6.0 BUILDING 5672: PELLY CROSSING SWIMMING POOL

6.1 Description of Existing Water Supply System

Building 5672, the Pelly Crossing Swimming Pool, is currently serviced by a water supply system that delivers water from a well located in a pit below grade and approximately 3 m north of the building. A site plan is provided as Figure 5672-A in Appendix A6. The coordinates of the wellhead, as measured by a handheld GPS device, were recorded as:

- UTM ZONE 8
- Northing: 6966887
- Easting: 419787

The water system is not equipped with any treatment or disinfection. A schematic detailing the water system is provided as Figure 5672-B in Appendix A6. Photos of the well and water system are also included at the back of this appendix.

6.2 Description of Existing Wastewater Systems

The septic system could not be located during the water system assessment, but likely exists to the west of the building. Two potential septic clean-outs were observed near each corner of the west side of the building as indicated on Figure 5672-A. The exact type (in-ground disposal, or sewage eduction tank) and location of the septic system relative to the well should be confirmed.

6.3 Water Quality Results

6.3.1 Water Quality Results from Previous Sampling

Bacteriological

One sample was collected from the Pelly Crossing Swimming Pool water system in June 2005 and was tested for total coliform and *E. coli* by Yukon Environmental Health Services using the presence/absence test method. Coliform bacteria and *E. coli* were reported as absent as indicated in Table 5672-1 in Appendix A6.

Potability

YTG representatives collected a water sample from the Pelly Crossing Swimming Pool water system on June 8, 2005. The sample was submitted to ALS Environmental in Vancouver for potability analyses, and results are summarized in Table 5672-2 in Appendix A6. EBA reviewed the analytical results for comparison with Canadian Drinking Water Quality Guidelines (CDWQG), to observe general water quality, to identify and recommend additional sampling and analytical, and to identify potential indicators of contamination. Details are summarized below:

- At 4.07 NTU, turbidity was above of the CDWQG MAC of 1.0 NTU;
- At 0.945 mg/L, the reported iron concentration was above of the CDWQG AO of 0.3 mg/L;
- At 0.5 mg/L, the manganese concentration was above the CDWQG AO of 0.05 mg/L;
- The water quality results indicated that all other health based and aesthetic objectives were met for the parameters analyzed;
- The water quality results indicated that the groundwater is calcium bicarbonate type with a pH of approximately 8.2; and,
- The hardness (as $CaCO_3$) was 181 mg/L, and is considered very hard.

6.3.2 Identification of Additional Analytical Testing Required

Additional analytical for the Pelly Crossing Swimming Pool that was identified to be included during the water system assessments is detailed below:

- Turbidity to confirm the exceedence of CDWQG MAC;
- Total and dissolved iron and manganese to determine if exceedences could be attributed to the elevated turbidity;
- UV absorbance and UV transmissivity, and tannins and lignin, to determine potential for UV treatment as a disinfection option for this water system;
- Total organic carbon (TOC) to aid in water treatment system design;
- Measurements in the field for total dissolved solids, conductivity, pH, and temperature.

Additional Analytical Results

A water sample was obtained by EBA during the water system assessment on August 23, 2005, and was submitted to ALS Environmental in Vancouver for analysis of selected additional parameters. Results are summarized in Table 3440-2 in Appendix A6 and laboratory reports are included in Appendix B. Details are as follows:

- At 1.29 NTU, the turbidity of the water, though it was lower than the previous result, was still above the CDWQG MAC of 1.0;
- Total iron and dissolved iron concentrations at 0.748 and 0.104 mg/L respectively indicate that most of the iron can be attributed to suspended solids, however, the concentration of dissolved iron is also higher than the aesthetic objective;
- Total and dissolved manganese concentrations at 0.452 and 0.437 mg/L respectively indicate that the elevated manganese concentration is not a result of elevated turbidity; and
- The results indicate that all other health based and aesthetic objectives were met for the parameters analyzed.

6.3.3 Indicators of Potential Contamination

Chloride, nitrate and nitrite concentrations can indicate impacts from surface water sources or septic waste. Chloride concentrations were low and are within the normal background ranges for groundwater in the area. Nitrate and nitrite concentrations for this sample were also low and within the normal background range for this area. These water quality results do not suggest that the groundwater is under the influence of anthropogenic sources of nutrients or septic wastes.

