



Region 6 Compliance Assurance and Enforcement Division
INSPECTION REPORT

Inspection Date(s):	11/29/2017		
Media:	Water		
Regulatory Program(s)	CWA – NPDES		
Company Name:	City of Rio Rancho		
Facility Name:	Rio Rancho WWTP #2		
Facility Physical Location:	100 Industrial Park Loop		
(city, state, zip code)	Rio Rancho, NM 87124		
Mailing address:	3200 Civic Center Circle		
(city, state, zip code)	Rio Rancho, NM 87144		
County/Parish:	Sandoval County		
Facility Contact:	Jim Chiasson	Director of Utilities	
	jchiasson@rrnm.gov		
FRS Number:	110022872346		
Identification/Permit Number:	NM0027987		
Media Number:			
NAICS:	22132		
SIC:	4952		
Personnel participating in inspection:			
Amy Andrews	US EPA, 6EN-WM	Inspector	(214) 907-0638
Sandra Gabaldón	NMED SWQB, Point Source Regulation Section	Inspector	(505) 827-1041
Daniel Valenta	NMED SWQB, Point Source Regulation Section	Inspector	(505) 827-2575
Edward De Lara Jr.	CH2M, City of Rio Rancho WWTP #2	Operations Manager - Wastewater	(505) 891-5022
Bill Jaquez	CH2M, City of Rio Rancho WWTP #2	Compliance Manager	(505) 891-5024
Gene Garcia	CH2M, City of Rio Rancho WWTP #2	Operations Supervisor	
EPA Lead Inspector Signature/Date			
	Amy Andrews		Date
Supervisor Signature/Date			
	Carol Peters		Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

United States Environmental Protection Agency (EPA) Region 6 inspector, Amy Andrews, and New Mexico Environment Department (NMED) inspectors Sandra Gabaldon and Daniel Valenta arrived at the City of Rio Rancho Wastewater Treatment Plant (WWTP) #2 at 9:15am on November 29, 2017 for an unannounced Compliance Evaluation Inspection (CEI). We met with Edward De Lara Jr., Wastewater Operations Manager, and Bill Jaquez, Compliance Manager, for the Opening Conference. I presented my credentials to Mr. De Lara and Mr. Jaquez, and informed them that this was an EPA inspection to determine the WWTP's compliance under the Clean Water Act (CWA). This CEI was conducted under the authority of the National Pollutant Discharge Elimination System (NPDES) permit program, in accordance with the CWA. The generation of this report is based on information supplied by Rio Rancho WWTP representatives, observations made by the EPA and NMED inspectors, and records and reports maintained by the permittee (Rio Rancho WWTP), and the EPA.

FACILITY DESCRIPTION

The City of Rio Rancho WWTP#2 is classified as a major municipal discharger with a pre-treatment program, permitted for 8.2 million gallons per day (MGD) of discharge, with a current facility design flow of 5.5 MGD, and an average actual flow of 3.6 MGD. Discharge is into the Rio Grande River, located at Latitude 35° 15' 23" North and Longitude 106° 35' 32" West. The facility has two full time operators and two supervisors in addition to a total of eight operators shared between all the City of Rio Rancho WWTPs who also take turns responding to the on-call SCADA system.

WWTP#2 is one of five WWTPs owned by the City of Rio Rancho (see Appendix 1, WWTP Flow Diagram). Outfall 001, the outfall from WWTP#2, is the only outfall currently discharging under an NPDES permit. WWTP#3 has an NPDES Permit which is maintained for potential future discharge, however the plant has been offline since 2004 and all waste streams are diverted to the influent flow at WWTP#2 (WWTP#3 currently has no discharge). The effluent waste streams from WWTP#1 and WWTP#6 are covered under the NPDES permit for WWTP#2 and are discharged at Outfall 001 seasonally. During the warmer months the effluent from WWTP#1 is used to water golf courses and parks, and during the colder months, when not seasonally reused, the effluent is sent to WWTP#2. The WWTP#1 effluent is combined with the WWTP#2 effluent prior to the ultraviolet (UV) disinfection system and becomes part of the WWTP#2 effluent flow leaving the system at Outfall 001. As of the summer of 2017, effluent from WWTP#5 is being used to recharge the aquifer with recycled water via injection well; wastewater is not discharged to surface waters. Effluent from WWTP#6 is usually also sent to the injection well, however if the injection system is down the effluent is sent to WWTP#2, and joins with the effluent leaving the facility through Outfall 001, after the WWTP#2 UV system and flow meter.

