

Crystal River Ranch Association Water System

8-25-2011

System Name: Crystal River Ranch Association
System ID: 164800
Class: "A" Pierce County
Source Type: SO1 – Well #2 Primary 283 ft. deep
SO2 – Well #1 Secondary 70 ft. deep (Disc. from system Classed as Emerg. Source.)
SO4—Well #3 Primary 320ft. deep
Operation: SO1 & SO4 Alternate between cycles by way of motor control box located in pump house.
Operator: James (Jim) McKinley CRR Caretaker / WDM1 # 9822
360-663-2416 cell 253-720-5009

Periodic Tasks/Maintenance

Daily: Chlorination report / DMR

1. Record meter readings
2. Calculate gallons pumped in last 24 hours
3. Record total gallons of chlorine in container
4. Calculate gallons of chlorine used within the last 24 hour
5. Record free chlorine available in system by using Hach test kit
6. Note other worthy comments on bottom or rear such as flushing, leaks, power outage, etc.

Weekly:

1. Change chart on Chart Recorder (7-day chart)
Note on chart: Flow meter readings, and other noteworthy comments (i.e. severe weather, holiday weekend, leaks in system, power outage, etc....)
2. Drive or walk to tanks and perform visual security check. Note that water level in both tanks is between 9 and 12 feet.

Monthly:

1. Chlorination Plant Report/Daily Monitoring Report (DMR)
This report is due on, or before the 10th of each month.
Use the remark column for notations such as the chlorine and water that you put into the mix tank, generator test and number of hours, test on the 70 – foot well, etc. Also note any water leaks here on your file copy. Mail the completed report to:
Dept. of Health
20435 72nd Ave S Ste 200
Kent, WA 98032-2358

2. Bacteriological Test

Fill one sample vial with tap water from a source near the Ranch House. Take off tap screen and let cold water run for 5 to 15 minutes. DO NOT touch any part of the inside or cap of the bottle, as it will become contaminated. Fill according to instructions given on the back of the sheet needed with the sample. (See **coliform monitoring plan in SWSMP**)

NOTE: YOU MUST USE THE VIAL PROVIDED BY THE DDHS. THERE IS A MIXING AGENT IN THE VIAL. DO NOT RINSE OUT THE VIAL.

Samples taken to “City Shop” in Enumclaw on first Tuesday of each month by 10:00 am – Draw samples on morning of test.

You will receive a confirmation (green slip) in the mail within a week after submitting the sample. Keep this with the other green slips in the Pump House.

If test comes back positive for coliform you must take four more samples at the locations described in coliform monitoring plan.

3. Run the 70-ft well pump and motor. The 70-ft well is also in the front pump room. It operates from Panel ‘B’. It is operated by the circuit breaker in panel; the valve must be open before you operate. Pump monthly for 30 minutes. DO NOT TURN ON/OFF more than 6 times per hour – will overheat the pump. Run the faucet until water runs clear.

4. Run generator once month for at least 30 minutes.

Procedures: By turning off power at the main panel

5. Exercise all valves in pump house

ANNUALLY

Clean one water storage tank (usually in the fall)

Recommend CRR Caretaker attend the Water/Wastewater Operations Workshop held each year. The plant operator can earn a minimum of 2.5 Continuing Education Units (CEU) every year, which will keep their state certification valid.

SEMI-ANNUALLY

Every 6 months exercise each gate valve on water system loop to ensure function ability. Open stand pipe nearest to the valve you’re exercising to flush loosen debris out of system. **SEE FLUSHING IN SWSMP**

WATER TESTING REQUIREMENTS

Dept. of Health will send you all testing requirements for the calendar year.

IMPORTANT INFORMATION

Primary pump operating pressures 70-80 PSI

The Automatic Chlorinator runs automatically with the primary pumps.

How to chlorinate:

Mix 10 gallons of water to 1 Gal 12.5% chlorine = PPM.

Coliform Monitoring Plan per WAC #246-290-300

WHO TO CALL

Block heater for generator:

UNIVERSAL ENGINE HEATERS

22 W. Mansfield Ave

PO BOX 5162

509-328-1220 888-566-1220

Chlorinators:

Fluid Control Inc.

3921 Spur Ridge Lane

Bellingham, WA 98226

800-251-9698

In Use: Make: Liquid Metering Inc.

