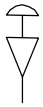
LEGEND


PUMP


PRESSURE GAUGE


GATE VALVE


CHECK VALVE

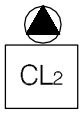

SOLENOID

#2 COMPONENT ID. No.
(SEE TABLE ON FOLLOWING PAGE)

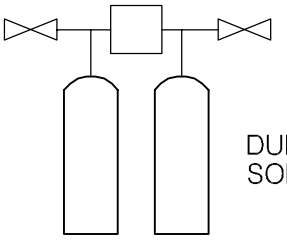
FLOW METER

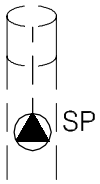
WATER FILTER
(CARTRIDGE TYPE)

PRESSURE TANK

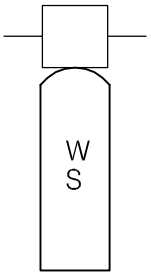


CHLORINE RESERVOIR AND
INJECTION PUMP


DUPLEX WATER
SOFTENER

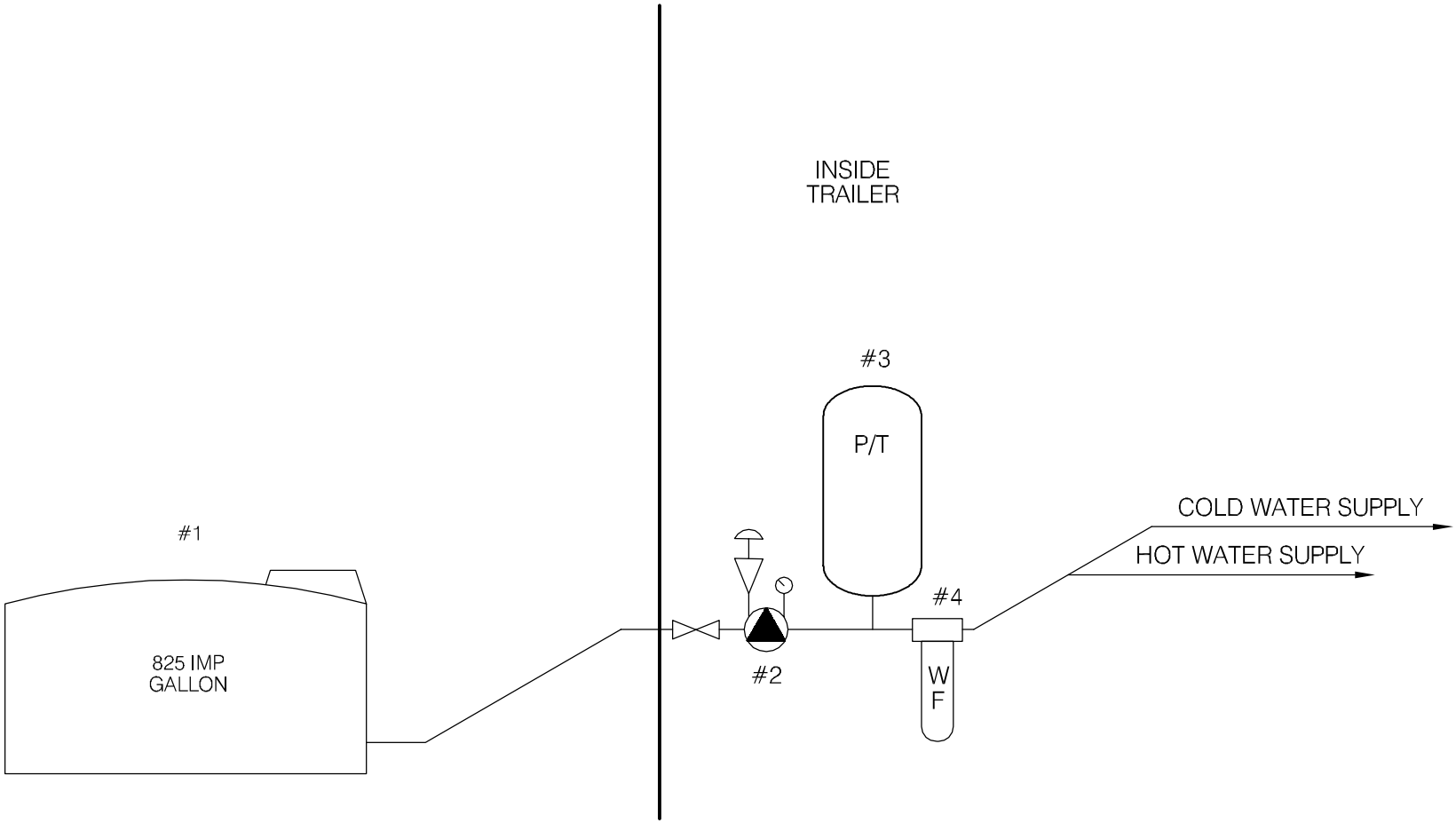


WELL WITH
SUBMERSIBLE PUMP



ACTIVATED
CARBON

EBA Engineering Consultants Ltd.			PROJECT	SMALL PUBLIC WATER SYSTEMS ASSESSMENT WESTERN REGION	
CLIENT Yukon Highways and Public Works Property Management Branch			TITLE	SCHEMATIC SYSTEM LEGEND	
DATE APRIL 2006	DWN. JSB	CHKD. RMM	FILE NO. 1260002		DRWG. LEGEND



