

**Drinking Water Operator
Qualification Program**

**Water Distribution
operators
(with or without disinfection)**

Job P6a

**Apprenticeship and
Evaluation Booklet**

EQ-5055-02A (04-2005)

**This document is a working copy
of the official Learning & Assessment Guide.
It may be used as a worksheet
by journeymen and trainers.**

April 2003

Emploi-Québec, in collaboration with the *Comité sectoriel de main-d'œuvre de l'environnement*, has produced this guide in order to describe the skills required to qualify as an water distribution operator (with or without disinfection) (P6a).

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ADDRESS _____
CITY _____ POSTAL CODE _____
PHONE (____) _____

Emploi-Québec File #: _____

Note on the protection of personal information

- ① The information collected in this guide is subject to the *Act respecting access to documents held by public bodies and the protection of personal information*.
- ② The information is being collected for the purposes of administering the Emploi-Québec Drinking Water Operator Qualification Program.
- ③ For any questions regarding access to documents and the protection of personal information, contact Emploi-Québec.

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Introduction

This Apprenticeship and Evaluation Booklet is made up of modules for on-the-job training as a water distribution operator (with or without disinfection), Job P6a.

Using this booklet, apprentices will learn all about the occupation under the supervision of experienced workers, called journeymen, and gain recognition of their new skills. The journeymen will evaluate their performance at each stage of the apprenticeship and ensure that their skills meet the prescribed standards.

The modules and tasks can be taught in the order deemed most appropriate at any given plant.

Suggestions and explanations on how to use this Apprenticeship and Evaluation Booklet are incorporated into the Journeyman's Guide.

Once the apprentice is deemed to have acquired the job skills in question, the journeyman is to sign the Apprenticeship and Evaluation Booklet in certification thereof.

≡ IMPORTANT ≡

Apprentices are responsible for the safekeeping of this guide, as it is the only document recording the details of their apprenticeship.

Certificate of Qualification

Certificates of qualification are issued to those who have mastered the skills required to water distribution operator (with or without disinfection) (Job P6a). They certify that the holder is qualified to practice the occupation.

Certification can be granted once the apprentice has fully mastered all steps of every task in each module and the journeyman has completed an assessment based on the performance indicators in the guide.

Emploi-Québec issues certificates of qualification to individuals who have mastered the skills set out in this Apprenticeship and Evaluation Booklet.

Two certificates are available:

Water distribution operator with disinfection
(Success with all training modules)

Water distribution operator without disinfection
(Success in training modules 1, 2, 4, 6, 7)

Module 1

Taking Water Samples

Job Skill:
Take water samples according to the provisions of the Regulation

Task 1.1
Take bacteriological and physicochemical
samples according to the provisions of the
Regulation

1.1.1 Describe or develop, as the case may be, a
sampling program for bacteriological and
physicochemical analysis

1.1.2 Take samples for bacteriological and
physicochemical analysis

1.1.3 Store samples

1.1.4 Send samples to the laboratory

1.1.5 Receive and read lab results and compare with
the prescribed standards

1.1.6 Take any remedial action necessary to meet
the bacteriological and physicochemical quality
standards

(P6A) Apprenticeship Context

1. THE APPRENTICE HAS TAKEN SAMPLES IN THE FOLLOWING SITUATIONS. TICK OR SPECIFY:

- Regulatory samples (compulsory)
- Samples to check pipe rinsing quality
- Samples following pipe disinfection
- Samples following a consumer complaint
- Other _____

Job Skill: Take water samples according to the provisions of the Regulation

Task 1.1 Take bacteriological and physicochemical samples according to the provisions of the Regulation	
Steps	References & Work Aids
1.1.1 Describe or develop, as the case may be, a sampling program for bacteriological and physicochemical analysis	
<input type="checkbox"/> Identify the distribution network's vulnerable points as well as primary and alternative sampling sites	R Map of the water distribution network
<input type="checkbox"/> On the map of the distribution network, locate neighborhoods, service areas, facilities, and equipment	
<input type="checkbox"/> Describe the network sampling program for bacteriological and physicochemical analysis	R Water sampling program
<input type="checkbox"/> Explain the standards and contamination-related risks and describe the health impact of any bacteriological and physicochemical levels exceeding the standards	T Corrective measures in the case of noncompliance, as per the Regulation
1.1.2 Take samples for bacteriological and physicochemical analysis	
<input type="checkbox"/> Take samples according to the methods for taking and preserving samples set out in the Regulation	T Methods for taking and preserving samples
1.1.3 Store samples	
<input type="checkbox"/> Explain proper storage and preservation conditions and how quickly the samples must be sent to the laboratory	T Methods for taking and preserving samples
<input type="checkbox"/> Store the samples according to the reference materials provided by the Ministère de l'Environnement (MENV)	

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids
1.1.4 Send samples to the laboratory		
<input type="checkbox"/>	Complete the test request form(s) as per the established protocol	R Test request forms provided by an accredited laboratory
<input type="checkbox"/>	Send the samples to an accredited laboratory by the time and as per the procedures set out in the Regulation	T Methods for taking and preserving samples
1.1.5 Receive and read lab results and compare with the prescribed standards		
<input type="checkbox"/>	Compare the test results with the legal limits set out in the <i>Regulation respecting the quality of drinking water</i>	R Regulation respecting the quality of drinking water (Appendices 1 and 2) T Corrective measures in the case of noncompliance, as per the Regulation
1.1.6 Take any remedial action necessary to meet the bacteriological and physicochemical quality standards		
<input type="checkbox"/>	Identify all compliances and noncompliances	T Corrective measures in the case of noncompliance, as per the Regulation
<input type="checkbox"/>	Describe in detail the procedures to follow in the presence of fecal coliformes or E. coli	
<input type="checkbox"/>	Describe in detail the procedures to follow in the case of noncompliance with other parameters	T Legal responsibilities of workers in normal and abnormal situations
<input type="checkbox"/>	Specify the corrective measures needed to meet the standards	T Procedure for restoring compliance, as per the Regulation
Journeyman's initials:		Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

(P6A) Confirmation of Skills Acquired

We, the undersigned, hereby certify that the Apprentice has mastered Module 1,

“Taking Water Samples”

Signature of the Apprentice

Signature of the Journeyman

Date _____

Signature of the Employer _____

Module 2

Pumping Drinking Water into the Distribution Network

Job Skill:

Operate the system for pumping drinking water into the distribution network

Task 2.1

Conduct an inspection and verification tour of drinking water pumping facilities in the distribution network

2.1.1 Inspect and verify pumps and any related measuring or control instruments

2.1.2 Verify and test pump flow rate or the number of active pumps according to the area and distribution network's operating capacity

2.1.3 Inspect and test the operation of valves (if applicable)

2.1.4 Inspect and test operation of air valves (if applicable)

2.1.5 Inspect and verify Drinking Water tanks (open surface or hydropneumatic) as well as measuring and control instruments, as the case may be

(P6A) Apprenticeship Context

1. THE APPRENTICE HAS WORKED WITH THE FOLLOWING TYPES OF EQUIPMENT. TICK OR SPECIFY:

PUMPS	STORAGE TANKS (IF APPLICABLE)	VALVES (IF APPLICABLE)	AIR VALVES (IF APPLICABLE)
Dry well:	Open surface:	Main valves in use, e.g., guillotine, pressure release, self-regulating, etc.	
	Hydropneumatic:		

2. THE APPRENTICE HAS LEARNED TO USE THE FOLLOWING INSTRUMENTS. TICK OR SPECIFY:

- Flow indicator
- Pressure indicator
- Water level alarm or float
- Water level measuring devices
- Other _____