There are a total of 27 lift stations that bring wastewater from residential and industrial users to WWTP#2. All main lift stations are equipped with permanent generators in case of power failure, and

portable generators are available for use at the remaining smaller lift stations in case of emergency. WWTP#2 consists of two separate treatment streams. 2A is a Schreiber Process Unit that was built in 1995, with a bar screen, aeration basin and clarifier basin. 2B has approximately twice the capacity of 2A, and is an activated sludge treatment process with an automatic grit belt and climber screen system, anoxic basins, fine bubble aeration basins, and clarifiers. Both treatment streams join back together prior to the ultraviolet (UV) disinfection system.

Section II - OBSERVATIONS

We began the inspection with a tour of the WWTP. Both treatment streams appeared to be operating within normal parameters, however the aeration basin of 2B did have a broken pipe in the fine bubble aeration basin. The influent waste stream is split to each of the treatment streams on a percent (%) basis (as an example, 30% might go to 2A and 70% might go to 2B). Influent samples are collected just after the bar screen of 2A and at the headworks of 2B. The influent is assumed to be identical at each treatment stream, and even though influent samples are collected at both treatment streams, only the influent samples from 2B are used for reporting on DMRs.

A sewage odor was noted around the facility, and was explained to be originating from Lift Station 14.2, which is the main lift station just prior to entrance into the WWTP. The odor comes primarily from grease issues at this lift station, and the facility has plans to implement odor control measures at this lift station in the near future.

The UV disinfection system has approximately 400 UV bulbs, and the upkeep on the system has become tedious to keep up with. Rio Rancho has allocated \$2.2 Million to replace the entire system, which is scheduled for around the middle of 2019.

A tour of the laboratory showed that samples run by the facility include pH (run daily), biochemical oxygen demand (BOD; run 5 days/week), total suspended solids (TSS; run 5 days/week), total residual chlorine (TRC; run daily when chlorine has been in use at the facility). Whole Effluent Toxicity testing is sent to Sage Environmental in Oklahoma City, Oklahoma, and all other testing is sent to Hall Environmental, in Albuquerque, New Mexico.

Section III – AREAS OF CONCERN

Requirement

NPDES Permit NM0027987, Part I: Requirements for NPDES Permits, A. Limitations and Monitoring Requirements, 1A. *Effluent limits for Outfall 001 list a Minimum % Removal for BOD5 and TSS equal to 85% or greater.*

NPDES Permit NM0027987, Part III: Standard Conditions, C.3. Representative Sampling: *Samples and measurements taken for the purpose of monitoring shall be representative of the monitoring activity.*

Concern

Permit requirements include sampling effluents from WWTP #1 and #6 at internal outfalls prior to comingling with effluent from WWTP#2, however they do not state a specific requirement for sampling of influent locations. The percent removal requirement necessitates sampling of influent for comparison to effluent. Facility personnel stated that influent samples are collected from treatment stream 2A and 2B, but that only the samples from stream 2B are used to calculate % removal compared to effluent. Note that the effluent from WWTP#1 joins with the effluent from WWTP#2 prior to the effluent sampling, and therefore a custom formula has been provided for % removal. Facility personnel stated that because influent streams 2A and 2B are split from the same stream, they should be approximately equivalent. The inspector was unable to conclusively verify that these streams are equivalent, using data from October 2017 (see Appendix 2 for calculations), and that stream 2B is representative of all influent at WWTP#2.

Section IV – FOLLOW UP

The following information was received by EPA after exiting the Facility on 11/29/2017:

- 2/9,12/2018; follow-up email correspondence with Mr. Jaquez containing daily flow data for the month of October 2017 and clarification on connection of effluents from WWTP#1 and WWTP#6.