SCHEMATIC PRODUCED BY BERT ALBISSER OF AQUA TECH SUPPLIES AND SERVICES LTD.

EBA Engineering Consultants Ltd.			PROJECT	SMALL PUBLIC WATER SYSTEMS ASSESSMENT NORTHERN REGION	
CLIENT Yukon Highways and Public Works Property Management Branch			TITLE	WATER SYSTEM DISTRIBUTION/TREATMENT SCHEMATIC SYSTEM ID.: 5636 DAY USE BUILDING - MAYO, YT.	
DATE SEPT. 2005	DWN. JSB	CHKD. RMM	FILE NO. 1260002.004		DWG.: FIGURE 5636-B

Z:\0201Drawings\1260002 Water Assessment YTG\004 - Northern Region\mayo\1260002004 Mayo Day Use Building_5636B Schematic.dwg, 4/5/2006 2:54:07 PM, Adobe PDF, jbuyck

Northern Region – Mayo Day Use Building
Building # 5636

DISTRIBUTION & TREATMENT SYSTEM DATA

Item	Description	Manufacturer	Model	Part No.	Serial No.	Size
1	STORAGE TANK	PEMBINA PLASTICS	825 IMP.			825 I. GALLONS
2	JET PUMP.	MONARCH	JKC-2			1/2 HP.
3	PRESSURE TANK	RED LION	JR-15			4.5 GALLON
4	INLINE FILTER	AMETEK	10" /3/4"			
5						
6						
7						
8						
9						
10						

Table 5636 - 2: Water Quality Results

SOURCE:	Building 5636 - Mayo ATB Day Use Building	GCDWQ Criteria		
Location/ Resident	Mayo			
Address				
Treatment	None			
Disinfection	None			
Source of Water	Water delivery			
Purpose of Sampling	Base Line			
Sample Location				
Date Sampled	N/A	**Lower**	**Upper Limit**	
Field Chemistry (EBA)		**AO**	**MAC**	**AO**
pH	8.31	6.5		8.5
TDS (ppm)	94			500
EC (uS/cm)	190			500
Temperature (°C)	15.1			
Free Available Chlorine	0.02			

Notes:

A. Guidelines indicated for hardness are not CDWQG, rather they are general aesthetic guidelines - exceedences are indicated in yellow highlighting.

Italics and underline indicates exceedence of proposed MAC (ie. arsenic)

Bold with Yellow highlighting indicates exceedence of CDWQG Aesthetic Objective (AO)

Bold Underline with Yellow highlighting indicates exceedence of CDWQG MAC

Results are expressed as milligrams per litre except for pH and Colour (CU) Conductivity (umhos/cm),Temperature (°C) and Turbidity (NTU)

< = Less than the detection limit indicated.

AO = Aesthetic Objective

MAC = Maximum Acceptable Concentration (Health Based)

eba

SMALL PUBLIC WATER SYSTEM ASSESSMENT

PART A - EBA Site Inspection

Inspector: Ryan Martin, Luke Lebel Date August 17, 2005

WELL ID #	Owner	Location Description
5636	YTG	Mayo ATB Day Use Building

1. Well Location and Potential Contaminant Sources

a. General location of well: (Community, Subdivision, etc.)
Mayo

b. Specific location: (Road or street, Building number, name of owner and/, legal description,
Mayo Airport

c. GPS location: N 7054867 E456503 elv 509m ±8m
of water storage tank

d Is there electric power? ☒ Yes ☐ No

e Is there outside water access? ☒ Yes ☐ No

f. Does the well system have:

☐ 15 or more service connections to a piped distribution system ? If so how many_____
Day Use Building → on water delivery

☐ 5 or more delivery sites on a trucked distribution system? If so how many_____

g. Nearest building, specify Water Storage Tank Located Outside Building

h. Distance from well to building _____

i. If there is an effluent disposal field, is its location known? ☒ Yes ☐ No

j. Distance from well to nearest point of known field: _____

k. Well location relative to field: ☐ upslope ☐ downslope ☐ lateral

l. Is there any part of a sewage disposal system(s)or other potential sources of pollution that may pose a health and safety risk within 30 m? ☐ Yes ☒ No

