

Region 6 - Enforcement & Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	06/15/2023	
Media Program:	Water	
Regulatory Program(s)	NPDES	
Company Name:	San Felipe Pueblo	
Facility Name:	San Felipe Pueblo Wastewater Treatment Plant (WWTP)	
Facility Physical Location:	76 Taos Road	
(city, state, zip code)	San Felipe Pueblo, Sandoval County, New Mexico	
Mailing address:	Post Office Box 4219	
(city, state, zip code)	San Felipe Pueblo, New Mexico 87121	
County/Parish:	Sandoval	
Facility Phone Number	(505) 771-6628	
Facility Contact:	Pinu'u Stout pstout@sfpueblo.com	Director Department of Natural Resources
FRS Number:	110037117679	
Identification/Permit Number:	NM0031011	
Media Identifier Number:	NA	
NAICS:	221320	
SIC:	4952	
Personnel participating in inspection:		
Pinu'u Stout	San Felipe Pueblo	Director Department of Natural Resources
Paul Kennedy	Souder-Miller & Associates	Contract Operator
Chris Lopez	Souder-Miller & Associates	Contract Operator
James Leija	Souder-Miller & Associates	Contract Operator
David A. Esparza	USEPA/6ECDWM	Environmental Engineer
EPA Lead Inspector Signature/Date		
	David Esparza	Date
Supervisor Signature/Date		
	Roberto Bernier	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector David Esparza, PE, arrived at San Felipe Pueblo Administrative Building for the opening meeting prior to traveling to the Wastewater Treatment Plant (WWTP) (San Felipe WWTP) office at 9:00 AM on June 15, 2023, for an announced inspection. I met with Ms. Pinu'u Stout, San Felipe Pueblo, Messrs.' Paul Kennedy, and Chris Lopez, and James Leija, all contract operators from, Souder-Miller & Associates presented them my credentials and informed them that this was an EPA inspection to determine San Felipe's WWTP compliance under the Clean Water Act (CWA). This compliance evaluation inspection (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 San Felipe Pueblo representatives, observations made by the United States Environmental Protection Agency (US EPA) inspector, and records and reports maintained by the permittee, and the US EPA. Before leaving the facility, an exit briefing was held at approximately 1:00 PM with above-described individuals to answer any questions.

FACILITY DESCRIPTION

The WWTP is a minor discharger with a design flow capacity of 0.60 MGD (million gallons per day). Currently the average daily discharge flow equates to approximately 200k-gallons per day (gpd). The facility is located at 76 Taos Road or approximately 2.7-miles southwest of the intersection of U.S. Interstate 25 (I-25) and Indian Service Route #85 (aka Hagan Road), San Felipe Pueblo, Sandoval County, New Mexico (depicted in Aerial Image #1 below). The WWTP facility serves a population of approximately 620 connections or 1,250 persons, the Black Mesa Casino/administrative buildings, restaurant, and travel center. The WWTP is overseen by contract operator Souder-Miller & Associates (SMA) on a Monday-Friday 8:00 AM- 12:00 PM schedule.

The disinfected effluent from the WWTP is discharged into San Felipe Eastside Ditch (depicted in Aerial Image #1 below), an intermittent tributary of Rio Grande. After traversing approximately 2.0-miles from Outfall 001 located at a point described as Latitude 35° 23' 60" North and Longitude 106° 27' 0" West, the effluent enters the Rio Grande, thence travels approximately 2-miles downstream to the Middle Rio Grande Conservancy District's (MRGCD) Angostura Diversion Structure (ADS) and Santa Ana Pueblo lands immediately below.

The wastewater treatment process consists of four (4) lift stations (identified as Northeast, West, Southeast and Main), fine screen, anoxic digesters, aeration basin with fine bubble diffusers, membrane basin using membrane bioreactors (MBR), and lastly two (2) banks of ultraviolet (UV) disinfection chamber.



Aerial Image #1: Overall view of the San Felipe Pueblo Wastewater Treatment Plant location and the approximate location of Outfall 001. Aerial from Google Earth Maps.

A Supervisory Control and Data Acquisition (SCADA) system provides around the clock monitoring of WWTP operations. Additionally, the WWTP maintains two (2) evaporative lagoons (1-lined and 1-unlined) in the event of an emergency.

