STATE OF ALASKA

SEAN PARNELL, GOVERNOR

DEPT. ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL HEALTH
DRINKING WATER PROGRAM

610 University Avenue
Fairbanks AK 99709
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File Number: 790.07.001

November 21, 2011

CERTIFIED MAIL-RETURN RECEIPT REQUESTED: # 7011 0470 0003 4646 8588

Ms. Wilma Pitka
Beaver Traditional Council
PO Box 24029
Beaver, AK 99724-0029

RE: 2011 Sanitary Survey Follow-up for Beaver Water System
PWS ID: 360230; Class: Community; Source Type: Groundwater

Dear Ms. Pitka,

We received the sanitary survey report for an inspection conducted October 13, 2011 by Landon Wiggins with Tanana Chiefs Conference. This letter is to advise you of required timelines to correct any deficiencies noted in the survey. Enclosed is a copy of the survey report with some minor changes from the report you received from Mr. Wiggins. The new Ground Water Rule has changed the frequency for sanitary survey inspections for Community public water systems from 5 years to 3 years. Your next survey will be due in 2014.

Sanitary survey inspections are required to identify any deficiencies that could pose a threat to public health. These deficiencies can be significant or minor, or they could be recommendations. Significant and minor deficiencies have specific timelines to be resolved. Listed below are the deficiencies noted during this inspection.

Significant Deficiencies

1. As noted in a previous survey, the screen on the overflow vent on the water storage tank is torn. This must be fixed within 30 days of receipt of this letter.
2. The reagents used for laboratory testing were past their expiration date. The surveyor noted that new reagents have been ordered. You will need to provide a copy of the shipping document once the reagents have been received. We must receive this information within 30 days of receipt of this letter.
3. The well log does not indicate whether or not the well was grouted and it does not appear a ground seal has been added. It is important that the well has a ground seal to prevent water from traveling down the well casing and possibly contaminating the aquifer. You must provide an action plan outlining how and when the ground seal will be added. We understand that this work will most likely have to be done next spring, but the action plan must be received by the Department within 30 days of receipt of this letter.

Minor Deficiencies

1. The air gap for the filter backwash discharge line to the sump needs to be adjusted so that the air gap is 2.5 times the diameter of the discharge line. This must be done within 120 days of receipt of this letter.

2. Backflow preventers need to have a testing or replacement schedule. These devices are not designed to work forever. The design life and testing schedule must be determined for these devices. Replacement and/or testing must be done according to the manufacturer specifications to ensure they are functioning according to their specifications. ANTHC may be able to help you with this task. You will need to provide an action plan showing when and how this will be done. The plan must be received by the Department within 120 days of receipt of this letter.
3. The surveyor was unable to verify that records for laboratory analyses have been kept for the time specified in the Drinking Water Regulations 18 AAC 80. You must submit an action plan indicating where these records will be stored and who will be responsible for their upkeep. This plan must be received within 120 days of receipt of this letter.
4. The surveyor noted that the Inspection and Maintenance checklists in the O&M Manual are not currently maintained. These checklists are necessary to ensure that routine maintenance is being done in order to keep the water treatment plant running properly. You must provide documentation that these checklists have been updated. This must be done within 120 days of receipt of this letter.

Once these deficiencies have been addressed, you will need to provide photographic documentation of completion. These can be sent to us via regular mail or email.

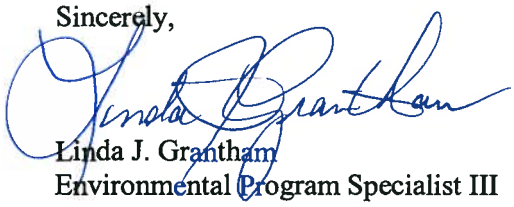
Recommendations

1. Your facility does not have a back-up power source, but it was noted that there is a generator at the school. It was unknown whether or not this generator is properly maintained or tested. If your water system looses power, it could damage your treatment system resulting in inadequate treatment of your water. Even though the generator belongs to the school, it would be good if it could be used as back-up power for the water plant.
2. The surveyor was informed that the WTP is currently operating at a loss and that there was a plan to establish a meter based schedule for the watering point. It is vital to have an adequate budget to ensure that the plant continues to operate properly and that there is revenue to cover any emergency situations.
3. It was noted that one of the pressure tanks has been damaged (dented). Damaged tanks may not operate properly and should be replaced as they could pose a safety risk.

Failure to address these deficiencies will result in violations that could ultimately lead to the assessment of administrative penalties. But the real concern is that you could be putting the health of your community at risk by providing water from an unprotected water system.

If you have any questions about the required timelines, please feel free to contact me at (907) 451-2137 or (800)770-2137. You may also contact me by email at Linda.Grantham@alaska.gov .

Sincerely,



Linda J. Grantham
Environmental Program Specialist III

LJG/ (G:\EH\DW\PWS\360230_Beaver Water System\360230 2011 SS Follow-up.doc)

Encl.: 2011 Sanitary Survey Report

Cc: Landon Wiggins, Environmental Health Specialist / TCC/OEH
landon.wiggins@tananachiefs.org

Paul Petruska, WTP Operator / P.O. Box 24029, Beaver, AK 99724

Alaska Department of Environmental Conservation
Division of Environmental Health

Drinking Water Program
Public Water System - Sanitary Survey Submittal Checklist

Purpose: Minimum standards for a complete sanitary survey package submittal.

Instructions: Complete this form and attach with your sanitary survey report submittal. Incomplete report submittals will be immediately returned without DEC review, to the Sanitary Survey Inspector for completion.

PWSID# 2360230 **System Name:** Beaver Water System

Sanitary Survey Report Submittal Information;
A sanitary survey report package shall contain the following items;

- ☒ Cover letter { signed and dated, includes inspector certification},
- ☒ Deficiency Report,
- ☒ Completed survey questions {in ESS format – hand completed forms will not be accepted},
- ☒ Photo Log {must be labeled},
- ☒ Site Schematic {such as a labeled site plan using Google maps, or other labeled format showing overall site layout},
- ☒ Treatment schematic (if applicable) {or show system schematic. If no changes from last sanitary survey – inspector must verify "No Changes" and sign on the last schematic/diagram},
- ☒ Lat/Long form for all sources (other facilities if applicable) {such as water treatment plant},
- ☒ Well log (if available) {must note a search was made in the file and the field - and state "no well log found"},
- ☒ Please comment on any issues noted that are not addressed through the questions that should be noted. (Example: deficiencies not revealed by questions.) {This is an important question – the standard deficiencies are not comprehensive for all deficiencies which could be found in all the varieties of systems}.

TANANA CHIEFS CONFERENCE
Health Services – Office of Environmental Health
201 1st Avenue, Suite 300 Fairbanks, AK 99701
Phone: (907) 452-8251 ext. 3431 Fax: 459-3989
Toll Free in Alaska 1-800-478-6822 ext. 3431
Email: landon.wiggins@tananachiefs.org

October 27, 2011

Ms. Wilma Pitka
Beaver Traditional Council
PO Box 24029
Beaver, AK 99724

Re: 2011 Enhanced Sanitary Survey for Beaver Water System, PWSID #2360230 Or AK2360230

Dear Ms. Pitka:

Attached, please find the completed Enhanced Sanitary Survey (ESS) for the subject public water system (PWS). The on-site inspection of your PWS occurred on Thursday, October 13, 2011. Thank you along with your water system operator who accompanied TCC-OEH staff during the on-site inspection of your drinking water facilities.

Your PWS consists of 1 ground water source and employs a conventional treatment technique which involves the following general processes: oxidation, filtration, and disinfection. This report is being reviewed by Linda Grantham, your Environmental Program Specialist (EPS), for determination of system deficiencies which will require corrective action by your system. The following documents are attached for your review and files;

1. **1 page - Signed copy of the ESS Generated Cover Letter**
2. **7 pages – Sanitary Survey Deficiency Report**
3. **23 pages - Sanitary Survey Responses**
4. **14 pages – Photo Log**
5. **2 page – Site Plan Schematics**
6. **2 page – Treatment Schematics**
7. **3 pages – Location Data Forms**
8. **3 pages – Well Information & Well Logs**
9. **3 pages – Water Sampling Plan**

An electronic copy of this survey and attachments has been provided to ADEC for their review and action. You will get a follow-up letter from them outlining deficiencies found in this report which require corrective action and schedule for implementing a solution for them.

If you have any questions about this survey or its findings please contact me at 907.452.8251 x3431

Sincerely,

Landon T. Wiggins
Environmental Health Specialist
Tanana Chiefs Conference/OEH

Enc: Sanitary Survey Report for PWSID 2360230
Beaver Water System

cc: Linda Grantham, Environmental Program Specialist
ADEC Drinking Water Program - via e-mail

Public Water Systems Sanitary Survey Submittal Letter

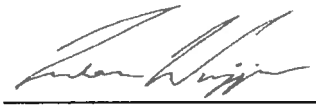
To: Alaska Department of Environmental Conservation
Drinking Water Program

From: Landon Wiggins

Please find attached the completed Sanitary Survey for BEAVER WATER SYSTEM - 2011
PWS#: AK2360230 . The Survey ID number is 1030 .

I hereby certify this survey was completed by me personally o 10/27/201 and is accurate and complete
I have provided the surveyed public water system a copy of this survey in accordance with 18 AAC 80.430(g). I have notified DEC and the public water system owner of any found Deficiencies within the required time frame in accordance with 18 AAC 80.430(h)(i) on this date 10/27/2011 **.**

Landon T. Wiggins
Printed Name


Signature

10/27/2011
Date

Sanitary Survey - Deficiency Report

PWS Number: AK2360230 **Survey Date:** 10/27/2011

Survey Name: BEAVER WATER SYSTEM - 2011 **User Name:** Landon T. Wiggins

Sanitary Survey Category: DS

SDWIS Severity Code: **Deficiency**

DS BEAVER WATER SYSTEM - (Active) / Cross-Connections

If backflow preventers are installed, is there a scheduled testing of the devices?

Answer Recorded No

Comments:

Notes: Staff was unaware of any scheduled testing. "Quarterly Inspection & Maintenance Checklist" calls for Inspection of Backflow Preventers. Unable to find any additional documentation regarding scheduled testing of backflow prevention devices.

Days to Correct Deficiency: 120

SDWIS Deficiency Description: NCRM

SDWIS Severity Code: **Recommendation**

DS BEAVER WATER SYSTEM - (Active) / Hydropneumatic tanks

Are the exterior surfaces in good condition (if no, explain condition in comments and include photo)?

Answer Recorded No

Comments:

Notes: Damage (Dented) Upper Portion of Tank #3 (See Figure 21)

Days to Correct Deficiency:

SDWIS Deficiency Description: PVWM

Sanitary Survey Category: FW

SDWIS Severity Code: Significant Deficiency

Storage / ST BEAVER WATER SYSTEM - (Active)

Are overflow lines, air vents, drainage lines or clean-out pipes turned downward or covered, screened and are the lines terminated a minimum of 2 times the diameter of the water outlet above the ground or storage?

Answer Recorded No

Comments:

Notes: Overflow Screen is Torn (See Figure 23)

Days to Correct Deficiency: 30

SDWIS Deficiency Description: SCRN

Sanitary Survey Category: MR

SDWIS Severity Code: Deficiency

Regulations / Plans/Records

Bacteriological Analysis - 5 years retention.

Answer Recorded No

Comments:

Notes: Unable to verify on-site or through follow-up phone calls.

Days to Correct Deficiency: 120

SDWIS Deficiency Description: OMRC

Sanitary Survey Category: MR

SDWIS Severity Code: Deficiency

Regulations / Plans/Records

Records of actions taken to correct violations - 3 years retention.

Answer Recorded No

Comments:

Notes: Unable to verify on-site or through follow-up phone calls.

Days to Correct Deficiency: 120

SDWIS Deficiency Description: OMRC

Copies of reports, summaries or communications related to Sanitary Surveys -10 years retention.

Answer Recorded No

Comments:

Notes: Unable to verify on-site or through follow-up phone calls.

Days to Correct Deficiency: 120

SDWIS Deficiency Description: OMRC

Copies of reports, summaries or communications related to copies of public notices issued - 3 years retention.

Answer Recorded No

Comments:

Notes: Unable to verify on-site or through follow-up phone calls.

Days to Correct Deficiency: 120

SDWIS Deficiency Description: OMRC

Sanitary Survey Category: MR

SDWIS Severity Code: Deficiency

Regulations / Plans/Records

Chemical Analysis - 10 years retention.

Answer Recorded No

Comments:

Notes: Unable to verify on-site or through follow-up phone calls.

Days to Correct Deficiency: 120

SDWIS Deficiency Description: OMRC

Copies of exemptions if appropriate?

Answer Recorded No

Comments:

Notes: Unable to verify on-site or through follow-up phone calls.

Days to Correct Deficiency: 120

SDWIS Deficiency Description: OMRC

Sanitary Survey Category: SM

SDWIS Severity Code: Deficiency

Management / General

Are routine operations and maintenance records being kept?