6.4 Conceptual Hydrogeology

A driller's well log was not available for review for this well. Most wells in the Pelly Crossing Main Village area are completed at depths of 10 m to 17 m below ground within an unconfined sand and gravel aquifer consisting of floodplain alluvial sand and gravel deposits. The relatively shallow depth of the aquifer combined with the absence of confining material leaves this aquifer vulnerable to

surficial sources of contamination. The expected direction of groundwater flow is north to northwesterly (EBA 2004).

6.5 Potential Contaminant Sources

With the exception of an above ground storage tank located in a building to the north of the pool, there were no potential contaminant sources identified for this site. The septic system serving this building, however, could not be located during the water system assessment, but likely exists somewhere on the property and may be within 30 m of the well.

6.5.1 Spills Records and Contaminated Sites Search Results

It was reported by Environment Canada that an overturned residential fuel tank owned by Selkirk First Nation was overturned and approximately 2000 L of furnace oil was spilled. Removal of contaminated soil was recommended, however, it is unclear whether this was completed. The spill site is located approximately 500 m upgradient of the subject well, and is considered to be a low risk.

Another reported spill of an unknown quantity occurred in 1998 due to an open valve on the heating fuel tank located at the Eliza Van Bibber School. Removal of contaminated soil was recommended by Environment Canada, however it is unknown if this was completed. Since the spill location is inferred to be downgradient from the well it is unlikely that this would impact the water quality at this well.

6.6 Identified Water System Deficiencies and Associated Risk

6.6.1 High and Medium Risk Deficiencies

High and medium risk deficiencies for this water system identified during this study include:

- Well head construction is inadequate (located in a pit below grade, wellhead enclosure is damaged);
- There is no surface sanitary seal (grout or bentonite seal as required by the Canadian Groundwater Association's Guidelines for Water Well Construction);

- There is no driller's log available to review well construction and lithology;
- The septic system that serves the swimming pool was not located during the water system assessment, but is likely on the property and may be within 30 m of the well;
- There have been CDWQG MAC exceedences of turbidity;
- By definition of the Draft Yukon GUDI Assessment Guideline, the well is potentially under the direct influence of surface water because it is a vulnerable type (unconfined aquifer) and does not meet the requirements of the Guidelines for Water Well Construction; and,
- There is no treatment or disinfection system.

6.6.2 Low Risk Deficiencies

- Iron and manganese concentrations have been reported above CDWQG aesthetic objectives; and,
- The water system and plumbing requires upgrading.

6.7 Mitigative Options for Deficiencies

Mitigative options were developed to address the deficiencies identified in the previous section. Deficiencies are categorized by recommended level of priority (with Priority 1 being most critical). Recommendations are made in consideration of the fact that a piped distribtuion system with water sourced from a community well located in Willow Creek area of Pelly Crossing will likely be installed by the Selkirk First Nation in 2006 or 2007. In the interim, however, some upgrade options are presented to mitigate existing risk. Both options involve interim use of the existing well with disinfection treatment and interim well upgrading. Option 1 prosposes UV disinfection while Option 2 proposes proportional feed chlorine injection with retention tanks and other appurtenances. Each option is outlined in the following sections.

6.7.1 Priority 1

An attempt should be made to locate the well log for this well, and to identify the location and construction of the septic system.

It is recommended that the pool be connected to the community piped water system as soon as it becomes available. As mentioned previously, however, it is

considered prudent that interim upgrades be completed to ensure a safe water supply in the interim. These recommended interim upgrades are summarized below:

- The casing should be extended to at least 500 mm above the base of the well pit, and a localized near surface bentonite seal should be installed immediately around the wellhead.
- The well and water system should be super-chlorinated.

In addition to this interim upgrade, disinfection is also recommended. Two disinfection options are presented below:

- *Option 1:* Disinfection treatment consisting of filtration to 1 micron (absolute), and a UV system that is NSF/ANSI certified (or equivalent) could be installed. Pretreatment consisting of a duplex water softener would likely be necessary for optimum UV performance.
- *Option 2*: A proportional feed chlorine injection system with retention tanks and necessary appurtenances (chlorine reservoir, drip tray, ventilation, flow meter) could be installed. The benefit of the chlorine system is that it could be used for back-up to the pool chlorinator once the pool is connected to the proposed community piped system.

These are conceptual design recommendations based on the information available for planning and budgeting purposes. Engineering input will be required for final system specifications.