3. REMARKS OR DETAILS CONCERNING FACILITIES AND INSTRUMENTS:

Job Skill: Operate the system for pumping drinking water into the distribution network

Task 2.1 Conduct an inspection and verification tour of drinking water pumping facilities in the distribution network	
Steps	References & Work Aids
2.1.1 Inspect and verify pumps and any related measuring or control instruments	
<input checked="" type="checkbox"/> A- Test pumps	
<input type="checkbox"/> Locate drinking water pumping facilities on the network map	R Map of distribution network
<input type="checkbox"/> Describe the types of pumps and their main components	
<input type="checkbox"/> Explain normal pump operation (capacity and range of operation) and the consequences of malfunction	
<input type="checkbox"/> Identify the measuring and control instruments associated with the pumps and explain their basic operating principles	W Measuring Instruments
<input type="checkbox"/> Take readings from measuring and control instruments and compare the results with reference values	R Manufacturer's manual (pump curve)
<input type="checkbox"/> Evaluate the production and electromechanical process parameters for each pump	W Drinking Water Extraction Pumps
<input type="checkbox"/> Assess pump operation based on process parameters and take any corrective measures required according to established procedures	W Drinking Water Extraction Pumps R Manufacturer's manual
<input checked="" type="checkbox"/> B- Appropriately assess what preventive and corrective measures must be taken to ensure the pumps operate properly	
<input type="checkbox"/> Describe the preventive maintenance needed to identify potential problems with the drinking water pumps	W Maintenance Chart (Module 2) R Manufacturer's manual
<input type="checkbox"/> Identify potential pump malfunctions, explain the possible causes, diagnose the problem, and take the appropriate corrective measures	W Drinking Water Extraction Pumps R Manufacturer's manual
<input checked="" type="checkbox"/> C- Record any noteworthy information on pump operating parameters	
<input type="checkbox"/> Provide a detailed, accurate, and legible listing of all noteworthy data on pump operations	R Daily Log or Tour Report W Drinking Water Extraction Pumps
Journeyman's initials:	Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids	
2.1.2 Verify and test pump flow rate or the number of active pumps according to the area and distribution network's operating capacity			
✓	A- Verify the output and pressure of drinking water pumping units		
<input type="checkbox"/>	Describe the pumping system's operating capacity and the output rate needed to meet the distribution network's needs		
<input type="checkbox"/>	Explain the consequences of malfunction at a drinking water pumping facility		
<input type="checkbox"/>	Either onsite or by remote sensing, identify which pumps are active and which are inactive	R	Distribution network map
<input type="checkbox"/>	Assess the flow rate and pressure according to the pumping system's operating capacity and the distribution network's needs	W	System of Units
<input type="checkbox"/>	Verify whether the number of active pumps is sufficient for the pumping system's operating capacity and the distribution network's needs		
<input type="checkbox"/>	Verify that pumps can be activated and de-activated to meet the pumping system's operating capacity and the distribution network's needs		
<input type="checkbox"/>	Draw conclusions from the data collected, analyze the effect on drinking water production volumes, and take any corrective measures required	W	Drinking Water Extraction Pumps
✓	B- Appropriately assess what corrective measures must be taken to address situations affecting pump flow rate		
<input type="checkbox"/>	Identify potential problems that may affect drinking water production volumes, explain the possible causes, diagnose the problem, and take the appropriate corrective action	W	Drinking Water Extraction Pumps
✓	C- Record any noteworthy information on pump operating capacity		
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of all noteworthy data on pump operating capacity	R	Daily Log or Tour Report W Drinking Water Extraction Pumps
Journeyman's initials:			Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids	
2.1.3 Inspect and test the operation of valves (if applicable)			
✓	A- Verify valve functioning		
<input type="checkbox"/>	Locate drinking water pumping system valves on the map of the water distribution network	R	Map of the water distribution network
<input type="checkbox"/>	Describe how valve-related devices work and explain the optimum operating conditions	W R	Valves Manufacturers' manuals
<input type="checkbox"/>	Ascertain that the valves are properly positioned for the pressure and flow rate requirements at the time of inspection	W R	Valves Manufacturer's manual
<input type="checkbox"/>	Examine the condition of the valves (maneuverability, pressure required, seal, noise)		
<input type="checkbox"/>	Verify and adjust self-regulating valves, if any, to obtain the required pressure or flow rate		
<input type="checkbox"/>	Draw conclusions from the data collected and consequences noted and take any corrective measures required	W	Valves
✓	B- Appropriately assess what preventive and corrective measures must be taken to ensure proper valve operation		
<input type="checkbox"/>	Describe the preventive maintenance needed to identify potential problems with the valves	W R	Maintenance Chart (Module 2) Manufacturer's manual
<input type="checkbox"/>	Identify valve malfunctions that may affect drinking water production volumes, explain the possible causes, make a diagnosis, and take the appropriate corrective measures	W	Valves
Journeyman's initials:			Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids	
2.1.4 Inspect and test operation of air valves (if applicable)			
✓	A- Verify that air valves are working properly		
<input type="checkbox"/>	Locate air valves on the map of drinking water pumping facilities	R	Map of groundwater facilities
<input type="checkbox"/>	Explain how air valves work and describe their role in the process	T	Air valves
<input type="checkbox"/>	Explain how the presence of air affects pumps and pipes		
<input type="checkbox"/>	Describe the annual preventive maintenance required to eliminate potential problems with air valves	W	Maintenance Chart (module 2)
<input type="checkbox"/>	Record any noteworthy information after inspecting air valves	R	Tour Report
Journeyman's initials:			Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids
2.1.5 Inspect and verify Drinking Water tanks (open surface or hydropneumatic) as well as measuring and control instruments, as the case may be		
✓	A- Verify water storage tanks as per established procedures	
<input type="checkbox"/>	Locate water tanks on the map of the water distribution network	R Map of the water distribution network
<input type="checkbox"/>	Check for signs of physical deterioration of Drinking Water storage tanks and explain the potential risk of contamination and its effect on water quality	W Storage Tanks
<input type="checkbox"/>	Verify the physical integrity of the tanks, draw conclusions from your findings, and take any corrective measures required as per established procedures	W Storage Tanks R OHS Confined Spaces Regulation
<input type="checkbox"/>	Make a list of the measuring and control instruments used and explain their role in the drinking water production process	W Measuring Instruments
<input type="checkbox"/>	Periodically verify that the drinking water level measuring and control instruments are working properly and take any appropriate corrective action	R Manufacturer's manual
<input type="checkbox"/>	Take readings from measuring and control instruments in storage tanks and verify that the results are within established critical water levels	W Measuring Instruments
<input type="checkbox"/>	Adjust the flow rate accordingly	
✓	B- Appropriately assess what corrective measures must be taken to address potential risks	
<input type="checkbox"/>	Identify abnormalities that may pose a risk, analyze the possible causes, diagnose the problem, and take the appropriate corrective measures as per established procedures	W Water Tanks
✓	C- Record any noteworthy information on drinking water storage tanks	
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of all noteworthy data on water levels in the Drinking Water storage tanks	R Daily Log or Tour Report

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

(P6A) Confirmation of Skills Acquired

We, the undersigned, hereby certify that the Apprentice has mastered Module 2

“Pumping Drinking Water into the distribution network”

