DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
2050 West Main Street, Suite #1
Rapid City, SD 57702-2493
Telephone: 605-394-2229
Fax: 605-394-5317

January 6, 2020

Mike Riker, Water Manager
Colonial Pine Hills Sanitary District
7806 Croyle Ave
Rapid City, SD 57702

Re: Colonial Pine Hills Sanitary District Sanitary Survey (EPA ID# 0263)

Dear Mr. Riker:

The Department of Environment and Natural Resources (DENR) performed an on-site evaluation of your drinking water system on December 11, 2019. Based on the information obtained during that evaluation, we have some requirements and recommendations to assist you with maintaining compliance with regulations, improving operations, and providing public health protection. The requirements and recommendations are as follows:

Requirements for Public Water System On-Site Evaluations

1. As a reminder, Required Compliance Records are required to be kept on file. The chart below outlines what records you must keep and for how long.

Records That Must Be Kept	**Frequency**
Actions taken by your system to correct violations	At least 3 years
Public Notices that your system issues	At least 3 years
Public Notification Rule	At least 3 years
Consumer Confidence Rule	At least 3 years
Microbiological and turbidity analyses	At least 5 years
Chemical analyses	At least 10 years
Sanitary Surveys and written reports and summaries of surveys	At least 10 years
Stage 1 and 2 Disinfectants and Disinfection By-Products Rule	At least 10 years
Lead and Copper Rule - Public Education activities and materials	At least 12 years
Lead and Copper Rule – all associated sample analyses, corrosion control recommendations	At least 12 years

2. Once an Operator is certified they are required to maintain contact hours in order to stay certified. The contact hour requirements for renewal of water and wastewater operator certificates can be seen below:

Operator with one certificate (Class I or II) 10 contact hours every three years

Operator with one certificate (Class III or IV)	20 contact hours every three years
Operator with more than one certificate (and all certificates are Class I or II)	15 contact hours every three years
Operator with more than one certificate (and at least one certificate is class III or IV)	30 contact hours every three years

If there are any questions on certification requirements, please contact Rob Kittay, Secretary of the Board of Operator Certification, at 773-4208. A complete copy of the regulations and more information is available on the Operator Certification Website at http://denr.sd.gov/des/dw/opcertqa.aspx

Recommendations

1. Colonial Pine Hills Sanitary District does an exceptional job of operating and maintaining its water system, continue to tremendous efforts!

2. Continue to good effort of cleaning and inspecting your storage tanks. Storage tanks should be cleaned and inspected every three to five years. Regular inspection schedules will greatly prolong the working life of the storage tank or reservoir and help prevent unnecessary water contamination or tank corrosion problems.

3. Protection of the water system from acts of vandalism or other threats is a vital part of providing safe water for consumers. Continue the basic security measure of locking all buildings and water reservoirs, limiting access to water facilities, and conducting routine visual checks of the system.

4. For technical assistance contact the Department of Environment and Natural Resources Drinking Water Program at 523 East Capitol, Pierre, SD 57501, (605) 773-3754; or the Rural Water Association (SDRWA) at 301 Seaton Circle, Spearfish, SD 57783, (605) 642-4031. Representatives of your water system are invited to attend seminars and training courses sponsored by DENR and the SDRWA. For additional information, please contact them.

The on-site evaluation report is attached. If you have questions or comments concerning this on-site evaluation, please contact me.

Sincerely,

Erin Fagnan
Engineer II
Drinking Water Program – SD DENR
2050 W Main St, Suite #1
Rapid City, SD 57702
605-394-6780

Enclosures

Cc: Drinking Water Office, Pierre - via email only

South Dakota Department of Environment and Natural Resources

Drinking Water Program

Public Water System On-Site Evaluation Report

System Name: Colonial Pine Hills Sanitary District EPA ID #: 0263
Address: 7806 Croyle Ave
Rapid City, SD 57702-8950

County: Pennington

Person Contacted: Mike Riker Work phone: (605)341-7800
Address: 7806 Croyle Ave Home phone:
Rapid City, SD 57702 Cell phone: (605)209-2811
Fax:
E-mail: mike.riker@ae2s.com

Inspected By: Erin Fagnan Date of Inspection: 12/11/19 (mm/dd/yy)

Type of System: (check one) X Community Water System
Non-Transient Non-Community

Population: Total Population Served: 1,200 System Population: 1,200

Number of Service Connections: 431 Susceptibility to contamination of water source: moderate

Sources of Water: Water data from year: 2019

Own Source(s):	Croyle 2, Nonanna, Conifer Wells	Total produced:	40,318,600	% of total:	100.0%
Bulk Supplier:		Total purchased:		% of total:	0%
Contracted flow rate?:	N/A				
		Total Annual Use:	40,318,600		100.0%

Water Sold to: N/A
(bulk connections only)

How much water can this system supply? 698400 (maximum flow rate, gpm)
What major factor limits system's ability to supply water? None

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Is there an up-to-date map or schematic of system?
☑	☐	☐	☐	☐	2 Is the system capable of meeting demand at all times (excluding fire flow)?
☑	☐	☐	☐	☐	3 Is good housekeeping evident throughout the system?

Comments: Water Data for Jan 2019 to October 2019

Water Usage

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	4 Are all customers metered?	
					5 If not, what entities are not metered?	
					6 Total gallons billed:	21,215,110
					7 Calculated water loss:	47.4%
yes	no	n/a	unk	note	8 Peak month and amount used	August 7,557,400 gallons
☑	☐	☐	☐	☐	9 Does the system track unaccounted-for water?	

