

Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	12/6/2023	
Media Program:	Water	
Regulatory Program(s)	NPDES	
Company Name:	NEW MEXICO WATER SERVICE	
Facility Name:	Rio Del Oro Wastewater Treatment Plant	
Facility Physical Location:	1 PNM Access Road	
(city, state, zip code)	Los Lunas, New Mexico	
Mailing address:	401 Horner	
(city, state, zip code)	Belen, New Mexico 87002	
County/Parish:	Valencia	
Facility Phone Number	505-864-2218/505-463-1395	
Facility Contact:	Bobby Towle	WWTP Supervisor
	BTowle@NewMexicoWater.com	
FRS Number:	110009831110	
Identification/Permit Number:	NM0030414	
Media Identifier Number:	NA	
NAICS:	221320	
SIC:	4952	
Personnel participating in inspection:		
Gene Garcia	New Mexico Water Service	WWTP Operator-4
David Esparza	USEPA/R6-ECDWM}	Environmental Engineer
EPA Lead Inspector Signature/Date	DAVID ESPARZA Digitally signed by DAVID ESPARZA Date: 2024.01.02 09:12:38 -07'00'	
	David Esparza	Date
Supervisor Signature/Date	ROBERTO BERNIER Digitally signed by ROBERTO BERNIER Date: 2024.01.02 13:35:19 -06'00'	
	Roberto Bernier	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector David Esparza arrived at the Rio Del Oro, Wastewater Treatment Plant (WWTP) at approximately 2:00 PM on December 6, 2023, for an unannounced Compliance Evaluation Inspection (CEI). I met with Mr. Gene Garcia, a Level 4 operator with New Mexico Water Service (NMWS). **Note:** NMWS is the owner and operator of Rio Del Oro WWTP. I presented my credentials to Mr. Garcia and informed him 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 New Mexico Water Service representatives, observations made by the EPA inspector, and records and reports maintained by the permittee (NMWS) and EPA. Before leaving the facility on December 6, 2023, an exit briefing was held with Mr. Garcia to explain areas of concern noted at the time of the inspection.

FACILITY DESCRIPTION

The WWTP is a minor discharger with a design flow of 0.3 million gallons per day (MGD), with an average daily flow of approximately 0.175 MGD. The private treatment facility is located at 1 PNM Access Road, Los Lunas, Valencia County, New Mexico (depicted in **Aerial Image #1** below). The facility location can be further described as approximately 600-feet East of the Tomé Cemetery or approximately 1,800-feet Southeast of the University of New Mexico-Valencia Campus. The WWTP facility serves a population of approximately 3,300 persons. The facility is operated from 7:30 AM to 4:30 PM Monday through Friday with a total of one (1) full-time staff.

In approximately 2005 New Mexico Water Services Company commenced an upgrade of the 0.1 MGD, single-train conventional activated sludge (CAS) with a membrane bioreactor (MBR) system to meet Class 1A effluent for reuse. The MBR was commissioned circa July 2006.

Raw sewage is discharged into one (1) of two (2) automatic fine bar screens (one on-line; one standby) that are provided with a common conveyor/washer/compactor (CWC). The CWC removes organics from the screens and automatically discharges the washed and compacted screenings into a dumpster that is transported and disposed of at a landfill.

The effluent from the bar screen discharges into the pre-air basin to be mixed with the activated sludge (mixed liquor suspended solids). This process allows removal of the biological oxygen demand (BOD) and total suspended solids (TSS) in the pre-aeration basin, in addition to nitrogen, which is removed through alternating periods of aeration (nitrification) and anoxic mixing (denitrification).

