

16.0 BUILDING 3201: BURWASH LANDING AIRPORT BUILDING

16.1 Background and Description of Existing Water Supply System

Building 3201, the Burwash Landing Airport Building, is currently served by a water supply system that delivers water from a 10.5 m deep well. The well is located outside in a wooden enclosure adjacent to the airport building. At the time of the assessment, the well was not equipped with a proper watertight and vermin-proof cap. The well location and other details about the surrounding area are provided in Figure 3201-A in Appendix A16. The coordinates of the wellhead, as measured by a handheld GPS device, were recorded as:

- UTM ZONE 7
- Northing: 6805564
- Easting: 605217

There is no treatment or disinfection system for the water supplying this system. A schematic detailing the well water supply system is provided as Figure 3201-B in Appendix A16.

16.2 Description of Existing Wastewater Systems

The septic tank that serves this building is located east of the building approximately 23 m southeast of the well. Septic effluent is discharged to the southeast of the tank approximately 40 m from the well. A site plan showing the septic system is given by Figure 3201-A in Appendix A16.

Reportedly the former septic system consisted of a septic holding tank within the basement of the building. The tank reportedly discharged through a pipe across the existing driveway. According to Nick Barnett, PMA, the sewer discharge pipe was found to be broken and leaking at a location beneath the driveway (Personal Comm., Nick Barnett).

16.3 Water Quality Results

16.3.1 Water Quality Results from Previous Sampling

Bacteriological

Eleven samples were collected from the Burwash Landing Airport building water system between September 2004 and June 2005 and were tested for total coliform and *E. coli* by Yukon Environmental Health Services using the presence/absence test method. Results are

tabulated in Table 3201-1 in Appendix A16. Two out of the eleven samples reported positive results for total coliform bacteria.

Reportedly, an additional water sample collected from the system on July 14th, 2005 also tested positive for Total Coliform Bacteria (Personal Comm., Nick Barnett). We understand that this system is currently under a boil water advisory, and signs are posted.

Potability

Water samples were previously collected from the Burwash Landing Airport Building water system on September 21, 2004 and June 15, 2005. The samples were submitted to Northwest Labs in Surrey, BC and ALS Environmental in Vancouver, BC for potability analyses. The results of these analyses are summarized in Table 3201-2 in Appendix A16. EBA reviewed the analytical results to compare them with the Canadian Drinking Water Quality Guidelines (CDWQG) to observe general water quality, identify and recommend additional sampling and analytical, and to identify indicators of potential contamination as follows:

- During the first sampling event the copper concentration was 1.12 mg/L, which is in exceedence of the CDWQG MAC of 1.0 mg/L. The copper concentration during the second sampling event was 0.793 mg/L, which, although is not in exceedence of the CDWQG MAC, is elevated;
- The water quality results indicated that all other health based and aesthetic objectives were met for the parameters analyzed;
- Chloride and nitrate concentrations, although were not in exceedence of CDWQG aesthetic objectives, were found to be elevated and may indicate influence by surfacewater or septic sources;
- The water quality results indicated that the groundwater from which this system receives its water supply is a calcium bicarbonate type water; and,
- The hardness (as CaCO₃) was 334 mg/L during the first sampling event and 329 mg/L during the second sampling event, and is considered very hard.

16.3.2 Identification of Additional Analytical Testing Required

Additional analytical for the Burwash Landing Airport Building that was identified to be included during the water system assessments is detailed below:

- UV absorbance and UV transmissivity, as well as tannins and lignin, to determine potential for UV treatment as a disinfection option for this water system;

- Total organic carbon (TOC);
- As the copper concentration had previously exceeded the CDWQG MAC, samples were taken for total and dissolved copper;
- Since there was evidence of elevated chloride and nitrate, samples were taken to analyze for nitrate, nitrite, chloride, and ammonia;
- Extractable Petroleum Hydrocarbons (EPH) to determine if there are any signs of hydrocarbon contamination; and,
- Measurements in the field for total dissolved solids, conductivity, pH, and temperature.