Signature of the Apprentice

Signature of the Journeyman

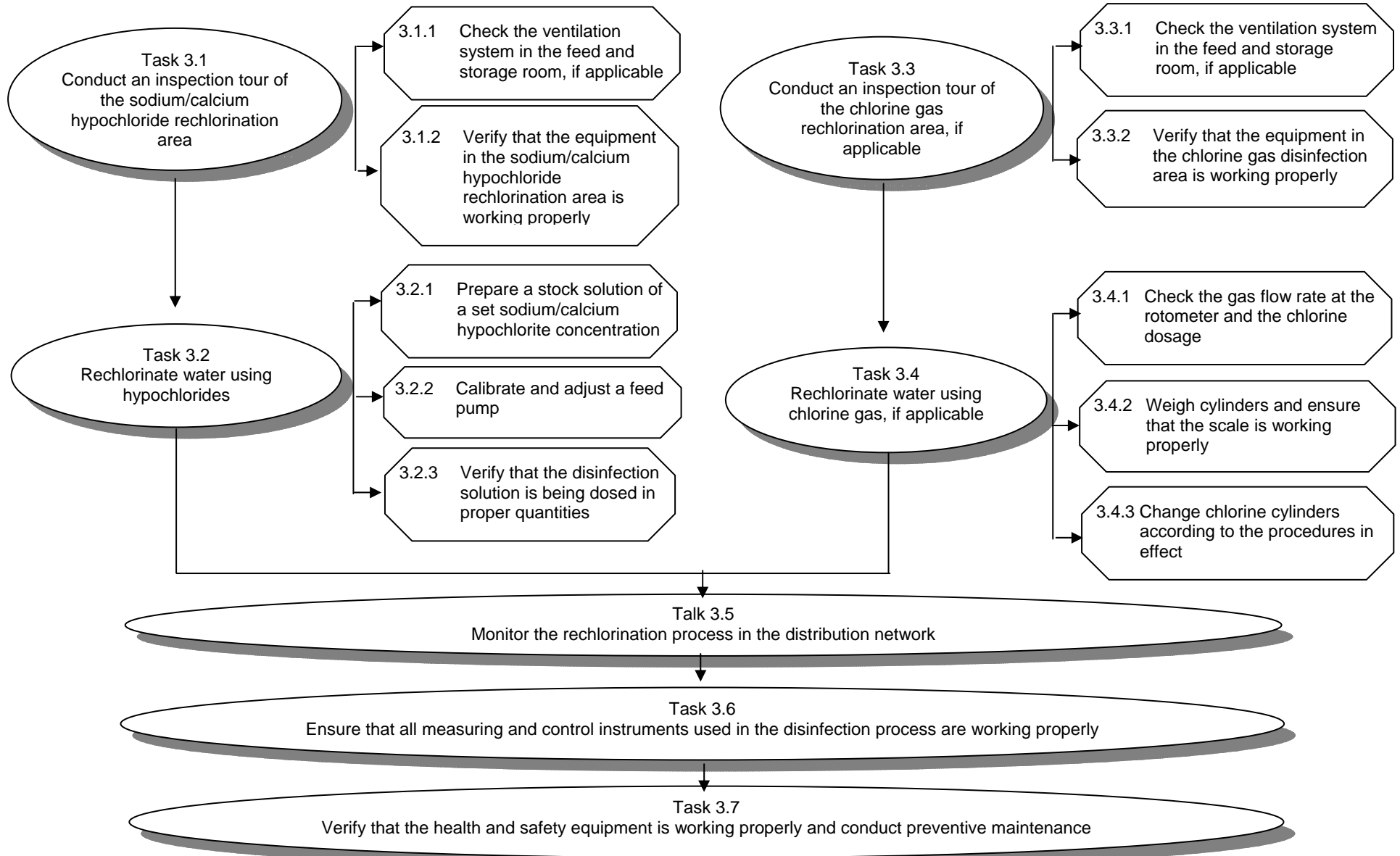
Date _____

Signature of the Employer: _____

Module 3

Disinfection (rechlorination) system in the Distribution Network (if available)

Job Skill:
Operate one or more disinfection (rechlorination) system(s) (using sodium or calcium hypochlorite and chlorine gas)



1. THE APPRENTICE HAS WORKED WITH THE FOLLOWING DISINFECTION SYSTEMS:

- ◇ Hypochlorites
 - Sodium
 - Calcium
- ◇ Chlorine Gas

2. THE APPRENTICE HAS LEARNED TO USE THE FOLLOWING INSTRUMENTS:

Compulsory according to the Regulation

- ◇ Residual chlorine analyzer

Others :

- ◇ Integrated chlorine analyzer
- ◇ pH Meter
- ◇ Flow meter
- ◇ Rotometer
- ◇ Scale

Other _____

Note : The instruments used must comply with the requirements indicated in the reference book titled “Standard Methods For The Analysis of Water and Wastewater”

3. REMARKS OR DETAILS:

Job Skill: Operate one or more disinfection (rechlorination) system(s) (using sodium or calcium hypochlorite and chlorine gas)

Task 3.1 Conduct an inspection tour of the sodium/calcium hypochlorite rechlorination area		
Steps		References & Work Aids
3.1.1 Check the ventilation system in the feed and storage room, if applicable		
<input type="checkbox"/>	Describe the dangers related to sodium/calcium hypochlorite and improper ventilation in feed and storage areas	R WHMIS regulations
<input type="checkbox"/>	Ensure that the ventilator is working properly and the feed and storage room is well aerated	R Manufacturer's manual R WHMIS regulations
<input type="checkbox"/>	Draw conclusions from the data collected and consequences noted and take any corrective measures required	R WHMIS regulations
<input type="checkbox"/>	Describe the preventive maintenance needed to identify potential problems with the ventilation system	W Maintenance Chart (Module 3) R Manufacturer's manual

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

C: Work aids provided by the journeyman or trainer

Steps		References & Work Aids
3.1.2 Verify that the equipment in the sodium/calcium hypochlorite rechlorination area is working properly		
✓	A- Ensure that each piece of equipment is working properly	
<input type="checkbox"/>	Locate chlorination equipment on the rechlorination area map	R Map of rechlorination area
<input type="checkbox"/>	Give a general explanation of how the equipment works	
<input type="checkbox"/>	Explain the consequences of malfunction or complete shutdown of a piece of equipment	
<input type="checkbox"/>	Examine the physical condition of the hypochlorite storage tanks (e.g., salt deposits)	
<input type="checkbox"/>	Verify the hypochlorite level in rechlorination tanks	
<input type="checkbox"/>	Find the number of the active pumps, assess their level of functioning, and flush them as required	
<input type="checkbox"/>	Find the active valves and measure and check their percentage of opening	
<input type="checkbox"/>	Inspect the release valve and verify that the full dosage of hypochlorite solution is injected into the water to be treated	
<input type="checkbox"/>	Check pipes for leakage	
<input type="checkbox"/>	Draw conclusions from the data collected and take any corrective measures required, following safety procedures	W Hypochlorite Disinfection Equipment R Health and Safety Manual and WHMIS regulations
✓	B- Appropriately assess what corrective and preventive must be taken to ensure that the rechlorination equipment works properly	
<input type="checkbox"/>	Describe the preventive maintenance needed to identify potential problems with the rechlorination equipment	W Maintenance Chart (Module 3) R Manufacturer's manual
<input type="checkbox"/>	Identify potential rechlorination equipment malfunctions, explain the possible causes, and indicate the appropriate corrective measures	W Hypochlorite Disinfection Equipment R Manufacturer's manual
✓	C- Record any noteworthy information on rechlorination equipment	
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of all operating parameters of the disinfection equipment examined	W Hypochlorite Disinfection Equipment R Operating report