Two (2) submersible pumps pump the mixed liquor from the pre-aeration basin into the two (2) separate bioreactors. Each reactor is equipped with four (4) submerged membrane units (SMU) comprised of 200 flat plate filters in each unit. Facility effluent is withdrawn through the flat plate membranes (filtered) by permeate pumps (two on-line; one standby), thence traverses through two (2) alternating ultraviolet (UV) disinfection units (one on-line; one standby), thence to a holding basin

for irrigation reuse upon request by the Valley Improvement Association (VIA) for watering of their parks. This facility has a discharge permit from NMED (NMDP- 1569) for re-use water, Class IA.

The MBR is monitored and controlled by a programmable logic controller (PLC) that also provides supervisory control and data (SCADA) acquisition for alarm notification. Operator control is provided through a human-machine interface that is simply a PC located in the administration/laboratory building. In the event of a failure of the PLC, the facility can also be operated manually.



Aerial Image #1: Overall view of the Rio Del Oro Wastewater Treatment Plant. Aerial from Google Earth maps

Table 1: Rio Del Oro Lift Stations

Lift Station Number	Location by Street Address
Tomé Vista 1	2 Avenida Serena Place
Tomé Vista 2	73 Tome Vista Drive
RDO/UNM	266 La Entrada Road
La Canada	70 Camino La Canada
Monzarro	30 Mission Court
Eastland	7 Hermanos Loop

All the lift stations have emergency back-up power in the event of a power outage. The WWTP onsite generator and all lift stations back-up power is exercised every Wednesday under a load.

Rio Del Oro does not have any identified Industrial Users (IU), though one (1) commercial and five (5) education entities contribute to their WWTP.

Additionally, the WWTP maintains an 500K-gallon evaporative lagoon in the event of an emergency. This onsite lagoon measures approximately 0.52 acres in surface area.

Additionally, the WWTP has implemented written policies and procedures to address any potential sanitary sewer overflow events (SSOs), and standard operating procedures (SOPs) pertaining to facility operations and maintenance (O&M).

Section II - OBSERVATIONS

I observed the following and/or information was provided, stated, or requested of the WWTP staff.

- The observed affixed thermometer within the sample storage refrigerator did not exhibit any visible evidence of proper and timely calibration of temperature recording devices (thermometers). In response to the Request for Information (RFI) dated December 7, 2023 (**Appendix 3 Request for Information (RFI)**). The WWTP simply responded “none”. Therefore, the integrity or stability of the collected samples cannot be guaranteed; thus, the results could be inaccurate or in error.
- The observed laboratory glass sample containers appeared to lack proper cleaning.
- It was stated the WWTP had experienced three (3) Sanitary Sewer Overflow (SSO) events in conjunction with their NPDES permit as follows: at the WWTP (June 17, 2021), Tomé Vista (August 10, 2021) and the Eastland Hills lift station (September 7, 2021), respectively (**Appendix 4 Transmittal Notification of SSO Event**).
- It was stated that the WWTP typically discharges the disinfected effluent through a closed conduit pipe to the Las Maravillas Homeowners Association lagoon located approximately 1-mile east of the facility.
- The WWTP had secure perimeter fencing; thus, limiting access. The overall WWTP’s operations and maintenance (O&M), and general facility housekeeping appeared to be in good order.

Section III – AREAS OF CONCERN

- A review of the submitted Integrated Compliance Information System (ICIS) Discharge Monitoring Reports (DMR) data for the period January 101, 2019, through September 30, 2023, indicates numerous NPDES permit excursions with respect to Escherichia coli (E. coli) and Percent (%) Suspended Solids removal (**Appendix 2 ICIS E90 Effluent Violations**).
- The WWTP had experienced three (3) Sanitary Sewer Overflow (SSO) events in conjunction with their NPDES permit as follows: at the WWTP (June 17, 2021), Tomé Vista (August 10, 2021) and the Eastland Hills lift station (September 7, 2021), respectively (**Appendix 4 Transmittal Notification of SSO Events**).