Additional Analytical Results

A water sample was obtained during the water system assessment on July 28, 2005, and was submitted to ALS Environmental in Vancouver, BC for analysis. These results are summarized in Table 3201-2 in Appendix A16 and the laboratory reports are included in Appendix B. Details are:

- Additional analytical sampling reported that the nitrate concentration was elevated with respect to expected background concentrations for the Burwash Landing area;
- The concentration of total copper in the water was reported to have been 0.645 mg/L, and the reported concentration of dissolved copper was 0.647 mg/L. Although the copper concentration was not in exceedence of the CDWQG MAC of 1.0 mg/L, it was elevated and very close to the MAC; and,
- The EPH screening did not indicate any petroleum hydrocarbons above detection limits.

16.3.3 Indicators of Potential Contamination

Chloride, nitrate and nitrite concentrations can indicate impacts from surfacewater sources or septic waste. Nitrate concentrations for this sample were reported in three independent sampling events to be elevated above expected background concentrations for the Burwash area. Reported nitrate concentrations are not likely within the normal background range for this area. There were also two bacteriological results from between September 2004 and June 2005 that had reportedly tested positive for total coliform. Chloride concentrations were slightly elevated, in the range of 5 mg/L for the three sampling events, and are likely above background chloride concentrations for the region. Considering that water quality results show elevated nitrates and chlorides, and also positive total coliform results, indicators of potential contamination would suggest that the aquifer from which the groundwater is obtained for the Burwash Landing Airport Building may be under the influence of surfacewater sources or septic wastes.

The closest point of the existing septic field is approximately 40 m downgradient from the well, and although the septic tank and sewer service lines are within 30 m of the well, it is not likely that this is the cause of high nutrients in the water system. One potential cause of the elevated nitrates and chlorides is the poor surface completion of the well. The well is located in a wooden enclosure containing fiberglass insulation. This type of enclosure is especially subject to inhabitation by rodents. At the time of the water system assessment there were mouse feces and other evidence of rodents in the wellhead enclosure. The well is also equipped with a jet pump rather than a submersible pump. Because of the depth of the well it was required that two drop pipes be installed as opposed to only one. Having two drop-pipes in the well makes it difficult to find a proper double-holed well cap to install on the well casing, and likely due to this, there was no well cap present. Because the well is open without a cap on the casing, and because the wellhead enclosure is constructed in a manner such that it is appealing to rodents for habitation, it is likely that the well is subject to animals and animal feces falling directly into the well. It is possible that the elevated nitrate and chloride concentration, as well as the positive bacteriological results for total coliform, is being caused by fecal matter and/or decaying rodent carcasses in the well.

Another potential cause of elevated chloride and nitrate may be resulting from the former leak of the sewer discharge pipe. We understand that this leak was repaired in 1989 and a new in-ground sewage disposal system was installed.

16.4 Conceptual Hydrogeology

There is no log available for this well. Most wells in the Burwash area are completed in a 30 m to 50 m deep confined aquifer. The general lithology of the area indicates 30 m to 50 m of fine grained sediments overlying the aquifer, discontinuous permafrost has also been identified. The well is completed at a depth of 10.51 m with a static water level 8.55 m below grade. Unlike most wells in the Burwash area, this well is most likely completed in an unconfined aquifer located in permeable sediments interbedded within the fine grained, surficial material. The shallow depth of the aquifer and probable lack of a confining layer make it somewhat susceptible to surficial sources of contamination. Groundwater flow direction in the vicinity is likely north towards Kluane Lake.

16.5 Potential Contaminant Sources

Potential contaminant sources from observations during the site investigation are compiled in field notes located in Appendix A16. Photos of potential contaminant sources are also provided in Appendix A16.

Potential contaminant sources within 30 m of the wellhead include:

- One above ground fuel storage tank (AST); and,
- An abandoned well located beside the existing well.

In addition, there is a septic tank located approximately 23 m away from the wellhead, a septic field is located at 40 m. There is also a bulk fuel storage area located approximately 80 m southeast and crossgradient from the well.