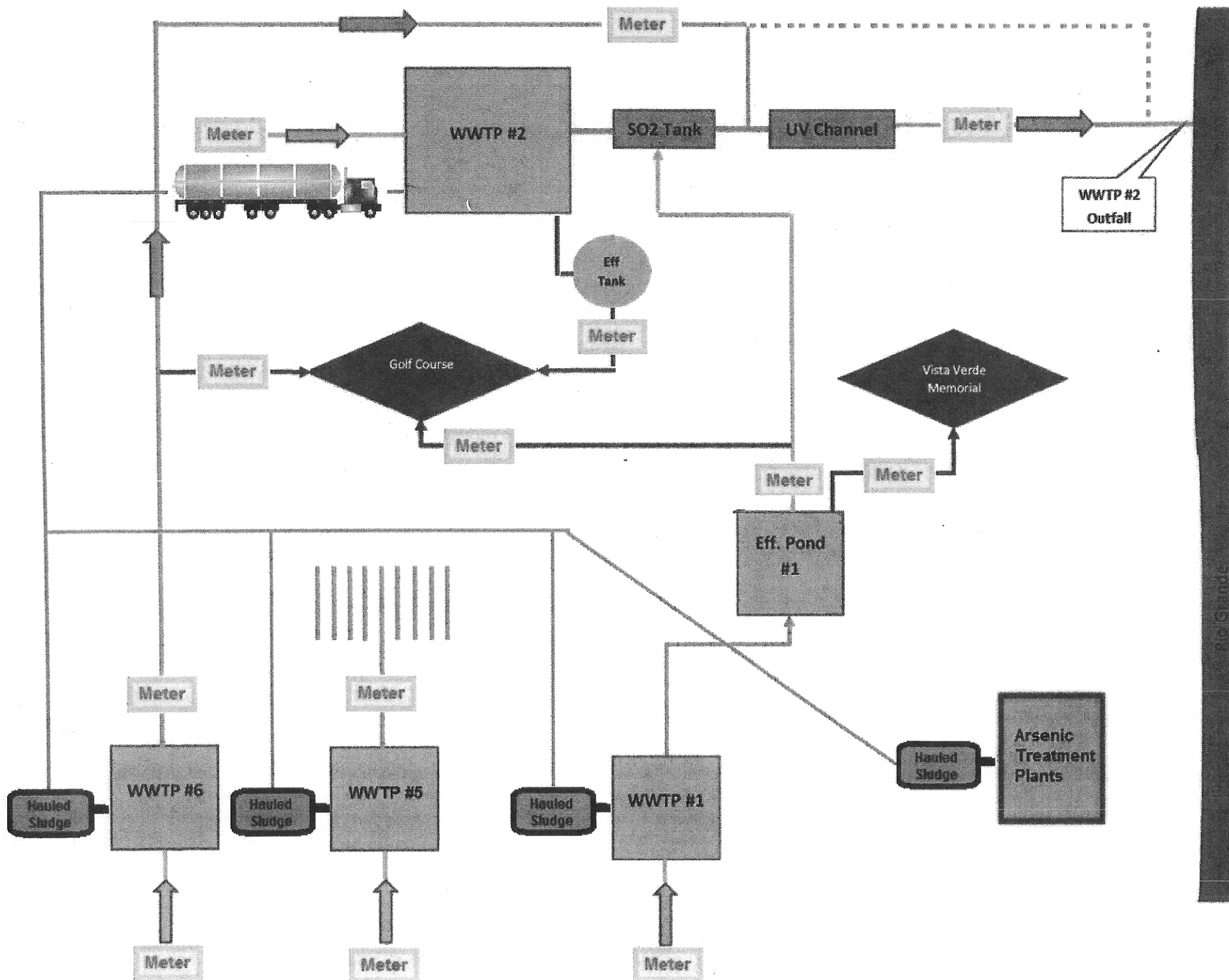
Section V – LIST OF APPENDICES

Appendix 1 – WWTP Flow Diagram

Appendix 2 – Comparison Calculations of WWTP#2 Influent Streams 2A and 2B; October 2017

Appendix 1

WWTP Flow Diagram



Appendix 2
Comparison Calculations of
WWTP#2 Influent Streams 2A and 2B;
October 2017