6.7.2 Priority 2

The recommended solution to mitigate long-term risk (Priority 2) to the Pelly Crossing Pool water system would be to connect to the proposed piped distribution system as soon as this system is available. The community well that will be the source of water for the piped distribution system is constructed in accordance with applicable guidelines; offers better wellhead protection; and is completed within a deeper aquifer that is less vulnerable to surficial sources of contamination. Furthermore, the community well and piped distribution system will be operated and maintained by others as a Public Drinking Water Supply with chlorine disinfection and routine monitoring and sampling as required by regulation.

We understand that there would be a monthly service fee charged by the Selkirk First Nation for providing, operating and maintaining the piped water supply.

6.7.3 Priority 3

All deficiencies will have been mitigated by Priority 1 and 2 upgrades.

6.8 Cost Estimates for Mitigative Options

Engineering costs for mitigative options are estimated to be 20% of construction costs, and would include inspection and completion reporting. The costs for materials and labour (not including engineering) are provided in the sections below. An additional contingency allowance of 20% is suggested for budgetary purposes.

6.8.1 Priority 1

The estimated costs for the recommended Priority 1 upgrades are detailed below:

- It would cost approximately **$800** for materials and labour to complete the recommended interim wellhead upgrades and well and water system superchlorination.

Disinfection options are presented below:

- *Option 1*: UV disinfection treatment (filtration and UV) with pretreatment (duplex softener to remove iron and manganese) would cost approximately **$7,000** including materials and labour.
- *Option 2:* A proportional feed chlorination system with retention tanks and other appurtenances would cost approximately **$8,000** installed.

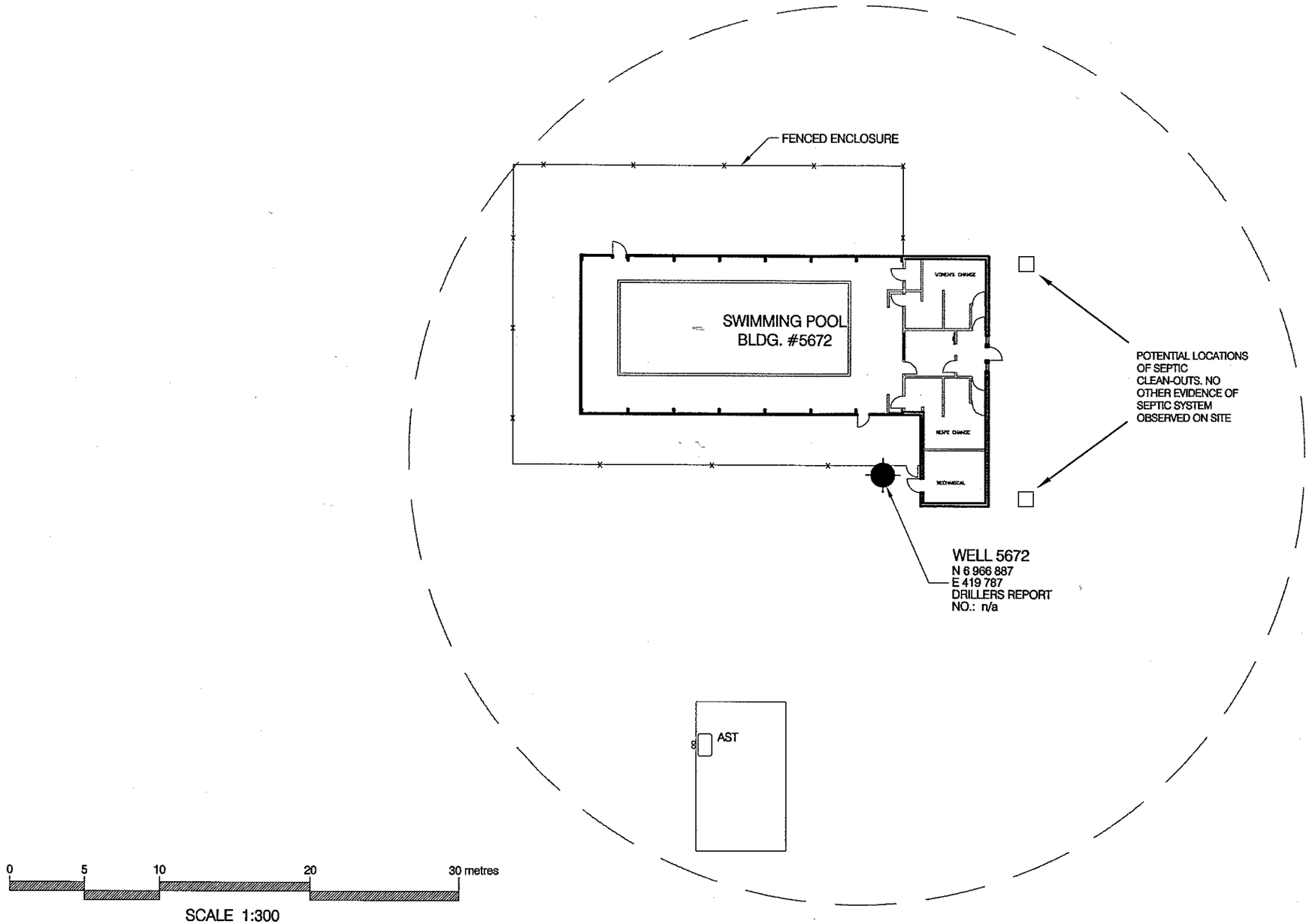
Therefore, it would cost between **$7,800** and **$8,800** for recommended Priority 1 upgrades for this water system.