Answer Recorded No

Comments:

Notes: O&M Manual contains "Inspection and Maintenance" Checklists. These records are not currently maintained.

Days to Correct Deficiency: 120

SDWIS Deficiency Description: OMRC

SDWIS Severity Code: Recommendation

Management / General

Are the financing and budget satisfactory?

Answer Recorded No

Comments:

Notes: Informed that WTP is currently operating at a loss - plan to establish meter based fee schedule for watering point.

Days to Correct Deficiency:

SDWIS Deficiency Description: CDFB

Sanitary Survey Category: SO

SDWIS Severity Code: Significant Deficiency

Sources / Groundwater / WL BEAVER WATER SYSTEM - (Active) / General

Is there an adequate concrete pad or documented 10 feet of continuous well grout?

Answer Recorded No

Comments:

Notes: Unable to verify 10 feet of continuous well grout. (See "Well Information")

Days to Correct Deficiency: 30

SDWIS Deficiency Description: GSEA

Sanitary Survey Category: TR

SDWIS Severity Code: Deficiency

TP FOR BEAVER WATER SYSTEM - (Active) / General / Cross-Connections

If system has air gaps, are they two times the diameter of the drain or waste line?

Answer Recorded No

Comments:

Notes: Filter Backwash Discharge Into Sump - See Figure 9

Days to Correct Deficiency: 120

SDWIS Deficiency Description: CCPE

Sanitary Survey Category: TR

SDWIS Severity Code: Significant Deficiency

TP FOR BEAVER WATER SYSTEM - (Active) / General / Monitoring

Are the reagents used in testing past the expiration Date?

Answer Recorded Yes

Comments:

Notes: Reagents ordered at the time of survey.

Days to Correct Deficiency: 30

SDWIS Deficiency Description: TERL

Sanitary Survey - Survey Responses

PWS Number: AK2360230 **Survey ID:** 1030 **Survey Date:** 10/27/2011

Survey Name: BEAVER WATER SYSTEM - 2011 **User Name:** Landon T. Wiggins

Question Number

General / SDWIS Site Visit Info

1	Reason for the visit.	☑ SNSV - Sanitary Survey ☐ WHPP - Wellhead Protection ☐ WSHD - Filtration Avoidance
2	Date of the survey	10/13/2011
3	Status of the Survey	☑ C - Completed ☐ P - Planned
4	Last name of inspector:	Wiggins
5	First name of inspector:	Landon
6	Inspector organization	Tanana Chiefs Conference
7	Name of system representative participating in survey	Paul Petruska
	Notes: Beaver WTP Primary Operator	
8	Other parties participating	Travis Monson
	Notes: Tanana Chiefs Conference - Environmental Engineer	

General / SS Organization

Pre-inspection:

1	Phone contact with responsible party?	☑ Yes ☐ No ☐ NA ☐ Unknown
2	Reviewed correspondence relative to the system to be inspected?	☑ Yes ☐ No ☐ NA ☐ Unknown

Question Number		
3	Reviewed previous sanitary survey report?	☑ Yes ☐ No ☐ NA ☐ Unknown
4	Reviewed compliance monitoring results and compliance record?	☑ Yes ☐ No ☐ NA ☐ Unknown
5	Reviewed plans / documents on file that are specific to the water system to be inspected?	☑ Yes ☐ No ☐ NA ☐ Unknown
6	Verified certification level of operator on line at operator certification website https://myalaska.state.ak.us/dec/water/opcert/Home.aspx?p=SystemSearch	☑ Yes ☐ No ☐ NA ☐ Unknown
7	Reviewed Source Water Assessment and delineated protection area (if available).	☑ Yes ☐ No ☐ NA ☐ Unknown
8	Obtained data dump to review and provide to the water system for reference.	☑ Yes ☐ No ☐ NA ☐ Unknown

General / SS Organization

Post-inspection:

1	Date official notification provided to DEC regarding deficiencies?	10/28/2011
2	Date official notification provided to water system regarding deficiencies?	10/28/2011
3	Date notified owner/operator of any variance between the written evaluation and the verbal de-briefing or of any draft version of the report?	10/28/2011
4	**Checklist of items needed for a complete survey:**	
5	Cover letter	☑ Yes ☐ No ☐ NA ☐ Unknown
6	Deficiency Report	☑ Yes ☐ No ☐ NA ☐ Unknown

Question Number		
7	Completed survey questions	☑ Yes ☐ No ☐ NA ☐ Unknown
8	Photo log	☑ Yes ☐ No ☐ NA ☐ Unknown
9	Site schematic	☑ Yes ☐ No ☐ NA ☐ Unknown
10	Treatment schematic (if applicable)	☑ Yes ☐ No ☐ NA ☐ Unknown
11	Lat/Long form for all sources (other facilities if applicable)	☑ Yes ☐ No ☐ NA ☐ Unknown
12	Well Log (if available)	Yes
13	Please comment on any issues noted that are not addressed through the questions that should be noted. (example: deficiencies not revealed by questions.)	NA

General / Background Info

Name / Location:

1	Name of public water system:	Beaver Water System
2	PWS number:	AK2360230
3	Physical Address:	Corner of "C" Street & 2nd AVE
	Notes: PO Box 24029	
4	Total system design water production/treatment capacity (GPD)?	11,200
	Notes: DWG No. P2A of 21 - 03/09 Record Drawings (Year 2022)	
5	Average Daily production (GPD):	3,000
	Notes: Per WTP Operator	

General / Background Info

Classification:

1	SDWIS Activity Status:	☑ A - Active ☐ I - Inactive ☐ P - Proposed
2	Primary water source?	☑ GW - Groundwater ☐ GWUDISW- Ground water u ☐ GWP - Groundwater purchased ☐ SW - Surface Water ☐ SWP - Surface Water purchased
3	Transient Population:	0
4	Residential population:	99
5	Non-Transient population (workers, students, etc.):	0
6	Number of service connections:	4
	Notes: Watering Point Haul System Beaver Tribal Council Building Cruikshank School	
7	**Is water obtained from another PWS?**	☐ Yes ☑ No ☐ NA ☐ Unknown
7.01	If yes, name and PWSID of system water is purchased from:	
8	**Does the system sell/provide water to another water system/business?**	☑ Yes ☐ No ☐ NA ☐ Unknown
8.01	If yes, name (and PWSID if applicable).	Cruikshank School
9	Does the PWS have State Operating Approval for the water system?	☑ Yes ☐ No ☐ NA ☐ Unknown
	Notes: Final Approval: 10/21/2009	
10	**Have there been recent modifications to the system since the last survey?**	☑ Yes ☐ No ☐ NA ☐ Unknown

Question Number		
10.01	Recent modifications date:	07/2006
10.02	Recent modifications description:	Well Improvments
	Notes: See "Well Information" Appendix	
10.03	Have these modifications been approved by DEC?	☑ Yes ☐ No ☐ NA ☐ Unknown
11	**Is the system only open on a seasonal basis?**	☐ Yes ☑ No ☐ NA ☐ Unknown
11.01	If yes, what are the seasonal dates?	

General / Background Info

Owner:

1	Owner type:	☐ F - Federal ☐ P - Private ☑ L - Local ☐ S - State Government ☐ M - Mixed ☐ N - Native American
2	Legal ownership by (name or entity):	Beaver Tribal Council
3	Owner's address line1:	PO Box 24029
4	Owner's address line2:	
5	Owner's address city:	BEAVER
6	Owner's address state:	AK
7	Owner's address zip code:	99724
8	Owner's telephone number (daytime):	907-628-6126

Question Number		
9	Owner's telephone (emergency):	907-628-6288
	Notes: Paul Petruska, WTP Operator - Home Phone Number	
10	Owner's Fax number:	907-628-6815
11	Owner's email address:	'wilma_pitka2000@yahoo.com'

General / Background Info

Staff:

1	Does this PWS require a Certified Operator?	☑ Yes ☐ No ☐ NA ☐ Unknown
2	Primary operator's last name:	Petruska
3	Primary operator's first name:	Paul
4	Primary operator's address:	P.O. Box 24029
5	Primary operator's telephone:	907-628-6288
	Notes: Paul Petruska - Home Phone Number	
6	Primary operator's email address:	sep_99724@yahoo.com
7	Primary operator's certification Level:	☐ Small - Untreated ☐ Small - Treated ☐ Provisional ☑ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ No Certification
8	Is primary operator's certification adequate for the system?	☑ Yes ☐ No ☐ NA ☐ Unknown
9	Date Certification expires:	12/31/2012
10	Does the system have a remote supervision agreement?	☐ Yes ☑ No ☐ NA ☐ Unknown

Question Number		
11	List all secondary operators:	Alvin Winer
12	Emergency contacts: Day - name	Wilma Pitka
	Notes: 'wilma_pitka2000@yahoo.com'	
13	Emergency contacts: Day - telephone number	907-628-6126
14	Emergency contacts: Night - name	Paul Petruska
15	Emergency contacts: Night - telephone number	907-628-6288
	Notes: Home Phone Number	

General / Background Info

Previous Survey Info:

1	Date of last sanitary survey:	06/19/2006
2	Last survey conducted by (Name and Organization):	Kyle Wright, Tanana Chiefs Conference
3	Have you reviewed the deficiencies listed on the previous survey?	☑ Yes ☐ No ☐ NA ☐ Unknown
4	Have all deficiencies noted during the previous survey been corrected?	☐ Yes ☑ No ☐ NA ☐ Unknown
5	If no, list remaining uncorrected deficiencies: (During site visit, survey inspector must document the status of deficiencies; use photo documentation where applicable.)	WST Overflow Screen is Torn, Well Grouting, & Record Keeping

General / Background Info

Current Survey Info / History:

1	**Are there any abandoned wells in the delineated protection area?**	☐ Yes ☑ No ☐ NA ☐ Unknown
1.01	Are they properly decommissioned?	☐ Yes ☐ No ☑ NA ☐ Unknown

Question Number		
2	**Are there unused wells in the delineated protection area?**	☐ Yes ☑ No ☐ NA ☐ Unknown
2.01	Are they maintained in a safe and sanitary condition?	☐ Yes ☐ No ☑ NA ☐ Unknown
3	Is standby or auxiliary power available?	☑ Yes ☐ No ☐ NA ☐ Unknown
	Notes: Per Operator: Cruikshank School Generator	
4	If standby or auxiliary power is available is it in operable condition and well maintained? (tested and noted in a log book)	☐ Yes ☐ No ☐ NA ☑ Unknown
5	What parts of the system does the auxiliary power supply?	Operator Stated The Entire WTP System
6	Does the system have a master meter?	☑ Yes ☐ No ☐ NA ☐ Unknown
	Notes: See Figure 1	
7	Is the master meter operable?	☑ Yes ☐ No ☐ NA ☐ Unknown
8	Is the system under a current Boil Water Notice or other Public Notification requirement?	☐ Yes ☑ No ☐ NA ☐ Unknown
9	If so, is the notice posted on-site as required?	☐ Yes ☐ No ☑ NA ☐ Unknown

Regulations / Plans/Records

1	Are all components and chemicals NSF listed or approved?	☑ Yes ☐ No ☐ NA ☐ Unknown
	Notes: See Figure 2	
2	Does the system have a total coliform rule (TCR) sample siting plan and if so has it been approved by DEC?	☑ Yes ☐ No ☐ NA ☐ Unknown
4	Is the sample siting plan available for review?	☑ Yes ☐ No ☐ NA ☐ Unknown
	Notes: See Water Sampling Appendix	
5	Does the system have 4 extra TCR bottles available?	☐ Yes ☑ No ☐ NA ☐ Unknown
	Notes: Had been ordered @ time of survey.	