Comments: System fixed large leak in 2019 that lasted approximately 3 months (May to Sept). Leak was difficult to detect due to water not surfacing, eventually a sink hole formed in the road and source of leak discovered. System works hard to limit water lost and it is tracked monthly

Water Sources

Colonial Pine Hills EPA ID: 0263

Name	Year Built	Diameter (in)	Depth (ft)	GPM	Status	ID
WP MAIN WELL	1978	7	1109	93	Emergency	6
NAYLOR WELL	1976	4	825	30	Abandoned	7
CROYLE 1 WELL	1964	6	725	18	Abandoned	8
NONANNA WELL	2002	7	1055	147	Permanent	10
CLARKSON WELL	1972	8	720	15	Abandoned	12
CONIFER WELL	1997	7	1020	140	Permanent	14
CS MAIN WELL	1994	7	945	44	Emergency	17
CROYLE 2 WELL	2010	13	1010	180	Permanent	19

Name	Water Right #	Aquifer	Location Description	ID
WP MAIN WELL	1726-2	DEADWOOD		6
NAYLOR WELL	1726-2	MADISON AQ.		7
CROYLE 1 WELL	1726-2	MADISON AQ.		8
NONANNA WELL	2461-2	MADISON		10
CLARKSON WELL	2108-2	MADISON		12
CONIFER WELL	2295-2	DEADWOOD		14
CS MAIN WELL	2295-2	DEADWOOD		17
CROYLE 2 WELL	2607A-2	MADISON		19

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Has a Source Water Protection Plan been developed? Date: 2006
☑	☐	☐	☐	☐	2	Is the wellhead/pumphouse protected from unauthorized personnel?
☐	☑	☐	☐	☐	3	Are there any sources of contamination with 1/4 mile?
☑	☐	☐	☐	☑	4	Are pesticides, herbicides, fertilizers applied in the area of the well(s)?
☑	☐	☐	☐	☐	5	Is a pressure gauge provided at each source?
☑	☐	☐	☐	☐	6	Is a sample tap provided at each well for raw water? List locations below.
☑	☐	☐	☐	☐	7	Can flow be measured from each well?
☑	☐	☐	☐	☐	8	Is the well house(s) kept clean, in good repair and not used to store hazardous material?

Comments: 4. Assume use of chemicals on nearby lawns

Water Treatment

Colonial Pine Hills **EPA ID: 0263**

General Items

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Is there continuous online water quality measurements taken? If so, what? (pH, turbidity, chlorine, etc.) Cl residual and turbidity at Croyle 2 after contact loops for Croyle 2 and Nonanna well blend. Hach CL 17 chlorine analyzer and Hach 1720E turbidimeter
☑	☐	☐	☐	☐	2	Can the treatment process be interrupted by power outages?
☐	☐	☐	☐	☑	3	Is backup electrical power available?
☐	☑	☐	☐	☑	4	Are treatment units designed to be taken out of service without interruption to operations?
☑	☐	☐	☐	☐	5	Is routine maintenance and good housekeeping evident?

Chlorination

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Is continuous disinfection provided?
					2	Type of chemical used: Azone
☑	☐	☐	☐	☐	3	Is there an anti-siphon valve on the feed pump?
☑	☐	☐	☐	☐	4	Is there adequate spill containment?
					5	Gas chlorination features:
☐	☐	☑	☐	☐	6	Separate room?
☐	☐	☑	☐	☐	7	Positive mechanical ventilation?
☐	☐	☑	☐	☐	8	Restraints for all cylinders?
☐	☐	☑	☐	☐	9	Self-contained air pack present?
☐	☐	☑	☐	☐	10	Scale present?
☐	☐	☑	☐	☐	11	Observation window?
☐	☐	☑	☐	☐	12	Automatic leak detectors?
☐	☐	☑	☐	☐	13	Chlorine safety plan?
☐	☐	☑	☐	☐	14	Other chemicals stored in room?
☐	☐	☑	☐	☐	15	Is ammonia used to form chloramines?
☐	☐	☑	☐	☐	16	Is an alternate method of disinfection used?

Describe:

Comments: 3. System has transfer switch. 4. System has redundancy

Presedimentation

yes	no	n/a	unk	note	
☐	☐	☑	☐	☐	1 Does the water require presedimentation?
☐	☐	☑	☐	☐	2 Is there a minimum detention time of three hours (Ten States Standards)?
					If not, what is approximate detention time? _____
☐	☐	☑	☐	☐	3 Is any treatment/conditioning done to water prior to presedimentation?
					Describe: _____
☐	☐	☑	☐	☐	4 Can the basin be bypassed?
☐	☐	☑	☐	☐	5 Is there continuous sludge removal?
☐	☐	☑	☐	☐	6 Is short circuiting a problem?

Comments: _____

Aeration

yes	no	n/a	unk	note	
☐	☐	☑	☐	☐	1 Is aeration provided?
					2 What type of aeration is provided? _____

Comments: _____

Coagulation

yes	no	n/a	unk	note	
☐	☐	☑	☐	☐	1 Does the treatment process include coagulation?
					2 List chemicals added: _____
☐	☐	☑	☐	☐	3 Is the basin equipped with mechanical mixing devices?
☐	☐	☑	☐	☐	4 Is the detention period more than 30 seconds (Ten States Standards)?