16.5.1 Spills Records and Contaminated Sites Search Results

The Government of Yukon Environmental Programs Branch and Environment Canada Environmental Protection Branch did not identify any recorded spill events or contaminated sites issues for this site or neighbouring sites.

16.6 Identified Water System Deficiencies and Associated Risk

16.6.1 High and Medium Risk Deficiencies

- Poor surface completion of the well (located in a wooden enclosure with fiberglass insulation, wellhead is open, subject to access by rodents and rodent feces, wellhead is at grade). Note that the wellhead was temporarily sealed with plastic and tape, however, this is not considered to be an adequate long-term solution;
- There is no surface sanitary seal;
- 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), has a production zone less than 15 m below grade, and does not meet the requirements of the Guidelines for Water Well Construction;
- There are at least three bacteriological results that reported positive total coliform within the past year;
- Water quality results indicated elevated (above expected background concentrations) nitrates and chlorides, suggesting that there may be impact of this shallow aquifer from septic or surface sources of contamination;

- There is a previous exceedence of the CDWQG MAC for copper. Most recent result is not above MAC, but is elevated above expected background concentrations;
- Well is located within 30 m of potential sources of contamination, including an above ground fuel storage tank at 8 m and an abandoned well at 1 m from the current well;
- The well is a shallow well and is likely completed in an unconfined aquifer that is susceptible to surface sources of contamination; and,
- There is no treatment or disinfection.

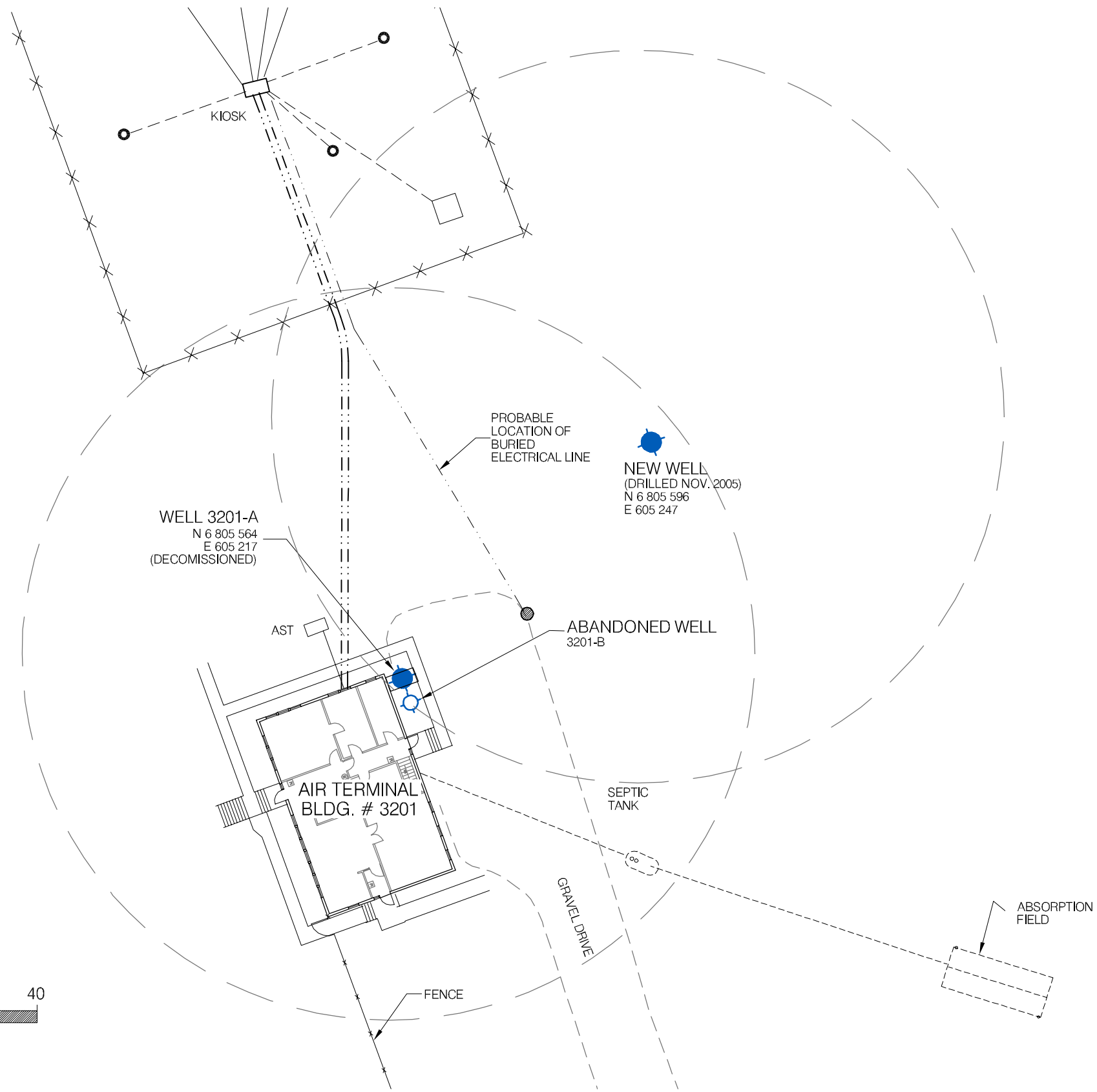
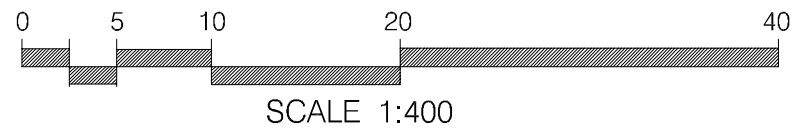
16.6.2 Low Risk Deficiencies