- The observed affixed thermometer within the sample storage refrigerator did not exhibit any visible evidence of proper and timely calibration of temperature recording devices (thermometers). In response to the Request for Information (RFI) dated December 7, 2023 (**Appendix 3 Request for Information (RFI)**). The WWTP simply responded “none”. Therefore, the integrity or stability of the collected samples cannot be guaranteed; thus, the results could be inaccurate or in error.
- The WWTP description of Outfall 001 states the discharge is to an arroyo named La Cañada de la Loma de Arena thence to La Constancia Ditch, and finally to Rio Grande (**Aerial Image #2**). However, if the statement of the closed conduit discharge to the Las Maravillas Homeowner’s Association lagoon is correct (**Aerial Image #3**) this is contrary to the permitted outfall location.



Aerial Image #2 View of the Rio Del Oro WWTP and the permitted flow path from Outfall 001 into the La Cañada de la Loma de Arena arroyo



Aerial Image #3 View of the Rio Del Oro WWTP (yellow pin) and the stated discharge to the Las Maravillas Subdivision (green pin) located approximately 1-mile east of the WWTP.

Section IV – RECOMMENDATIONS

- Ensure all appurtenant temperature recording devices (thermometers) within the on-site laboratory, flow meters, automatic samplers, etc. are calibrated in accordance with recognized protocol.
- Ensure all appurtenant laboratory testing equipment (flasks, beakers, etc.) maintain proper cleaning and storage.

EPA Region 6 inspector David Esparza conducted a closing conference at Rio Del Oro Wastewater Treatment Plant at approximately 3:00 PM on December 6, 2023, for the inspection. During the closing conference, David Esparza reviewed the Areas of Concern noted during the inspection.

Section IV – FOLLOW UP

The following information was received by EPA on December 14, 2023, after exiting the Facility on December 6, 2023.

- See **Appendix 3** Request for Information (RFI) and the Rio Del Oro/New Mexico Water Services Response

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 7 photos taken 12/06/2023

Appendix 2 – ICIS E90 Effluent Violations

Appendix 3 – Request for Information (RFI)

Appendix 4 – Transmittal Notification of SSO Events

Appendix 5 – Rio Del Oro Site Map and Outfall Points of Reference

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: Rio Del Oro Wastewater Treatment Plant		
City: Los Lunas	County/Parish: Valencia	State: New Mexico



View of WWTP's pre-air basin. Bar screen and entrance headworks on right side of photograph. (DSCN2678). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: Rio Del Oro Wastewater Treatment Plant		
City: Los Lunas	County/Parish: Valencia	State: New Mexico



View of the bioreactors. (DSCN2681). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: Rio Del Oro Wastewater Treatment Plant		
City: Los Lunas	County/Parish: Valencia	State: New Mexico



View of the ultraviolet (UV) disinfection treatment system. (DSCN2682). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: Rio Del Oro Wastewater Treatment Plant		
City: Los Lunas	County/Parish: Valencia	State: New Mexico



View of the one (1) of the ultraviolet (UV) disinfection treatment systems (UV-2) injection ports exhibiting corrosion. (DSCN2683). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: Rio Del Oro Wastewater Treatment Plant		
City: Los Lunas	County/Parish: Valencia	State: New Mexico



View of the sodium hypochlorite (UN1791) un-restrained drum. (DSCN2684). Note: not clear why the sodium hypochlorite (typically used in wastewater treatment as an oxidizing and disinfection agent) and the UV are plumbed into the system. Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: Rio Del Oro Wastewater Treatment Plant		
City: Los Lunas	County/Parish: Valencia	State: New Mexico



View of the onsite back-up generator. (DSCN2685). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: Rio Del Oro Wastewater Treatment Plant		
City: Los Lunas	County/Parish: Valencia	State: New Mexico



View looking south of the 500K-gallon emergency storage lagoon. (DSCN2675). Photographed by D. Esparza