6.8.2 Priority 2

It would cost approximately **$4,000** for materials and labour to connect this water system to a community water main, assuming a 30 m service connection (freeze-protected underground service piping) and some inside plumbing modifications.

6.8.3 Priority 3

The estimated cost to decommission the existing well once it is no longer needed, would be approximately **$1000**.



NOTES:

1. UTM COORDINATES OBTAINED WITH A HAND HELD GPS USING NAD83 SYSTEM AND ARE CONSIDERED TO BE ACCURATE TO 10.0 m, APPROXIMATELY.

30 m RADIUS FROM WATER WELL FOR CONSIDERATION OF PROXIMITY TO POTENTIAL CONTAMINANT SOURCES.

No.	DESCRIPTION	DATE	APPROVED
0	ISSUED FOR CLIENT REVIEW	DD/MM/YY	XXX

REVISION

EBA Engineering Consultants Ltd.

DESIGNED BY:	R. MARTIN
DRAWN BY:	J. BUYCK
DATE:	SEPT. 2005
SCALE:	AS SHOWN
PROJECT No.:	1260002.004
ACAD FILENAME:	004-NORTHERN REGION

CLIENT: Yukon — Highways and Public Works, Property Management Branch

SMALL PUBLIC WATER SYSTEMS ASSESSMENT
NORTHERN REGION

GOVERNMENT OF YUKON
HIGHWAYS & PUBLIC WORKS

PELLY SWIMMING POOL
BUILDING # 5672
SITE LOCATION DIAGRAM
WELL ID: 5672

REVISION ISSUE: 0

FIGURE No.: FIGURE 5672-A

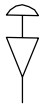
LEGEND


PUMP


PRESSURE GAUGE


GATE VALVE


CHECK VALVE

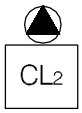

SOLENOID

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

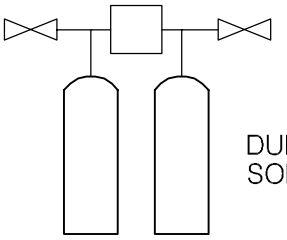
FLOW METER

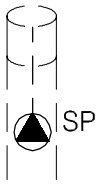
WATER FILTER
(CARTRIDGE TYPE)