---

m. Is the well located within 300 m from a sewage lagoon or pit? ☐ Yes ☐ No n/a

n. Is the well located within 120 m from a solid waste site or dump, cemetery? ☐ Yes ☐ No n/a

o. Is the infrastructure protecting the wellhead, pumphouse, storage tank and/or water treatment plant designed and secured to prevent:

Unauthorized access by humans? ☐ Yes ☒ No Tank is unlocked, located outside
Entrance by animals? ☒ Yes ☐ No vermin proof fill. No vent

p. Is well site subject to flooding? ☐ Yes ☐ No n/a

q. Is the well site well drained? ☐ Yes ☐ No n/a

r. Is there a buried fuel tank on the property? ☐ Yes ☒ No unlikely

If yes, is it ☐ in use ☐ abandoned

Is the location known? ☐ Yes ☐ No
Distance from the well to known buried tank _____

s. Are there any other known contaminant sources on the property?

☐ Yes ☐ No Describe _____

If yes, specify the source: ☐ dump ☐ sewage lagoon ☐ cemetery ☐ other

Potential Source 1: Fire Retard Tanks; Distance from well to Potential Source 1: _____
Potential Source 2: AST; Distance from well to Potential Source 2: _____
Potential Source 3: chemical storage; Distance from well to Potential Source 3: _____
Potential Source 4: _____; Distance from well to Potential Source 4: _____

t. Are there other wells on this property? ☐ Yes ☒ No

How many? _____ ☐ in use ☐ abandoned ☐ require proper sealing

2. Well and Wellhead information:

a. When was well installed? Year n/a - water delivery Month _____

b. Type: ☐ drilled ☐ dug ☐ sand point ☐ other n/a

c. Is there a drillers log for the well: ☐ Yes ☐ No n/a

d. Is there a surface seal to 6 m ☐ Yes ☐ No ☐ unknown ☐ unlikely n/a

e. Surface casing: ☐ Yes Diameter n/a ☐ No

f. Well casing: Diameter n/a Material: ☐ steel ☐ plastic ☐ concrete

g. Depth of well: n/a ☐ measured (if possible) ☐ reported ☐ from log

h. Static water level below ground: n/a

☐ measured (if possible) ☐ reported ☐ from log ☐ flowing

i. (If granular) Is the well completed: ☐ open end casing ☐ with a well screen

☐ with slotted pipe ☐ unknown other n/a

j. (If bedrock) Does the well have a liner? ☐ yes ☐ No ☐ steel ☐ plastic

k. If there is a well screen: length n/a slot size(s) _____
Location of screen: from _____ to _____ from log reported

l. Is there a sump below the screen? ☐ Yes ☐ No n/a

m. Is the well head: ☐ in pumphouse ☐ in pit ☐ pitless adaptor ☐ in a building

☐ in a wooden enclosure other, describe Tank is located outside building

n. If the well head is located in a wooden enclosure,

i. Is the well head below grade? describe in detail n/a

ii. Are there signs of ponding on the enclosure(e.g. water stains, etc.)? ☐ Yes ☐ No n/a

iii. Is the wellhead enclosed by fiberglass insulations? ☐ Yes ☒ No

iv. Any evidence of rodents? Specify No

v. Does the well casing have a proper seal cap? ☐ Yes ☐ No

If no, describe condition n/a

3. Water Supplying This Well:

a. By definition is the water from a surface water source or under the direct influence of surface water?

☐ Yes ☐ No ☐ farther investigation required. n/a

If yes is there treatment or disinfection ☐ Yes ☒ No

Explain (filtration, disinfection etc…)

---

4. Aquifer Supplying This Well:

a. The aquifer is: ☐ bedrock ☐ granular sediment ☐ unknown n/a

b. Does water level and/or well capacity show seasonal fluctuation? ☐ Yes ☐ No n/a

5. Pump Installation:

a. Is the ~~well~~ System equipped with a pump? ☒ yes ☐ No

b. Type of pump: ☐ hand ☐ electric submersible ☒ jet

☐ shallow well centrifugal ☐ other, _____

c. Description: Manufacturer _____ Model _____

horsepower _____ capacity _____ voltage _____

d. Date installed: _____ By: _____

e. For submersible pump, depth of setting below surface _____

f. Drop pipe for submersible pump: ☐ steel ☐ plastic

g. Pump delivers water to: ☒ pressure tank ☐ elevated tank ☐ other

h. Are there automatic pump controls: ☒ Yes ☐ No

i. Is there provision for taking water samples before water reaches storage? ☐ Yes ☐ No n/a

j. Is there a water meter on the system? ☐ Yes ☒ No

k. Is the pump and piping protected from freezing? ☐ Yes ☒ No

If yes, describe: Seasonal facility

l. Comments on pump installation: _____

6. Conclusions

a. Comments on overall installation:

System is on water delivery

TDS 94 ppm
EC 190 µS
pH 8.31
Temp 15.1°C
FAC 0.02 mg/L

b. Recommendations: _____

PART B: EBA Site Inspection

Inspector: _____ Date _____

WELL ID #	Owner	Location Description
5636	YTG.	MAYO DAY USE BUILDING

6. Water Treatment

a. Is well water treated? ☐ Yes ☑ No; Type of treatment:

☐ chlorination ☐ iron and or manganese removal ☐ other _____

b. Is water entering plumbing or piped distribution system treated with chlorine or another treatment that is as effective as chlorine used to achieve disinfection throughout the system?