- There are no low-risk deficiencies associated with this site. All deficiencies are considered either high or medium risk.


16.7 Mitigative Options for Deficiencies

Following the high-risk deficiencies identified by EBA at the time of the water system assessment, PMA retained EBA to coordinate the drilling, construction and testing of a new well to serve the Burwash Landing Airport Building. The construction of the well is documented in a report to PMA entitled “Well Completion Report- Burwash Landing Airport Terminal Building” (EBA, 2005). Included in this report are recommendations pertinent to maintaining the safety of the new water supply well. All deficiencies presented in the above report were addressed through the drilling of a new well, and through decommissioning of the old wells. Therefore, mitigative options and associated costs to address former deficiencies have not been included in this final report.

The new well is currently temporarily connected with above ground piping. Once the ground has thawed, it would be prudent to re-plumb the well and install piping with adequate freeze-protection below grade. It is estimated that the cost to complete the well hook-up will be in the order of **\$5,000**. It is also recommended that an NSF/ANSI approved UV disinfection system be installed (Priority 2) in keeping with the multi barrier approach. This system would cost in the order of **\$2,200** installed.



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.
 BUILDING STRUCTURES RELATIVE TO PROPERTY LINES ARE APPROXIMATE ONLY.

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: AUG. 2005
 SCALE: AS SHOWN
 PROJECT No.: 1260002.003
 ACAD FILENAME: 003-WESTERN REGION

CLIENT:

