DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
2050 West Main, Suite #1
Rapid City, SD 57702
Telephone 605-394-2229
FAX Number 605-394-5317

March 2, 2006

Re: Nemo Water System On-Site Evaluation (EPA ID# 8083)

Tony Balistreri
Black Hills National Forest
2014 N. Main Street
Spearfish, SD 57783

Dear Mr. Balistreri:

Enclosed are the results of the on-site evaluation performed by the Department of Environment and Natural Resources (DENR) on January 31, 2006. Requirements and recommendations are provided to assist you with maintaining compliance with state and federal regulations, improving operations, and providing public health protection. Please acknowledge that you have received this report by indicating corrective actions taken.

Representatives of the water system are invited to attend seminars and training courses sponsored by the DENR and the South Dakota Association of Rural Water Systems. For further information, write the South Dakota Association of Rural Water Systems at 5009 West 12th Street - Suite 5, Sioux Falls, SD 57106. Phone (605) 336-7219. Website: www.sdarws.com.

If you have questions or comments concerning this on-site evaluation, please call me at (605) 394-2229.

Sincerely,

Linda Harris
Environmental Scientist
Drinking Water Program

cc: Brian Beam, Forest Supervisors Office, Custer
Drinking Water Program, Pierre

Enclosures

Requirements for the Nemo Water System:
Current state and federal regulations require the following items.

1. The Total Coliform Rule requires this water system to collect one bacteriological sample every calendar quarter. Samples must be submitted to a certified laboratory. The department requires that routine bacteriological samples be collected from the sample sites assigned on your sample site plan. Sampling sites located throughout the distribution system will provide an indication of the water quality throughout the water system. Quarterly, rather than monthly, sampling is required by the Department of Environment and Natural Resources; however, we recommend monthly sampling to better monitor water quality and assure safe drinking water for the consumers.

   If a routine sample is bacteriologically unsafe, four repeat samples, collected at service connections clustered around the unsafe point, are required within 24 hours of notification. Accelerated monitoring is triggered and five additional routine samples are required during the month following the unsafe routine sample. If you have questions concerning the number of required samples, your sampling record, or your compliance status, please contact the Drinking Water Program at (605) 773-3754.

2. The South Dakota Drinking Water Standards require that results of compliance monitoring for coliform bacteria be kept on file for not less that than five years and results of compliance monitoring for chemical analyses be kept on file for not less than ten years.

3. The Disinfectants/Disinfection By-Products Rule became effective for the Nemo Water System in October 2004, upon reclassification from a transient to a nontransient public water supply. This rule establishes a maximum disinfectant residual level of 4.0 mg/L and maximum contaminant levels of 0.080 mg/L for total trihalomethanes and 0.060 mg/L for haloacetic acids. Additionally, the chlorine residual must be tested when bacteriological samples are collected and the levels reported quarterly to DENR. The reports have not been submitted. Forms are included with this report.

   Monitoring plans were to be developed and be available for inspection. The plan has not been completed. Please finish the "Stage 1 Disinfectants & Disinfection Byproducts Rule Monitoring Plan" that is included with this report. The plan is not submitted to DENR but must be kept on file. Contact Mark Mayer at (605) 773-3754 with any questions about the disinfection by-products rule.

Recommendations for the Nemo Water System:
The following recommendations are submitted to help the system improve operations and maintain drinking water quality.

1. A minimum free chlorine residual of 0.3 mg/L should be detectable in the distribution system at all times. The level should not exceed 4.0 mg/L under normal operating conditions.

2. Then reservoir overflow pipe was extended down the hill and used to fill tanks for hauling water. During normal operation, the end of the overflow pipe should terminate 12 to 24 inches above the ground surface and discharge over a drainage inlet structure or a splash plate. The overflow should open downward and be located so that any discharge is visible. Screen the pipe with 24-mesh noncorrodible screen to prevent the entry of insects, birds, and other forms of contamination into the water system.

3. The Forest Service may wish to obtain a second pressure pump so it is available as a backup should the pump in service fail.

4. Because the floor of the pressure tank structure is below grade, it is recommended that a floor drain be installed.

5. Records of maintenance activities should be kept. Include work such as valve exercising, main flushing, and repairs.

6. Any public water system could be the target of terrorist activities or, more likely, acts of vandalism. This makes protection of the water system a vital part of providing safe water for consumers. An assessment of the vulnerabilities of your water system should be conducted and appropriate steps taken to improve security. Basic security measures include: locking all buildings and water reservoirs; limiting access to water facilities; conducting routine visual checks of the system; and developing a protocol for reporting and responding to threats or unusual conditions. Please contact the Drinking Water Program at (605) 773-3754 for more information or to report any water quality concerns. For assistance after work hours, holidays, and weekends, contact Emergency Management at (605) 773-3231.