Appendix 2
Review
of the
ICIS
E90 Effluent Violations

E90 Effluent Violations From 01/01/2019 - Present

NM0030414

RIO DEL ORO WWTF-NM W

Monitoring Period End Date	Perm Feature ID	Limit Set Designator	Parameter Desc	Statistical Base Short Desc	Limit Unit Short Desc	Limit Value	DMR Value Qualifier Code	DMR Value
09/30/2022	001	A	E. coli	30DAVGEO	BCFU/d	1.43	=	1.89
10/31/2022	001	A	E. coli	30DAVGEO	BCFU/d	1.43	=	4.2
10/31/2022	001	A	E. coli	DAILY MX	CFU/100	126	=	137.6
01/31/2023	001	A	E. coli	30DAVGEO	BCFU/d	1.43	=	2.49
01/31/2023	001	A	E. coli	DAILY MX	CFU/100	126	=	130.3
06/30/2023	001	A	E. coli	30DAVGEO	BCFU/d	1.43	=	1.54
07/31/2023	001	A	E. coli	30DAVGEO	BCFU/d	1.43	=	16.2
07/31/2023	001	A	E. coli	30DAVGEO	CFU/100	126	=	186.9
07/31/2023	001	A	E. coli	7DAV GEO	CFU/100	126	=	186.9
07/31/2023	001	A	E. coli	DAILY MX	CFU/100	126	=	816.4
08/31/2023	001	A	E. coli	30DAVGEO	BCFU/d	1.43	=	70.47
08/31/2023	001	A	E. coli	30DAVGEO	CFU/100	126	=	1773.1
08/31/2023	001	A	E. coli	7DAV GEO	CFU/100	126	=	1773.1
08/31/2023	001	A	E. coli	DAILY MX	CFU/100	126	=	2419
09/30/2023	001	A	E. coli	30DAVGEO	BCFU/d	1.43	=	2.87
09/30/2023	001	A	E. coli	DAILY MX	CFU/100	126	=	131.4
09/30/2023	001	A	Solids, suspended percent	MO AV MN	%	85	=	82

Appendix 3

Request for Information (RFI)

and

The New Mexico Water Service Response

Esparza, David

From: Towle, Bobby <BTowle@NewMexicoWater.com>
Sent: Thursday, December 14, 2023 4:15 PM
To: Esparza, David
Cc: Vaughn, Alan; Matthews, Rachel
Subject: RE: Rio Del Oro Wastewater Treatment Facility (WTF) (NM0030414)
Attachments: Flow meter calibrations.pdf; Flow records.pdf; Liftstations address, pump sizes.pdf; Facility site, equipment,basins,outfall.pdf; SOP.pdf; SSO-Event letters.pdf

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Good afternoon Mr. Esparza

Attached is the information you requested. If you need anything else, don't hesitate to contact me. I will be sending another email with the 2 years' worth of analytical results due to not enough space.

Sincerely,

Bobby Towle

Wastewater Supervisor
NEW MEXICO WATER SERVICE
OFFICE #: 505-864-2218
Mobile #: 505-463-1395
Fax #: 505-864-8438



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calwater.com

From: Esparza, David <esparza.david@epa.gov>
Sent: Thursday, December 7, 2023 2:51 PM
To: Towle, Bobby <BTowle@NewMexicoWater.com>
Cc: Vaughn, Alan <Vaughn.Alan@epa.gov>; Matthews, Rachel <Matthews.Rachel@epa.gov>; Esparza, David <esparza.david@epa.gov>
Subject: Rio Del Oro Wastewater Treatment Facility (WTF) (NM0030414)

Mr. Towle:

As I discussed, this is my follow-up to our telephone conversation this afternoon December 7, 2023. To reiterate my understanding, I was informed you would provide copies or make available the information as requested. Additional information might be requested after my review of the received information. The

specific request for information (RFI) will be delineated below. Therefore, please forward by email the requested information as soon as possible, but no later than close of business December 14, 2023.