☐ Yes ☑ No If so how _____

c. If treated with chlorine, is the free residual chlorine concentration less than 0.2 mg/L

☐ Yes ☑ No _____ reading.

Tested at _____ (location)

d. Is testing for chlorine residual concentration done at the tap (eg. Kitchen faucet) or from representative points in a piped distribution system, including a point from tap at the end line

☐ Yes ☑ No If yes how often? _____

e. If the drinking water is being transported by water delivery truck does it have a minimum chlorine free residual of 0.4 mg/L at the time of fill. ☐ Yes ☑ No

7. Water Quality (observations):

a. Does the water stain plumbing? ☐ yes ☐ No ☑ slight ☐ severe

Type of stain: ☐ brown ☐ red ☐ black

b. Does the water contain sediment? ☐ Yes ☑ No ☐ occasional ☐ constant

c. Is there an unpleasant odour? ☐ Yes ☑ No ☐ H_2S ☐ Other _____

d. Is there an unpleasant taste? ☐ Yes ☑ No ☐ brackish ☐ Other _____

e. Is there a history of bad bacterial analyses? ☐ Yes ☐ No ?

f. Is there a chemical analysis? ☑ Yes ☐ No ☐ adequate ☐ incomplete
MAYO TOWN WATER

g. Is there analysis of trihalomethanes (THMs) where the water source is a surface water supply or a well under the direct influence of surface water? ☐ Yes ☑ No

h. Is the drinking water tested daily with an accurate reading chlorine test kit capable of reading in the range 0 to 3.5 mg/L of free chlorine residual in increments of 0.1mg/L? ☐ Yes ☑ No ☐ unknown

i. If yes is the test performed in accordance with manufactures directions? ☐ Yes ☑ No ☐ unknown

j. Is a record of the date, time, name of person performing the test and results of the drinking water sample kept? ☐ Yes ☑ No

TANK AND PIPING DETAILS

Tank Room

Is there a water tank? Yes No Details:

Where is it located?
Comments: OUTDOORS.

Is the room in which the water tank is located heated to maintain an optimum temperature of 4°C for stored water?
YES (NO)
Comments: _____

Are there windows in the add-on that may allow direct sunlight onto the water holding tank? (YES)
NO
Comments: POLY TANK OUT DOOR

Are there other heat sources near the tank? YES (NO)
Comments: _____

Is there waterproof flooring with a sealed base to contain spills? YES (NO)
Comments: _____

Overall Tank

What are the tank size and dimensions?

825 HORIZONTAL CYLINDRICAL 84" x 40" HIGH

What material is the tank constructed of? POLYETHYLEN

Is tank and associated piping constructed of safe materials (i.e. CSA approved and material that does not affect the taste of the water)? (YES) NO

Comments: EXPOSED TO DIRECT SUNLIGHT

Tank Inlet, Outlet and Lid

Is there adequate access on the tank for cleaning (i.e. min 15" access lid)? (YES) NO

Does the lid have a tight seal and is it watertight when closed? (YES) NO

Does the tank have an overflow or high level whistle? YES (NO)

Is the water tank drain accessible? YES (NO)

WATER TANK AND WATER QUALITY CONDITION

Are there signs of staining or biofouling? YES (NO)
Comments:

Is there any sediment or scum in bottom of tank? YES (NO)
Comments:

Is there any odour associated with the water or tank? YES (NO)

Have there been any bacteriological analyses conducted previously? YES (NO)

Does the tank appear that it has been cleaned recently? YES (NO)

Are the tanks easily assessed for the purpose of cleaning and disinfection? (YES) NO

8. Conclusions

a. Comments on overall installation:

THIS IS A TYPICAL OUTDOOR TEMPORARY CAMP SET UP.

b. Recommendations:

INSTALL DUPLEX INLINE FILTER 10 AND 1 MICRON @ 5 GPM NSF55 CERTIFIED UV SYSTEMS.

Photo 033: 5636 Day use area and garage.

Photo 029: 5636 Seasonal water holding tank.

Photo 190: 5636 Jet pump and pressure tank.

Photo 036: 5636 Potential well location to service day use area and crew quarters.