Submitted by:

Linda Harris
Drinking Water Program

South Dakota Department of Environment and Natural Resources

Drinking Water Program

Public Water System On-Site Evaluation Report

System Name: Nemo Water System EPA ID #: 8083
Address: 2014 N Main
Spearfish, SD 57783

County: Lawrence

Person Contacted: Tony Balistreri Work phone: (605)642-4622
Address: 2014 N Main Home phone:
Spearfish, SD 57783 Cell phone:
Fax: (605)642-4156
E-mail: tbalistreri@fs.fed.us

Inspected By: Linda Harris Date of Inspection: 1/31/06 (mm/dd/yy)

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

Population: Total Population Served: 31 System Population: 31

Number of Service Connections: 13 Susceptibility to contamination of water source: moderate

Sources of Water: Water data from year: 2005

Own Source(s):	Old Well & New Well	Total produced:	312,700	% of total:	100.0%
Bulk Supplier:	N/A	Total purchased:		% of total:	0%
Contracted flow rate?:	N/A				
		Total Annual Use:	312,700		100.0%

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

How much water can this system supply? 24 gpm (maximum flow rate, gpm)
What major factor limits system's ability to supply water? Redundancy in sources and storage; no major limiting factors.

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: The water system has 13 service connections serving 22 year-round residents, 9 year-round work place users, and 20-30 seasonal users (May-Sept).

Water Usage

yes	no	n/a	unk	note				
☐	☑	☐	☐	☐	4 Are all customers metered?			
					5 If not, what entities are not metered?	See comments.		
					6 Total gallons billed:			
					7 Calculated water loss:			
yes	no	n/a	unk	note	8 Peak month and amount used	Jul-Aug *	75,100	gallons
☐	☐	☐	☐	☑	9 Does the system track unaccounted-for water?			

Comments: The Nemo water system was orignally classified as a transient noncommunity public water system. In 2004, the system was reclassified as a nontransient noncommunity system because more than 25 of the users were year-round residents or employees.

5 & 9. Customers are not metered, but meters have been installed in the following locations to help track water loss: each well, outlet line from the reservoirs, "Troxel" line, and the forest service shop.

8. * The volume recorded is for 56 days during July & August.

Water Sources

Nemo Water System EPA ID: 8083

Name	Year Built	Diameter (in)	Depth (ft)	GPM	Status	ID
#1	1930	4	38	7	Abandoned	4
NEW WELL #1	1997	6	150	8	Permanent	5
NEW WELL #2	2004	4	150	16	Permanent	8

Name	Water Right #	Aquifer	Location Description	ID
#1			W. of bunkhouse at Nemo Work Center	4
NEW WELL #1			0.7 mi. S. of Nemo. ~50 ft. W. of Nemo Rd.	5
NEW WELL #2			0.7 mi. S. of Nemo. ~375 ft. W. of Well #1.	8

yes	no	n/a	unk	note		
☐	☐	☐	☐	☐	1	Has a Source Water Protection Plan been developed? Date: _____
☑	☐	☐	☐	☐	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 for raw water?
☑	☐	☐	☐	☐	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: 2. Both well casings are PVC pipe, which have been enclosed with iron pipe and fitted with a locking cover.

3. There is ethylene dibromide (EDB) contamination of the groundwater in the area, but it has not been detected in the Nemo Water System wells. Annual testing is conducted. The source of the EDB (buried drums) have not been located.

5. There is a pressure gauge for Well #1 only.

Water Treatment

Nemo Water System EPA ID: 8083

General Items

yes	no	n/a	unk	note		
☐	☐	☑	☐	☐	1	Is there continuous online water quality measurements taken? If so, what? (pH, turbidity, chlorine, etc.)
☑	☐	☐	☐	☐	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: Sodium hypochlorite, 10% Dixi-chlor
☐	☐	☑	☐	☐	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: Stenner model 45M11HA metering pump for chlorine.