PRESSURE TANK

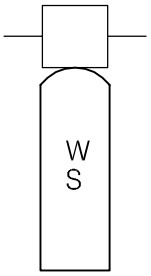


CHLORINE RESERVOIR AND
INJECTION PUMP


DUPLEX WATER
SOFTENER

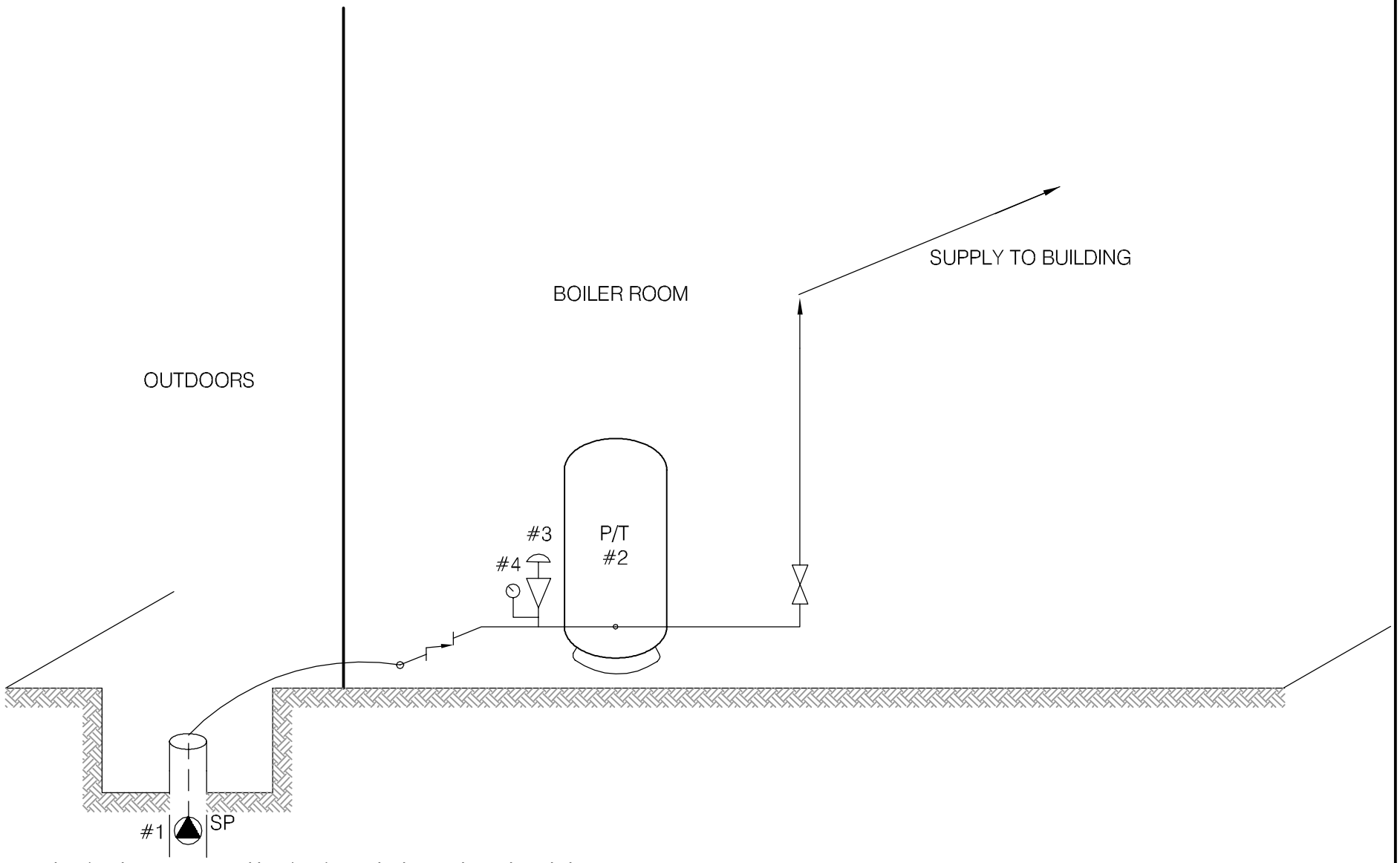


WELL WITH
SUBMERSIBLE PUMP



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.: 5672 PELLY CROSSING SWIMMING POOL	
DATE SEPT. 2005	DWN. JSB	CHKD. RMM	FILE NO. 1260002.004		DWG.: FIGURE 5672-B

Z:\0201Drawings\1260002 Water Assessment YTG\004 - Northern Region\pelly\1260002004 Pelly Swim Pool_5672B Schematic.dwg, 4/5/2006 3:09:20 PM, Adobe PDF, jbuyck

Northern Region – Pelly Crossing Swimming Pool
Building # 5672

PHOTO 102-0208 **DISTRIBUTION & TREATMENT SYSTEM DATA**

Item	Description	Manufacturer	Model	Part No.	Serial No.	Size
1	SUB PUMP	N/A	1½HP-4"			
2	PRESSURE TANK	MONARCH	M252			80 GALLON
3	PRESSURE SWITCH	SQUARE D	FSG-2			2HP- 1/4" FIPT
4	PRESSURE GAUGE	MARSH	0-100			2½" - 1/4 FIPT
5						
6						
7						
8						
9						
10						