Comments: _____

Flocculation

yes	no	n/a	unk	note	
☐	☐	☑	☐	☐	1 Does the treatment process include flocculation?
☐	☐	☑	☐	☐	2 Is there at least 30 minutes of detention time for floc formation?
					If not, what is approximate detention time? _____
☐	☐	☑	☐	☐	3 Does the inlet and outlet design prevent short-circuiting and destruction?

Comments: _____

Sedimentation

yes	no	n/a	unk	note	
☐	☐	☑	☐	☐	1 Is sedimentation part of this treatment process?
☐	☐	☑	☐	☐	2 Is there a detention time of at least 4 hours (Ten States Standards)?
					If not, what is approximate detention time? _____
☐	☐	☑	☐	☐	3 Is there continuous sludge removal?
☐	☐	☑	☐	☐	4 Is sludge dewatered?
					5 Where does recycled water reenter system? _____
					6 Where is the sludge discharged? _____
☐	☐	☑	☐	☐	7 Does the facility have the appropriate waste water permits?

Comments: _____

Filtration

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Is filtration provided?
					2 What type: WesTech brand 0.01 micron ultrafiltration for Nonanna well. 12 filters present, 10 are in use. 50 micron Tekleen screen at Conifer
☑	☐	☐	☐	☐	3 Do records indicate that adequate filtration is being done?
					4 Filtration area: 7750 square feet with 10 filters in use
					5 Maximum flow rate: 150-200gpm
					6 Backwash frequency: every 30 minutes
					7 How determined? scheduled and water quality

Comments: Each filter is 775 square feet. Sodium hydroxide, sodium bisulfate & citric acid use to clean filter fibers. Tekleen screen at Conifer for particulate removal and is not in use at Croyle 2 or Nonanna

Fluoridation

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Is fluoridation provided?
					2 Type of chemical used? Fluorosilicic Acid
☑	☐	☐	☐	☐	3 Is there an anti-siphon valve on the feed pump?
☑	☐	☐	☐	☐	4 Is there adequate spill containment?
☑	☐	☐	☐	☐	5 Do records indicate consistent, acceptable levels are maintained?

Comments: _____

Stabilization (pH adjustment, polymers, softening, etc.)

yes	no	n/a	unk	note	
☐	☐	☑	☐	☐	1 Does the water require stabilization?
☐	☐	☑	☐	☐	2 Are pH and alkalinity adjusted? (via soda ash, lime, caustic soda, carbon dioxide, sulfuric acid, etc.) How?
☐	☐	☑	☐	☐	3 Is the water softened as part of this treatment process? Describe:
☑	☐	☐	☐	☐	4 Are corrosion inhibitors or sequestering agents used? Describe: Calgon LPC at Conifer: iron sequestration
☑	☐	☐	☐	☐	5 Are polymers used for something other than described previously? Aquahawk 627 added at Nonanna to build floc and improve particulate removal

Comments: _____

Corrosion Control

yes	no	n/a	unk	note	
☐	☐	☑	☐	☐	1 Does this system require a corrosion control program?
					2 What chemical is being used? Dosage?
☐	☐	☑	☐	☐	3 Is the corrosion control equipment working properly?
☐	☐	☑	☐	☐	4 Do records show WQP's are tested every two weeks?
☐	☐	☑	☐	☐	5 What test kits are used for WQP's and are reagents up to date?

Comments: _____

Storage

Colonial Pine Hills EPA ID: 0263

Description	Service Date	Location	ID
1 Steel Standpipe 504000	2019		18

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Is the area surrounding the ground-level storage structures graded in a manner that will prevent surface water from standing within 50 feet?
☑	☐	☐	☐	☐	2	Do overflows and drains have free fall discharges which are screened?
☑	☐	☐	☐	☐	3	Are the discharges between 12 and 24 inches above the ground?
☑	☐	☐	☐	☐	4	Do the overflows and/or drains discharge to a splash pad or drainage inlet structure that is not connected to a storm or sanitary sewer?
☑	☐	☐	☐	☐	5	Do the storage reservoirs have a watertight roof or cover and are they sloped so that water will drain?
☑	☐	☐	☐	☐	6	Are storage structures designed so that they can be isolated from the distribution system without necessitating loss of pressure in the distribution system?
☐	☑	☐	☐	☐	7	Is leakage evident at the time of inspection?
☑	☐	☐	☐	☐	8	Are the storage structures vented?
☑	☐	☐	☐	☐	9	Are vents properly protected/screened?
☑	☐	☐	☐	☐	10	Are covers and hatches locked?
☐	☑	☐	☐	☐	11	Are there any weather related problems (freezing, etc.)?
☑	☐	☐	☐	☐	12	Is there a control system to maintain level?
☑	☐	☐	☐	☐	13	Are there high and low level alarms?
					14	Are tanks filled automatically, manually or both? auto
☐	☑	☐	☐	☐	15	Is there a service contract for cleaning/inspecting the tanks?
☑	☐	☐	☐	☐	16	Are the tanks disinfected after being cleaned or inspected?
☑	☐	☐	☐	☐	17	Are the storage structures secure from unauthorized access?
☑	☐	☐	☐	☐	18	Is the area fenced?
					19	What other steps have been taken to address security?