- A complete electronic copy of your Sanitary Sewer Overflow (SSO) protocol, inclusive of all SSO events for the previous two (2) years. See Attachment (SSO- Event letters)
- A complete electronic copy of your Standard Operating Procedures (SOPs) (i.e., WTF treatment process and on-site laboratory) and clarification how often it is updated. See Attachment for SOP. On-site lab is for in-house process control, MLSS, R.A.S and % T.S updated on as needed basics. (SOP)
- A current copy of the facility Site Map delineating the total area footprint, locations/volumes of any on-site fuel storage tanks, delineation of processes (i.e., headworks, EQ basins, chlorination, etc.), all associated ancillary equipment and outfall(s). See Attachment (Facility site, equipment, basins, outfall)
- Identification of the quantity, location, and names of any lift stations (LS), wet wells etc. See Attachment (Lift stations address, pump sizes)
- Clarification if the identified LSs have on-site back-up power or quick connects in the event of power outages. See Attachment (Lift stations address, pump sizes)
- Electronic copies of calibration and maintenance records of your flow measuring (meter) devices, inclusive of serial numbers (S/N) for the previous three (3) years. Found 2 years see attachment. (Flow meter calibrations)
- Electronic copies of your flow measurement records for the previous 1-year period. See Attachment (Flow records)
- Clarification the generator observed on-site is capable of fully operating the entire WTF and how often it is exercised. The on-site EMG was oversized for the facility. The on-site E.M.G runs every Wednesday for approximately 30 Min under load.
- Electronic copies of calibration and maintenance records of your temperature recording devices (thermometers) within the on-site laboratory. None
- Electronic copies of your analytical analysis reports for the previous two (2) years, both internal and external. See Attachment (this will be attached to another email following this one)
- Clarification of the WWTP's current staffing and hours of operation. 1 Operator on-site is Mr. Baca operator # NM10140 working hours are 7:30am – 4:30pm
- Clarification of the type of electronic monitoring utilized in operating the WWTP (i.e., SCADA, PLC, etc.). Clarification how the operator is alerted to a WWTP situation/event. Vendor supply HMI (human machine interface) Allen Bradley control logics. Vendor supply Wonderware SCADA. Alarms transmitted to the on-call phone. We only receive a message loss of aeration that can be intrusion, power failure etc..
- Identification of the industrial/commercial/educational entities contributing to the WTF. No Industrial. 1 commercial, and 5 schools.
- Electronic copies of applicable service agreements with respect to the industrial/commercial/educational entities and the Las Maravillas Homeowners Association. None to my knowledge that I'm aware of.

Please let me know if you have any questions.

David A. Esparza, P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Water Enforcement Branch-Municipal/Industrial Section
Mail Code: 6-ECDWM
1201 Elm Street, Suite 500
Dallas, Texas 75270
(505) 366-8402
eMail: esparza.david@epa.gov

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Appendix 4

Transmittal Notification of SSO Events



NEW MEXICO WATER SERVICE

401 Horner St.
Rio Communities, NM 87002-6322 Tel: (505) 864-2218

June 18, 2021

Sandra Gabaldon
Environmental Scientist/Specialist
Surface Water Quality Bureau
Point Source Regulation Section
1190 St. Francis Drive
Santa Fe, NM 87502-0110

RE: SEWAGE SPILL – Rio Del Oro Facility, Permit NM0030414 – June 17, 2021

Mrs. Gabaldon,

This written notification serves as a follow up to our phone notification of the sewer spill that occurred at our Rio Del Oro facility.

On June 17, 2021 at 13:30, a contractor working in the area hit a 6 inch sewer line cleanout at our Rio Del Oro facility. We already had our operators on site marking the locations of our waterlines, so we were able to shut the lift station off immediately. This resulted in approximately 200 gallons of waste spilling out of the ruptured pipe.

Once the leak was isolated, our operators used a vac truck to clean up the affected area. There were no visible solids on the ground. The area was also disinfected with the application of HTH for 45 minutes and materials were swept up and removed.