TABLE 5672 - 1: SUMMARY OF BACTERIOLOGICAL RESULTS

Building #	Building Name	Number of Sampling Events	Time Period over which Sampling was Done	Any Positive Total Coliform Results? (yes or no)	Fraction of Positive Total Coliform Results vs. Total Sampling Events	Any positive E.Coli results? (yes or no)	Most Recent Sampling Event Available for EBA Review	Is Most Recent Result Positive?
5672	Pelly Crossing Swimming Pool	1	5-Jun	no	0/1	no	9-Jun-05	no

Table 5672 - 2: Water Quality Results

SOURCE:	Building 5672 - Swimming Pool		GCDWQ Criteria		
Location/ Resident	Pelly Crossing				
Address					
Treatment	None				
Disinfection	None				
Source of Water	On-site well				
Purpose of Sampling	Base Line	Additional Sampling			
Sample Location					
Date Sampled	8-Jun-05	23-Aug-05	**Lower**	**Upper Limit**	
Physical Tests *(ALS)*			**AO**	**MAC**	**AO**
Colour (CU)	6.4				15
Conductivity (uS/cm)	405				
Total Dissolved Solids	225				500
Hardness CaCO3	181		AO >200 = poor, > 500 unacceptable[A]		
pH	8.2		6.5		8.5
Turbidity (NTU)	**4.07**	**1.29**		1	5
UV Absorbance		0.112			
% UV Transmittance		81.0			
Dissolved Anions *(ALS)*					
Alkalinity-Total CaCO3	183				
Chloride Cl	0.69				250
Fluoride F	0.117			1.5	
Silicate SiO4					
Sulphate SO4	29.1				500
Nitrate Nitrogen N	<0.10			10	
Nitrite Nitrogen N	<0.10			1	
Ammonia Nitrogen N					
Total Phosphate PO4					
Total Metals *(ALS)*					
Aluminum T-Al	<0.010			0.1	
Antimony T-Sb	<0.00050			0.006	
Arsenic T-As	0.0014			0.025	
Barium T-Ba	0.104			1	
Boron T-B	<0.10			5	
Cadmium T-Cd	<0.00020			0.005	
Calcium T-Ca	51.8				
Chromium T-Cr	<0.0020			0.05	
Copper T-Cu	0.019			1	
Iron T-Fe	**0.945**	**0.748**			0.3
Lead T-Pb	0.0023			0.01	
Magnesium T-Mg	12.5				
Manganese T-Mn	**0.500**	**0.452**			0.05
Mercury T-Hg	<0.00020			0.001	
Potassium T-K	2.49				
Selenium T-Se	<0.0010			0.01	
Sodium T-Na	5.1				200
Uranium T-U	0.00063			0.02	
Vanadium T-V					
Zinc T-Zn	0.207				5
Dissolved Metals					
Iron D-Fe		0.104			0.3
Manganese D-Mn		**0.437**			0.05
Organic Parameters					
Tannin and Lignin		0.32			
Total Organic Carbon C		4.87			
Field Chemistry (EBA)					
pH		7.84	6.5		8.5
TDS (ppm)		182			500
EC (uS/cm)		364			
Temperature (°C)		22.3			
Free Available Chlorine					

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: KSJ / RMM Date Aug. 23/05

WELL ID #	Owner	Location Description
5672	YTG	Pelly Crossing - Swimming Pool

1. Well Location and Potential Contaminant Sources

a. General location of well: (Community, Subdivision, etc.)
Pelly Crossing 462 Klondike Hwy.

b. Specific location: (Road or street, Building number, name of owner and/, legal description,
Swimming Pool beside Eliza Van Bibber School

c. GPS location: 08 E 419787 N 6966887 ±5m
elev. 477m.

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 No

☐ 5 or more delivery sites on a trucked distribution system? If so how many No

g. Nearest building, specify Swimming Pool

h. Distance from well to building 3.0m

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

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 Entrance by animals? ☐ Yes ☒ No

p. Is well site subject to flooding? ☐ Yes ☒ No

q. Is the well site well drained? ☒ Yes ☐ No graded away from w.h.