Yukon
 Highways and Public Works
 Property Management Branch

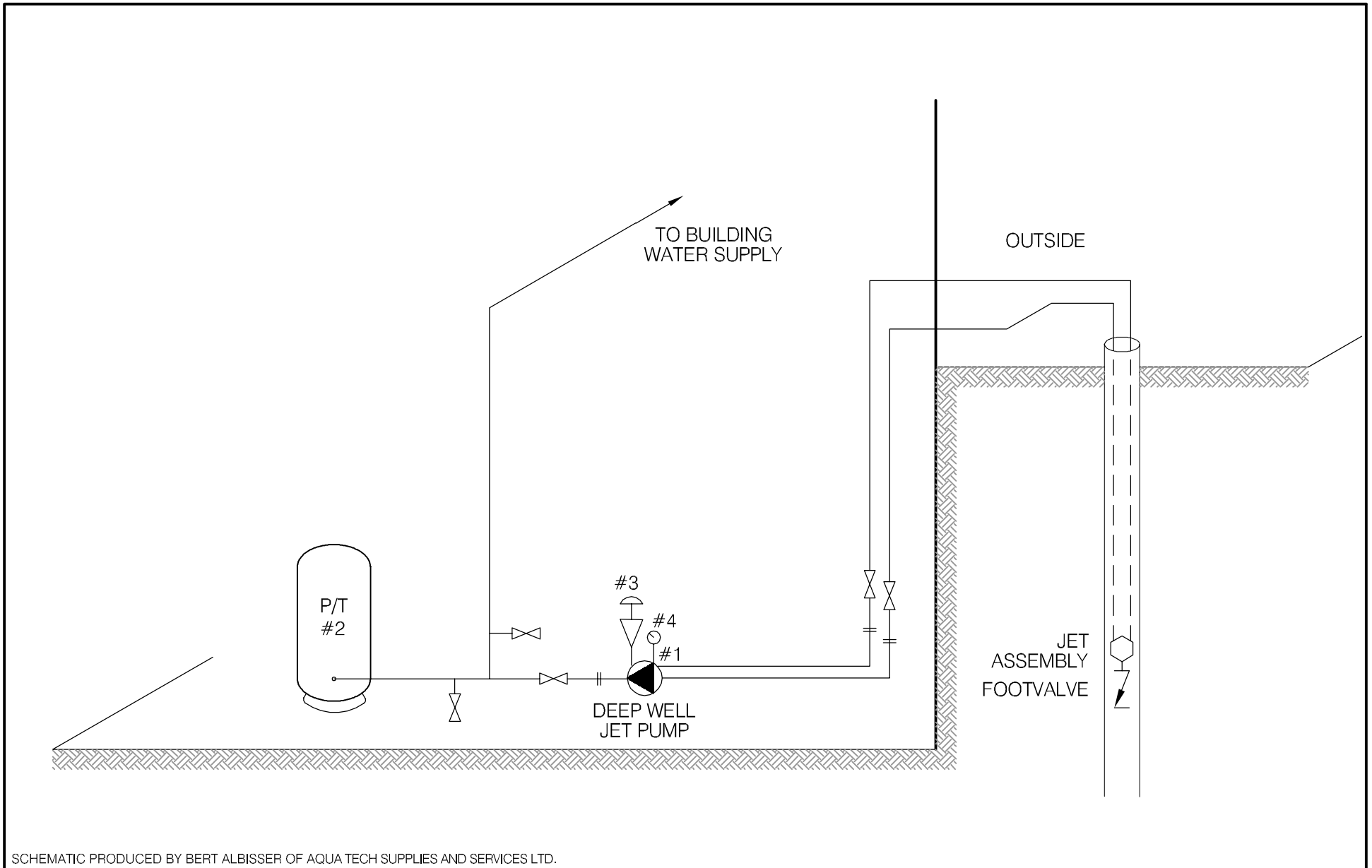
SMALL PUBLIC WATER SYSTEMS ASSESSMENT
 WESTERN REGION

GOVERNMENT OF YUKON
 HIGHWAYS & PUBLIC WORKS



BURWASH LANDING AIRPORT
 BUILDING # 3201
 SITE LOCATION DIAGRAM
 WELL ID: 3201-A,B,C

REVISION ISSUE
 0

FIGURE No.
 FIGURE 3201-A



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

 EBA Engineering Consultants Ltd.		PROJECT SMALL PUBLIC WATER SYSTEMS ASSESSMENT WESTERN REGION	
CLIENT 		TITLE WATER SYSTEM DISTRIBUTION/TREATMENT SCHEMATIC SYSTEM ID.: 3201 BURWASH LANDING AIRPORT	
DATE	SEPT. 2005	DWN.	JSB
CHKD.	FMM	FILE NO.	1260002.003
		DWG.:	FIGURE 3201-B