Question Number		
6	If applicable does the system have sample siting plans for lead/copper, DBP, LT2, etc.?	☐ Yes ☑ No ☐ NA ☐ Unknown
7	**Does the water system maintain the following records? (Please review these records.)**	
7.01	Bacteriological Analysis - 5 years retention. Notes: Unable to verify on-site or through follow-up phone calls.	☐ Yes ☑ No ☐ NA ☐ Unknown
7.02	Records of actions taken to correct violations - 3 years retention. Notes: Unable to verify on-site or through follow-up phone calls.	☐ Yes ☑ No ☐ NA ☐ Unknown
7.03	Copies of reports, summaries or communications related to Sanitary Surveys -10 years retention. Notes: Unable to verify on-site or through follow-up phone calls.	☐ Yes ☑ No ☐ NA ☐ Unknown
7.04	Copies of reports, summaries or communications related to copies of public notices issued - 3 years retention. Notes: Unable to verify on-site or through follow-up phone calls.	☐ Yes ☑ No ☐ NA ☐ Unknown
7.05	Chemical Analysis - 10 years retention. Notes: Unable to verify on-site or through follow-up phone calls.	☐ Yes ☑ No ☐ NA ☐ Unknown
7.06	Copies of exemptions if appropriate? Notes: Unable to verify on-site or through follow-up phone calls.	☐ Yes ☑ No ☐ NA ☐ Unknown

Sources / Groundwater

WL BEAVER WATER SYSTEM - (Active) / General:

1	What is the name of this well?	Beaver Well
2	Do you have a well log? Surveyor Inspector : A COPY NEEDS TO BE SENT TO ADEC. Notes: See "Well Information" Appendix	☑ Yes ☐ No ☐ NA ☐ Unknown
3	Is well site properly drained (sloping away from the casing for 10 feet in all directions)? Notes: Portion of Gravel Fill needs to be replaced around Well Casing within Well House.	☑ Yes ☐ No ☐ NA ☐ Unknown
4	Is the well casing intact?	☑ Yes ☐ No ☐ NA ☐ Unknown
5	Is there an adequate concrete pad or documented 10 feet of continuous well grout? Notes: Unable to verify 10 feet of continuous well grout. (See "Well Information")	☐ Yes ☑ No ☐ NA ☐ Unknown

Question Number		
6	Is sanitary seal or well cap properly installed to seal the casing? Notes: See Figure 3	☑ Yes ☐ No ☐ NA ☐ Unknown
7	Does the system have any of the listed possible/potential contaminant sources within the specified distance in the table below? Wastewater Treatment/Disposal (200)' Private Sewer Line (100') Community Sewer Line (200') Septic Tank (200') Leach Field (200') Bulk Fuel Storage (100') Fuel Line(100')	☐ Yes ☑ No ☐ NA ☐ Unknown
8	List the measured distance from the source to the contaminants listed in the above question.	NA
9	Please list any other contaminant source and distance.	NA
10	How far away is the nearest surface water? (lake, river, slough, etc.) Notes: See Figure 4 - Varies with river water levels.	50 Feet
11	Does casing extend at least 12 inches above the floor or ground? Notes: See Figure 5	☑ Yes ☐ No ☐ NA ☐ Unknown
12	If vented, is well vent screened with the return bend facing downward and terminating 18 inches above ground level or above maximum flood level, whichever is higher?	☐ Yes ☐ No ☑ NA ☐ Unknown
13	Is there a raw water sampling tap present? Notes: See Figure 6	☑ Yes ☐ No ☐ NA ☐ Unknown

Sources / Groundwater

WL BEAVER WATER SYSTEM - (Active) / Pumps:

1	What type of pump(s) does the system have?	☐ CF - Centrifugal ☐ HP - Hand Pump ☐ JT - Jet ☐ PD - Positive Displacement ☐ SC - Screw ☑ SU - Submersible ☐ VT - Vertical Turbine
2	Are pumps in good operating condition?	☑ Yes ☐ No ☐ NA ☐ Unknown
3	Is electrical wiring maintained properly?	☑ Yes ☐ No ☐ NA ☐ Unknown

Question Number		
4	Is there an electrical safety hazard present?	☐ Yes ☑ No ☐ NA ☐ Unknown
5	Are there spare pumps or pump parts?	☑ Yes ☐ No ☐ NA ☐ Unknown

TP FOR BEAVER WATER SYSTEM - (Active) / General

General:

1	Is a tap accessible to take samples at the entry point of the distribution system? Notes: See Figure 7	☑ Yes ☐ No ☐ NA ☐ Unknown
2	**Does the system add chemicals that are not listed on the data dump?**	☐ Yes ☑ No ☐ NA ☐ Unknown
2.01	What chemicals are added? List manufacturer and product for each.	_____ _____
2.02	Is chemical feed equipment maintained and in operable condition?	☐ Yes ☐ No ☑ NA ☐ Unknown
2.03	Are static or mechanical mixers or other means of mixing installed downstream of chemical feed points to ensure adequate mixing?	☐ Yes ☐ No ☑ NA ☐ Unknown
2.04	Are records maintained for quantity of each chemical used?	☐ Yes ☐ No ☑ NA ☐ Unknown
2.05	Are dosages for each chemical calculated on at least a daily basis?	☐ Yes ☐ No ☑ NA ☐ Unknown
2.06	Are concentrations for each chemical added monitored on at least a daily basis? (example: chlorine, fluoride, polymer, etc.)	☐ Yes ☐ No ☑ NA ☐ Unknown
2.07	Are backflow prevention devices installed on water lines used for mixing chemical dilutions?	☐ Yes ☐ No ☑ NA ☐ Unknown
2.08	Are chemicals properly stored to prevent risk of contamination, fire or explosion?	☐ Yes ☐ No ☑ NA ☐ Unknown
2.09	Are critical spare parts for chemical feed equipment on hand?	☐ Yes ☐ No ☑ NA ☐ Unknown

Question Number		
2.1	Is chemical feed equipment connected to flow switches?	☐ Yes ☐ No ☑ NA ☐ Unknown
2.11	Are flow switches installed in the correct location	☐ Yes ☐ No ☑ NA ☐ Unknown
2.12	Are flow switches periodically checked to ensure that the chemical feed equipment does not operate when no water is flowing?	☐ Yes ☐ No ☐ NA ☐ Unknown

TP FOR BEAVER WATER SYSTEM - (Active) / General

Monitoring:

1	List test equipment present in the water treatment plant? (make, model and use) Notes: See Figure 8	HACH: FE-58700-22, Mn-58700-18, & Cl-58700-00
2	Are testing facilities and equipment orderly and well maintained?	☑ Yes ☐ No ☐ NA ☐ Unknown
3	Are proper calibration standards and reagents used for analyses?	☑ Yes ☐ No ☐ NA ☐ Unknown
4 **Potential Deficiency**	Are the reagents used in testing past the expiration Date? Notes: Reagents ordered at the time of survey.	☑ Yes ☐ No ☐ NA ☐ Unknown
5	**Did the operator demonstrate competence with standard testing methods for the following: (Operator must demonstrate all control tests applicable to the system, document results in the comments section of each applicable test)**	
5.01	Turbidity	☐ Yes ☐ No ☑ NA ☐ Unknown
5.02	pH/Temperature	☐ Yes ☐ No ☑ NA ☐ Unknown
5.03	Fluoride	☐ Yes ☐ No ☑ NA ☐ Unknown
5.04	Disinfection Residual	☑ Yes ☐ No ☐ NA ☐ Unknown
5.05	Other (i.e. orthophosphate, jar testing, etc) Notes: Fe & Mn	☑ Yes ☐ No ☐ NA ☐ Unknown

TP FOR BEAVER WATER SYSTEM - (Active) / General

Cross-Connections:

1	Are there existing cross-connections at the water treatment plant? (describe in comments)	☐ Yes ☑ No ☐ NA ☐ Unknown
2	Are there any arrangements that pose a potential threat of cross-connection? (i.e. solo valve, etc. - please describe in comments)	☐ Yes ☑ No ☐ NA ☐ Unknown
3	Are air gaps or backflow prevention devices installed at all appropriate locations?	☑ Yes ☐ No ☐ NA ☐ Unknown
4	If system has air gaps, are they two times the diameter of the drain or waste line? Notes: Filter Backwash Discharge Into Sump - See Figure 9	☐ Yes ☑ No ☐ NA ☐ Unknown
5	If backflow preventers are installed are they functioning properly	☑ Yes ☐ No ☐ NA ☐ Unknown
6	If back flow preventers are installed, is there scheduled testing of the devices? Notes: Staff was unaware of any scheduled testing. "Quarterly Inspection & Maintenance Checklist" calls for Inspection of Backflow Preventers. Unable to find any additional documentation regarding scheduled testing of backflow prevention devices.	☐ Yes ☑ No ☐ NA ☐ Unknown
7	If backflow preventers are installed, do they have isolation valves to facilitate removal and maintenance?	☑ Yes ☐ No ☐ NA ☐ Unknown
8	Are any back flow prevention devices installed in a pit?	☐ Yes ☑ No ☐ NA ☐ Unknown
9	Are back flow prevention device drains provided with a suitable air gap if applicable?	☐ Yes ☐ No ☑ NA ☐ Unknown
10	Has the system operator been trained in identifying and controlling cross-connections?	☑ Yes ☐ No ☐ NA ☐ Unknown
11	Is there a cross connection control program in writing?	☐ Yes ☑ No ☐ NA ☐ Unknown
12	If yes, is it adequate?	☐ Yes ☐ No ☑ NA ☐ Unknown

Question Number

TP FOR BEAVER WATER SYSTEM - (Active) / Chlorination

Hypochlorination:

1	What disinfectant is used?	Calcium Hyprochlorite
2	Is the disinfection equipment operated and maintained properly? Notes: See Figure 10	☑ Yes ☐ No ☐ NA ☐ Unknown
3	If hypochlorite is used, are the solutions being made in the proper manner?	☑ Yes ☐ No ☐ NA ☐ Unknown
4	Is there adequate chlorine residual at entry point to the distribution system? (the higher of 0.2 mg/L or level required to meet contact time)	☑ Yes ☐ No ☐ NA ☐ Unknown
5	Are disinfectant residual measurements being made and recorded at the same time and place as the total coliform bacteria sample is collected?	☑ Yes ☐ No ☐ NA ☐ Unknown
6	Is there a detectable disinfectant residual being maintained throughout the distribution system?	☑ Yes ☐ No ☐ NA ☐ Unknown
7	Are proper residual test kits available and properly maintained?	☑ Yes ☐ No ☐ NA ☐ Unknown
8	Is the operator trained to use and conduct monitoring of disinfectant properly ?	☑ Yes ☐ No ☐ NA ☐ Unknown
9	Is there sufficient CT (concentration X contact time) between the disinfection point and the first point of use? (please attach calculation)	☑ Yes ☐ No ☐ NA ☐ Unknown
10	**Is there a backup disinfection unit?** Notes: There are currently 2 disinfection units in use.	☐ Yes ☑ No ☐ NA ☐ Unknown
10.01	Is there an auto switch-over for disinfection units to prevent a break in disinfection?	☐ Yes ☐ No ☑ NA ☐ Unknown
10.02	Is it online and operational?	☐ Yes ☐ No ☑ NA ☐ Unknown
11	Are disinfection units hooked up to flow switches that prevent the addition of disinfectant when no water is flowing? Notes: See Figure 11	☑ Yes ☐ No ☐ NA ☐ Unknown

Question Number		
12	Is disinfectant feed proportional to water flow?	☑ Yes ☐ No ☐ NA ☐ Unknown
13	Is there an adequate quantity of disinfectant on hand?	☑ Yes ☐ No ☐ NA ☐ Unknown
14	Is disinfectant properly stored?	☑ Yes ☐ No ☐ NA ☐ Unknown

TP FOR BEAVER WATER SYSTEM - (Active) / Filtration

General:

1	Is filtration equipment maintained and in operable condition?	☑ Yes ☐ No ☐ NA ☐ Unknown
2	Are turbidimeters calibrated with primary standards following manufacturer's recommendations as to frequency and method.	☐ Yes ☐ No ☑ NA ☐ Unknown

TP FOR BEAVER WATER SYSTEM - (Active) / Filtration

Greensand:

1	How many filters are there?	3
	Notes: See Figure 12	
2	Are filters pressure or gravity?	☑ Pressure ☐ Gravity
3	What is the filter media type?	Gravel, Greensand, Anthracite Coal
4	Is the proper amount of media in the filter?	Unknown
	Notes: Viewpoints not installed.	
5	What is the total surface area including all filters? (ft2)	14.7
6	What is the flow rate through the filters, in gpm?	10
7	How is backwash frequency determined? (turbidity, minutes etc.)	Differential Pressure, Iron Levels, and Filter Run Time
	Notes: If the differential pressure in building up to 8 psi, when iron levels are beginning to increase, or a filter run of approx 6 hrs. Operator observations and testing are the final determination factor.	

Question Number		
8	For pressure filters are there viewports on the filters?	☐ Yes ☑ No ☐ NA ☐ Unknown
9	Is backwash flow measured? Notes: Backwash Flow Meter is Not Functioning (See Figure 13)	☐ Yes ☑ No ☐ NA ☐ Unknown
10	Can backwash rate of flow be adjusted?	☑ Yes ☐ No ☐ NA ☐ Unknown
11	Is there air assisted backwash capability?	☑ Yes ☐ No ☐ NA ☐ Unknown
12	What is the source of water used for backwashing?	Filtered/Treated
13	Is there equal flow through all filters?	☑ Yes ☐ No ☐ NA ☐ Unknown
14	Is flow to the filter(s) controlled with a device such as a rate of flow controller? Notes: See Figure 14	☑ Yes ☐ No ☐ NA ☐ Unknown
15	Is there a surface wash?	☐ Yes ☑ No ☐ NA ☐ Unknown
16	Can surface wash arm rotation be verified?	☐ Yes ☐ No ☑ NA ☐ Unknown
17	Is there air scour? Notes: See Figure 15	☑ Yes ☐ No ☐ NA ☐ Unknown
18	Is source of air free from VOC's?	☑ Yes ☐ No ☐ NA ☐ Unknown
19	Is there filtered water to waste piping? Notes: See Figure 16	☑ Yes ☐ No ☐ NA ☐ Unknown
21	Is pressure drop monitored across the filter?	☑ Yes ☐ No ☐ NA ☐ Unknown

Question Number		
22	Are contact clarifiers used?	☐ Yes ☑ No ☐ NA ☐ Unknown

TP FOR BEAVER WATER SYSTEM - (Active) / Other

Permanganate:

1	Is potassium permanganate used as an oxidant?	☑ Yes ☐ No ☐ NA ☐ Unknown
2	Is catalytic media used? (ie. Green sand media)	Yes, Greensand
3	How is chemical feed rate determined?	Flow Rate & Dosage Rate Calculations
	Notes: Operator observations and testing are the final determination factor.	