Storage

Nemo Water System EPA ID: 8083

Description	Service Date	Location	ID
ground level plastic standpipe, 5000 gal.	2005	Building behind the USFS shop.	6
ground level plastic standpipe, 5000 gal.	2004	Building behind the USFS shop.	
4 pressure tanks		Old underground cistern between shop and reservoir building.	7

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 and are brought down to an elevation between 12 and 24 inches above the ground?
☐	☑	☐	☐	☐	3	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?
☐	☐	☑	☐	☐	4	Do the storage reservoirs have a watertight roof or cover and are they sloped so that water will drain?
☑	☐	☐	☐	☐	5	Are storage structures designed so that they can be isolated from the distribution system without necessitating loss of pressure in the distribution system?
☐	☑	☐	☐	☐	6	Is leakage evident at the time of inspection?
☑	☐	☐	☐	☐	7	Are the storage structures vented?
☑	☐	☐	☐	☐	8	Are vents properly protected/screened?
☐	☐	☑	☐	☐	9	Are covers and hatches locked?
☑	☐	☐	☐	☐	10	Is there separate inlet and outlet piping?
☑	☐	☐	☐	☐	11	Does the drain allow for removal of accumulated silt?
☐	☑	☐	☐	☐	12	Are there any weather related problems (freezing, etc.)?
☑	☐	☐	☐	☐	13	Is there a control system to maintain level?
☑	☐	☐	☐	☑	14	Are there high and low level alarms?
					15	Are tanks filled automatically, manually or both? Automatically
☐	☑	☐	☐	☐	16	Is there a service contract for cleaning/inspecting the tanks?
☑	☐	☐	☐	☐	17	Are the tanks disinfected after being cleaned or inspected? How? Tanks are power washed and then shock chlorinated. The maintenance is done by Forest Service employees.
☑	☐	☐	☐	☐	18	Are the storage structures secure from unauthorized access?
☑	☐	☐	☐	☐	19	Is the area fenced?
					20	What other steps have been taken to address security? The reservoirs are in a locked building.

Comments: 2. The overflow pipe was extended down the hill to the shop and used to fill tanks for hauling water. This was done by manually operating the well pumps and overflowing the reservoirs.

14. Low level alarm turns on a light.

Pressure Tanks

Nemo Water System **EPA ID: 8083**

Description of pressure tank facilities: 4 Well-X-Trol model WX-252 pressure tanks, 86 gallons each.

yes	no	n/a	unk	note	
☑	☐	☐	☐	☐	1 Is the volume of the pressure tank(s), in gallons, at least ten times the the capacity of the largest pump, rated in gallons per minute? (10 gpm pump should have a 100 gallon pressure tank)
☐	☑	☐	☐	☐	2 Is the tank(s) located above normal ground surface and completely housed?
☐	☑	☐	☐	☐	3 Does the pressure tank(s) have bypass piping to permit operation of the system while it is being inspected or repaired?
☑	☐	☐	☐	☐	4 Is the recharge air free of pollutants such as oil from an air compressor?
					5 Does the pressure tank have the following?
☐	☑	☐	☐	☐	- A drain?
☑	☐	☐	☐	☐	- Pressure gauge?
☐	☑	☐	☐	☐	- Water sight glass?
☑	☐	☐	☐	☐	- Automatic or manual air blow off?
☑	☐	☐	☐	☐	- Means to add air?
☑	☐	☐	☐	☐	- Pressure operated start-stop controls for the pumps?

Comments (please indicate the question number): The pressure tanks are housed in the old concrete cistern. One side of the cistern was excavated and a door installed to minimize confined space hazards. The pressure pump and pressure tanks are about 3 feet below grade. There is no floor drain. It is planned to install a floor drain and valves so each pressure tank can be isolated.

Distribution System

Nemo Water System **EPA ID: 8083**

Main sizes and types: 1 to 2 inch polyethylene; 2 inch PVC and galvanized

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? 55 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?
☐	☑	☐	☐	☐	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? 4/year
☐	☑	☐	☐	☐	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? Usually every day.

Comments (please indicate the question number): The distribution system was installed in 1996-97.

