

Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	9/1/2023	
Media Program:	Water	
Regulatory Program(s)	CWA – NPDES	
Company Name:	Village of Reserve	
Facility Name:	Reserve Wastewater Treatment Plant	
Facility Physical Location:	101 Plant Street	
(city, state, zip code)	Reserve, NM 87830	
Mailing address:	P.O. Box 587	
(city, state, zip code)	Reserve, NM 87830	
County/Parish:	Catron County	
Facility Phone Number	{Phone Number}	
Facility Contact:	Hilda Kellar kellarhdjk@outlook.com	Mayor 575-533-6246
FRS Number:	110010656879	
Identification/Permit Number:	NM0024163	
Media Identifier Number:		
NAICS:	221320	
SIC:	4952	
Personnel participating in inspection:		
<i>Name</i>	<i>Affiliation/mailcode</i>	<i>Title</i>
Amy Andrews, P.E.	USEPA/6EN-WMH	Environmental Engineer
William Graham	Village of Reserve	Utility Operator
Bret Sellars	Rural Water Association	Wastewater Technician
EPA Lead Inspector Signature/Date	AMY ANDREWS AMY ANDREWS c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=AMY ANDREWS, 0.9.2342.19200300.100.1.1=68001003655888 2023.11.01.14:26:15 -06'00' Amy Andrews Date	
Supervisor Signature/Date	ROBERTO BERNIER Digitally signed by ROBERTO BERNIER Date: 2023.11.01 15:42:26 -05'00' Roberto Bernier Date	

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

Environmental Protection Agency (EPA) Region 6 inspector Amy Andrews arrived at the Village of Reserve Wastewater Treatment Plant (WWTP) at 12:55 PM on September 1, 2023, for an announced inspection. I met with William Graham, Village of Reserve Utility Operator and Bret Sellars, Rural Water Association Wastewater Technician. I presented my credentials to Mr. Graham and informed him that this was an EPA inspection to determine compliance with the facility's National Pollutant Discharge Elimination System (NPDES) permit and the Clean Water Act (CWA). The inspection was conducted under the authority of the NPDES permit program, in accordance with the Federal CWA. This report is based on information supplied by Village of Reserve representatives (the permittee), observations made by the EPA inspector, and records and reports maintained by the permittee and the EPA.