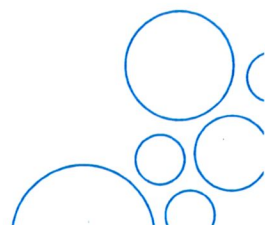
Please let me know if you have any follow up questions.

Sincerely,

Martin Torrez

Martin Torrez
Project Manager/Water Quality Manager
New Mexico Water Service
(505) 313-3344 Mobile

CC: Helen Nguyen, USEPA Region 6
Jake Knutson, NMED GWQB
Cynthia Apodaca, NMWSC General Manager





NEW MEXICO WATER SERVICE

401 Horner St.
Rio Communities, NM 87002-6322 **Tel:** (505) 864-2218

August 10, 2021

Jason Martinez
Environmental Scientist/Specialist
Surface Water Quality Bureau
Point Source Regulation Section
1190 St. Francis Drive
Santa Fe, NM 87502-0110

RE: SEWAGE SPILL – Tome Vista Lift Station, Permit NM0030414 – June 17, 2021

Mr. Martinez,

This written notification serves as a follow up to our phone notification of the sewer spills that occurred at our Tome Vista Lift Station.

On August 09, 2021 at 9:00 pm, our VFD lost power due to a power surge at our Tome Vista lift station. This resulted in approximately 150 gallons of waste spilling out.

Our operator responded and disinfected with HTH for 45 minutes. Materials were swept up and removed.

Please let me know if you have any follow up questions.

Sincerely,

Martin Torrez

Martin Torrez
Project Manager/Water Quality Manager
New Mexico Water Service
(505) 313-3344 Mobile

CC: Helen Nguyen, USEPA Region 6
Jake Knutson, NMED GWQB
Cynthia Apodaca, NMWSC General Manager





NEW MEXICO WATER SERVICE

401 Horner St.
Rio Communities, NM 87002-6322 **Tel:** (505) 864-2218

September 07, 2021

Jason Martinez
Environmental Scientist/Specialist
Surface Water Quality Bureau
Point Source Regulation Section
1190 St. Francis Drive
Santa Fe, NM 87502-0110

RE: SEWAGE SPILL – Eastland Hills, Permit NM0030414 – September 07, 2021

Mr. Martinez,

On September 7, 2021 at 9:30 am our lift station at Eastland Hills overflowed. Our main lift station pump lost power and our back up well had never turned on because of a high temperature reading. This spill resulted in approximately 650 gallons of waste spilling out.

Our operator responded and disinfected with HTH for 45 minutes. Materials were swept up and removed.

Please let me know if you have any follow up questions.