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 3.2 Rechlorinate water using hypochlorites		
Steps		References & Work Aids
3.2.1 Prepare a stock solution of a set sodium/calcium hypochlorite concentration		
<input type="checkbox"/>	Describe the risks associated with handling a hypochlorite solution	R WHMIS & OHS Rules
<input type="checkbox"/>	Periodically drain and clean the tank of disinfection solution	
<input type="checkbox"/>	Calculate the amount of disinfectant required to reach the desired concentration level and meet the network's needs	T Calculating Dosage
<input type="checkbox"/>	Prepare the hypochlorite stock solution with concentrated hypochlorite solution, as per the disinfection and safety procedures (wear gloves, goggles, apron)	
3.2.2 Calibrate and adjust a feed pump		
<input type="checkbox"/>	Identify the type of pump and its mode of operation (variable or single speed, presence of needle valve, instrument loop, type of controls, etc.)	R Manufacturer's manual W Feed Pumps
<input type="checkbox"/>	Explain the consequences of malfunction or complete shutdown of a feed pump	
<input type="checkbox"/>	Calibrate the pump for various operating levels	R Manufacturer's manual
<input type="checkbox"/>	Measure the residual chlorine in the drinking water at the reference point to determine the proper disinfectant flow rate	
<input type="checkbox"/>	Identify the working capacity of each type of pump and adjust it accordingly	R Manufacturer's manual
<input type="checkbox"/>	After calibration or adjustment, verify that the hypochlorite dosage is as required	

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids
3.2.3 Verify that the disinfection solution is being dosed in proper quantities		
✓	A- Verify the dosage of the disinfection solution as per the standard set out in the Regulation	
<input type="checkbox"/>	Describe the effects of chlorine on microorganisms	
<input type="checkbox"/>	Describe the effects and consequences of nitrogenous and organic matter on chlorination	
<input type="checkbox"/>	Describe the impact that pH, temperature, and contact time have on the disinfecting action of chlorine	
<input type="checkbox"/>	Verify and adjust the disinfectant solution to ensure that standards are being met (amount of residual chlorine in the network)	R Regulation respecting the quality of drinking water T Calculating Dosage
<input type="checkbox"/>	Verify whether there is sufficient disinfectant solution in storage to last until the next delivery	R WHMIS & OHS Rules
<input type="checkbox"/>	Verify the quality of the chlorine provided (e.g., agreement with supplier, test when in doubt)	
✓	B- Appropriately assess what corrective measures must be taken to remedy dosage problems	
<input type="checkbox"/>	Identify any problems related to dosage equipment operation, analyze the possible causes, and indicate the appropriate corrective measures	W Hypochlorite Disinfection Equipment
<input type="checkbox"/>	Identify any problems related to the quality of the disinfectant solution provided, analyze the possible causes, and indicate the appropriate corrective measures	
✓	C- Record any noteworthy information on dosage	
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of all noteworthy data on dosage	W Hypochlorite Disinfection Equipment R Daily Log or Tour Report

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 3.3 Conduct an inspection tour of the chlorine gas rechlorination area, if applicable	
Steps	References & Work Aids
3.3.1 Check the ventilation system in the feed and storage room, if applicable	
<input checked="" type="checkbox"/> A- Safely verify the feed and storage room ventilation system	
<input type="checkbox"/> Describe the dangers of chlorine gas and poor aeration in feed and storage rooms	R WHMIS regulations
<input type="checkbox"/> Ensure that the ventilator is working properly and the feed and storage room is well aerated	R Manufacturer's manual R WHMIS regulations
<input type="checkbox"/> Draw conclusions from the data collected and consequences noted and take any corrective measures required	R WHMIS regulations
<input type="checkbox"/> Describe the preventive maintenance needed to identify potential problems with the ventilation system	C Maintenance Chart (Module 3) R Manufacturer's manual

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids	
3.3.2 Verify that the equipment in the chlorine gas disinfection area is working properly			
✓	A- Verify the gas cylinder switchover		
<input type="checkbox"/>	Test switchover as specified by the manufacturer and as per existing procedures	R	Manufacturer's manual
<input type="checkbox"/>	Identify any possible malfunction, analyze the causes, and indicate the appropriate corrective measures		
✓	B- Check the chlorine gas leak detector and the chlorine regulating vent		
<input type="checkbox"/>	Describe how the safety system works on a chlorine gas device and a regulating vent and explain the consequences of malfunction		
<input type="checkbox"/>	Following detection procedures, periodically verify whether the system reacts to the presence of chlorine gas	R	Manufacturer's manual R OHS Rules
<input type="checkbox"/>	Verify that the regulator vent is uncharged and is not emitting chlorine into the air		
<input type="checkbox"/>	Explain and, if required, take any remedial action in the case of malfunction or a chlorine gas leak	R	WHMIS and OHS Rules R Manufacturer's manual
✓	C- Verify the chlorine injection system		
<input type="checkbox"/>	Describe how the chlorine gas injector works		
<input type="checkbox"/>	Check the chlorine injection system and related equipment (e.g., venturi, pressurization pump)	R	Manufacturer's manual
<input type="checkbox"/>	Check for malfunction and take any remedial action necessary	R	Manufacturer's manual
Journeyman's initials:			Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 3.4 Rechlorinate water using chlorine gas (if applicable)		
Steps		References & Work Aids
3.4.1 Check the gas flow rate at the rotometer and the chlorine dosage		
<input type="checkbox"/>	Take readings of the gas flow rate and chlorine dosage	
<input type="checkbox"/>	Verify and calibrate the gas flow rate to ensure proper dosage	R Manufacturer's manual
<input type="checkbox"/>	Inspect the bottom of the cylinders for freezing	
<input type="checkbox"/>	Calculate the amount of gas remaining and the number of cylinders in stock	
<input type="checkbox"/>	Check for malfunction and take any remedial action necessary	R Manufacturer's manual
<input type="checkbox"/>	Describe the preventive maintenance needed to identify potential problems with the rotometer	W Maintenance Chart (Module 3) R Manufacturer's manual
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of dosage values attained	R Daily Log or Tour Report W Chlorine Gas Disinfection Equipment
3.4.2 Weigh cylinders and ensure that the scale is working properly		
<input type="checkbox"/>	Ensure that the scale is working properly	R Manufacturer's manual
<input type="checkbox"/>	Weigh the cylinders to determine how much chlorine has been used	
<input type="checkbox"/>	Check for malfunction and take any remedial action necessary	R Manufacturer's manual
<input type="checkbox"/>	Describe the preventive maintenance needed to identify potential problems with the scale	W Maintenance Chart (Module 3) R Manufacturer's manual
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of the weight measurements taken	R Daily Log or Tour Report W Chlorine Gas Disinfection Equipment
3.4.3 Change chlorine cylinders according to the procedures in effect		
<input type="checkbox"/>	Wear the required safety clothing	
<input type="checkbox"/>	Handle cylinders using the tools and accessories indicated in the manufacturer's instructions and safety regulations	R Manufacturer's manual R Safety regulations (WHMIS, OHS)
<input type="checkbox"/>	Check for malfunction and take any remedial action necessary	

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 3.5 Monitor the rechlorination process in the distribution network			
Steps		References & Work Aids	
A - Determine the residual chlorine concentration in water leaving the rechlorination area, as per the frequency required			
<input type="checkbox"/>	Identify the measuring and control instruments and describe how they work	W Measuring Instruments	
<input type="checkbox"/>	Describe the effect of chlorine on microorganisms and the causes of bacterial proliferation		
<input type="checkbox"/>	Take a sample of drinking water and measure the concentration of residual chlorine using the appropriate instruments and prescribed methods	R Regulation respecting the quality of drinking water R Methods for taking and preserving samples	
<input type="checkbox"/>	Compare the free residual chlorine levels with the distribution network's water quality objectives		
<input type="checkbox"/>	In the case of noncompliance, adjust and fine-tune the dosage to obtain the chlorine concentrations required to meet the distribution network's quality standards	R Regulation respecting the quality of drinking water	
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of all required information at the frequency set out in the Regulation	R Regulation respecting the quality of drinking water	
Journeyman's initials:		Apprentice's initials:	