Comments:

Distribution System

Colonial Pine Hills EPA ID: 0263

Main sizes and types: 4, 6, 8, 10, 12" PVC

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Is the water system capable of providing sufficient water during maximum demand conditions (excluding fire flow) to maintain a minimum pressure of 20 psi within the system measured at the consumer's tap?
					2	What is normal operating pressure? 50-80 psi
☐	☑	☐	☐	☐	3	Are there areas with chronic low pressure problems?
☑	☐	☐	☐	☐	4	Is an adequate map (shows valve locations, line sizes, etc) of the distribution system maintained?
☑	☐	☐	☐	☐	5	Is there a main flushing program? If yes, how often? 1x/yr
☑	☐	☐	☐	☐	6	Are all dead-end water mains equipped with a means to flush?
☐	☑	☐	☐	☐	7	Any plans to eliminate dead-ends (via looping of mains, etc.)?
☑	☐	☐	☐	☐	8	Are valves exercised regularly? If yes, how often? 1x/yr
☑	☐	☐	☐	☑	9	Are there fire hydrants on mains less than 6 inches in diameter?
☑	☐	☐	☐	☐	10	Does the system disinfect after pipe repairs or new pipe installation?
☑	☐	☐	☐	☐	11	Is the location and nature of each repair documented?
☑	☐	☐	☐	☑	12	Does the system utilize a conservation program at any time?
☑	☐	☐	☐	☐	13	Is the system adequately protected from freezing?
☐	☐	☑	☐	☐	14	Are water and sewer mains separated by a horizontal distance of 10 feet or greater?
☐	☐	☑	☐	☐	15	Is there a cross connection control program?
☐	☐	☑	☐	☐	16	Are audits conducted to check for cross connections in the system?
☑	☐	☐	☐	☐	17	Are backflow preventers installed on all consumer connections?
☐	☐	☑	☐	☐	18	Is the bulk water loading station designed with back flow prevention and appropriate air gap device to prevent contamination?
☑	☐	☐	☐	☐	19	Does the system contain any pressure reducing valves?
☐	☐	☑	☐	☐	20	For systems using chloramines, can you measure a total chlorine residual level of at least 0.5 mg/l in your distribution system at all times?
☑	☐	☐	☐	☐	21	For systems using chlorine, can you measure a free chlorine residual level of at least 0.3 mg/l in your distribution system at all times?
					22	How often do you take chlorine readings in the distribution system? continuously

Comments (please indicate the question number): 9. Hydrants on 4" lines are marked for fire dept.
12. Limit lawn irrigation during the day in the summer

Facilities Equipment

Colonial Pine Hills EPA ID: 0263

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Are any pumps used in the system? If so, describe: 30 hp high lift pump at Croyle 2 treatment plant to push water to the distribution system.
☐	☑	☐	☐	☐	2 Are backup pumps available?
☐	☑	☐	☐	☐	3 Is any equipment located in a pit?
☑	☐	☐	☐	☐	4 Do you use a qualified pump contractor to inspect pump equipment?
☑	☐	☐	☐	☐	5 Is food grade lubrication used in all water facilities equipment?
☐	☐	☐	☐	☑	6 Is backup power available in the event of a power loss?
☑	☐	☐	☐	☐	7 Is equipment protected from unauthorized entry or vandalism?
☐	☑	☐	☐	☐	8 Are the facilities and equipment subject to weather related problems?
☑	☐	☐	☐	☐	9 Is there a floor drain? Where does it drain to? daylight

Comments (please indicate the question number): 6. Transfer switch

Monitoring/Reporting - Entry Point

Colonial Pine Hills **EPA ID: 0263**

SAMPLING

Entry point: Treat Site - Croyle 2/nonanna

	Chemical	Sampling Frequency	Waivers	Taken Last	Due Next	Notes
1	Inorganic Chemicals					
	A. Antimony	Triennially	No	Nov-17	2020	
	B. Arsenic	Triennially	No	Nov-17	2020	
	C. Barium	Triennially	No	Nov-17	2020	
	D. Beryllium	Triennially	No	Nov-17	2020	
	E. Cadmium	Triennially	No	Nov-17	2020	
	F. Chromium	Triennially	No	Nov-17	2020	
	G. Cyanide		Yes			State-wide waiver
	H. Fluoride		No			State Fluoride Rule Applies
	I. Mercury	Triennially	No	Nov-17	2020	
	J. Nickel	Triennially	No	Nov-17	2020	
	K. Selenium	Triennially	No	Nov-17	2020	
	L. Thallium	Triennially	No	Nov-17	2020	
2	Radiological Chemicals	Every nine years	N/A	Oct-15	2024	
3	VOC Chemicals	Triennially	No	Feb-18	2021	
4	SOC Chemicals					
	A. Method 515.1	Triennially	No	Feb-18	2021	
	B. Method 524	Triennially	No	Feb-18	2021	
	C. Method 525	Triennially	No	Feb-18	2021	
	D. Method 531.1	Triennially	No	Feb-18	2021	
	E. Method 547	Triennially	No	Feb-18	2021	
	F. Method 548	Triennially	No	Feb-18	2021	
	G. Method 549	Triennially	No	Feb-18	2021	
5	Nitrate	Annually	N/A	Sep-19	2020	
6	Nitrite	Triennially	N/A	Sep-19	2022	

(These values are calculated from available data. Check correspondence for verification.)