The WWTP maintains a backup diesel generator for power that is exercised weekly.

Section II – OBSERVATIONS

I observed the following and/or the following information was provided and/or stated:

- The WWTP is contract operated by Souder-Miller & Associates.
- A Supervisory Control and Data Acquisition (SCADA) system provides around the clock monitoring of WWTP operations.
- Effluent totalizing flow meter readings are recorded daily.
- The WWTP has added additional plate cartridges to the MBR basins; thus, increasing the available treatment processes to approximately 300k gallons per day. Additional back-up or replacement cartridges are stored onsite and available as needed.
- The WWTP currently utilizes a two (2) bank Ultraviolet (UV) effluent disinfection configuration prior to discharge at Outfall 001 into the San Felipe Eastside Ditch (depicted in Aerial Image #1 above).

- Sludge material is transported for disposal.

Section III – AREAS OF CONCERN

I observed no areas of concern at the time of the inspection.

Section IV – FOLLOW UP

No additional information was received by EPA after exiting the Facility on June 15, 2023.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 5 photos taken 06/15/2023

Appendix 2 – San Felipe MBR Treatment Plant and Flow Diagram

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: San Felipe Pueblo Wastewater Treatment Plant		
City: San Felipe Pueblo	County/Parish: Sandoval	State: New Mexico



Picture of San Felipe WWTP Headworks structures. (DSCN 2587). Photographed by D. Esparza.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: San Felipe Pueblo Wastewater Treatment Plant		
City: San Felipe Pueblo	County/Parish: Sandoval	State: New Mexico



Picture adjacent to the two (2) Anoxic basins and raw water inflow (depicted as the green flow line in Appendix 2). (DSCN 2588). Photographed by D. Esparza.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: San Felipe Pueblo Wastewater Treatment Plant		
City: San Felipe Pueblo	County/Parish: Sandoval	State: New Mexico



View of the MBR basins and headwork structure looking approximately Northwest. (DSCN 2590).
Photographed by D. Esparza.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: San Felipe Pueblo Wastewater Treatment Plant		
City: San Felipe Pueblo	County/Parish: Sandoval	State: New Mexico



Picture of the three (3) MBR Permeate pumps located along the approximate southside of the treatment plant. (DSCN 2592). Photographed by D. Esparza.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: San Felipe Pueblo Wastewater Treatment Plant		
City: San Felipe Pueblo	County/Parish: Sandoval	State: New Mexico

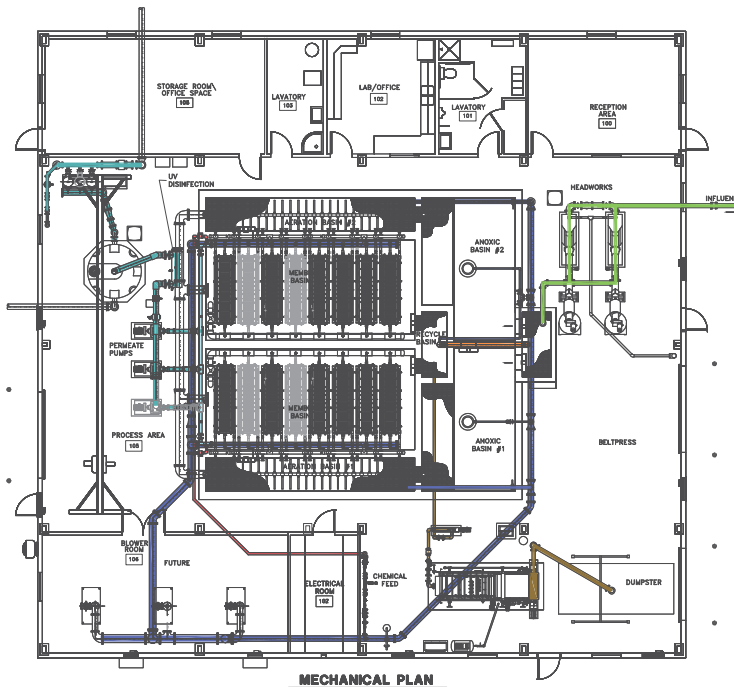


Picture of the two (2) bank Ultraviolet (UV) effluent disinfection configuration prior to discharge at Outfall 001 into the San Felipe Eastside Ditch (depicted in Aerial Image #1 above). (DSCN 2596). Photographed by D. Esparza.