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

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: AST 1 ; Distance from well to Potential Source 1: 17m (inside buildings)

Potential Source 2: _____ ; Distance from well to Potential Source 2: _____

Potential Source 3: _____ ; 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 Month N/A

b. Type: ☒ drilled ☐ dug ☐ sand point ☐ other _____

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

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

e. Surface casing: ☐ Yes Diameter No ☐ No

f. Well casing: Diameter 6" Material: ☒ steel ☐ plastic ☐ concrete

g. Depth of well: unk ☐ measured (if possible) ☐ reported ☐ from log

h. Static water level below ground: _____

☐ 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 _____

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

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

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

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

☒ in a wooden enclosure other, describe PWF below ground.

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

i. Is the well head below grade? describe in detail Yes.

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

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 split gasket cap.

3. Water Supplying This Well:

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

no surface seal ☒ Yes ☐ No ☐ farther investigation required.

If yes is there treatment or disinfection ☐ Yes ☐ No

Explain (filtration, disinfection etc...) N/A

---

4. Aquifer Supplying This Well:

a. The aquifer is: ☐ bedrock ☐ granular sediment ☒ unknown no log.

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

5. Pump Installation:

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

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

☐ shallow well centrifugal ☐ other, _____

c. Description: Manufacturer _____ Model _____

horsepower 1½ 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

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: _____

l. Comments on pump installation: _____

_____

6. Conclusions

a. Comments on overall installation:

_____

_____

_____

_____

_____

_____

_____

b.Recommendations: _____

_____

_____

_____

_____

_____

_____

PART B: EBA Site Inspection

Inspector: BERT ALBISSER Date AUG. 23/05

WELL ID #	Owner	Location Description
S672	YTG	SWIMMING POOL, PELLY CROSSING

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

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: Pressure Tank

Where is it located?
Comments: Boiler Room

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: _____

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?

_____

What material is the tank constructed of? _____

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: _____

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 INSTALLATION REQUIRES UPGRADING. THE TEMPORARY LINE IS EXPOSED ABOVE GROUND

b. Recommendations:

REPAIR PIPING SYSTEM. INSTALL WATER TREATMENT AS REQUIRED BY WATER ANALYSIS.
INSTALL PROPORTIONAL CHLORINATION SYSTEM

Environment Canada Environnement Canada

Enforcement and Emergencies Section
91782 Alaska Highway, Whitehorse, YT Y1A 5B7
PH: 867.667.3400 FAX: 867.667.7962

Spill Report Information

Spill #	8621
Jurisdiction	Yukon
Community	Pelly Crossing
Address	
Highway	
Milepost	
Feature	Pelly Crossing
Location and Cause	overturned home heating fuel storage tank - garbage truck backed into supporting stand
Latitude	62.819543
Longitude	-136.569408
Incident Date	12/31/1986 2:00:00 PM
Lead Agency	Environment Canada - Environmental Protection Service
Other Agency	RCMP
Company(s)	Selkirk Indian Band
Amount	1890
Units	Litres
Quantity	Estimate
Release Description	Spilled
Additional Quanitit	
Concentration	
Concentration Unit	
Phase	Liquid
Major Contaminant	Furnace Oil
2nd Contaminant	
3rd Contaminant	
4th Contaminant	
Outcome	fuel spilled onto frozen ground and snow/ice cover - fuel was flushed with water and dispersed over a wider area - band advised to remove cont snow

Environment Canada Environnement Canada

Enforcement and Emergencies Section
91782 Alaska Highway, Whitehorse, YT Y1A 5B7
PH: 867.667.3400 FAX: 867.667.7962

Spill Report Information

Spill #	9840
Jurisdiction	Yukon
Community	Pelly Crossing
Address	
Highway	
Milepost	
Feature	Pelly Crossing
Location and Cause	Pelly Crossing School - valve opened intentionally on heating fuel tank - tank drained
Latitude	62.8181
Longitude	-136.5665
Incident Date	9/11/1998
Lead Agency	Yukon Government - Renewable Resources
Other Agency	
Company(s)	
Amount	
Units	
Quantity	Unknown
Release Description	
Additional Quanitit	
Concentration	
Concentration Unit	
Phase	Liquid
Major Contaminant	Furnace Oil
2nd Contaminant	
3rd Contaminant	
4th Contaminant	
Outcome	spill to ground - near community well - soil excavated - EC suggested taking contaminated soil to dump and spreading out on tarps - no further information on file

Photo 209: 5672 Pelly Crossing swimming pool. (northeast)

Photo 209: 5672 Well enclosure and wellhead.

Photo 208: 5672 Water system. (pump controls, pressure tank)

Photo 214: 5672 Potential septic clean out?