11. There has been 1 break in that time.

5. There are 2 flushing hydrants.

Facilities Equipment

Nemo Water System EPA ID: 8083

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	1	Are any pumps used in the system? If so, describe: 2 submersible well pumps Pressure pump, 2 HP
☑	☐	☐	☐	☑	2	Are backup pumps available?
☑	☐	☐	☐	☐	3	Is any equipment located in a pit?
☑	☐	☐	☐	☐	4	Do you have contacts with contractors and equipment vendors to assure prompt service and spare parts availability?
☑	☐	☐	☐	☐	5	Do you use a qualified pump contractor to inspect pump equipment?
☐	☐	☐	☐	☐	6	Is food grade lubrication used in all water facilities equipment?
☑	☐	☐	☐	☐	7	Is backup power available in the event of a power loss?
☑	☐	☐	☐	☐	8	Is equipment protected from unauthorized entry or vandalism?
☐	☑	☐	☐	☐	9	Are the facilities and equipment subject to weather related problems?
☑	☑	☐	☐	☐	10	Is there a floor drain? Where does it drain to? Reservoir building has a floor drain that discharges outside to the ground. No drain in pressure tank bldg.
☐	☐	☐	☐	☐	11	Is there adequate spill containment in chemical room?

Comments (please indicate the question number): 2. There are backup pumps for both wells; no spare pressure pump.

3. The pressure tanks and pressure pump are housed in the old concrete cistern about 3 feet below grade. One side of the cistern was excavated and a door installed to minimize confined space hazards.

7. Generator available to provide power for well pumps.

Monitoring/Reporting - Entry Point

Nemo Water System EPA ID: 8083

SAMPLING

Entry point: Treatment Site for New Wells

	Chemical	Sampling Frequency	Waivers	Taken Last	Due Next	Notes
1	Inorganic Chemicals					
	A. Antimony	Triennially	No	Jan-05	2008	
	B. Arsenic	Triennially	N/A	Jan-05	2008	
	C. Barium	Triennially	No	Jan-05	2008	
	D. Beryllium	Triennially	No	Jan-05	2008	
	E. Cadmium	Triennially	No	Jan-05	2008	
	F. Chromium	Triennially	No	Jan-05	2008	
	G. Cyanide		Yes			State-wide waiver
	H. Fluoride	Triennially	No	Jan-05	2008	
	I. Mercury	Triennially	No	Jan-05	2008	
	J. Nickel	Triennially	No	Jan-05	2008	
	K. Selenium	Triennially	No	Jan-05	2008	
	L. Thallium	Triennially	No	Jan-05	2008	
2	Radiological Chemicals		N/A			Not required for this system.
3	VOC Chemicals	Annually	No	Dec-05	2006	
4	SOC Chemicals					
	A. Method 515.1	Triennially	No	Dec-05	2007	
	B. Method 524	Triennially	No	Dec-05	2007	
	C. Method 525	Triennially	No	Dec-05	2007	
	D. Method 531.1	Triennially	No	Dec-05	2007	
	E. Method 547	Triennially	No	Dec-05	2007	
	F. Method 548	Triennially	No	Dec-05	2007	
	G. Method 549	Triennially	No	Dec-05	2007	
5	Nitrate	Annually	N/A	Jan-05	2006	
6	Nitrite	Triennially	N/A	Jan-04	2007	

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

Monitoring/Reporting - Distribution

Nemo Water System EPA ID: 8083

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 Does the system have a waiver for asbestos sampling?
					3 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 colorimeter for residual chlorine.

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

Tests and frequency performed by operator: Residual chlorine is usually tested daily.

Survey test results: 0.14 mg/L free chlorine residual measured at the Post Office.

Bacteriological Monitoring

Bacteriological sampling and analysis: January 1, 2005 to January 1, 2006

A	Samples submitted:	12
B	Samples required:	One Sample Each Quarter.
C	Survey samples:	1 safe
D	Safe samples:	12
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:	December 13, 2005	
B	Samples required:	5	
C	Sampling Frequency	Every Six Months	
D	Date Due Next	by June 30, 2006	
E	Lead - 90% Level	3.5	Action Level - 15 ug/l
F	Copper 90% Level	0.09	Action Level - 1.3 mg/l

Disinfectant Residual Monitoring

Residual sampling and analysis: _____ to _____

A	Samples taken:		
B	Samples required:	1/quarter	(same as TCR)
C	Residual measured:	Free chlorine: X	mg/L
		Chloramines:	mg/L
D	RAA Residual:	*	

Comments: * Disinfectant Residual Monitoring reports have not been submitted, and the Disinfection By-products (DBP) monitoring plan has not been prepared. TTHM and HAA5 monitoring was completed in 2006.

Managerial Capacity

Nemo Water System EPA ID: 8083

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

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	Are all personnel that make water quality and quantity decisions certified?