Model: P141358S1

125 psi pump

Depository of System Drawings:

Tom Touma

Touma Engineering

15668 West Valley Highway

Tukwila, WA 98138

425-251-0665

Designer of System:

Bob Scholes

ESM Engineering

Renton, WA

425-623-5911

Diesel Motor (local help):

Southworth

(360) 663-2215

(360) 663-2238 (home)

Electrical Contactor

Thompson Electric

253-539-0999

Tim Eaton cell

253-677-2806

Pump and Motor:

Holt Drilling

Jim Fey cell

253-381-2077

253-883-5200

Regional Engineer:

Dept of Health

John Ryding PE

253-395-6757

Testing Requirements

Dept of health

Steve Hulsman

253-395-6777

WHERE TO ORDER

Charts:

ABB Kent Taylor – Stead – Baggerly

13200 SE 30th ST.

Bellevue, WA 98005

425-644-1700

Chlorine: 12.5 % Hypochlorite

UNIVAR
8201 South 212th
Kent, WA 253-872-5000

Test Pillows:

Hach Co.
P.O. Box 389
Loveland, Co 80539 303-669-3050

Our account # 141120

DPD Free Chlorine Test Pillows: DPD Free Chlorine Reagent Powder Pillows (package of 100)

Catalog # 14077-99

OTHER:

Valves, Pipes, Etc.

H.D. Fowler
13440 SE 30th St
Bellevue, WA 98004
Sumner: 253-863-8600

or

National Waterworks
602 Valley Ave NE
Puyallup, WA 98372-2518
253-840-8558

EMERGENCY INFORMATION

POWER FAILURE

The generator turns on automatically in the event of a power failure. The Generator continues to run unattended without interruption. The telemetry is not connected to backup power so pump must be monitor and operated manually as needed. If it is a general power failure there is no concern.

If the failure is isolated to the pump house and not the rest of the area, then a check should be make that the transformer jack is not blown. Puget Power will come and check their service.

Since the emergency generator is heated by hot water, the generator will run for the entire power outage. This is critical in the cold weather, as the generator will not start if the engine is cold.

PUGET POWER SERVICE 206-825-3573 or 800-321-4123

LOW WATER

Immediately go to pump house and start system manually.

MANUAL OVER RIDE TO OPERATE PUMP

1. Turn both switches to off position at (grey) motor control box
2. Turn switch at blue control box to manual.
3. Turn desired pump to manual position

Turn switches to original position to return to automatic operation.

After tanks are filled, go to Indian Summer Way and open the blow off slowly to bleed off air. Next go to Willow Tree Court and follow same procedure.

NOTE: Each foot of water in the two tanks equals 5,000 gallons.

If it is determined that the pump and motor are not functioning, call:

Holt Drilling Inc. 253-845-7448
10621 Todd Rd E
Edgewood, WA 98372-2527

If the main pump operates, the problem may be in the “High-Low” fill telemetry system. The low and high water fill system is operated through a telephone circuit. For service call:

206-345-3556 and ask for Don Ross, or call 800-954-1211

Reference System #4UGDA0115, / 206 T21 887767OB they will determine if the problem is with their equipment or ours. If the problem is determined to be in our equipment, in the pump house or on the water tower road meter pole, call:

Thompson Electric 253-539-0999 Tim Eaton cell 253-677-2806

...or...

S & B (Stead & Baggerly) http://www.sb-inc.com/Contact_Us.html

13200 S.E. 30th

Bellevue, WA

425- 644- 1700

Customer Support: service@sb-inc.com

After describing the problem, they will determine if a service call can be made or if the instruments must be taken in for check and/or repair.

TONE MODULE EQUIPMENT

The “blue box” in the pumphouse, and the “gray box” on the other side of the phone lines (S & B equipment) are known as the tone module equipment. They consist basically of a transmitter on the gray box side, and a receiver on the blue box side. They are easily identified by the initials “DAQ” on the outside of the box.

In the receiver, you will find three red lights. Only two of these, the ones marked “C”, and the one marked “M” is used in our system. The other one has no function with our system. The “C” light should be on constantly, indicating that there is a clean communication on the phone lines. The “M” light indicates that the transmitter signal is being received, and will only be seen operating when the pump is filling the tanks. In both boxes, there are some small “buss” type fuses which will need to be watched and replaced if necessary. They are ¼ amps; 250 volt fuses, and can be purchased in any gas station or hardware store.

For any questions or troubleshooting of this equipment, S&B Inc. will be very helpful in determining the problem.

LOW WATER

If there is a power failure, check to see if the generator is running. If not, troubleshoot the generator. Will the pump operate manually?

If pump works, check TONE MODUAL EQUIPMENT

If pump doesn't work, check the breakers on the panel.

Check the chart recorder, if the pen is in the “operate” position, which means that there is no power going to the pump. This could mean a pump failure. If the pen is in the “non-operate” position, there is no voltage going to the pump.

OTHER EMERGENCY CONTACTS

JIM McKinley 360-663-2416 Cell 253-720-5009

BILL STEEL 360-663-2626 Cell 253-569-9014

JEFF McIntyre 360-663-2263

SAM ADAMS 360-663-2315

MEL SOUTHWORTH 360-663-2215 360-663-2238 253-261-0465

Dept. of Health Drinking Water Emergency Hotline 24 Hr 1-877-481-4901 (see SWSMP)