Monitoring/Reporting - Entry Point

Colonial Pine Hills EPA ID: 0263

SAMPLING

Entry point: Treat Site - Conifer Well

	Chemical	Sampling Frequency	Waivers	Taken Last	Due Next	Notes
1	Inorganic Chemicals					
	A. Antimony	Every nine years	Yes	Nov-12	2021	
	B. Arsenic	Every nine years	Yes	Nov-12	2021	
	C. Barium	Every nine years	Yes	Nov-12	2021	
	D. Beryllium	Every nine years	Yes	Nov-12	2021	
	E. Cadmium	Every nine years	Yes	Nov-12	2021	
	F. Chromium	Every nine years	Yes	Nov-12	2021	
	G. Cyanide		Yes			State-wide waiver
	H. Fluoride		No			State Fluoride Rule Applies
	I. Mercury	Every nine years	Yes	Nov-12	2021	
	J. Nickel	Every nine years	Yes	Nov-12	2021	
	K. Selenium	Every nine years	Yes	Nov-12	2021	
	L. Thallium	Every nine years	Yes	Nov-12	2021	
2	Radiological Chemicals	Triennially	N/A	Feb-18	2021	
3	VOC Chemicals	Triennially	No	Feb-18	2021	
4	SOC Chemicals					
	A. Method 515.1	Triennially	No	Feb-18	2021	
	B. Method 524	Triennially	No	Feb-18	2021	
	C. Method 525	Triennially	No	Feb-18	2021	
	D. Method 531.1	Triennially	No	Feb-18	2021	
	E. Method 547	Triennially	No	Feb-18	2021	
	F. Method 548	Triennially	No	Feb-18	2021	
	G. Method 549	Triennially	No	Feb-18	2021	
5	Nitrate	Annually	N/A	Sep-19	2020	
6	Nitrite	Triennially	N/A	Sep-19	2022	

(These values are calculated from available data. Check correspondence for verification.)

Monitoring/Reporting - Distribution

Colonial Pine Hills EPA ID: 0263

yes	no	n/a	unk	note	
					1 Are the following sampling site plans up to date?
☑	☐	☐	☐	☐	- Bacteriological
☑	☐	☐	☐	☐	- Lead and copper
☑	☐	☐	☐	☐	- Disinfection By Products (DBP)
☑	☐	☐	☐	☐	2 Are microbiological sampling sites (as approved by DENR) being rotated on a monthly basis for routine sampling?
☑	☐	☐	☐	☐	3 Does the system have a waiver for asbestos sampling?
					4 Which of the following records are kept regarding the system?
yes	no	n/a	unk	note	Operational Data:
☑	☐	☐	☐	☐	Flow meter readings:
☑	☐	☐	☐	☐	Electrical usage:
☑	☐	☐	☐	☐	Chemical usage:
☑	☐	☐	☐	☐	Hour meter readings:
☑	☐	☐	☐	☐	Storage or reservoir levels:
					Sampling data:
☑	☐	☐	☐	☐	- Chlorine residual testing
☑	☐	☐	☐	☐	- Bacteriological sampling
☑	☐	☐	☐	☐	- Fluoride levels
☐	☐	☑	☐	☐	- Asbestos sampling results
☑	☐	☐	☐	☐	- Lead and Copper sampling results
☑	☐	☐	☐	☐	- DBP Monitoring
					Other: _____
					Maintenance Data:
☑	☐	☐	☐	☐	Water main repairs:
☑	☐	☐	☐	☐	Main flushing dates:
☑	☐	☐	☐	☐	Valve exercising dates:
☑	☐	☐	☐	☐	Equipment service:
					Other: _____

Testing and Testing Equipment

Test kits present at system: Hach digital: chlorine, fluoride, turbidity

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	5 Are up to date reagents present?

Tests and frequency performed by operator:

Cl and turbidity: continuously; fluoride measure weekly

Survey test results: not collected

Bacteriological Monitoring

Bacteriological sampling and analysis: October 1, 2018 to October 1, 2019

A	Samples submitted:	24
B	Samples required:	Two Samples Each Month.
C	Survey samples:	0
D	Safe samples:	24
E	Unsafe samples:	0
F	Repeat samples:	0

Lead and Copper Monitoring

(These values are calculated from available data. Check correspondence for verification.)

A	Date Last Tested:	June 27, 2018	
B	Samples required:	10	
C	Sampling Frequency	Triennially	
D	Date Due Next	2021	
E	Lead - 90% Level	3	Action Level - 15 ug/l
F	Copper 90% Level	0.34	Action Level - 1.3 mg/l

Disinfectant Residual Monitoring

Residual sampling and analysis: October 1, 2018 to October 1, 2019

A	Samples submitted:	24	
B	Samples required:	Two Samples Each Month.	
C	Last Qtr Cl Residual:	1.15	mg/l
D	Running Annual Average:	1.27	mg/l
E	Date of last DBP test:	September 12, 2019	
F	THM - Qtr Average:	21.8	ug/l
G	Haa5 - Qtr Average:	0	ug/l

Asbestos

A	Date of last test:	Waiver - Testing Not Required	
B	Asbestos Result:		million fibers per liter

Comments: Asbestos waiver good through 2028

Managerial Capacity

Colonial Pine Hills **EPA ID: 0263**

Certification Level of Water System: Distribution: I Treatment: I

Certification Levels: Very Small Water System (VSWS) Water Distribution (WD) I - IV
Small Water Treatment System (SWTS) Water Treatment (WT) I - IV

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Does the water system have a governing body? (city council, housing association, district, etc.) Board
					2	How often does the governing body meet to review water system data? Monthly
☑	☐	☐	☐	☐	3	Are all personnel that make water quality and quantity decisions certified?
☑	☐	☐	☐	☐	4	Is an operator certified at the level of the system available at all times?