DS BEAVER WATER SYSTEM - (Active) / General

1	What are the distribution lines made of?	Copper / HDPE
	Notes: Copper within WTP. HDPE Main Lines to Council, Clinic, & School.	
2	How many services are metered?	4
	Notes: Watering Point Haul System Beaver Tribal Council Building Cruikshank School	
3	Are fire hydrants connected to the distribution system?	☐ Yes ☑ No ☐ NA ☐ Unknown
4	Is there any portion of the distribution system that has a flowing pressure less than 20 psi measured at the customer's tap?	☐ Yes ☑ No ☐ NA ☐ Unknown
5	Are there any materials used in the distribution system that should not be in contact with drinking water? If yes, please explain in comments.	☐ Yes ☑ No ☐ NA ☐ Unknown
6	Is there a leak detection program?	☐ Yes ☑ No ☐ NA ☐ Unknown
7	Was asbestos cement pipe used in the system?	☐ Yes ☑ No ☐ NA ☐ Unknown
8	Is there a routine main and dead-end water flushing program?	☐ Yes ☐ No ☑ NA ☐ Unknown

Question Number		
9	Are check valves, blow off valves, water meters, etc., maintained properly?	☑ Yes ☐ No ☐ NA ☐ Unknown
10	Are check valves, blow off valves, water meters, etc., operating properly?	☑ Yes ☐ No ☐ NA ☐ Unknown
11	Is system adequately protected from freezing? If not, explain in comments.	☑ Yes ☐ No ☐ NA ☐ Unknown
12	Are heat exchangers used in conjunction with the water system? Notes: See Figure 17	☑ Yes ☐ No ☐ NA ☐ Unknown
13	If yes, what type?	☐ Single Walled ☑ Double Walled
14	**Is glycol used?**	☑ Yes ☐ No ☐ NA ☐ Unknown
14.01	If yes, what type?	Propylene Glycol
14.02	For circulating systems, what is the temperature of the water leaving from and returning to the plant?	55 F - 54 F

DS BEAVER WATER SYSTEM - (Active) / Cross-Connections

1	Are there existing cross-connections in the distribution systems? (describe in comments)	☐ Yes ☑ No ☐ NA ☐ Unknown
2	Are there any arrangements that pose a potential threat of cross-connection? (i.e. connections/valves to industry, wastewater treatment plants, clinics etc. that do not have backflow prevention devices - please describe in comments)	☐ Yes ☑ No ☐ NA ☐ Unknown
3	Are air gaps or backflow prevention devices installed at all appropriate locations?	☑ Yes ☐ No ☐ NA ☐ Unknown
4	If system has air gaps, are they two times the diameter of the drain or waste line?	☑ Yes ☐ No ☐ NA ☐ Unknown

Question Number		
5	If backflow preventers are installed are they functioning properly?	☑ Yes ☐ No ☐ NA ☐ Unknown
6	If backflow preventers are installed, is there a scheduled testing of the devices?	☐ Yes ☑ No ☐ NA ☐ Unknown
Potential Deficiency	Notes: Staff was unaware of any scheduled testing. "Quarterly Inspection & Maintenance Checklist" calls for Inspection of Backflow Preventers. Unable to find any additional documentation regarding scheduled testing of backflow prevention devices.	
7	If backflow preventers are installed, do they have isolation valves to facilitate removal and maintenance?	☑ Yes ☐ No ☐ NA ☐ Unknown
8	Are any backflow prevention devices installed in a pit?	☐ Yes ☑ No ☐ NA ☐ Unknown
9	Are backflow prevention device drains provided with a suitable air gap if applicable?	☐ Yes ☐ No ☑ NA ☐ Unknown
10	Has the system operator been trained in identifying and controlling cross-connections?	☑ Yes ☐ No ☐ NA ☐ Unknown
11	Is there a cross-connection control program in writing?	☐ Yes ☑ No ☐ NA ☐ Unknown
12	If yes, is it adequate?	☐ Yes ☐ No ☑ NA ☐ Unknown

DS BEAVER WATER SYSTEM - (Active) / Pumps

1	How many pumps are there?	3
	Notes: See Figures 18 & 19	
2	What type of pump(s) are they?	Centrifugal
3	What are the pump(s) used for?	Pressure & Truck Fill
4	Are pumps in good operating condition?	☑ Yes ☐ No ☐ NA ☐ Unknown

Question Number		
5	Is electrical wiring maintained properly?	☑ Yes ☐ No ☐ NA ☐ Unknown
6	Does wiring pose an immediate safety hazard?	☐ Yes ☑ No ☐ NA ☐ Unknown
7	Are there spare pump parts?	☑ Yes ☐ No ☐ NA ☐ Unknown

DS BEAVER WATER SYSTEM - (Active) / Hydropneumatic tanks

1	Does the system have a hydropneumatic tank/s? Notes: See Figure 20	☑ Yes ☐ No ☐ NA ☐ Unknown
2	Note what the hydropneumatic tank(s) is equipped with: Drain; Pressure Gauge; Water sight glass (conventional tank);Automatic or manual pressure relief valve; Means to add air.	Drain, Manual Pressure Relief Valve & Means to Add Air
3	At the time of inspection, do all tanks appear water tight (not leaking)?	☑ Yes ☐ No ☐ NA ☐ Unknown
4	Are the exterior surfaces in good condition (if no, explain condition in comments and include photo)? Notes: Damage (Dented) Upper Portion of Tank #3 (See Figure 21)	☐ Yes ☑ No ☐ NA ☐ Unknown
5	Are tank supports adequate and structurally sound? Notes: Supported by sound, level floor and weight of tanks alone.	☑ Yes ☐ No ☐ NA ☐ Unknown
6	Is the hydropneumatic tank in a condition that represents an immediate threat to health, or safety, or danger of failure? (explain in comments)	☐ Yes ☑ No ☐ NA ☐ Unknown

Storage / ST BEAVER WATER SYSTEM - (Active)

1	How many storage tanks are there? Notes: See Figure 22 - Columbian TecTank	1
2	What is the name of this storage facility?	Beaver Water Storage Tank
3	What is the street or physical address of this storage tank?	Corner of "C" Street & 2nd AVE

Question Number		
4	What does this storage tank hold?	☐ Raw Water ☐ Filtered Water ☐ Disinfected Water ☑ Filtered and Disinfected Water
5	Is treated water storage covered?	☑ Yes ☐ No ☐ NA ☐ Unknown
6	Is this storage tank used to meet Contact Time?	☑ Yes ☐ No ☐ NA ☐ Unknown
7	What type of storage structure is used (clear-well, elevated, underground, etc.)?	Ground Level
8	Date in service?	03/01/2005
9	What is the volume of the structure in gallons?	66,000
10	On what date was the structure last inspected?	06/19/2006
11	What was the date the structure was last cleaned?	
	Notes: WST: No Known Cleaning Activities	
12	Total days of supply in this structure at time of inspection?	7.5
13	Does surface run-off drain away from the storage structure?	☑ Yes ☐ No ☐ NA ☐ Unknown
14	Are overflow lines, air vents, drainage lines or clean-out pipes turned downward or covered, screened and are the lines terminated a minimum of 2 times the diameter of the water outlet above the ground or storage?	☐ Yes ☑ No ☐ NA
	Notes: Overflow Screen is Torn (See Figure 23)	☐ Unknown
15	Is the hatch watertight and locked?	☑ Yes ☐ No ☐ NA ☐ Unknown
	Notes: Hatch is not locked, but access ladder is. (See Figures 24 & 25)	
16	Is the storage structure clean and free from contamination?	☑ Yes ☐ No ☐ NA ☐ Unknown

Question Number		
17	Is the storage structure structurally sound?	☑ Yes ☐ No ☐ NA ☐ Unknown
18	Can the storage be isolated from the system?	☑ Yes ☐ No ☐ NA ☐ Unknown
19	Is leakage evident at the time of inspection?	☐ Yes ☑ No ☐ NA ☐ Unknown
20	**Is the storage structure lined or coated?**	☑ Yes ☐ No ☐ NA ☐ Unknown
	Notes: Factory Applied Coating... Tank has not been cleaned or thoroughly inspected since installation.	
20.01	If yes, what type?	Epoxy Powder Coating
	Notes: Thermally Cured Multiple Resin Coating	
22	Is the storage structure interior coating or liner peeling or cracking?	☐ Yes ☑ No ☐ NA ☐ Unknown
23	Is storage structure safely accessible to inspector?	☑ Yes ☐ No ☐ NA ☐ Unknown

Management / General

1	Does this system keep separate financial records reflecting the costs of operating and maintaining this system?	☑ Yes ☐ No ☐ NA ☐ Unknown
2	Are the financing and budget satisfactory?	☐ Yes ☑ No ☐ NA ☐ Unknown
Potential Deficiency	Notes: Informed that WTP is currently operating at a loss - plan to establish meter based fee schedule for watering point.	
3	Are routine operations and maintenance records being kept?	☐ Yes ☑ No ☐ NA ☐ Unknown
Potential Deficiency	Notes: O&M Manual contains "Inspection and Maintenance" Checklists. These records are not currently maintained.	
4	Are routine maintenance schedules established and adhered to for all components of the water system?	☑ Yes ☐ No ☐ NA ☐ Unknown
5	Are there any local ordinances that hinder safe operation of the system? If yes, please describe on continuation sheet.	☐ Yes ☑ No ☐ NA ☐ Unknown
6	Is there a fee schedule?	☑ Yes ☐ No ☐ NA ☐ Unknown

Prepared By:
Tanana Chiefs Conference - Office of Environmental Health
Landon T. Wiggins - Environmental Health Specialist

Figure 1: Master Meter

Figure 2: Chemicals - NSF Approved

Figure 3: Well Cap

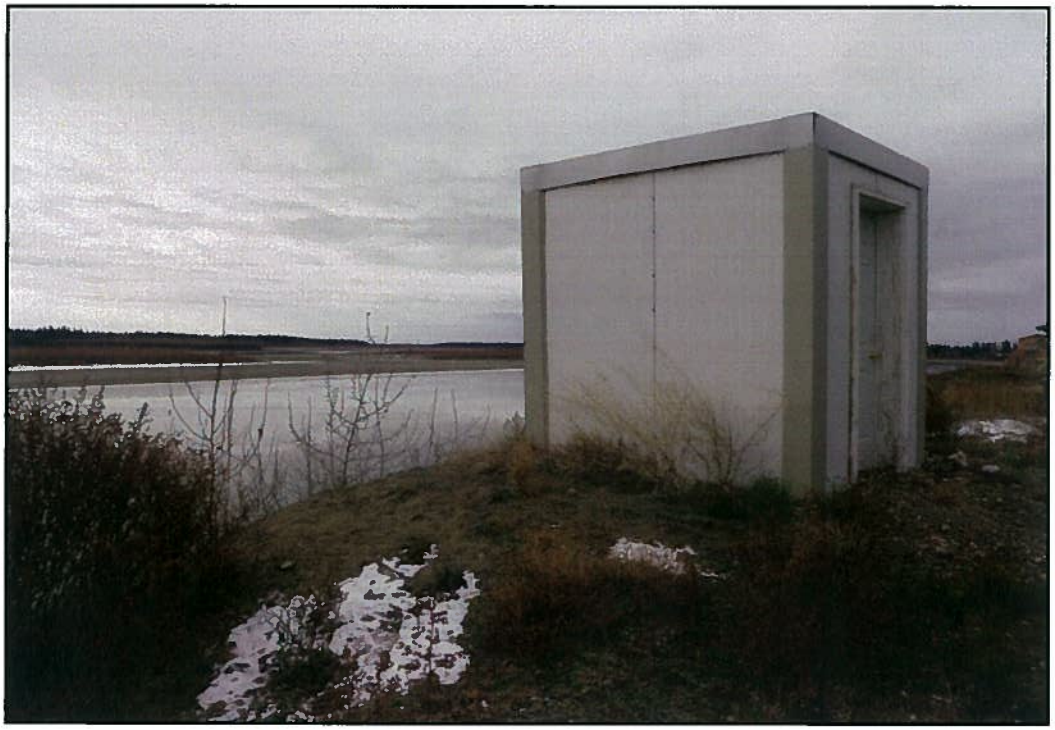


Figure 4: Proximity of Wellhouse to River (50")