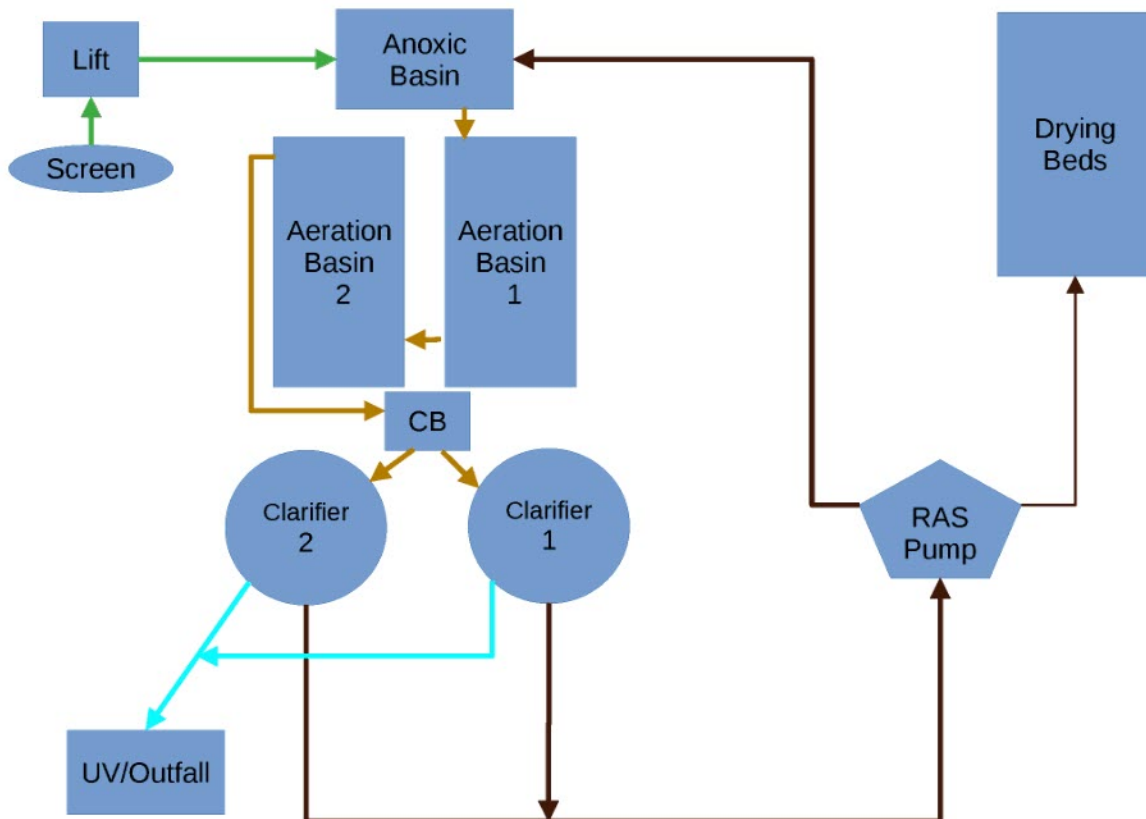
FACILITY DESCRIPTION

The Reserve WWTP is classified as a minor municipal discharger under the CWA, Section 402, of the NPDES permit program and is authorized to discharge up to 0.075 million gallons per day (MGD) based on design flow, with an actual average discharge around 0.017 MGD. The population served is approximately 1,612 residents according to 2020 United States Census. Discharge is to Christensen Arroyo, thence to the San Francisco River in waterbody segment 20.6.4.601 (NMAC, State of New Mexico Standards for Interstate and Intrastate Surface Waters) of the Rio Grande Basin. This segment includes the designated uses of irrigation, marginal warmwater and marginal coldwater aquatic life, livestock watering, wildlife habitat and primary contact.

The Reserve WWTP was originally constructed in the 1970's. The current anoxic basin, two cell aeration basin and secondary clarifiers were constructed in 2003. The Village has a grease trap ordinance for local restaurants. The WWTP's collection system has 2 lift stations. A 140-gallon diesel generator at the plant can be used for backup power. The headworks of the plant includes a bar screen and grit separator. An influent closed-pipe mag-meter is in a manhole. After the headworks, a pump lifts wastewater to an anoxic tank. The lift station at the headworks has an alarm (light) for power outages. Flow from the anoxic basin flows in series to the first aeration basin, then to the second aeration basin. Both aeration basins are concrete tanks with diffused aeration from one of three blowers on-site. After the aeration basins, wastewater flows by gravity to a splitter box where it can be directed to one of two secondary clarifiers. Clarifiers are run one at a time, with the other clarifier being cleaned during the downtime. Return activated sludge (RAS) from the clarifiers can be sent back to the anoxic basin. Wastewater flow from the clarifiers goes to the ultraviolet (UV) building, which was converted from the old serpentine chlorine contact chamber. Once inside the UV building, the flow goes through the effluent flow meter, which is a closed-pipe mag-meter. After the flow meter, flow can be split to one of two UV disinfection banks. The UV system is an ENAQUA AFP Disinfection System. After the UV banks, water free flows into a wet well trough, which has been designed to keep the UV banks from running dry. The wet well has a

valve after it which could allow all the flow to go to the drying beds instead of to the outfall. A secondary closed-pipe effluent mag-meter is located on the pipe to the outfall, after the diversion valve.

Outfall 001 is located outside the plant fence. Effluent from the outfall enters Christensen Arroyo, then a pipe that passes under an irrigation ditch and then the San Francisco River.



Waste activated sludge (WAS) from the secondary clarifier is dewatered in four sludge sand filter drying beds in a low area of the facility. Under drains collect water from the drying beds. Filtrate is pumped back to the headworks to be retreated. Dry sludge is moved from the beds to the plant's concrete dry sludge storage pad. Once the sludge is adequately dried and tested, it is given away for land application uses, mostly for pasture.

Section II – OBSERVATIONS

The inspection was announced via phone call with Mr. Graham at 9:38 AM on August 31, 2023. An opening conference was conducted at the time of the phone call.

A tour of the facility and the outfall was conducted. I observed or was informed of the following on the day of the inspection:

- On the day of the inspection, the facility was under construction to replace the entire electrical system (including breaker and control panels) and replace plumbing within the office building. Treatment basins were not under construction. Contractor is Southwest Solar and Electric. Construction began in late May and is expected to finish between October 2023 and December 2023. As a result of the construction, all records and sampling instrumentation and equipment (pH and Chlorine meters) are in storage. Records and photographs of equipment and instrumentation will be sent at a later date.
- Mr. Sellars is the Operator of Record for the WWTP while Mr. Graham works on becoming certified as an Operator with NMED. Mr. Sellars collects the compliance samples while Mr. Graham fills out all the paperwork.
- The NPDES permit (NM002163) expires March 31, 2024. The permit application is due 180 days prior to the expiration date, which was October 3, 2023.
- During UV bulb cleaning, effluent flow can be diverted to the drying beds instead of to the outfall.