**Western Region – Burwash Landing Airport Building
Building # 3201**

DISTRIBUTION & TREATMENT SYSTEM DATA

Item	Description	Manufacturer	Model	Part No.	Serial No.	Size
1	JET PUMP	MONARCH.	MJC-50		2999	1/2 HP
2	PRESSURE TANK	CHALLENGER	PC-66			
3	PRESSURE SWITCH	SQUARE D	FSG-2			2HP- 1/4" NPT
4	PRESSURE GAUGE	MARMA	2" - 0.100 PSI			2" - 1/4" NPT
5						
6						
7						
8						
9						
10						

TABLE 3201- 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?
3201	Burwash Landing Airport Building	11	Sept-04 to Jun-05	yes	2/11	no	16-Jun-05	no



Table 3201-2: Water Quality Results

SOURCE:		Building 3201 - Burwash Landing Airport Building			GCDWQ Criteria		
Location/ Resident		Burwash Landing					
Address							
Treatment		None					
Disinfection		None					
Source of Water		On-site well					
Purpose of Sampling		Base Line	Base Line	Additional Analytical			
Sample Location		Kitchen tap					
Date Sampled		21-Sep-04	15-Jun-05	28-Jul-05	Lower	Upper Limit	
Physical Tests (ALS)							
Colour (CU)		<5	<5.0	-	AO	MAC	AO
Conductivity (uS/cm)			622	-			
Total Dissolved Solids		370	402	-			500
Hardness CaCO3		334	329	-	AO >200 = poor, > 500 unacceptable ⁶		
pH		7.95	8.20	-	6.5		8.5
Turbidity (NTU)		0.40	0.64	-		1	5
UV Absorbance				0.119			
% UV Transmittance				76.0			
Dissolved Anions (ALS)							
Alkalinity-Total CaCO3		243	247	-			
Chloride Cl		6.6	4.23	4.36			250
Fluoride F		0.18	0.238	-		1.5	
Sulfate SO4				-			
Sulphate SO4		89.8	99.3	-			500
Nitrate Nitrogen N		1.7	1.44	1.59		10	
Nitrite Nitrogen N		<0.05	<0.10	<0.0010		3.2	
Ammonia Nitrogen N				0.020			
Total Phosphate PO4				-			
Total Metals (ALS)							
Aluminum T-Al		0.006	<0.010	-			
Antimony T-Sb		0.0003	<0.00050	-		0.006	
Arsenic T-As		0.0006	0.00037	-		0.025	
Barium T-Ba		0.038	0.025	-		1	
Boron T-B		0.062	<0.10	-		5	
Cadmium T-Cd		<0.00001	<0.00020	-		0.005	
Calcium T-Ca			91.9	-			
Chromium T-Cr		0.0008	<0.0020	-		0.05	
Copper T-Cu		1.12	0.793	0.645		1	
Iron T-Fe		0.02	0.059	-			0.3
Lead T-Pb		0.0004	0.0012	-		0.01	
Magnesium T-Mg			24.2	-			
Manganese T-Mn		<0.005	<0.0020	-			0.05
Mercury T-Hg			<0.00020	-		0.001	
Potassium T-K			4.42	-			
Selenium T-Se			0.0011	-		0.01	
Sodium T-Na		5.9	5.3	-			200
Uranium T-U		0.0024	0.00220	-		0.02	
Vanadium T-V				-			
Zinc T-Zn		0.012	<0.050	-			5
Dissolved Metals (ALS)							
Aluminum D-Al				-		0.1	
Antimony D-Sb				-		0.006	
Arsenic D-As				-		0.025	
Barium D-Ba				-		1.0	
Boron D-B				-		5	
Cadmium D-Cd				-		0.005	
Calcium D-Ca				-			
Chromium D-Cr				-		0.05	
Copper D-Cu				0.647			1.0
Iron D-Fe				-			0.3
Lead D-Pb				-		0.01	
Magnesium D-Mg				-			
Manganese D-Mn				-			0.05
Mercury D-Hg				-		0.001	
Potassium D-K				-			
Selenium D-Se				-		0.01	
Sodium D-Na				-			200
Uranium D-U				-		0.02	
Vanadium D-V				-			
Zinc D-Zn				-			5.0
Organic Parameters							
Tannin and Lignin				0.13			
Total Organic Carbon C				7.14			
Extractable Hydrocarbons							
EPH10-19				<0.30			
EPH19-32				<1.0			
LEPH				-			
HEPH				-			
Field Chemistry (EBA)							
pH				7.95	6.5		8.5
TDS (ppm)				284			500
EC (uS/cm)				575			
Temperature (°C)				4.8			
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)