Figure 5: Well Casing

Figure 6: Raw Water Sample Tap

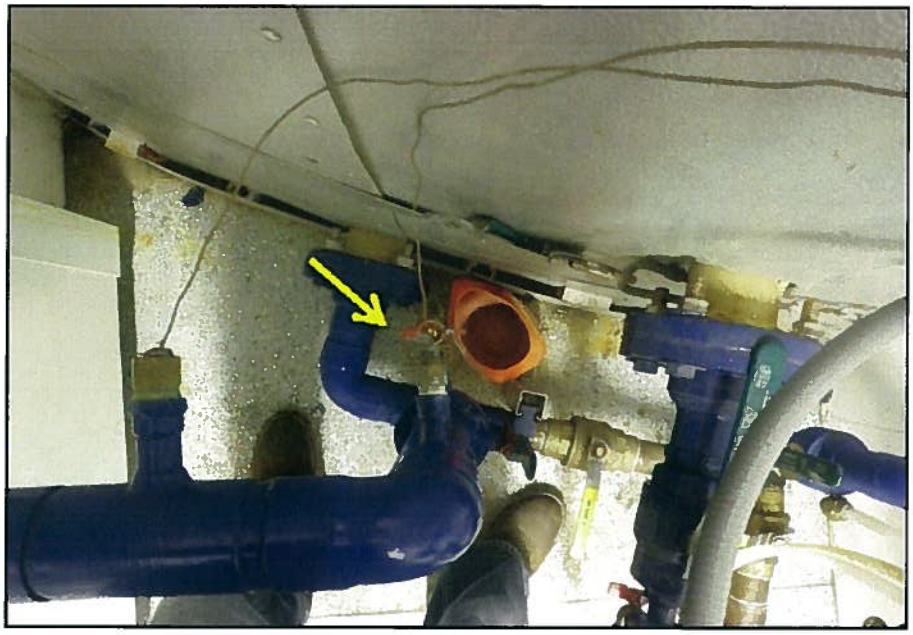


Figure 7: Distribution Entry Point Tap

Figure 8: Test Equipment

Figure 9: Filter Backwash Discharge Into Sump - Air Gap (<2D)

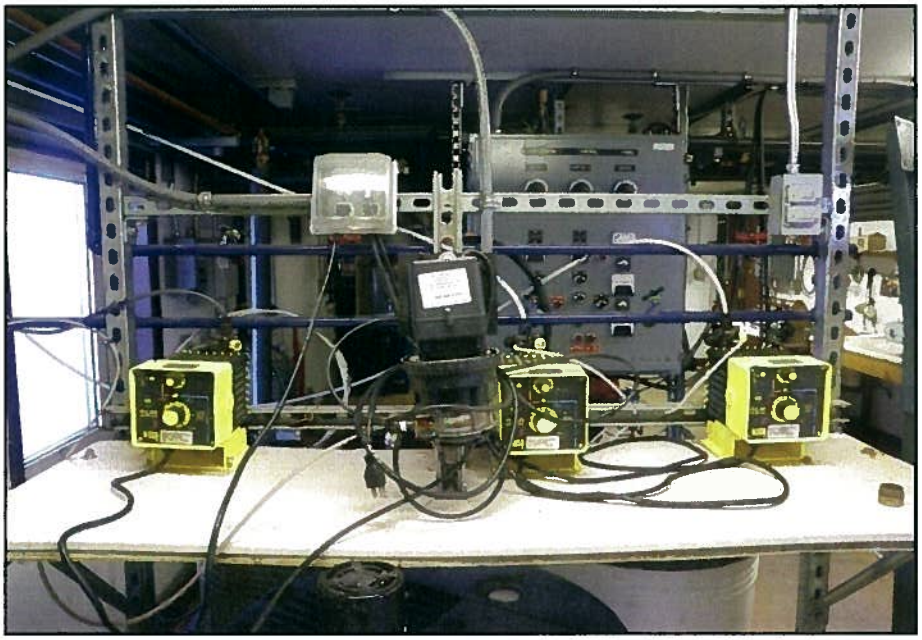


Figure 10: Chemical Feed Pumps

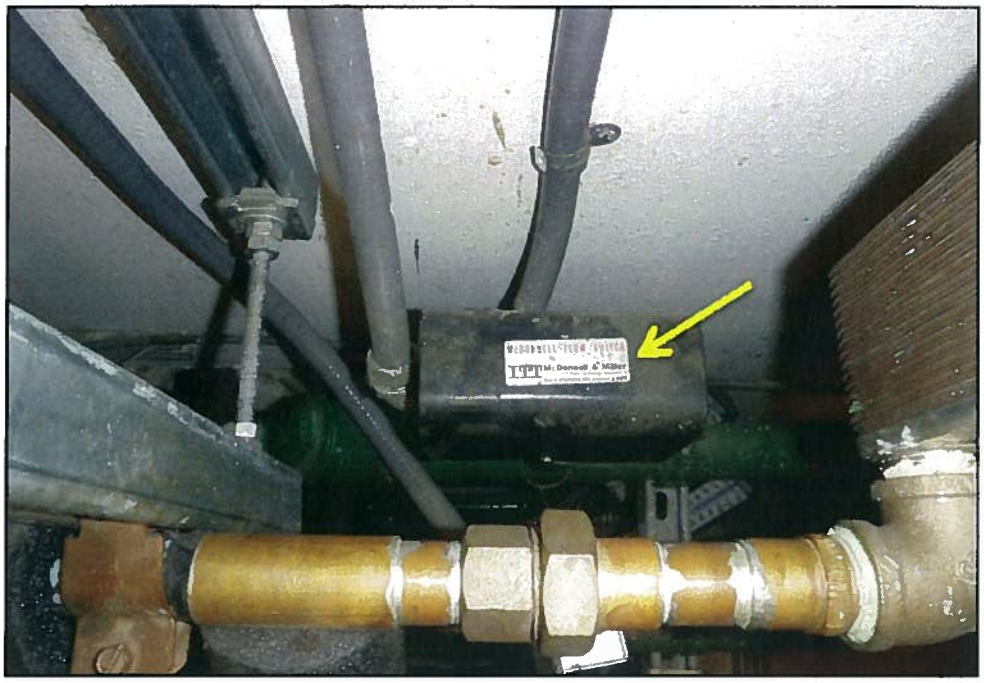


Figure 11: Disinfection Unit Flow Switch

Figure 12: Greensand Filters

Figure 13: Backwash Flow Meter (Not Functioning)