Appendix 2

San Felipe Pueblo MBR Treatment Plant and Flow Diagram

CAL 07/27/2008 2:10pm help\1\drawing\WTP\000 PACKAGE GENERAL DESIGN CRITERIA.dwg



LEGEND

RAW WATER	—
TREATED WATER	—
WAS	—
AIR	—
CHEMICAL CLEAN	—
RECYCLE	—
FUTURE	—

AS-CONSTRUCTED WARNING

These Record Documents have been prepared based on information provided by others. The Consultant has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions that may be incorporated as a result of erroneous information provided by others.

GENERAL	PHASE	
	1B	2
BUILDING SIZE	87'x 90'	NO ADDITION

DESIGN CRITERIA

GENERAL	PHASE	
	1	2
SYSTEM DESIGN		
AVERAGE DAILY FLOW (TOTAL OPD)	300,000	600,000
INFLUENT BOD ₅ (MG/L)	350	350
INFLUENT TSS (MG/L)	250	250
INFLUENT TON (MG/L)	40	40
EFFLUENT BOD ₅ (MG/L)	<5	<5
EFFLUENT TSS (MG/L)	<5	<5
EFFLUENT TON (MG/L)	<5	<5
DESIGN HRT (HOURS)	12	12.6
DESIGN OPERATING HLSS (MG/L)	15,000	15,000
DESIGN WASTING HLSS (MG/L)	6,210	12,422
SLUDGE AGE (DAYS)	31	29
VOLUME (200' PER DAY YD ³)	1.5	3.0

HEADWORKS

FINE SCREEN		
NUMBER OF UNITS	2	2
CAPACITY (GPM EACH UNIT)	33	33
SPACING (MM)	3	3

TREATMENT PROCESS

ANOXIC BASIN		
QUANTITY	2	2
WATER LEVEL (FT)	16'	16'
CAPACITY (TOTAL GAL)	56,000	56,000
# OF MIXERS	2	2
PRE-AERATION BASIN		
QUANTITY	2	2
MAXIMUM WATER LEVEL (FT)	15.5'	15.5'
CAPACITY (TOTAL GAL)	30,800	30,800
DIFFUSER CAPACITY (TOTAL SCFM)	225	450
MEMBRANE BASIN		
QUANTITY	2	2
MAXIMUM WATER LEVEL (FT)	15'	15'
CAPACITY (TOTAL GAL)	91,108	91,108
# MEMBRANE CARTRIDGES	2,400	4,800
MEMBRANE SCOUR (REQUIRED)	840	1,200
MEMBRANE SCOUR (SUPPLIED)	1,800	1,800
UV STERILIZATION		
QUANTITY	2	2
UVT	70%	70%
UV DOSE (MJ/CM ²)	35,000	35,000
BLOWERS		
# BLOWERS	2	2
FLOW (TOTAL GPM)	+1 STAND-BY	+1 STAND-BY
RAS PUMPS		
# PUMPS	2	2
FLOW (TOTAL GPM)	2,400	2,400
PERMEATE PUMPS		
# PUMPS	1	1
FLOW (TOTAL GPM)	1,400	1,400
WAS PUMPS		
# PUMPS	2	2
FLOW (TOTAL GPM)	+1 STAND-BY	+1 STAND-BY
SLUDGE HANDLING		
0.8 METER BELT FILTER PRESS		
# OF UNITS	20	20

0 1/2 1
DRAWING IS NOT TO
SCALE IF BAR DOES
NOT MEASURE 1"

CAD FILE	
NO. DATE	
0 07/2007	
DESIGN	
REVISIONS	
DATE	
BY	
CHECKED	
APPROVED	

PUEBLO OF SAN FELIPE
MBR TREATMENT PLANT
GENERAL
FLOW DIAGRAM & DESIGN CRITERIA

SMA
Civil/Environmental
Scientists & Engineers

QUA
ENGINEERING, INC.
SUITE 270
PHONE 801/295-9133
FAX 801/295-9133

SHEET 4 of 114
G-4