Comparison Calculations of WWTP #2 Influent Streams 2A and 2B - October 2017

Date	Flow (MGD)			BOD (mg/L)			BOD Loading (lbs/day)*			TSS (mg/L)			TSS Loading (lbs/day)*		
	INF 2B	INF 2A	WWTP#2 EFF	INF 2B	INF 2A	WWTP#2 EFF	INF 2B	INF 2A	WWTP#2 EFF	INF 2B	INF 2A	WWTP#2 EFF	INF 2B	INF 2A	WWTP#2 EFF
1-Oct	1.547	1.46	4.806	250.0	370.0	4.4	3227.4	4508.0	176.5	275.0	814.3	9.6	3550.2	9921.2	385.0
2-Oct	1.553	1.46	4.431	310.0	480.0	4.6	4017.5	5848.2	170.1	252.1	385.7	7.4	3267.2	4699.3	273.6
3-Oct	1.7	1.46	4.2	310.0	340.0	4.3	4397.8	4142.5	150.7	247.4	230.4	6.4	3509.7	2807.1	224.3
4-Oct	1.658	1.48	4.228	280.0	330.0	3.5	3874.1	4075.7	123.5	270.8	350.0	7.2	3746.8	4322.7	254.0
5-Oct	1.699	1.49	4.346	250.0	240.0	3.6	3544.5	2984.2	130.6	240.0	243.0	9.0	3402.8	3021.5	326.4
6-Oct	1.69	1.47	4.155												
7-Oct	1.88	1.49	3.955												
8-Oct	1.46	1.46	4.001	260.0	310.0	2.9	3167.8	3776.9	96.8	310.0	221.7	6.2	3776.9	2701.1	207.0
9-Oct	1.522	1.5	4.081	280.0	280.0	4.3	3556.3	3504.9	146.4	251.0	241.7	6.0	3188.0	3025.5	204.3
10-Oct	1.533	1.49	3.879	330.0	340.0	3.6	4221.7	4227.6	116.5	366.6	230.4	4.6	4689.9	2864.8	148.9
11-Oct	1.577	1.5	3.666	290.0	320.0	2.8	3816.4	4005.6	85.7	286.5	234.8	6.0	3770.4	2939.1	183.6
12-Oct	1.582	1.52	3.774	270.0	260.0	2.3	3564.5	3297.9	72.4	252.2	278.9	4.6	3329.5	3537.7	144.9
13-Oct	1.556	1.51	3.707												
14-Oct	1.535	1.49	3.608												
15-Oct	1.585	1.49	4.009	240.0	260.0	3.8	3174.4	3232.9	127.1	282.0	290.5	6.6	3730.0	3612.1	220.8
16-Oct	1.45	1.47	4.92	260.0	350.0	3.3	3146.1	4293.5	135.5	275.0	259.1	5.2	3327.6	3178.4	213.5
17-Oct	1.457	1.45	4.308	340.0	360.0	3.2	4133.9	4356.1	115.0	313.0	340.9	6.6	3805.7	4125.0	237.3
18-Oct	1.503	1.42	4.153	330.0	230.0	3.2	4139.0	2725.5	110.9	320.4	209.1	6.8	4018.6	2477.8	235.7
19-Oct	1.63	1.44	4.135	330.0	340.0	4.2	4488.8	4085.7	144.9	297.7	242.9	6.4	4049.4	2918.9	220.8
20-Oct	1.67	1.41	4.073												
21-Oct	1.668	1.39	3.988												
22-Oct	1.691	1.39	4.075	380.0	320.0	4.2	5362.3	3711.9	142.8	280.0	221.7	7.0	3951.2	2571.6	238.0
23-Oct	1.658	1.45	4.459	270.0	310.0	3.4	3735.7	3751.1	126.5	288.0	204.4	8.2	3984.8	2473.3	305.1
24-Oct	1.654	1.43	4.232	260.0	270.0	2.8	3588.7	3222.0	98.9	314.3	220.0	6.2	4338.2	2625.3	219.0
25-Oct	1.676	1.43	4.013	420.0	340.0	3.6	5874.2	4057.3	120.6	456.8	373.9	6.2	6388.9	4461.9	207.6
26-Oct	1.684	1.43	4.062	400.0	440.0	4.1	5621.2	5250.7	139.0	406.8	265.2	6.6	5716.8	3164.7	223.7
27-Oct	1.684	1.41	4.084												
28-Oct	1.681	1.43	3.875												
29-Oct	1.699	1.43	4.033	270.0	230.0	4.1	3828.1	2744.7	138.0	397.9	236.8	7.8	5641.5	2825.8	262.5
30-Oct	1.938	1.44	4.445	270.0	220.0	2.6	4366.6	2643.7	96.4	1575.0	257.1	5.2	25471.9	3089.5	192.9
31-Oct	1.701	1.43	4.114	310.0	250.0	3.3	4400.4	2983.3	113.3	280.0	239.1	5.8	3974.6	2853.3	199.1
30 day avg*	2.197	1.962	5.557	300.4	312.6	3.6	4054.2	3801.3	125.1	358.2	286.6	6.6	4983.9	3487.7	231.7
% removal*				98.8	98.9					98.2	97.7				
7 day avg - wk1*	1.675	1.473	4.303	280.0	352.0	4.1	3812.3	4311.7	150.3	257.1	404.7	7.9	3495.3	4954.3	292.7
7 day avg - wk2*	1.538	1.496	3.817	286.0	302.0	3.2	3665.3	3762.6	103.6	293.3	241.5	5.5	3750.9	3013.6	177.7
7 day avg - wk3*	1.566	1.439	4.227	300.0	308.0	3.5	3816.5	3738.7	126.7	297.6	268.5	6.3	3786.2	3262.4	225.6
7 day avg - wk4*	1.675	1.424	4.114	346.0	336.0	3.6	4836.4	3998.6	125.6	349.2	257.0	6.8	4876.0	3059.4	238.7
7 day avg - wk5*	1.779	1.433	4.197	283.3	233.3	3.3	4198.4	2790.6	115.9	751.0	244.3	6.3	11696.0	2922.9	218.2

*Note that these calculations are for comparison purposes only, and because they do not account for WWTP#1, they will not match reported DMR values.