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 3.6 Ensure that all measuring and control instruments used in the disinfection process are working properly			
Steps		References & Work Aids	
A - Verify that the measuring and control instruments are working properly as per the manufacturer's instructions			
<input type="checkbox"/>	Identify the measuring and control instruments and verify that they are working properly as per the manufacturer's instructions <input type="checkbox"/> Chlorine meters (integrated and portable) <input type="checkbox"/> pH meter <input type="checkbox"/> Flow meter <input type="checkbox"/> Other	W Measuring Instruments	
<input type="checkbox"/>	Explain and, if required, take any corrective measures if levels exceed the standards	R Manufacturer's manual	
B - Conduct preventive maintenance and calibration of measuring and control instruments			
<input type="checkbox"/>	Run the chlorine analyzer (integrated and portable) through a reliability test	R Manufacturer's manual	
<input type="checkbox"/>	Calibrate the chlorine analyzer according to the manufacturer's instructions		
<input type="checkbox"/>	Calibrate the pH meter according to the manufacturer's instructions		
<input type="checkbox"/>	Describe the preventive maintenance needed on chlorine analyzers and the pH meter	R Manufacturer's manual W Maintenance Chart (Module 3)	
Journeyman's initials:		Apprentice's initials:	

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 3.7 Verify that the health and safety equipment is working properly and conduct preventive maintenance		
Steps		References & Work Aids
A - Test health and safety equipment according to the procedures in effect		
<input type="checkbox"/>	Ensure that all necessary health and safety equipment is in good working order and is readily available: <ul style="list-style-type: none"> <input type="checkbox"/> Shower <input type="checkbox"/> Eyewash <input type="checkbox"/> Safety goggles <input type="checkbox"/> Self-contained breathing apparatus <input type="checkbox"/> Extinguisher <input type="checkbox"/> Apron <input type="checkbox"/> Other 	R Health and safety procedures in effect (drinking water treatment equipment, facilities, and products)
<input type="checkbox"/>	Describe preventive maintenance needed for health and safety equipment	R Health and safety procedures in effect (drinking water treatment equipment, facilities, and products) W Maintenance Chart (Module 3)

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

(P6A) Confirmation of Skills Acquired

We, the undersigned, hereby certify that the Apprentice has mastered Module 3

**“Disinfection (rechlorination) system in the Distribution Network
(if available)”**

Signature of the Apprentice

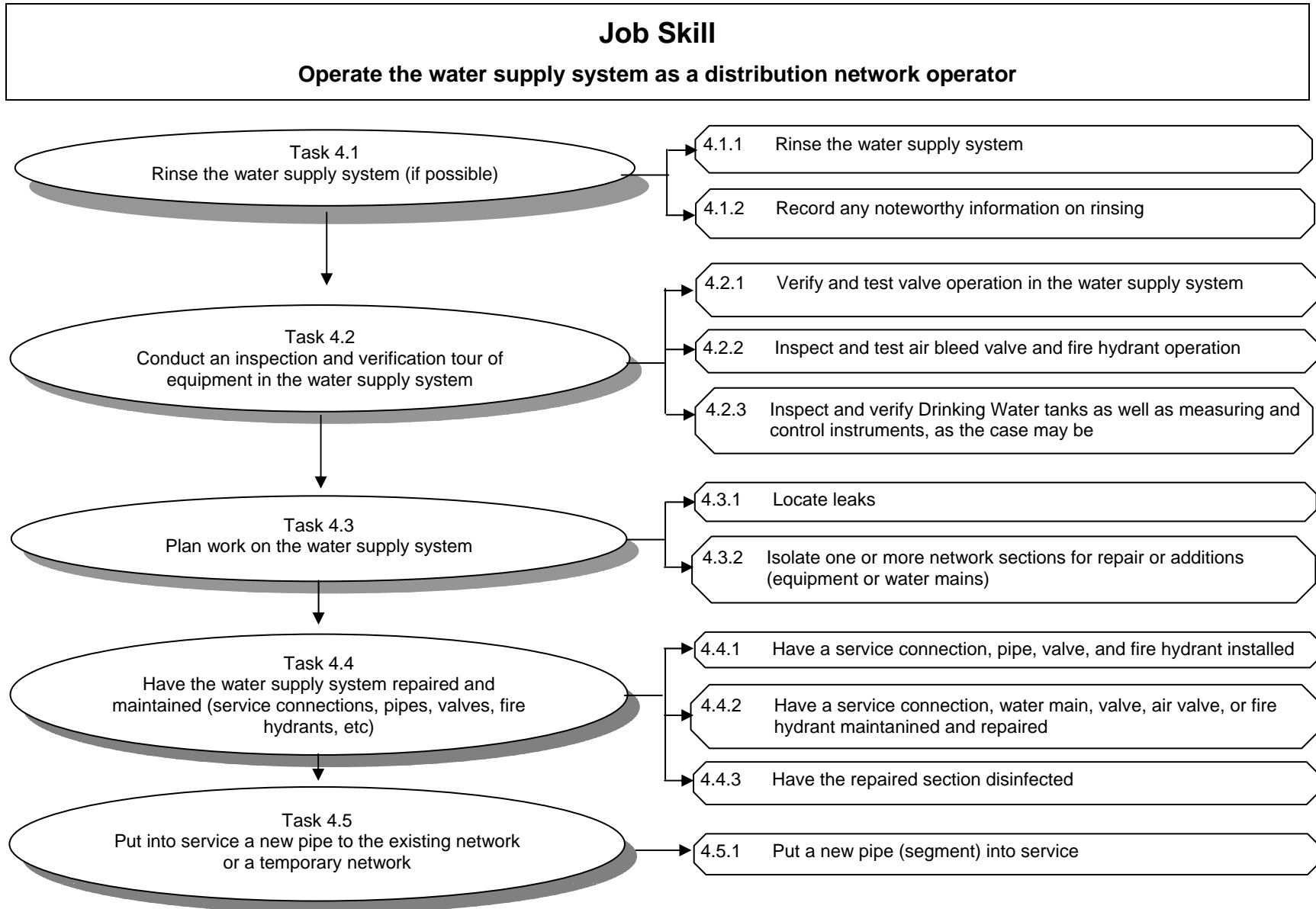
Signature of the Journeyman

Date _____

Signature of the Employer: _____

Module 4

Operating the Drinking Water Supply System (Knowledge)



(P6A) Context of the Apprenticeship

1. THE APPRENTICE HAS WORKED WITH THE FOLLOWING TYPES OF EQUIPMENT. TICK OR SPECIFY:

PUMPS	STORAGE TANKS	VALVES	AIR VALVES	FIRE HYDRANTS

2. THE APPRENTICE HAS LEARNED TO USE THE FOLLOWING INSTRUMENTS. TICK OR SPECIFY:

- Spectrometry measuring instruments
- Specify: _____

- Portable iron analyzer
- Portable chlorine analyzer
- Other _____

3. REMARKS OR DETAILS CONCERNING FACILITIES AND INSTRUMENTS:

Job Skill: Operate the water supply system as a distribution network operator

Task 4.1 Rinse the water supply system (if possible)		
Steps		References & Work Aids
4.1.1 Rinse the water supply system		
<input type="checkbox"/>	Identify and locate rinsing equipment (valves, fire hydrants, etc.) on the map of the water supply system	R Map of water supply network
<input type="checkbox"/>	Describe the principles and steps involved in developing an effective rinsing program	T Rinsing
<input type="checkbox"/>	Describe the rinsing program in effect, if any	R Rinsing program, if any
<input type="checkbox"/>	Explain the need for and benefits of a rinsing program adapted to a particular network	
<input type="checkbox"/>	Describe the potential water quality risks associated with rinsing and the steps to take to reduce these risks	
<input type="checkbox"/>	Describe and explain the steps required for remedial rinsing	T Rinsing
<input type="checkbox"/>	Describe and explain the steps required for unidirectional rinsing	
<input type="checkbox"/>	Describe the role and operation of safety valves, pressure control valves, shutoff valves, valve chambers, fire hydrants, and air valves	T Valves T Fire hydrants T Air Valves
<input type="checkbox"/>	Check the calibration of spectrophotometry measurement instruments, as the case may be	W Maintenance chart (Module 4)
<input type="checkbox"/>	Using the appropriate device, measure the turbidity, iron level, and residual chlorine level in the network in order to check rinsing quality	
<input type="checkbox"/>	Measure the pressure and flow rate at fire hydrant outlets using the appropriate devices	
4.1.2 Record any noteworthy information on rinsing		
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of all noteworthy data on rinsing	T Rinsing