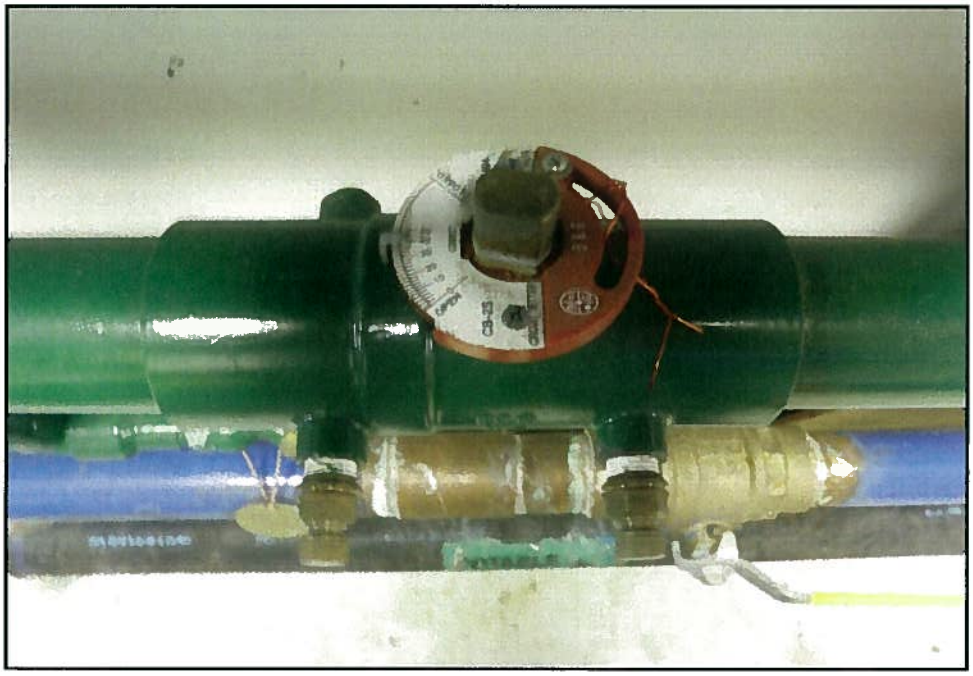


Figure 14: Rate of Flow Controller

Figure: 15: Air Blower Setup for Air Scour

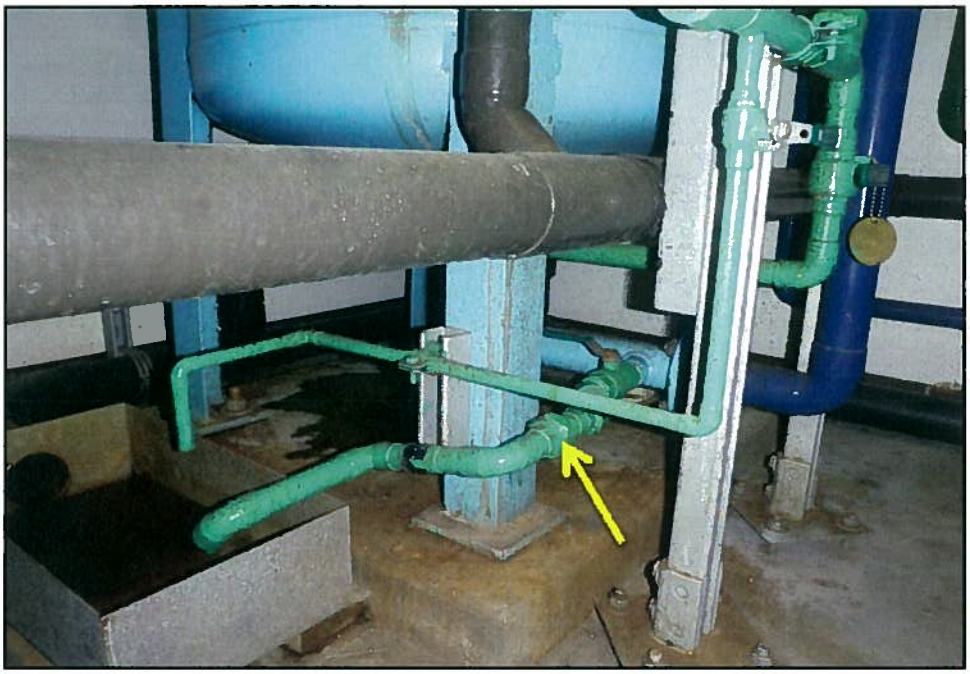


Figure 16: Filter to Waste Piping

Figure 17: Heat Exchanger

Figure 18: Distribution Pressure Pumps

Figure 19: Backwash Pump & Truck Fill Pump

Figure 20: Hydropneumatic Tanks

Figure 21: Damaged (Dented) Hydropneumatic Tank

Figure 22: Beaver Water Storage Tank

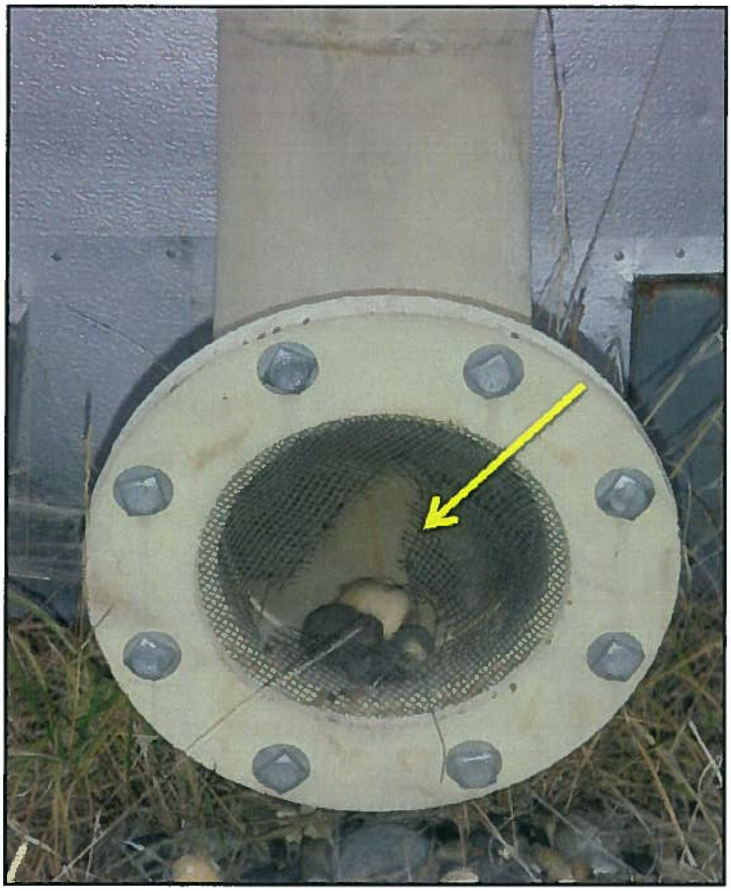


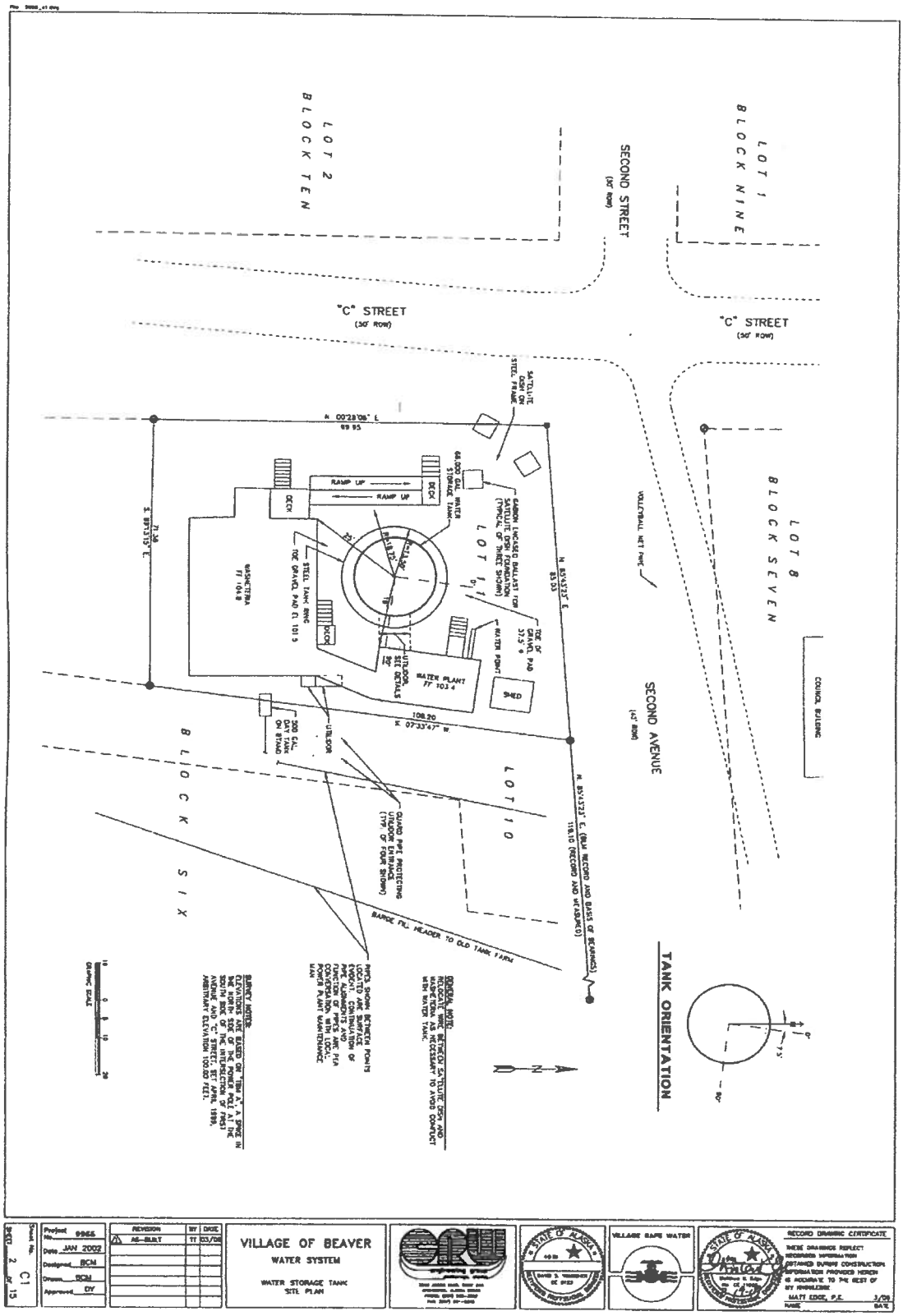
Figure 23: Torn WST Overflow Screen

Figure 24: Locked WST Access Ladder

Figure 25: WST Watertight Hatch

BEAVER WATER SYSTEM

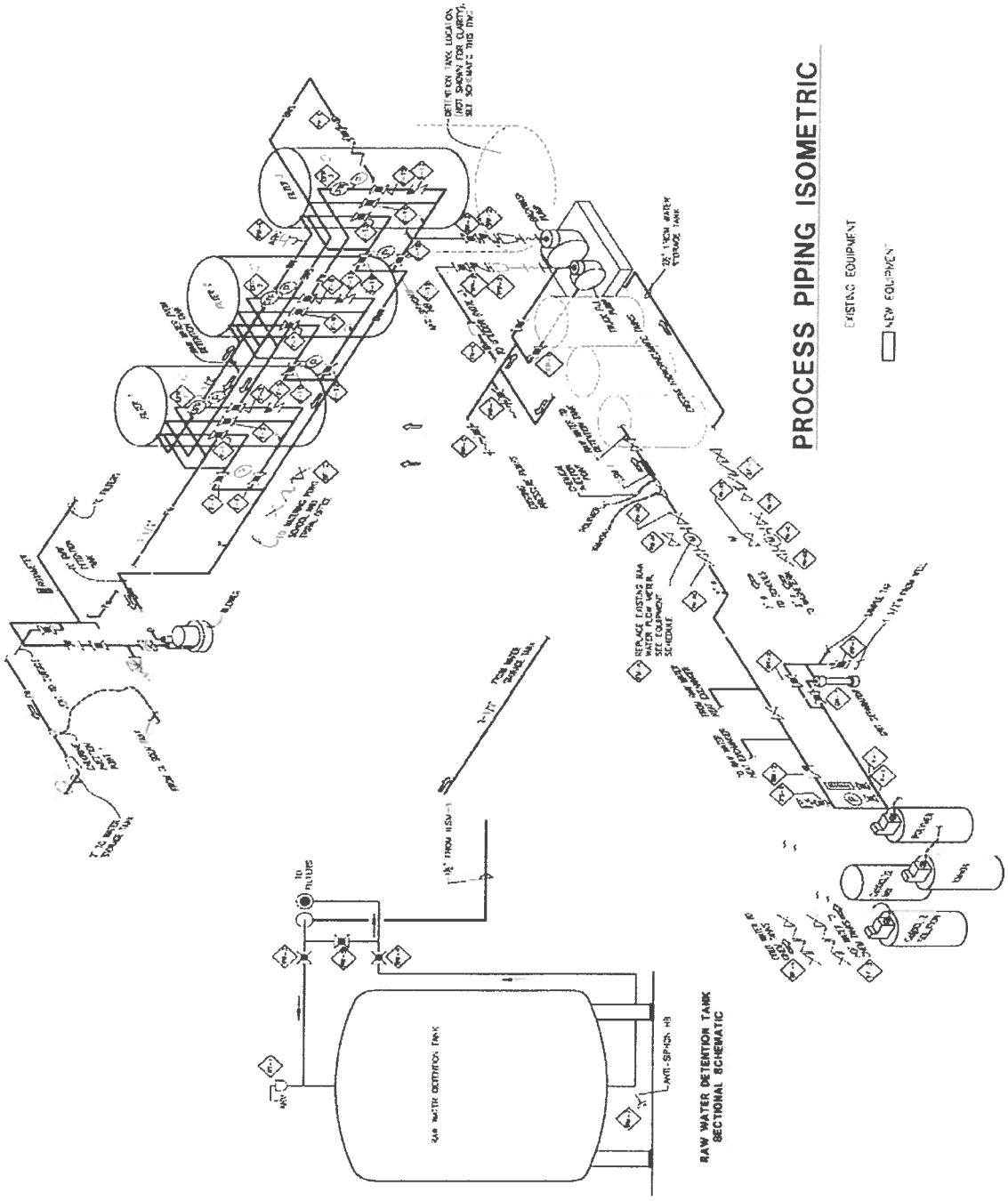
PWSID # 2360230



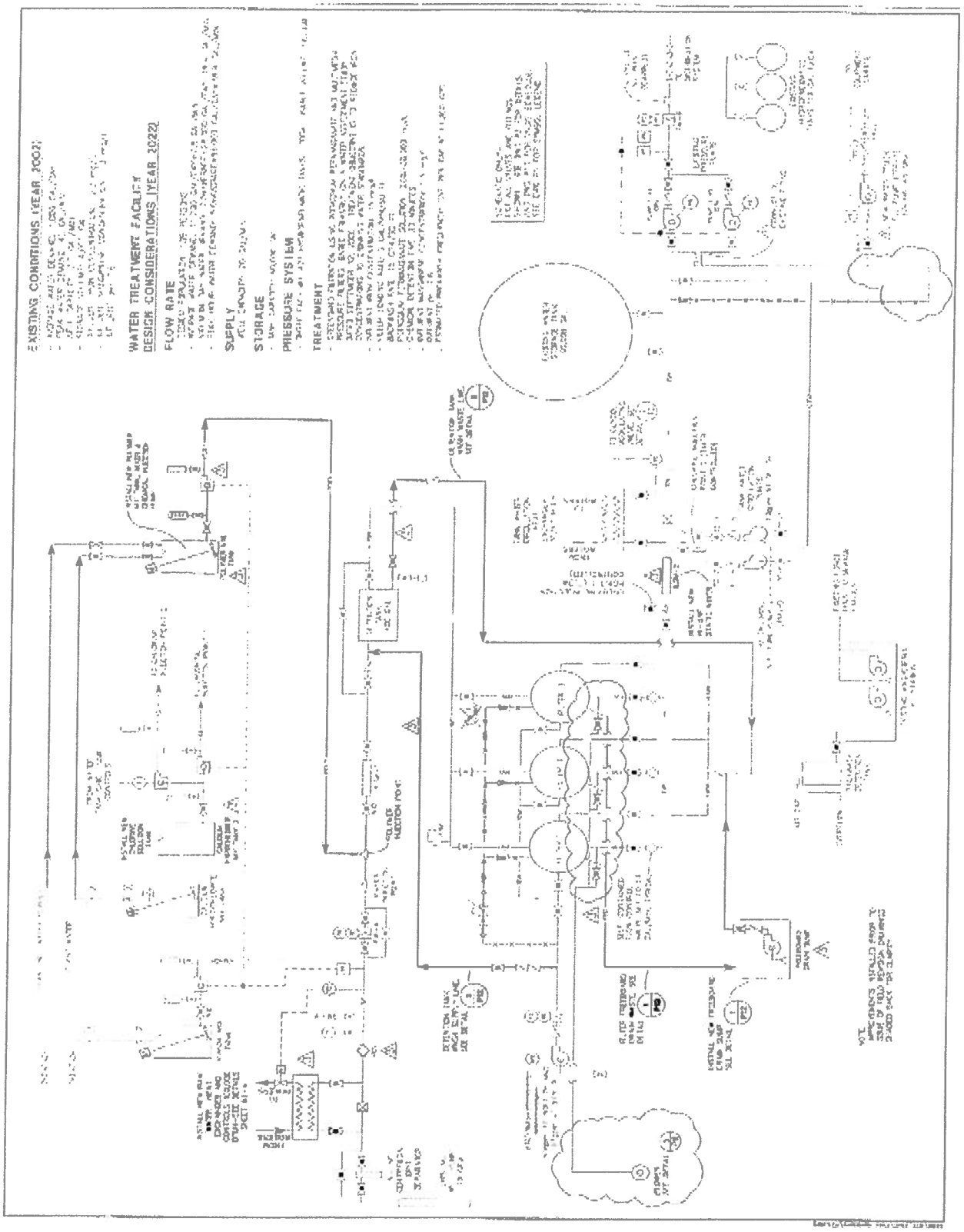
BEAVER WATER SYSTEM

PWSID # 2360230

SITE PLAN



BEAVER WATER SYSTEM
PWSID # 2360230
PROCESS PIPING ISOMETRIC



BEAVER WATER SYSTEM

PWSID # 2360230

PROCESS FLOW DIAGRAM

Department of Environmental Conservation
Division of Environmental Health
Drinking Water Program
555 Cordova Street
Anchorage, AK 99501
Phone: (907) 269-7549

ALASKA PUBLIC WATER SYSTEM LOCATIONAL DATA COLLECTION FORM

Public Water System Name: BEAVER WATER SYSTEM	**PWS ID#:** AK2360230
Name of Person Determining Lat/Long: TRAVIS MONSON	**Phone:** (907) 452-8251
Name of Person Completing Form: LANDON WIGGINS	**Phone** (907) 452-8251
Local Facility Name: BEAVER WASHETERIA	**Date Collected:** 10/13/2011 **Date Completed:** 10/21/2011

1) Facility Type. *(Check one)*

Sources: ☑ Wellhead ☐ Surface Water Intake ☐ Treatment Plant

2) The date the latitude and longitude were researched or collected. Example: 06/30/2007

10 / 13 / 2011

3) Latitude in decimal degrees. Must be recorded in WGS 84. For Alaska, latitudes are between 51 and 80 North. Give data to available accuracy. *Example: +56.234230*

+ 66.358333

4) Longitude in decimal degrees. Must be recorded in WGS 84. For Alaska, longitudes are generally -126 to -180 West. The minus sign means "West." Use + for "East." *Example: -136.23423*

- 147.397216

5) Are the latitude/longitude coordinates taken at the Wellhead /Intake? ☑ Yes ☐ No
If No, describe the proximity to the wellhead/intake ***(for example, 30 feet NW of the* wellhead *or intake)***

6) Type of GPS Unit used to determine latitude and longitude. (Describe unit and model number)

Garmin Vista eTrex

7.) Lat/long accuracy in meters. GPS accuracy is typically encoded in the unit's display. The datum used must be in WGS 84. *Example: 30. (meters)*

10 . Meters

8.) Site map or aerial image identifying the location of the facility must be provided to assist DEC Staff verify the lat/long location in the State geospatial database. (As-build, Google Maps, Google Earth, MSN Live Earth, Yahoo Maps are all acceptable.)