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SMALL PUBLIC WATER SYSTEM ASSESSMENT

PART A: EBA Site Inspection

Inspector: Ryan Martin, Luke Lebel

Date July 28, 2005

WELL ID #	Owner	Location Description
3201	YTG	Burwash Airport Building

1. Well Location and Potential Contaminant Sources

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

Burwash

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

Burwash Airport

c. GPS location: N 6805564 E 605217 elev 802m ± 8m

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 _____

Burwash Airport

5 or more delivery sites on a trucked distribution system? If so how many _____

g. Nearest building, specify Burwash Airport Terminal Building

h. Distance from well to building ~ 1 m

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

j. Distance from well to nearest point of known field: 23m to tank, field @ ~ 40m

k. Well location relative to field: upslope downslope lateral

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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 unlikely

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

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
fastened shut

Entrance by animals? Yes No
wooden enclosure with mouse droppings present

p. Is well site subject to flooding? Yes No

q. Is the well site well drained? Yes No

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: AST; Distance from well to Potential Source 1: ~8m

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? 1 in use abandoned require proper sealing

~1 m from existing well

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2. Well and Wellhead information:

- a. When was well installed? Year unknown Month _____
- 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
- f. Well casing: Diameter 15cm Material: steel plastic concrete
- g. Depth of well: 10.51m measured (if possible) reported from log
- h. Static water level below ground: 8.55m
 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 unknown slot size(s) _____
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 _____
- n. If the well head is located in a wooden enclosure,

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- i. Is the well head below grade? describe in detail well is at grade
- ii. Are there signs of ponding on the enclosure(e.g. water stains, etc.)? Yes No
Some
- iii. Is the wellhead enclosed by fiberglass insulations? Yes No
- iv. Any evidence of rodents? Specify Mause droppings
- v. Does the well casing have a proper seal cap? Yes No
If no, describe condition None present, well is open

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.
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
if likely
- b. Does water level and/or well capacity show seasonal fluctuation? Yes No *unlikely*

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 _____ capacity _____ voltage _____

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d. Date installed: _____ By: _____

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

f. Drop pipe for submersible pump: steel plastic
Copper

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: heat trace and insulation

l. Comments on pump installation: _____

6. Conclusions

a. Comments on overall installation:

b. Recommendations: _____

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PART B: EBA Site Inspection

Inspector: BERT ALBISSER

Date JULY 28/05

WELL ID #	Owner	Location Description
3201	YTG	BURWASH LANDING AIRPORT

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 H₂S Other _____

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- 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: MECHANICAL 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: _____

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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 IS OLD, BUT WELL DONE.
WATER PUMP NEEDS REPLACING UPGRADE
TO SUB. PUMP SYSTEM

b. Recommendations:

INSTALL TREATMENT IF REQUIRED BY WATER
ANALYSIS FOR UV PRETREATMENT. INSTALL
5 GPM (NSF 55 CERTIFIED) UV SYSTEM
WITH NECESSARY PRETREATMENT - 1 BIG
BLUE 5 MICRON FILTER.



Photo 0581: 3201 Burwash Landing Airport Building



Photo 0585: 3201 Wellhead enclosure



Photo 0577: 3201 Wellhead. Note open casing.



Photo 0578: 3201 Insulation around wellhead with evidence of mouse feces



Photo 05980: 3201 Septic system



Photo 0579: 3201 Above ground fuel storage tank



Photo 0584: 3201 Abandoned well adjacent to existing well



Photo 0114: 3201 Pressure tank (left), and jet pump (right)