Operator Name and Number	Water	Distribution	WW	Collection	Pond	SWTS	VSWS
Michael Riker (1900)	III	II	II	II			

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	5	Do you feel you have received adequate training?
☑	☐	☐	☐	☐	6	Is the number of people adequate to operate the water system?
☑	☐	☐	☐	☐	7	Do you maintain records to document compliance (up to 10 years)?
☑	☐	☐	☐	☐	8	Does the system have a written Emergency Response Plan?
☑	☐	☐	☐	☐	9	Does the system have operations and/or maintenance manuals?
☑	☐	☐	☐	☐	10	Do you know what to do in the event of a violation?
☐	☑	☐	☐	☐	11	Have there been any MCL violations or compliance orders for the system in the last 12 months?
☐	☐	☑	☐	☐	12	If so, is there a compliance plan?
☑	☐	☐	☐	☐	13	Is someone responsible for emergency operations, communications and customer relations? Who? Mike and Jim
☑	☐	☐	☐	☐	14	Are routine operation and maintenance records kept?
☑	☐	☐	☐	☐	15	Is the system aware of all required sampling for the year?
☑	☐	☐	☐	☐	16	Does the system have current "as built" engineering drawings of the system facilities?
☑	☐	☐	☐	☐	17	Do you keep records of complaints and the actions taken to address each one?
					18	How many complaints do you receive on average each year?
					19	What is general nature of complaints (taste, odor, color, pressure)?
☑	☐	☐	☐	☐	20	Has the latest edition of the Consumer Confidence Report been distributed?
☑	☐	☐	☐	☐	21	Is a copy of the latest Consumer Confidence Report Available?
☐	☑	☐	☐	☐	22	Have any changes been made since the last survey in the management, operations, personnel, budget, etc?

If so, what? _____

☐ ☐ ☑ ☐ ☐ 23 Have the recommendations from the previous survey been addressed?

Comments (please indicate the question number): _____

_____

_____

_____

_____

_____

Financial Capacity

Colonial Pine Hills **EPA ID: 0263**

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Does the public water system have an annual budget?
☑	☐	☐	☐	☐	2 Does the water system income exceed operating expenses (including debt service)?
☑	☐	☐	☐	☐	3 Does the water system track budget performance?
☑	☐	☐	☐	☐	4 Does the water system have audited financial statements?
☑	☐	☐	☐	☐	5 Are water revenues kept in a separate account?
☑	☐	☐	☐	☐	6 Is some of the water revenue set aside in reserve funds for future capital improvement projects?
☑	☐	☐	☐	☐	7 Is there a capital improvement long range plan (up to 5 years)?
☑	☐	☐	☐	☐	8 Are the water system rates reviewed on at least an annual basis?
☐	☑	☐	☐	☐	9 Is there a plan for rate increases?
☑	☐	☐	☐	☐	10 Is the rate structure based on metered water use?
					List rates: $47/min + $2/100cu ft. increases after 1000cu ft (example: $22 minimum plus $1.75/1000 gallons)
☑	☐	☐	☐	☐	11 Are there procedures in place to handle delinquent accounts?
☐	☑	☐	☐	☐	12 Are more than 5% of your customer accounts delinquent?
☑	☐	☐	☐	☐	13 Are controls available to limit over-expenditures?
☑	☐	☐	☐	☐	14 Are there purchasing procedures?
☑	☐	☐	☐	☐	15 Does the system utilize computer software (accounting or otherwise) to maintain its financial records?

Comments (please indicate the question number):