☑ Yes a map with approximate location has been provided.

Department of Environmental Conservation
Division of Environmental Health
Drinking Water Program
555 Cordova Street
Anchorage, AK 99501
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ALASKA PUBLIC WATER SYSTEM LOCATIONAL DATA COLLECTION FORM

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10 / 13 / 2011

3) Latitude in decimal degrees. Must be recorded in WGS 84. For Alaska, latitudes are between 51 and 80 North. Give data to available accuracy. *Example: +56.234230*

+ 66 . 358966

4) Longitude in decimal degrees. Must be recorded in WGS 84. For Alaska, longitudes are generally -126 to -180 West. The minus sign means "West." Use + for "East." *Example: -136.23423*

- 147 . 397633

5) Are the latitude/longitude coordinates taken at the Wellhead /Intake? ☑ Yes ☐ No
If No, describe the proximity to the wellhead/intake ***(for example, 30 feet NW of the*** **wellhead** ***or intake)***

6) Type of GPS Unit used to determine latitude and longitude. (Describe unit and model number)

Garmin Vista eTrex

7.) Lat/long accuracy in meters. GPS accuracy is typically encoded in the unit's display. The datum used must be in WGS 84. *Example: 30. (meters)*

10 . Meters

8.) Site map or aerial image identifying the location of the facility must be provided to assist DEC Staff verify the lat/long location in the State geospatial database. (As-build, Google Maps, Google Earth, MSN Live Earth, Yahoo Maps are all acceptable.)

☑ Yes a map with approximate location has been provided.

Department of Environmental Conservation
Division of Environmental Health
Drinking Water Program
555 Cordova Street
Anchorage, AK 99501
Phone: (907) 269-7549

ALASKA PUBLIC WATER SYSTEM LOCATIONAL DATA COLLECTION FORM

Public Water System Name: BEAVER WATER SYSTEM	**PWS ID#:** AK2360230
Name of Person Determining Lat/Long: TRAVIS MONSON	**Phone:** (907) 452-8251
Name of Person Completing Form: LANDON WIGGINS	**Phone** (907) 452-8251
Local Facility Name: BEAVER WASHETERIA	**Date Collected:** 10/13/2011 **Date Completed:** 10/21/2011

1) Facility Type. *(Check one)*

Sources: ☐ Wellhead ☐ Surface Water Intake ☑ Treatment Plant

Water Storage Tank

2) The date the latitude and longitude were researched or collected. Example: 06/30/2007

10/13/2011

3) Latitude in decimal degrees. Must be recorded in WGS 84. For Alaska, latitudes are between 51 and 80 North. Give data to available accuracy. *Example: +56.234230*

+66.359058

4) Longitude in decimal degrees. Must be recorded in WGS 84. For Alaska, longitudes are generally -126 to -180 West. The minus sign means "West." Use + for "East." *Example: -136.23423*

-147.39778

5) Are the latitude/longitude coordinates taken at the Wellhead /Intake? ☑ Yes ☐ No
If No, describe the proximity to the wellhead/intake ***(for example, 30 feet NW of the wellhead or intake)***

6) Type of GPS Unit used to determine latitude and longitude. (Describe unit and model number)

Garmin Vista eTrex

7.) Lat/long accuracy in meters. GPS accuracy is typically encoded in the unit's display. The datum used must be in WGS 84. *Example: 30. (meters)*

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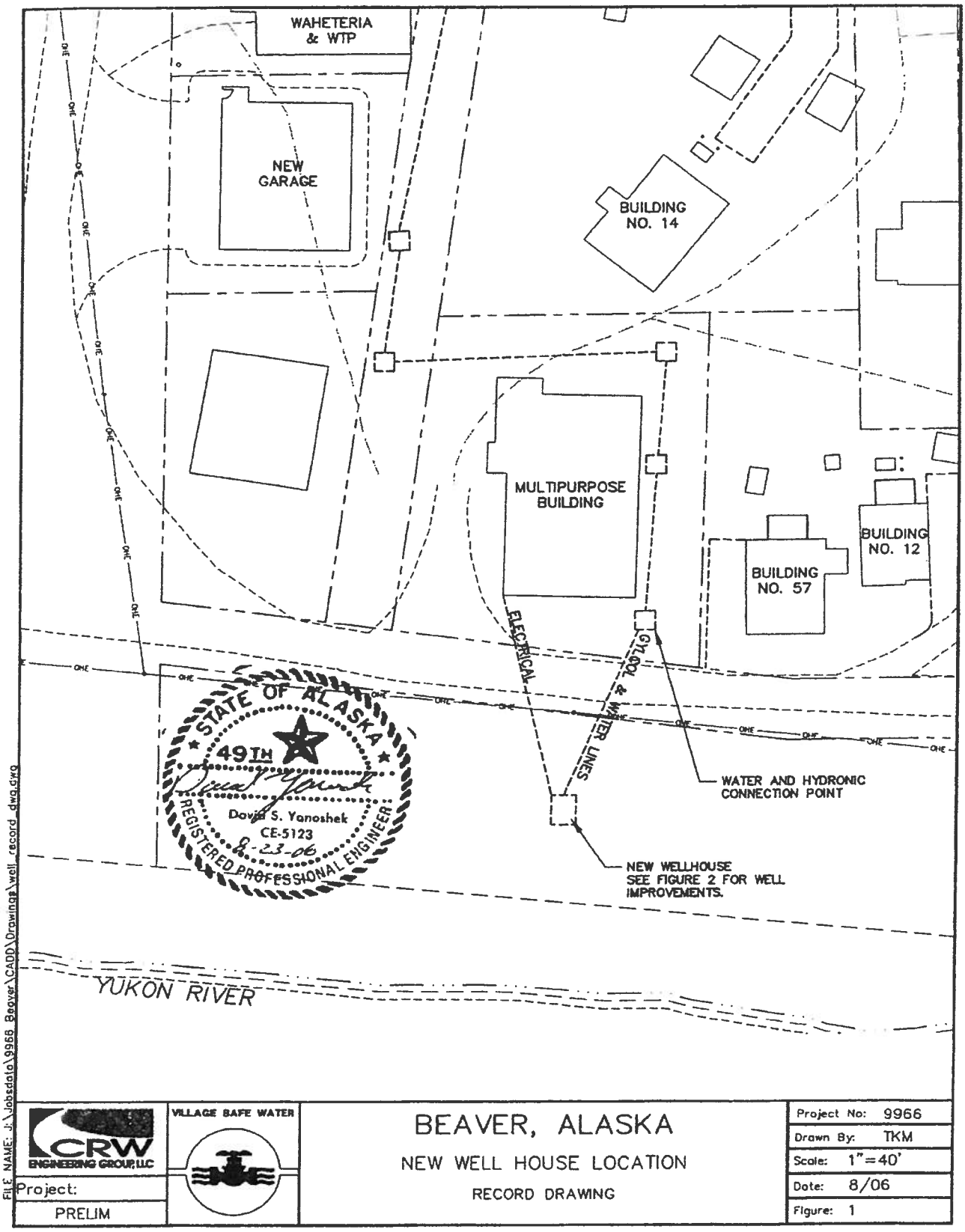
☑ Yes a map with approximate location has been provided.


WAHETERIA
& WTP
NEW
GARAGE
BUILDING
NO. 14
MULTIPURPOSE
BUILDING
BUILDING
NO. 57
BUILDING
NO. 12
ELECTRICAL
WATER LINES
WATER AND HYDRONIC
CONNECTION POINT
NEW WELLHOUSE
SEE FIGURE 2 FOR WELL
IMPROVEMENTS.
YUKON RIVER
STATE OF ALASKA
49TH
Davis S. Yanoshek
CE-5123
8-23-06
REGISTERED PROFESSIONAL ENGINEER
CRW
ENGINEERING GROUP, LLC
VILLAGE SAFE WATER
Project:
PRELIM
BEAVER, ALASKA
NEW WELL HOUSE LOCATION
RECORD DRAWING
Project No: 9966
Drawn By: TKM
Scale: 1"=40'
Date: 8/06
Figure: 1
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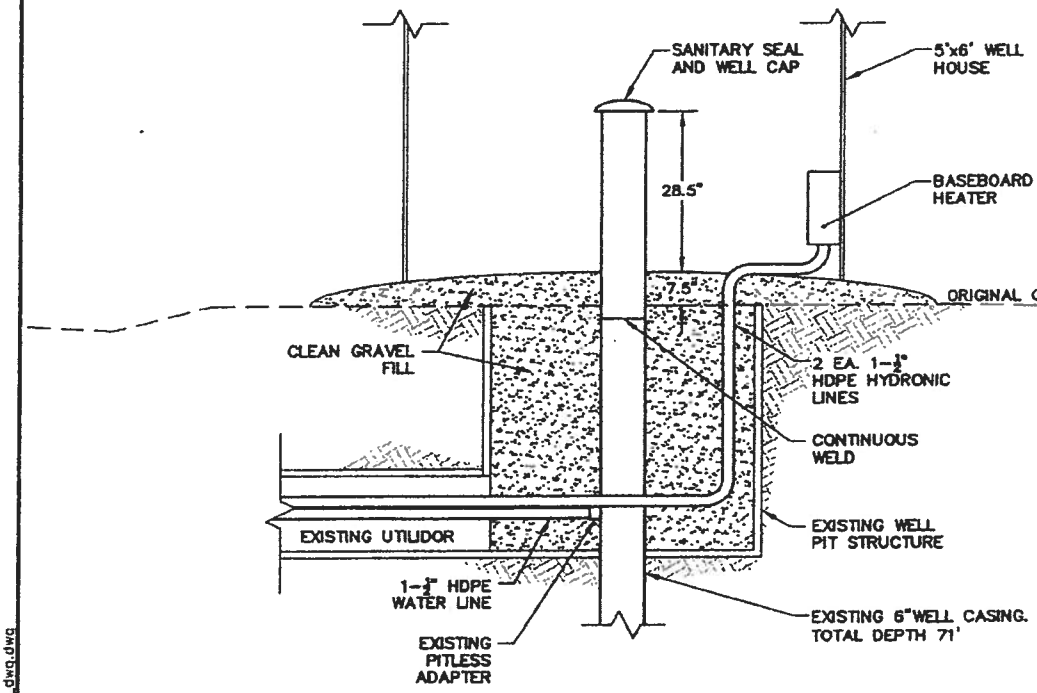


STATE OF ALASKA
49TH
David S. Yanoshek
CE-5123
8-23-06
REGISTERED PROFESSIONAL ENGINEER

NOTES:
1. SEE FIGURE 1 FOR WELL LOCATION.
2. SEE MEMO DATED 8-18-06 FOR ADDITIONAL INFORMATION.
3. SEE 11-6-95 WELL LOG FOR SUBSURFACE INFORMATION.
4. WELL IMPROVMENTS PERFORMED IN JULY, 2006.

FILE NAME: J:\Jobsdgto\9966 Beaver\CADD\Drawings\well_record_dwg.dwg

CRW ENGINEERING GROUP, LLC

Project: PRELIM

VILLAGE SAFE WATER

BEAVER, ALASKA

WELL IMPROVEMENTS

RECORD DRAWING

Project No:	9966
Drawn By:	TKM
Scale:	N.T.S.
Date:	8/06
Figure:	2

ICE WATER WELL, INC.