Sincerely,
Martin Torrez

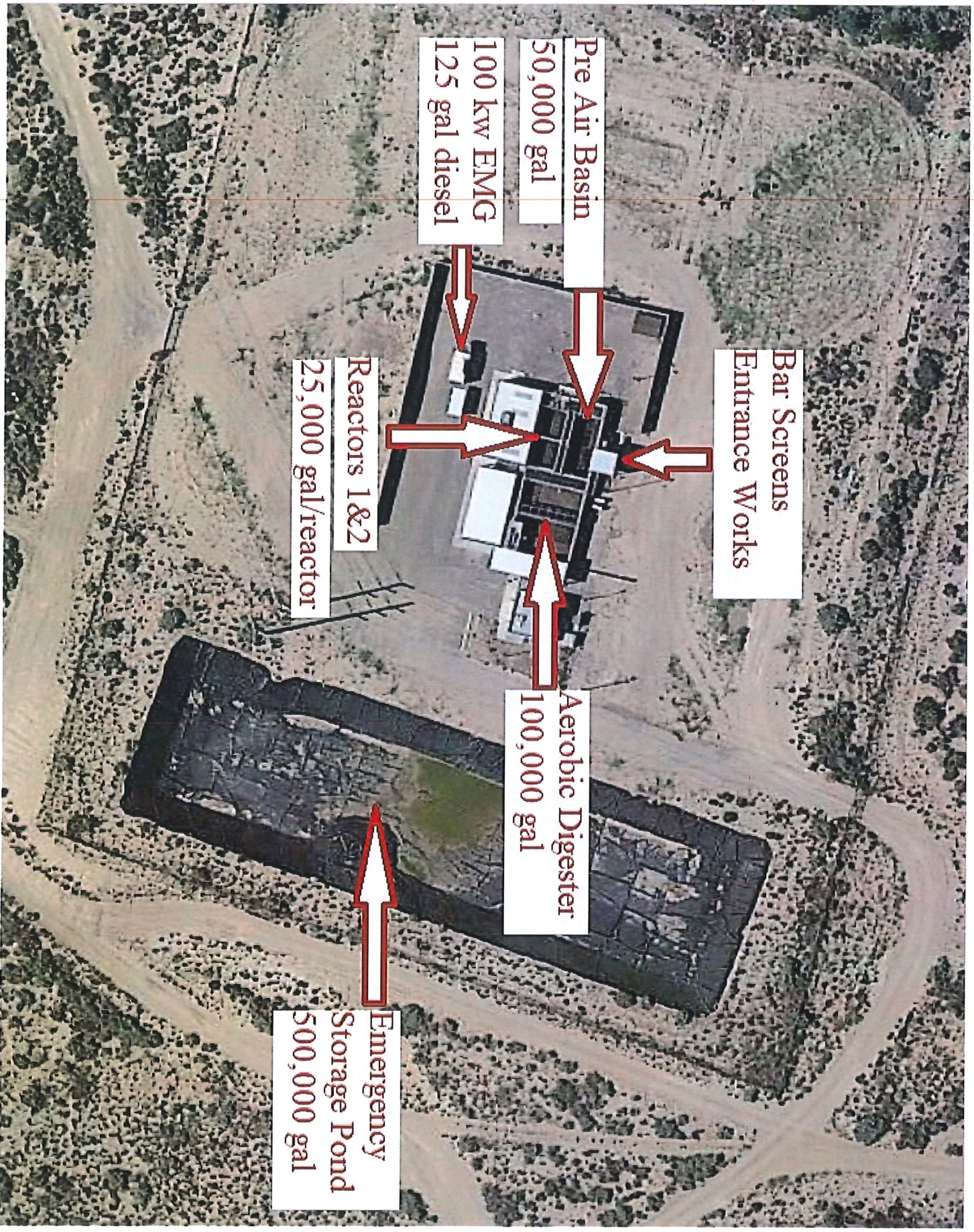
Martin Torrez
Project Manager/Water Quality Manager
New Mexico Water Service
(505) 313-3344 Mobile

CC: Nancy Williams, US EPA Region 6
Jake Knutson, NMED GWQB
Cynthia Apodaca, NMWSC General Manager



Appendix 5

Rio Del Oro Site Map
and
Outfall Points
of
Reference



Bar Screens
Entrance Works

Pre Air Basin
50,000 gal

100 kw EMG
125 gal diesel

Reactors 1 & 2
25,000 gal/reactor

Aerobic Digester
100,000 gal

Emergency
Storage Pond
500,000 gal

Discharge site RDO W/W/T/F

Write a description for your map.

Legend

-  Feature 1
-  Las Maravillas Community Park
-  Untitled Polygon

North Spring  Effluent Discharge

South Spring  Effluent Discharge

 Effluent sprinkler zones

Manzano Expy



Rio Communities North

Desert View Elementary

Las Maravillas

Valencia Middle School

The University of New Mexico Valencia Campus

La Cañada de la Loma de Arena Arroyo

Las Maravillas Nature Trail

Rio Del Oro WWTP

North Spring Effluent Discharge

South Spring Effluent Discharge

Rio Del Oro/Las Maravillas

Permitted Outfall La Canada de La Loma de Arena Arroyo- and stated Outfall Discharge