Violations and Significant Deficiencies

Colonial Pine Hills EPA ID: 0263

Violations From October 1, 2014 To October 1, 2019

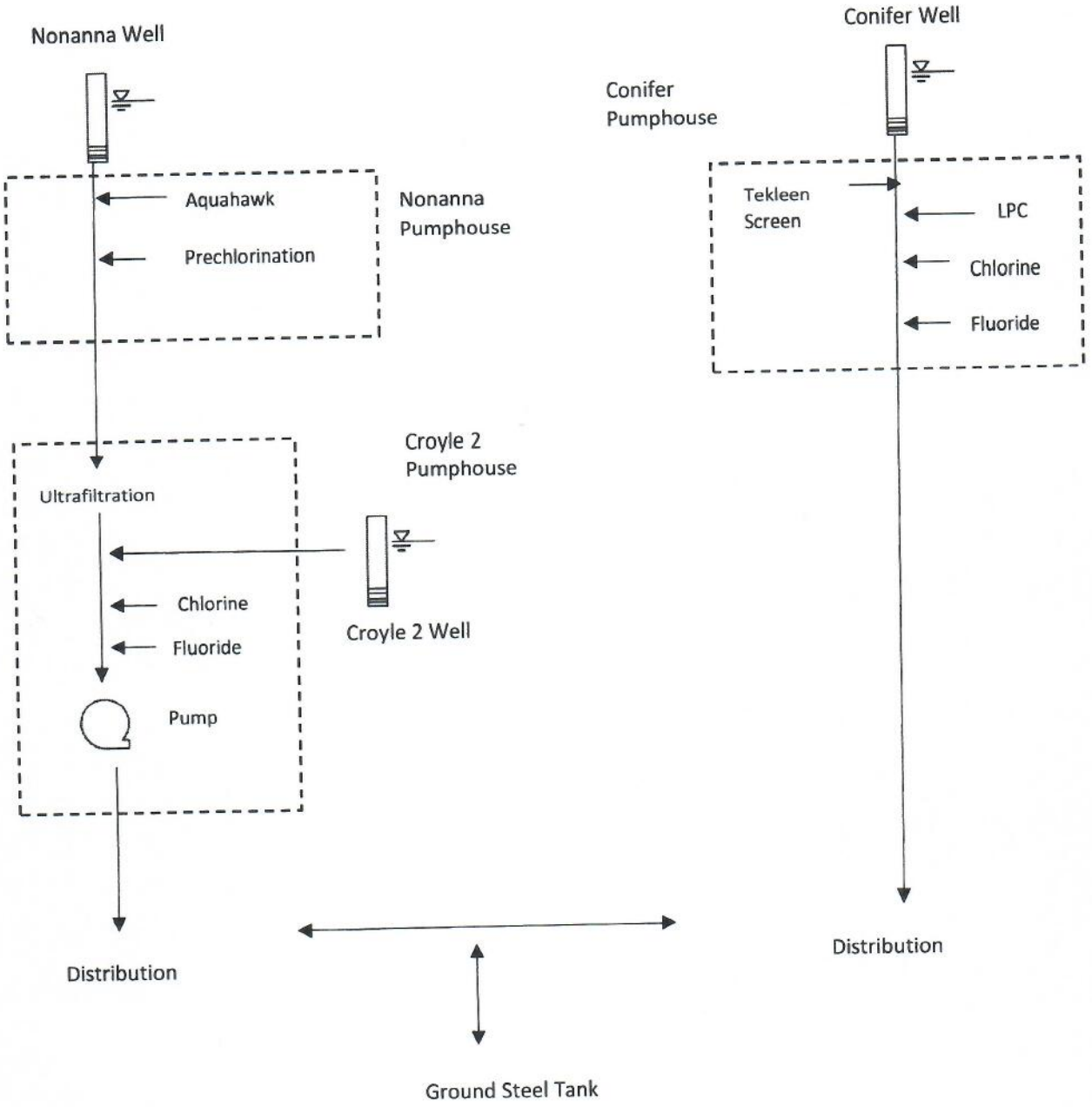
Violation Type	Parameter	Date	Status
No Violations			

Significant Deficiency	Date Identified	Date Corrected

Drawing/Flow Schematic

Colonial Pine Hills EPA ID: 0263

Note: Use Symbols provided to draw schematic of water system



MIDCONTINENT
TESTING LABORATORIES, INC.

2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709
(605) 348-0111 -- www.thechemistrylab.com

ERIN FAGNAN
DENR
2050 WEST MAIN ST STE #1
RAPID CITY, SD 57702

Sample Site: CPH Countryside South - Conifer
Purpose: Survey
EPA Number: 0263
Colonial Pine Hills
Sampled: 12/11/19 at 08:31 AM by Erin Dreis
Sample Matrix: Water

Lab ID#: 20191211911
Received: 12/11/19 at 12:55 PM by Steve Ristau
Account: 8591 - DENR - Drinking Water Program

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
Physical Properties							
Electrical Conductivity	384	µmhos/cm	1	0.237	5.00	SM 2510B	JAM 12/13/19
Hardness	170	mg/L	1			SM 2340 B	SCR 12/16/19
pH	8.12	S.U.	1			SM 4500-H+ B	JAM 12/13/19
Total Dissolved Solids	206	mg/L	100ml	21.0	50.0	SM 2540 C	TMN 12/12/19
Non-Metallics							
Alkalinity (CaCO3)	156	mg/L	1	0.236	10.0	SM 2320 B	JAM 12/13/19
Bicarbonate	191	mg/L	1	0.288	10.0	SM 2320 B	JAM 12/13/19
Chloride (Cl-)	9.02	mg/L	1	0.204	0.500	SM 4500-Cl E	BLL 12/12/19
Fluoride	0.774	mg/L	1	0.013	0.050	SM 4500 F-C	SAA 12/13/19
Langelier Scale Index	0.426	LSI	1			Calculation	SCR 12/16/19
Sulfate (SO4)	29.5	mg/L	1	0.297	1.00	SM 4500-SO4 E	BLL 12/12/19
Metals - Dissolved							
Calcium (Ca)	41.2	mg/L	1	0.040	1.00	SM 3111 B	TMS 12/12/19
Magnesium (Mg)	16.4	mg/L	1	0.026	0.500	SM 3111 B	TMS 12/12/19
Potassium (K)	3.21	mg/L	1	0.012	0.500	SM 3111 B	TMS 12/12/19
Sodium (Na)	14.4	mg/L	1	0.124	0.500	SM 3111 B	TMS 12/12/19
Metals - Total							
Iron (Fe)	0.115	mg/L	10	0.001	0.050	EPA 200.8	TNA 12/16/19
Manganese (Mn)	< 0.010	mg/L	10	0.000057	0.001	EPA 200.8	TNA 12/16/19

Report Approved By:

Steve Ristau

Report Approved On: 12/17/2019 10:37:57 AM

MIDCONTINENT
TESTING LABORATORIES, INC.