P.O. Box 10529
FAIRBANKS, ALASKA 99710
(907) 457-6444

WELL LOG

11-1-95 - 11-6-95

Well Owner: Village of BeaVER Date Started ________ Date Finished

Well Location: 1st Ave. RIVER BANK Driller: Lee + Church [illegible]

Mailing Address: BEAVER AlaSKA R.S. Township: 8 E to 20-W

Size of Casing: 6 Steel Depth of Hole: 70' Cased To: 60'

Static Water Level: 28' Drawdown: 4 inches Finish of Well: 10' SCREEN Recondit

Well Pump Test at: 30 gpm Gallons per minute for 36 Hours

Formations Encountered:

0	to 2	Stick up
2	to 6	Silt
6	to 30	GRAVEL "Dry"
30	to 70	GRAVEl and WateR
70	to 71	PERMA FROST GRAVEL
	to	NOTE: well CAPPED w/ 1/4 Plate
	to	Location Between OlD
	to	BIA well + 1976 Comm. WELL
	to	SEE MAP

Pump Installation:

Date Installed: 11-6-95 Type: "TEST" Size: 1 1/2 HP

Material Used:

6" Drive Shoe

60' STEEL CASING 6" x .250 WALL

10' SCREEN AssemBY KPACKER + Bottom

Water Sampling Plan
Beaver Water Treatment Plant
Public Water System ID# 360230 **YEAR** _____

	Test Type	Location	Notes
January	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet
	Quarterly Chlorine Residual Report		Send completed monthly and quarterly MRDL report to ADEC
	Radionuclides (Gross Alpha, Radium 226 & 228, Uranium)	Watering point tap	Send to lab for analysis
February	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet
March	Total Coliform Bacteria	Watering point tap	
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet
April	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet
	Quarterly Chlorine Residual Report		Send completed monthly and quarterly MRDL report to ADEC
	Radionuclides (Gross Alpha, Radium 226 & 228, Uranium)	Watering point tap	Send to lab for analysis
May	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet
June	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet

Water Sampling Plan
Beaver Water Treatment Plant
Public Water System ID# 360230

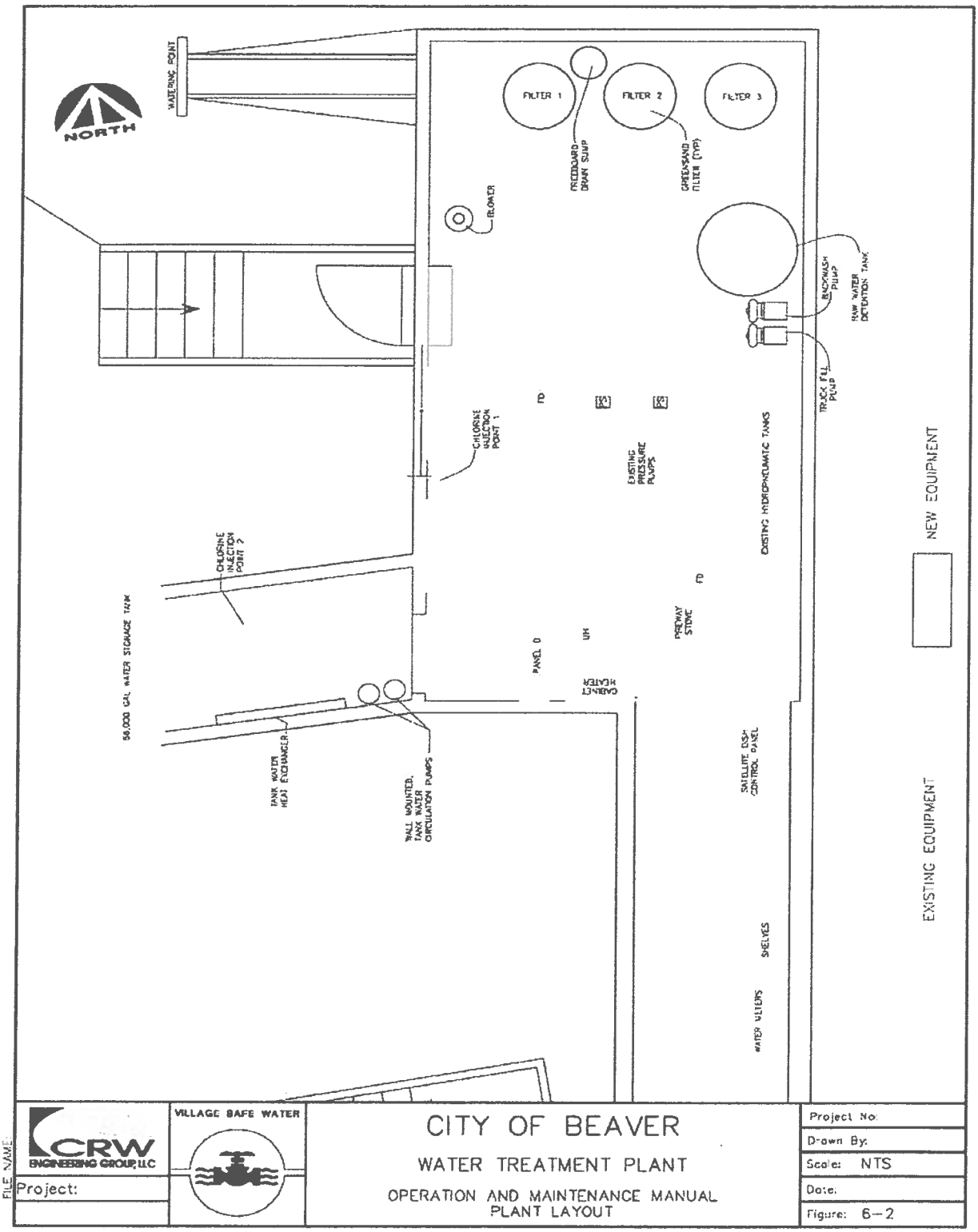
YEAR _____

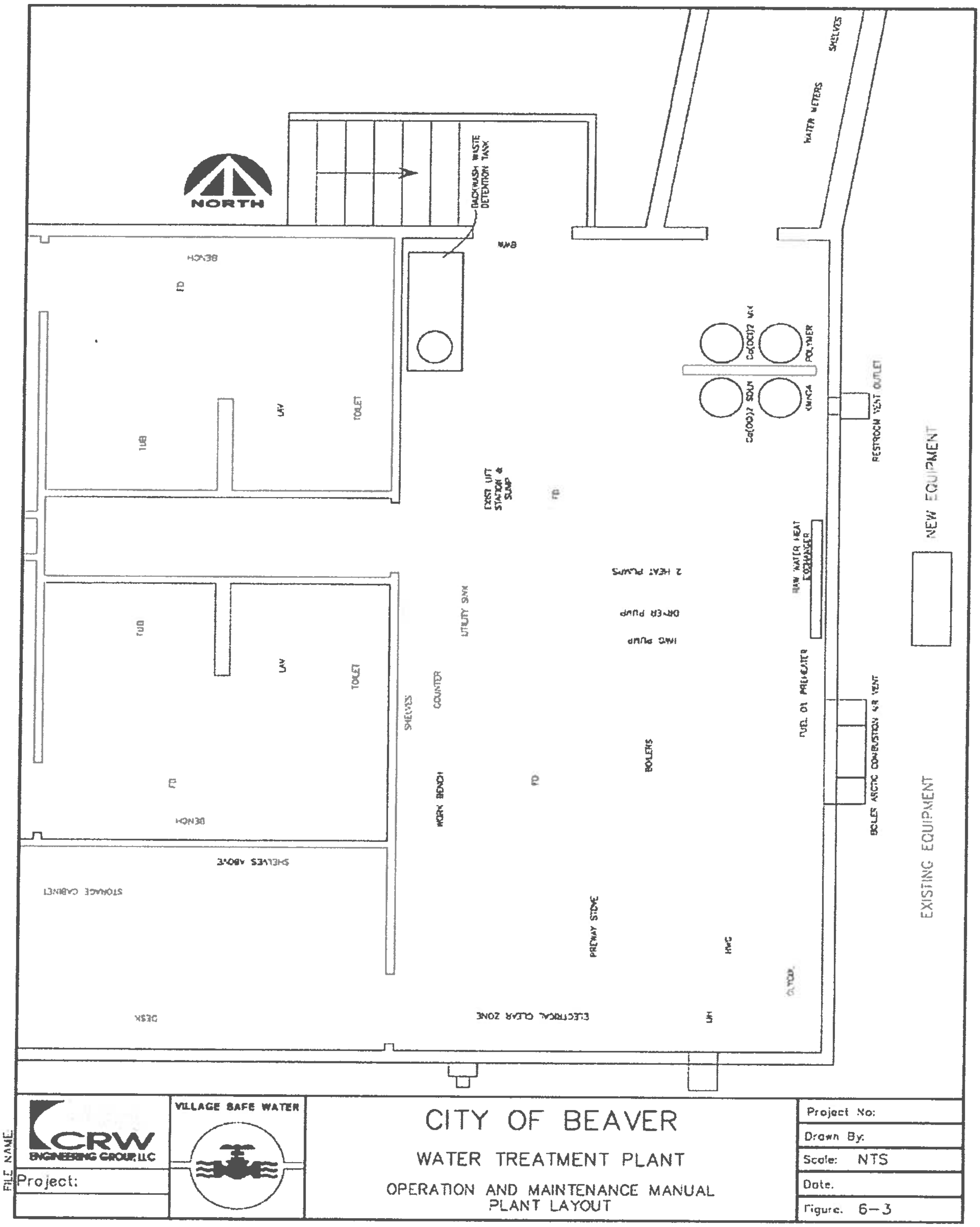
	Test Type	Location	Notes
July	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time an	Record in monthly MRDL worksheet
	Quarterly Chlorine Residual Report		Send completed monthly and quarterly MRDL report to ADEC
	Radionuclides (Gross Alpha, Radium 226 & 228, Uranium)	Watering point tap	Send to lab for analysis
August	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet
Sept.	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time an	Record in monthly MRDL worksheet
October	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet
	Quarterly Chlorine Residual Report		Send completed monthly and quarterly MRDL report to ADEC
	Radionuclides (Gross Alpha, Radium 226 & 228, Uranium)	Watering point tap	Send to lab for analysis
Nov.	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet
Dec.	Total Coliform Bacteria	Watering point tap	Send to lab for analysis
	Chlorine Residual	Watering point tap, same time and location as coliform sample	Record in monthly MRDL worksheet

Water Sampling Plan
Beaver Water Treatment Plant
Public Water System ID# 360230 **YEAR** _____

	Test Type	Location	Notes
Annual	Nitrate	Watering point tap	Send to lab for analysis
	TTHM	Watering point tap	Send to lab for analysis, take sample during warmest water temperature month of operation
	Consumer Confidence Report (CCR)	N/A	Annually before July 1st
	HAA5 (Haloacetic Acids)	Watering point tap	Send to lab for analysis, take sample during warmest water temperature month of operation
Period	Arsenic	Watering point tap	Send to lab for analysis
	VOCs (Volatile Organic Compounds)	Watering point tap	Send to lab for analysis
Cycle	Old Inorganics	Watering point tap	Send to lab for analysis
	New Inorganics	Watering point tap	Send to lab for analysis
Every 5 Years	Sanitary Survey	N/A	Due in 20XX
Waiver	Asbestos	Watering point tap	Waiver for current period
	Pesticides & Other Organics	Watering point tap	Renew waiver in 20XX

Notes:
1) Periods are three years in length and start in 2007. The current period is 1/1/07 - 12/31/09 and the next period will be 1/1/10 - 12/31/12.
2) Cycles are nine years in length and start in 2007. The current cycle is from 1/1/07 - 12/31/15.


NORTH
WATERING POINT
FILTER 1
FILTER 2
FILTER 3
BLOWER
BACKWASH PUMP
TANK WATER DETENTION TANK
TRUCK FILL PUMP
CHLORINE INJECTION POINT 1
EXISTING PRESSURE PUMPS
EXISTING HYDROPNEUMATIC TANKS
NEW EQUIPMENT
CHLORINE INJECTION POINT 2
50,000 GAL WATER STORAGE TANK
PANEL D
CABINET HEATER
FREEWAY STOVE
TANK WATER HEAT EXCHANGER
WALL MOUNTED TANK WATER CIRCULATION PUMPS
SATELLITE DISH CONTROL PANEL
SHELVES
WATER HEATERS
EXISTING EQUIPMENT
FILE NAME
CRW ENGINEERING GROUP, LLC
Project:
VILLAGE SAFE WATER
CITY OF BEAVER
WATER TREATMENT PLANT
OPERATION AND MAINTENANCE MANUAL
PLANT LAYOUT
Project No:
Drawn By:
Scale: NTS
Date:
Figure: 6-2


NORTH
BACKWASH WASTE DETENTION TANK
WATER METERS
SHELVES
NEW EQUIPMENT
EXISTING EQUIPMENT
POLYMER
RESTROOM VENT OUTLET
RAW WATER HEAT EXCHANGER
2 HEAT PUMPS
FUEL OIL PREHEATER
BOILERS
BOILER ARCTIC COMBUSTION AIR VENT
UTILITY SINK
COUNTER
SHELVES
WORK BENCH
TOILET
LAV
TUB
BENCH
SHELVES ABOVE
STORAGE CABINET
DESK
ELECTRICAL CLEAR ZONE
PREWAY STOVE
VILLAGE SAFE WATER
CRW ENGINEERING GROUP, LLC
FILE NAME
Project:
CITY OF BEAVER
WATER TREATMENT PLANT
OPERATION AND MAINTENANCE MANUAL
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Project No:
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Scale: NTS
Date:
Figure. 6-3