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 4.2 Conduct an inspection and verification tour of equipment in the water supply system	
Steps	References & Work Aids
4.2.1 Verify and test valve operation in the water supply system	
<input checked="" type="checkbox"/> A- Verify valve operation	
<input type="checkbox"/> Locate valves on the water supply system map	R Map of the water supply system
<input type="checkbox"/> Describe how valves work and explain the optimum operating conditions	T Valves R Manufacturers' manuals
<input type="checkbox"/> Examine the condition of the valves (maneuverability, pressure required, seal, noise)	R Manufacturers' manuals
<input type="checkbox"/> Verify and adjust self-regulating valves, if any, to obtain the required pressure or flow rate	
<input type="checkbox"/> Draw conclusions from the data collected and consequences noted and take any corrective measures required	T Valves
<input checked="" type="checkbox"/> B- Appropriately assess what preventive and corrective measures must be taken to ensure proper valve operation	
<input type="checkbox"/> Describe the preventive maintenance needed to identify potential problems with the valves	W Maintenance Chart (Module 4) R Manufacturer's manual
<input type="checkbox"/> Identify valve malfunctions that may affect drinking water production volumes, explain the possible causes, make a diagnosis, and take the appropriate corrective measures	T Valves
<input checked="" type="checkbox"/> C- Record any noteworthy information on valves	
<input type="checkbox"/> Provide a detailed, accurate, and legible listing of information on valve position in the network so that action can be taken, as necessary	R Daily Log or Tour Sheet
<input type="checkbox"/> Explain the importance of recording information on valves	T Valves

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids
4.2.2 Inspect and test air bleed valve and fire hydrant operation		
✓	A- Verify that air bleed valves are working properly (if available)	
<input type="checkbox"/>	Locate air bleed valves on the water supply system map	R Map of water supply system
<input type="checkbox"/>	Explain how air bleed valves work and describe their role in the water supply system	R Manufacturer's manual
<input type="checkbox"/>	Explain how the presence of air affects pumps and pipes	T Air Bleed Valves
<input type="checkbox"/>	Describe the annual preventive maintenance needed to eliminate potential problems with air bleed valves	W Maintenance Chart (Module 4)
✓	B- Verify that fire hydrants are working properly	
<input type="checkbox"/>	Locate fire hydrants on the water supply system map	R Map of water supply system
<input type="checkbox"/>	Identify the various types of fire hydrants in the network and explain their operation	T Fire hydrants
<input type="checkbox"/>	Describe the risks of contamination and the precautions to take during fire hydrant use or repair	
<input type="checkbox"/>	Inspect the fire hydrant opening and closing device according to the procedures in effect	
<input type="checkbox"/>	Explain the effects of fire hydrant malfunction and the actions to take to prevent it	
<input type="checkbox"/>	Describe the preventive maintenance to conduct on fire hydrants to eliminate any problems	W Maintenance Chart (Module 4)
✓	C- Record any noteworthy information	
<input type="checkbox"/>	Record any noteworthy information after inspecting air valves and fire hydrants	R Tour Report T Air Valves T Fire hydrants

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids
4.2.3 Inspect and verify Drinking Water tanks as well as measuring and control instruments, as the case may be		
✓	A- Verify water storage tanks as per established procedures	
<input type="checkbox"/>	Locate water tanks on the map of the water distribution network	R Map of the water distribution network
<input type="checkbox"/>	Check for signs of physical deterioration of Drinking Water storage tanks and explain the potential risk of contamination and its effect on water quality	W Storage Tanks
<input type="checkbox"/>	Verify the physical integrity of the tanks, draw conclusions from your findings, and take any corrective measures required as per established procedures	W Storage Tanks R OHS Confined Spaces Regulation
<input type="checkbox"/>	Make a list of the measuring and control instruments used and explain their role in the drinking water production process	W Measuring Instruments
<input type="checkbox"/>	Periodically verify that the measuring and control instruments are working properly and take any appropriate corrective action	R Manufacturer's manual
<input type="checkbox"/>	Take readings from measuring and control instruments in storage tanks and verify that the results are within established critical water levels	W Measuring Instruments
<input type="checkbox"/>	Adjust the flow rate accordingly	
✓	B- Appropriately assess what corrective measures must be taken to address potential risks	
<input type="checkbox"/>	Identify abnormalities that may pose a risk, analyze the possible causes, diagnose the problem, and take the appropriate corrective measures as per established procedures	W Water Tanks W Maintenance Chart (Module 4)
✓	C- Record any noteworthy information on drinking water storage tanks	
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of all noteworthy data on water levels in the Drinking Water storage tanks	R Daily Log or Tour Report

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 4.3 Plan work on the water supply system			
Steps		References & Work Aids	
4.3.1 Locate leaks			
<input type="checkbox"/>	Describe the method used to detect leaks in the water supply system	T	Leaks
<input type="checkbox"/>	Locate pipes and equipment in the water supply system	R	Map of the water supply system
<input type="checkbox"/>	Describe the risks of possible network contamination in the event of leaks and explain how to prevent them	T	Leaks
<input type="checkbox"/>	Record any noteworthy information on leaks	R	Operating log
Journeyman's initials:			Apprentice's initials:
4.3.2 Isolate one or more network sections for repair or additions (equipment or water mains)			
<input type="checkbox"/>	Locate the section(s) to isolate	R	Map of the water supply system
<input type="checkbox"/>	Describe the potential risks of contamination when isolating a network section	W	Isolating a Network Section
<input type="checkbox"/>	Explain the method to use and the precautions to take when isolating a network section for repair		
<input type="checkbox"/>	Determine when to notify the plant manager of an interruption in the drinking water supply		
<input type="checkbox"/>	Record any noteworthy information on the valves handled	R	Operating log