2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709
(605) 348-0111 -- www.thechemistrylab.com

Sample Site: Nonana & Croyle Well
Purpose: Survey
EPA Number: 0263
Colonial Pine Hills
Sampled: 12/11/19 at 08:31 AM
by Erin Dreis
Sample Matrix: Water

ERIN FAGNAN
DENR
2050 WEST MAIN ST STE #1
RAPID CITY, SD 57702

Lab ID#: 20191211910
Received: 12/11/19 at 12:55 PM
by Steve Ristau
Account: 8591 - DENR - Drinking Water Program

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst	Date
Physical Properties								
Electrical Conductivity	372	µmhos/cm	1	0.237	5.00	SM 2510B	JAM	12/13/19
Hardness	167	mg/L	1			SM 2340 B	SCR	12/16/19
pH	8.01	S.U.	1			SM 4500-H+ B	JAM	12/13/19
Total Dissolved Solids	178	mg/L	100ml	21.0	50.0	SM 2540 C	TMN	12/12/19
Non-Metallics								
Alkalinity (CaCO3)	148	mg/L	1	0.236	10.0	SM 2320 B	JAM	12/13/19
Bicarbonate	181	mg/L	1	0.288	10.0	SM 2320 B	JAM	12/13/19
Chloride (Cl-)	14.1	mg/L	1	0.204	0.500	SM 4500-Cl E	BLL	12/12/19
Fluoride	0.616	mg/L	1	0.013	0.050	SM 4500 F-C	SAA	12/13/19
Langelier Scale Index	0.306	LSI	1			Calculation	SCR	12/16/19
Sulfate (SO4)	24.3	mg/L	1	0.297	1.00	SM 4500-SO4 E	BLL	12/12/19
Metals - Dissolved								
Calcium (Ca)	42.5	mg/L	1	0.040	1.00	SM 3111 B	TMS	12/12/19
Magnesium (Mg)	14.8	mg/L	1	0.026	0.500	SM 3111 B	TMS	12/12/19
Potassium (K)	3.33	mg/L	1	0.012	0.500	SM 3111 B	TMS	12/12/19
Sodium (Na)	12.1	mg/L	1	0.124	0.500	SM 3111 B	TMS	12/12/19
Metals - Total								
Iron (Fe)	0.072	mg/L	10	0.001	0.050	EPA 200.8	TNA	12/16/19
Manganese (Mn)	< 0.010	mg/L	10	0.000057	0.001	EPA 200.8	TNA	12/16/19

Report Approved By:

Steve Ristau

Report Approved On: 12/17/2019 10:37:57 AM

MC medicontinent testing

Name of Water System: Colonial Pine Hills EPA ID #: 0263 Phone No:

Results to be Returned to: Sample Collector: Erin Dreis

Name: Erin Dreis - DWP Rapid Street or P.O. Box:

City: State: Zip:

Payment to be made by (if different than above):

Name: DWP - Pierre Organization: SD DOH

Address: State: Zip:

Date Collected: 12/11 Time: 0831 Location of Sampling Tap: Well Depth: Date Built:

Source Sample: ☒ Well ☐ Lake ☐ Reservoir ☐ Other: Type of Sample: ☐ Raw ☐ Treated ☐ Composite ☐ Entry Point ☒ Distribution System

Source Name(s):

Field Temperature: °F °C Field pH: Treatment Processes: Ultrafiltration treatment plant Comments:

8415 Alberta Drive 5370 Conifer Dr [Nonana + Coyle well] [Conifer well]

Please ✓ Analyses to be Performed. Common Ion Only

- ☒ COMMON IONS PANEL
- ☐ INORGANIC CHEMICAL PANEL
- ☐ INORG. CHEM + FLUORIDE
- LEAD/COPPER PANEL
- RADIOCHEMICAL SCREEN
- ☐ VOC's (Volatile Organic Chemicals)
- ☐ THM's (Trihalomethanes)
- ☐ TOC

RADIOCHEMICAL

Parameter	Maximum Limit
☐ Gross Alpha	15 pCi/L
☐ Gross Beta	
☐ Radium 226	5 pCi/L
☐ Radium 228	5 pCi/L
☐ Uranium	
☐ Radon in Water	
☐ Ortho Phosphate	
☐ Ammonia	
☐ Fecal Coliform	

INORGANIC CHEMICALS

Parameter	Maximum Limit
☐ Aluminum	
☐ Antimony	6 ug/L
☐ Arsenic	50 ug/L
☐ Barium	2000 ug/L
☐ Beryllium	4 ug/L
☐ Cadmium	5 ug/L
☐ Chromium	100 ug/L
☐ Copper	1.3 mg/L
☐ Lead	15 ug/L
☐ Mercury	2 ug/L
☐ Molybdenum	
☐ Nickel	100.0 ug/L
☒ Nitrate	10.0 mg/L
☐ Nitrite	1.0 mg/L
☐ Selenium	50 ug/L
☐ Silver	
☐ Thallium	2 ug/L
☐ Zinc	
☐ Cyanide	200 ug/L

COMMON IONS

Parameter	Suggested Limit
☐ Alkalinity	
☐ Bicarbonate	
☐ Calcium	
☐ Carbonate	
☐ Chloride	250 mg/L
☐ Conductivity @ °C umhos/cm	
☐ Fluoride	4.0 mg/L
☐ Hardness (calculated)	
☐ Iron	0.3 mg/L
☐ Langlier Index	
☐ Magnesium	
☐ Manganese	0.5 mg/L
☐ pH	
☐ Potassium	
☐ Sodium	
☐ Solids (Total Dissolved)	500 mg/L
☐ Sulfate	

* Not for Compliance *

For Lab Use Only

Condition of Sample: ☐ Clear ☐ Turbid ☐ Suspended Matter ☐ Odor

Temperature when Rec'd: Color Other pH

Received by SR/MCT Date 12/11/19 12:55

Lab Number (Lab Use Only)

1211911

1211910