Operator Name and Number	Water	Distribution	WW	Collection	Pond	SWTS	VSWS
Tony Balistreri (1363)	I						

yes	no	n/a	unk	note		
☑	☐	☐	☐	☐	2	Do you feel you have received adequate training?
☑	☐	☐	☐	☐	3	Do you maintain records to document compliance (up to 10 years)?
☑	☐	☐	☐	☐	4	Does the system have operations and/or maintenance manuals?
☑	☐	☐	☐	☐	5	Do you know what to do in the event of a violation?
☐	☑	☐	☐	☐	6	Have there been any MCL violations or compliance orders for the system in the last 12 months?
☐	☐	☑	☐	☐	7	If so, is there a compliance plan?
☑	☐	☐	☐	☐	8	Are routine operation and maintenance records kept?
☑	☐	☐	☐	☐	9	Is the system aware of all required sampling for the year?
☐	☑	☐	☐	☐	10	Does the system have current "as built" engineering drawings of the system facilities?
☑	☐	☐	☐	☐	11	Have any changes been made since the last survey in the management, operations, personnel, budget, etc? If so, what? New well, reservoir, and wellhouse.
☑	☐	☐	☐	☐	12	Have the recommendations from the previous survey been addressed?

Comments (please indicate the question number): 1. Operator certification in water distribution became a requirement in October 2004 when the system was reclassified as a nontransient noncommunity water system. Water distirbution certification has not been obtained.
12. The 2002 inspection report recommended routinely testing the chlorine residual, pouring a concrete floor in the reservoir building, and locking all doors and access hatches.

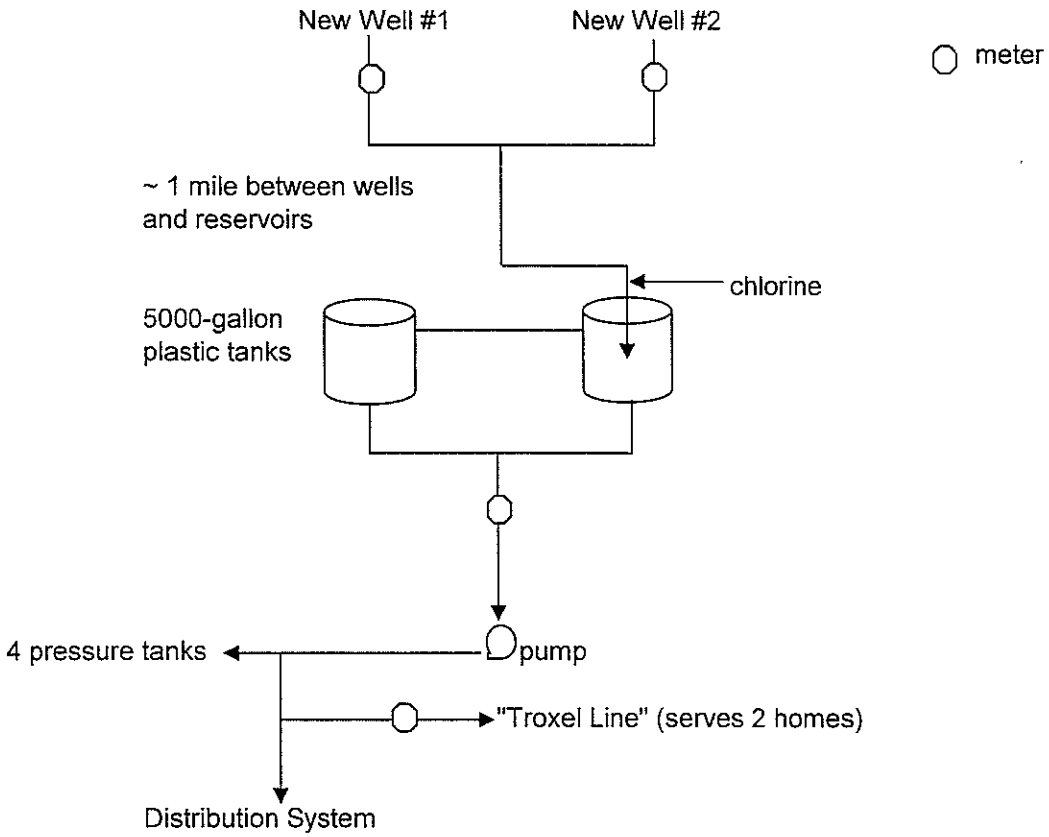
Violations

Nemo Water System **EPA ID: 8083**

Violations From January 1, 2003 To January 1, 2006

Violation Type	Parameter	Date	Duration (Months)
No Violations			

Drawing/Flow Schematic



MIDCONTINENT
TESTING LABORATORIES, INC.