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 4.4 Have the water supply system repaired and maintained (service connections, pipes, valves, fire hydrants, etc.)			
Steps		References & Work Aids	
4.4.1 Have a service connection, pipe, valve, and fire hydrant installed			
<input type="checkbox"/>	Describe the risks of contamination during installation of a service connection, valve, or fire hydrant	T	Service Connection
		T	Valves
<input type="checkbox"/>	Describe the appropriate connection procedures and precautions to take during installation of a service connection, pipe, valve, or fire hydrant	T	Fire hydrants
<input type="checkbox"/>	Describe the equipment and materials required to install these connections		
<input type="checkbox"/>	Describe the procedures used to disinfect equipment and materials before use		
<input type="checkbox"/>	Describe the appropriate procedure and necessary precautions for installing a service connection, pipe, valve, or fire hydrant in order to maintain water quality		
Journeyman's initials:			Apprentice's initials:
4.4.2 Have a service connection, water main, valve, air valve, or fire hydrant maintained and repaired			
<input type="checkbox"/>	Describe the appropriate procedures and precautions to take for conducting maintenance and repair on a service connection, pipe, valve, air bleed valve or fire hydrant	T	Valves
		T	Air Valves
		T	Service Connection
		T	Fire hydrants
<input type="checkbox"/>	Describe the procedures used to disinfect equipment and accessories prior to use		
<input type="checkbox"/>	Describe the appropriate procedures and precautions to take for replacing a pipe section with couplings		
<input type="checkbox"/>	Describe the appropriate procedures and precautions to take for installing a saddle on a pipe		
<input type="checkbox"/>	Describe the appropriate procedures and precautions to take for maintaining and repairing a service connection, valve, air valve, or fire hydrant		
Journeyman's initials:			Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps	References & Work Aids
4.4.3 Have the repaired section disinfected	
<input type="checkbox"/> Determine when the repaired section must be disinfected	T Disinfecting a Repaired Section
<input type="checkbox"/> Describe the procedures for disinfecting a repaired network section and the equipment used	
<input type="checkbox"/> Calculate and prepare the required concentration of disinfectant solution, as needed	T Calculation Chart
<input type="checkbox"/> Describe and explain the procedures in effect for disinfecting the repaired section and the equipment used such that repairs do not affect drinking water quality	R Disinfection procedures in effect T Disinfecting a Repaired Section R WHMIS
<input type="checkbox"/> Explain the importance of respecting the contact time during pipe disinfection	T Disinfecting a Repaired Section
<input type="checkbox"/> Explain the appropriate procedure and precautions to take for rinsing and purging the repaired section	T Rinsing
<input type="checkbox"/> Measure the residual chlorine level and compare it to normal operating limits	T Disinfecting a Repaired Section
<input type="checkbox"/> Take a representative sample and send it to an accredited laboratory for bacteriological analysis	R Procedures for Taking and Preserving Samples
<input type="checkbox"/> Describe what to do in the event of uncertainty regarding water quality	T Disinfecting a Repaired Section
<input type="checkbox"/> Record any noteworthy information on disinfection	

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Task 4.5 Put into service a new pipe to the existing network or a temporary network			
Steps		References & Work Aids	
4.5.1 Put a new pipe (segment) into service			
<input type="checkbox"/>	Describe internal procedures for opening a new pipe and putting it into service	R	Plant manager's procedures
<input type="checkbox"/>	Describe the effects of integrating a new pipe		
Journeyman's initials:			Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

(P6A) Confirmation of Skills Acquired

We, the undersigned, hereby certify that the Apprentice has mastered Module 4

“Operating the Drinking Water Supply System” (Knowledge)

Signature of the Apprentice

Signature of the Journeyman

Date _____

Signature of the Employer: _____

Module 5

Building Services Systems

Job Skill:
Operate building services systems

Task 5.1
Control the operation of the available building services systems (electricity, heating, ventilation, compressed air)

- 5.1.1 Control the main electric power supply system (Hydro-Québec)
- 5.1.2 Control the standby electrical system (generator)
- 5.1.3 Control the heating and ventilation systems
- 5.1.4 Control the compressed air systems

1. THE APPRENTICE HAS TAKEN SAMPLES IN THE FOLLOWING SITUATIONS. TICK OR SPECIFY

- Main electric power supply system (Hydro-Québec)
- Standby electrical system (generator)
- Heating system
- Ventilation system
- Compressed air system

2. COMMENTS OR DETAILS ON THE SYSTEMS USED:

Job Skill: Operate building services systems

Task 5.1 Control the operation of the available building services systems (electricity, heating, ventilation, compressed air)			
Steps		References & Work Aids	
5.1.1 Control the main electric power supply system (Hydro-Québec)			
<input type="checkbox"/>	Describe the operation of the station's main electric power supply system		
<input type="checkbox"/>	Use the various indicators (phase, amperage, voltage) to ensure that the main electric power supply system operates properly		
<input type="checkbox"/>	Periodically check the condition of the main electric power supply system components, if applicable		
<input type="checkbox"/>	If possible, describe and apply the electric power supply start/stop procedure	R	Electrical safety standards
<input type="checkbox"/>	Describe the measures needed and the safety procedure that must be complied with to insulate equipment to be repaired from the power supply system		
Journeyman's initials:			Apprentice's initials:
5.1.2 Control the standby electrical system (generator)			
<input type="checkbox"/>	Name the equipment connected to the generator and explain the consequences of a power failure		
<input type="checkbox"/>	Describe the start/stop procedure (simulate a power failure) of the standby electrical system (generator) in case of power failure	R	Generator start/stop procedure according to manufacturer's manual R Electrical safety standards
<input type="checkbox"/>	Take readings from the generator's instruments and on/off indicators and take appropriate corrective action	R	Manufacturer's manual
<input type="checkbox"/>	Describe the preventive maintenance required for the generator	W	Maintenance chart (Module 3) R Manufacturer's manual
Journeyman's initials:			Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

Steps		References & Work Aids	
5.1.3 Control the heating and ventilation systems			
<input type="checkbox"/>	Ensure that the heating and ventilation systems work properly and take appropriate corrective action	R Manufacturer's manual W Maintenance chart (Module 3)	
<input type="checkbox"/>	Explain the consequences of defective operation or failure of these systems		
<input type="checkbox"/>	Check the condition of the filters and take appropriate corrective action		
<input type="checkbox"/>	Describe the preventive maintenance required for the heating and ventilation systems		
Journeyman's initials:			Apprentice's initials:
5.1.4 Control the compressed air systems			
<input type="checkbox"/>	Describe the operation of the compressed air network and its components	R Manufacturer's manual	
<input type="checkbox"/>	Name the equipment connected to the compressed air system		
<input type="checkbox"/>	Explain the consequences and causes of a malfunction of these systems		
<input type="checkbox"/>	Flush the air storage tank of the compressor and the network air bleed valve, if applicable		
<input type="checkbox"/>	Describe the preventive maintenance required for the compressed air system	W Maintenance chart (Module 3)	
Journeyman's initials:			Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

(P6a) Confirmation of Skills Acquired

We, the undersigned, hereby certify that the Apprentice has mastered Module 5

“Building Services Systems”

Signature of the Apprentice

Signature of the Journeyman

Date _____

Signature of the Employer

Module 6

Stock Management

Job Skill:
Manage stock

Task 6.1
Take inventory and order the materials
and products needed

6.1.1 Verify product expiry dates

6.1.2 Determine the plant's usual requirements

6.1.3 Order or have someone order the products
needed

6.1.4 Compare shipment with order

Job Skill: Manage stock

Task 6.1 Take inventory and order the materials and products needed		
Steps		References & Work Aids
6.1.1 Verify product expiry dates		
<input type="checkbox"/>	Explain the consequences of using expired disinfecting products	R Technical spec sheets provided with the products
<input type="checkbox"/>	Ensure that products are classified and stored according to expiry dates and in adequate storage conditions	
6.1.2 Determine the plant's usual requirements		
<input type="checkbox"/>	Make a list of the materials needed for daily operations: equipment, essential parts, chemicals, testing products, measuring and control instruments	
<input type="checkbox"/>	Explain the basic principles of taking inventory	
<input type="checkbox"/>	Determine the plant's needs and keep the inventory current by verifying stock levels	
6.1.3 Order or have someone order the products needed		
<input type="checkbox"/>	Explain how to prepare a purchase requisition and an order form	
<input type="checkbox"/>	Prepare or have someone prepare an order according to the procedures in effect	R Internal procedures in effect
6.1.4 Compare shipment with order		
<input type="checkbox"/>	Verify the quantity and quality of the products received against the order form and invoice	
<input type="checkbox"/>	Ensure stock rotation	
Journeyman's initials:		Apprentice's initials:

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

(P6A) Confirmation of Skills Acquired

We, the undersigned, hereby certify that the Apprentice has mastered Module 6

“STOCK MANAGEMENT”

Signature of the Apprentice

Signature of the Journeyman

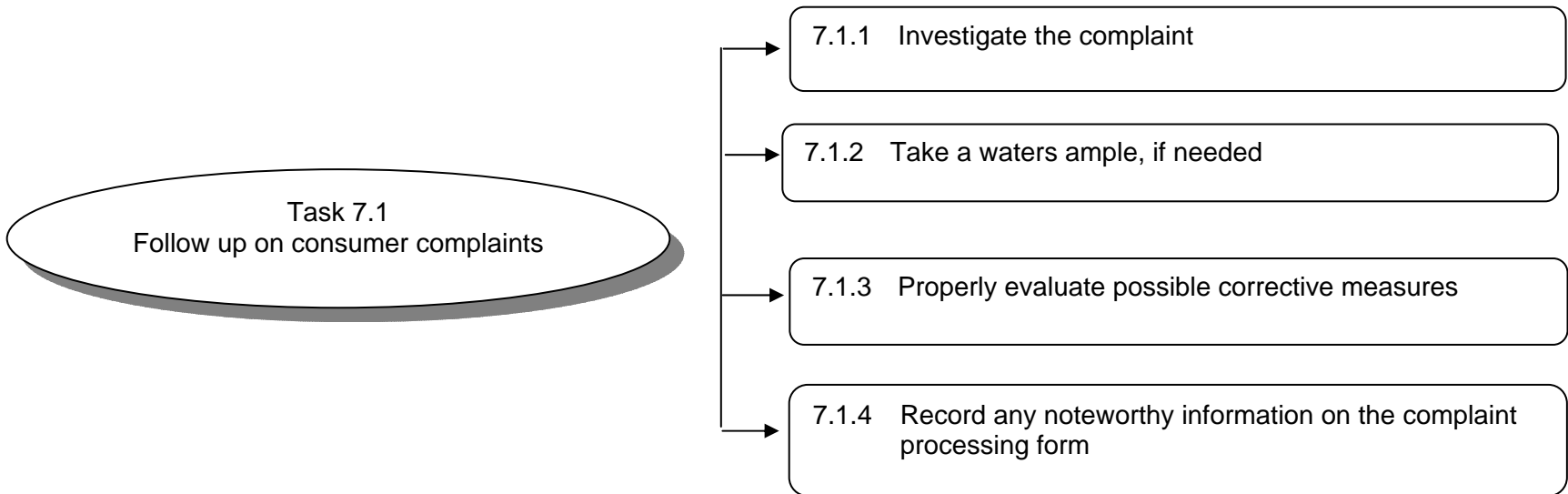
Date _____

Signature of the Employer _____

Module 7

Processing Complaints

Job Skill:
Process complaints



Job Skill: Process complaints

Task 7.1 Follow up on consumer complaints		
Steps		References & Work Aids
7.1.1 Investigate the complaint		
<input type="checkbox"/>	Explain the importance of processing complaints	
<input type="checkbox"/>	Explain how to identify the problem and assess the seriousness of the complaint (information from the consumer, other similar complaints, supply source, etc.)	R Internal procedures
<input type="checkbox"/>	Describe the various types of complaints and their probable causes	T Evaluating Complaints
<input type="checkbox"/>	Describe the checks to perform for each complaint	
7.1.2 Take a water sample, if needed		
<input type="checkbox"/>	Take a sample if the situation cannot be corrected immediately	T Procedures for Taking and Preserving Samples
<input type="checkbox"/>	Describe the physicochemical or microbiological parameters to measure, according to the nature of the complaint	T Evaluating Complaints
<input type="checkbox"/>	Send the sample to the laboratory along with the form indicating the required tests	R Laboratory form
<input type="checkbox"/>	Describe the procedure for notifying consumers of test results	R Internal procedures
7.1.3 Properly evaluate possible corrective measures		
<input type="checkbox"/>	Describe the abnormal situations most likely to occur and explain the short term corrective measures or long term preventive measures that should be implemented by the filer of the complaint or plant operator, according to the nature of the complaint	T Evaluating Complaints
7.1.4 Record any noteworthy information on the complaint processing form		
<input type="checkbox"/>	Provide a detailed, accurate, and legible listing of all noteworthy data in order to properly document the complaint	R Complaint processing form

R: Reference materials provided by the plant manager/apprentice; general apprenticeship documents from MENV

T: Training aids provided as part of earlier training

W: Work aids provided by the journeyman or trainer

(P6A) Confirmation of Skills Acquired

We, the undersigned, hereby certify that the Apprentice has mastered Module 7

“PROCESSING COMPLAINTS”

Signature of the Apprentice

Signature of the Journeyman

Date _____

Signature of the Employer _____

TABLES

SUMMARY TABLE (P6A)

Job Skill	STEPS					
<p>1. Take water samples according to the provisions of the Regulation</p>	<p>1.1 Take bacteriological and physicochemical samples according to the provisions of the Regulation</p>					
<p>2. Operate system for pumping drinking water into the distribution network</p>	<p>2.1 Conduct an inspection and verification tour of drinking water pumping facilities in the distribution network</p>					

SUMMARY TABLE (P6A)

Job Skill	STEPS					
<p>3. Operate one or more disinfection (rechlorination) system(s) using sodium or calcium hypochlorite and chlorine gas</p>	<p>3.1 Conduct an inspection tour of the sodium/calcium hypochlorite rechlorination area</p>	<p>3.2 Rechlorinate water using hypochlorites</p>	<p>3.3 Conduct inspection tour of the chlorine gas rechlorination area, if applicable</p>	<p>3.4 Rechlorinate water using chlorine gas (if applicable)</p>	<p>3.5 Monitor the rechlorination process in the distribution network</p>	<p>3.6 Ensure that all measuring and control instruments used in the disinfection process are working properly</p>
	<p>3.6 Verify that the health and safety equipment is working properly and conduct preventive maintenance</p>					

SUMMARY TABLE (P6A)

Job Skill	STEPS					
4. Operate the water supply system as a distribution network operator	4.1 Rinse the water supply system (if possible)	4.2 Conduct an inspection and verification tour of equipment in the water supply system	4.3 Plan work on the water supply system	4.4 Have the water supply system repaired and maintained (service connections, pipes, valves, fire hydrants, etc)	4.5 Put into service a new pipe to the existing network or a temporary network	
5. Operate building services systems	5.1 Control the operation of the available building services systems (electricity, heating, ventilation, compressed air)					
6. Manage stock	6.1 Take inventory and order the materials and products needed					
7. Process complaints	7.1 Follow up on consumer complaints					

(P6A) APPRENTICESHIP REPORT

Name of Apprentice:	Emploi-Québec File #:
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WORKPLACE APPRENTICESHIP PROGRAM

Module			Signature of Emploi-Québec Representative	Date	Agreement #
	To Acquire	To Be Assessed			
Taking Water Samples					
Pumping Drinking Water into the Distribution Network					
Disinfection (rechlorination) in the Distribution Network (if applicable)					
Operating the Water Supply System (Knowledge)					
Building Services Systems					
Stock Management					
Processing Complaints					

EMPLOYER		
Name		
Address		
City	Postal Code	Phone
Name of Journeyman		
Agreement	Start Date	End Date

EMPLOYER		
Name		
Address		
City	Postal Code	Phone
Name of Journeyman		
Agreement	Start Date	End Date