Section III – AREAS OF CONCERN

Requirement 1

NPDES Permit NM0024163, Part I: A.1 Limitations and Monitoring Requirements. *Outfall 001 - Final Effluent Limits —0.075 MGD Design Flow. During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated domestic wastewater from Outfall 001. Such discharges shall be limited and monitored by the permittee and reported as specified.*

Concern 1A

During the months of April 2023 and June 2023, sample results for TSS from the Hall Environmental Laboratory were reported as non-detect. The permittee reported these values as zero (0) on their DMRs. However, TSS, BOD, and E coli cannot be reported as zero, they must be reported as less than the laboratory's Reporting Limit, which in this case would have been "<4.0" milligrams per liter. The loading rate and percent removals must then also be calculated using the laboratory's Reporting Limit. Therefore, the loading rates and percent removals for the months of April 2023 and June 2023 were incorrect.

Concern 1B

Loading rates for both 7-day average and 30-day average should use the actual flow on the day of sampling. Permittee is using the average daily flow for the entire week of sampling to calculate the 7-day average loading and the average monthly flow for the month to calculate the 30-day average.

Requirement 2

NPDES Permit NM0024163, Part III: Standard Conditions B.3.a. Proper Operation and Maintenance. *The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit.*

Concern 2A

Clarifier weirs were not level and had multiple seams where the wastewater short circuits instead of flowing over the weirs.

Concern 2B

Facility personnel stated that they do not keep daily plant logs.

Requirement 3

NPDES Permit NM0024163, Part III: Standard Conditions. C.5.a. Monitoring Procedures. *Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.*

Concern 3A

Samples are not preserved at the time of collection. It is noted that the samples are driven to the laboratory (4+ hours from the facility) within a day of collection, however samples should be preserved immediately after collection to minimize any potential degradation during transport.

Concern 3B

Permittee stated that they buy pH buffers in bulk once per year from USABlueBook. According to the manufacturer, buffers, once opened are only good for 6 months or less, therefore permittee is not properly calibrating the pH probe for around half of every year.

Requirement 4

NPDES Permit NM0024163, Part III: Standard Conditions. C.6. Flow Measurements. *Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.*

Concern 4A

Flow measurement devices for both influent and effluent are closed-pipe mag-meters. These meters require full-pipe flow in order to function correctly. The permittee does have records showing that the meters have been professionally calibrated within the last year, however due to the nature and location

of the flow meters, there is no way for facility personnel to easily verify that flow rates are within 10% accuracy.

Concern 4B

The effluent flow meter is located prior to the ultraviolet disinfection banks and the wet-well where the wastewater flow can be diverted to the drying beds. If the flow is diverted to the drying beds, then the flow rate measured by the effluent flow meter located prior to the UV banks will not accurately represent the actual flow to the river through the outfall.

Section IV – CLOSING CONFERENCE

EPA Region 6 inspector, Amy Andrews, conducted a closing conference at Village of Reserve WWTP at 2:36 PM on September 1, 2023, for the inspection. During the closing conference, the inspector reviewed the Areas of Concern noted during the inspection (some Areas of Concern were noted after the conclusion of the inspection and were not included in the Closing Conference).

Section V – FOLLOW UP

The following information was received by EPA after exiting the Facility on 9/1/2023:

- On 9/7/2023 – Flow meter calibration sheets; photos of laboratory instruments and calibration records; and
- On 9/11/2023 – laboratory reports for sludge and WET Testing.

Section V – LIST OF APPENDICES

Appendix 1 – Photograph Log – Three photos taken 9/1/2023

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: Village of Reserve Wastewater Treatment Plant		
City: Village of Reserve	County: Catron County	State: New Mexico



Photo File Name: DSCN2053.JPG

Date of Photo: 9/1/2023

Time of Photo: 1:14 PM

Photographer: Amy Andrews

Description: View down manhole of influent closed-pipe mag-meter.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: Village of Reserve Wastewater Treatment Plant		
City: Village of Reserve	County: Catron County	State: New Mexico



Photo File Name: DSCN2071.JPG

Date of Photo: 9/1/2023

Time of Photo: 1:38 PM

Photographer: Amy Andrews

Description: View into UV disinfection room which used to be serpentine chlorine contact chamber. The effluent closed-pipe mag-meter is shown on the pipe at the bottom of the picture, prior to the pipe splitting to the UV banks. The wet well trough is in the upper right corner of the photo, behind the concrete baffle.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: Village of Reserve Wastewater Treatment Plant		
City: Village of Reserve	County: Catron County	State: New Mexico



Photo File Name: DSCN2076.JPG

Date of Photo: 9/1/2023

Time of Photo: 1:41 PM

Photographer: Amy Andrews

Description: View into wet well trough after the UV banks.