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

LINDA HARRIS
DENR
2050 WEST MAIN ST. SUITE #1
RAPID CITY, SD 57702

Sample Site: Nemo Water System
Sampled: 01/31/06 at 01:45 PM by Linda Harris
Purpose: Survey
EPA Number: 8083 Nemo Water System
Sample Matrix: Water

Lab ID#: 20060131931
Received: 01/31/06 at 04:25 PM by Kate Shreves
Account: 8591 DENR - Drinking Water Program

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
Physical Properties							
Electrical Conductivity	444	µmhos/cm	1	0.247	1.00	EPA 120.1	JAM 02/01/06
Hardness	216	mg/L	1			SM 2340 B	GAM 02/01/06
Total Dissolved Solids	232	mg/L	100ml	13.7	50.0	EPA 160.1	TMN 02/01/06
pH	8.17	SU	1			EPA 150.1	JAM 02/03/06
Non-Metallics							
Alkalinity	220	mg/L	1	0.337	10.0	SM 2320 B	JAM 02/03/06
Bicarbonate	269	mg/L	1	0.411	10.0	SM 2320 B	JAM 02/03/06
Chloride (Cl-)	2.00	mg/L	1	0.383	0.500	SM 4500-Cl B	BAS 02/02/06
Fluoride	0.102	mg/L	1	0.008	0.050	SM 4110B	JAM 02/02/06
Langelier Scale Index	0.725	LSI	1			Calculation	SCR 02/08/06
Nitrogen, Nitrate (NO3)	0.267	mg/L	1	0.014	0.050	EPA 353.2	DES 02/01/06
Sulfate (SO4)	16.1	mg/L	1	2.58	10.0	EPA 375.2	DES 02/01/06
Metals - Dissolved							
Calcium (Ca)	51.9	mg/L	1	0.051	1.00	EPA 215.1	BMC 02/01/06
Magnesium (Mg)	21.1	mg/L	5	0.108	2.50	EPA 242.1	BMC 02/01/06
Potassium (K)	2.46	mg/L	1	0.056	0.500	EPA 258.1	BMC 02/01/06
Sodium (Na)	2.87	mg/L	1	0.170	0.500	EPA 273.1	BMC 02/01/06
Metals - Total							
Iron (Fe)	< 0.050	mg/L	10	0.004	0.050	EPA 200.8	JEM 02/01/06
Manganese (Mn)	< 0.010	mg/L	10	0.000036	0.001	EPA 200.8	JEM 02/01/06

Approved By: Steve Pistau

Approved On: 2/8/2006 3:20:43 PM

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South Dakota
DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES

1/31/06 931

Chemical Analytical Data for Drinking Water
(revised) DOH – L112

Name of Water System: Nemo Water System EPA ID #: 8083

Results to be Returned to:

Name: Linda Harris, DENR Drinking Water Program Sample Collector: Linda Harris, DENR

Address: 2050 W. Main, Suite 1, Rapid City, SD 57702 Date Collected: 1-31-06 Time 1345

Copy to and Payment to be made by:

Name: DENR Drinking Water Program DENR Billing Code: 5112

Address: Joe Foss Building, 523 E. Capitol, Pierre, SD 57501

Source Name(s): Old Well & New Well Location of Sampling Tap Well house

Source Sample: ☒ Well ☐ Lake ☐ Reservoir ☐ Other: _____ Type of Sample: ☒ Raw ☐ Treated ☒ Composite

Well Depth: 150' ea Date Drilled: 1997 & 2004 ☐ Entry Point ☐ Distribution System

Field Temperature: _____ °F _____ °C Field pH: _____ Treatment Processes _____

Comments: _____

Please ✓ Analyses to be Performed.

☒ 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	30 ug/L

☐ 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	0.05 mg/L
☒ pH	6.5-8.5 s.u.
☒ Potassium	
☐ Sodium	
☒ Solids (Total Dissolved)	500 mg/L
☒ Sulfate	

For Lab Use Only

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

Temperature when Rec'd: _____ Color _____ Other _____ pH _____

Received by K Shreves Date 1/31/06 01625

Lab Number

(Lab Use Only)