

Region 6 - Enforcement & Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	09/22/2021	
Media Program:	Water	
Regulatory Program(s)	CWA	
Company Name:	City of Artesia	
Facility Name:	Artesia Wastewater Treatment Plant	
Facility Physical Location:	Intersection of State Road 229 and State Road 357	
(city, state, zip code)	Artesia, New Mexico	
Mailing address:	Post Office Box 1310	
(city, state, zip code)	Artesia, New Mexico 88210	
County/Parish:	Eddy	
Facility Phone Number	Patsy Hernandez	Patsy Hernandez
Facility Contact:	phernandez@artesianm.gov	575-748-0261
FRS Number:	110011031766	
Identification/Permit Number:	NM0022268	
Media Identifier Number:	N/A	
NAICS:	221320	
SIC:	4952	
Personnel participating in inspection:		
Patsy Hernandez	City of Artesia	Wastewater Supervisor
Susan A. Lucas Kamat	NMED	Program Manager, Point Source Regulation Section-Surface Water Quality Bureau
David Esparza	USEPA	Environmental Engineer
EPA Lead Inspector Signature/Date		
	David Esparza	Date
Supervisor Signature/Date		
	Roberto Bernier	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

United States Environmental Protection Agency (EPA) Region 6 inspector David Esparza, PE, and Ms. Susan A. Lucas Kamat, New Mexico Environment Department- Program Manager, Point Source Regulation Section-Surface Water Quality Bureau (NMED) arrived at the City of Artesia (Artesia) Wastewater Treatment Plant (WWTP) approximately 9:00 AM on September 22, 2021 for an unannounced inspection. I presented my credentials to Ms. Patsy Hernandez, Wastewater Supervisor and informed her that this was an EPA inspection to determine the facility's compliance under the Clean Water Act (CWA) and the requirements 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 Artesia representatives, observations made by the EPA inspector, NMED and records and reports maintained by the permittee (Artesia), and the EPA. Before leaving the facility on September 22, 2021, an exit briefing was held with Ms. Hernandez, and Ms. Lucas-Kamat to explain areas of concern noted at the time of the inspection.

FACILITY DESCRIPTION

The WWTP is a major discharger with a design flow of 2.6 million gallons per day (MGD). The original WWTP was built to treat approximately 1.3 MGD of wastewater (Train #1 built in approximately 2003). A second treatment train, identical to the original was built in approximately 2007; thus, increasing the facility capacity to the current 2.6 MGD. The facility is located at the intersection of New Mexico State Road 229 and State Road 357, Artesia, Eddy County, New Mexico (depicted in Aerial Image #1 below). The WWTP facility serves a population of approximately 12,000 residents. The WWTP is operated by staff within the Public Works Department and consists of 5 full-time equivalent (FTE) positions (2-certified and 3-operators-in-training (OIT)), inclusive of administrative support during the hours of 6:00 AM to 4:00 PM during the regular work week and 7:00 AM to 9:00 AM on the weekends. On-call staff is available on an as needed basis.

The city maintains 7 lift stations (Identified in **Table 1** below).

Table 1: City of Artesia Lift Stations

	Lift Station	Address	Comment
1	Haliburton South	2311 South 1 st Street	Not in use
2	Haliburton North	15 East Compress Road	In-use
3	Industrial Park	between Mill Road and Parkland Drive	In-use
4	Hermosa	1312 South 1 st Street	In-use
5	Canyonstone	1608 North 26 th Street	In-use
6	FLETC	1300 West Richey- Southeast corner	In-use
7	FLETC Gun Range	1300 West Richey- behind guard shack	In-use maintained by FLETC

Septage and domestic wastewater (typically greywater) is screened after a wet well before entering the headworks. According to WWTP records approximately 4,700 gallons of septage on average is received on a weekly basis. The facility staff monitors incoming registered septage haulers for pH and grease to determine compatibility with the WWTP for acceptance or rejection.

At the head of the treatment plant, the influent is pumped into the first of two (2) automatic bar screens for large solids removal. Installation of an additional bar screen was necessary due to pumps being damaged by large solids. Most of the treatment units are situated above land surface due to the areas high static water level (SWL).

Treatment units at the WWTP are comprised of two (2) bar screens and grit removal system at the headworks, followed by four (4) race-track design oxidation ditches, and extended air treatment units. The WWTP's existing grit chamber was rehabilitated in mid-2020. Each day, each race-track rotates through periods of anoxic and aerobic mixing and settling. The racetracks discharge to two (2) secondary clarifiers which discharge effluent to a filtration system which then feeds into three (3) independent banks of an ultraviolet (UV) disinfection system prior to discharge to the Pecos River or to a reuse pond for application in city parks. The onsite clarifiers are cleaned on a weekly basis. The WWTP also maintains an emergency high test hypochlorite (HTH) Chlorine/Sodium Thiosulfate system should the UV disinfection fail. Solids removed from the racetracks and/or the final clarifiers are sent to a thickener followed by a sludge press. Following UV disinfection, a Parshall flume with a staff gauge and a differential pressure sensor records the totalized flow. Part of the calendar year (approximately 7-months) the disinfected effluent is stored for reuse on city parks and other facilities within an onsite clay lined storage pond or lagoon measuring approximately 6M-gallons. This storage pond or lagoon is permitted by the New Mexico Environment Department (NMED) Groundwater Quality Bureau under permit number (DP-258). During the months of November through March the WWTP discharges the treated effluent to the Pecos River. During the months of discharge at the outfall the disinfected effluent traverses through a closed conduit pipe approximately 1-mile prior to discharging into the Pecos River, , though there were no discharges during calendar years 2020 or 2021. A riprap structure has been placed at the outfall to minimize embankment undermining, prevent erosion and to enhance aeration prior to discharge into the Pecos.

Following the belt press, the sludge is placed in concrete drying beds (underdrains return excess liquid to the headworks) for composting into Class A sludge for land application and/or local agricultural purposes.

A Supervisory Control and Data Acquisition (SCADA) system provides around the clock monitoring of WWTP operations and is manned during normal working hours with alarm notifications in the off hours.

The WWTP maintains a backup diesel generator for power that is exercised weekly, typically every Friday.



Aerial Image #1: Overall view of the City of Artesia's Wastewater Treatment Plant. Aerial from Google Earth maps.

Currently the only established Industrial User (IU) is the Holly Frontier (Navajo Refining Company, LLC-Artesia Refinery) (Navajo). The City of Artesia (COA) and Navajo entered into a wastewater agreement for the disposal of Navajo's effluent into the City's WWTP in 2013, which was updated in May 2014 to include selenium removal technology. In accordance with conditions of this Agreement, a WWTP (access only) sampling point and totalizing meter was installed within a locked building situated at the approximate southwest corner of North Freeman and East Logan Streets (Latitude/Longitude 32° 51' 11.305" North 104° 23' 45.142" West). WWTP personnel collect samples daily via an automatic sampler (auto-sampler) for pH and chlorine (CL) analysis. Additionally, the in-line filters installed before refinery flows enter the auto-sampler are inspected on a weekly basis. The Agreement allowed a discharge of industrial wastewater not to exceed 21,600 gallons per day (GPD) and a non-domestic wastewater discharge of not to exceed 216,000 GDP or a total combined discharge of not to exceed 237,000 GPD. The observed Omega® type C7.00 meter (serial number 56448/17) is scheduled for calibration/certification on an annual basis. The Navajo-Artesia facility is used for "cracking" (thermal & catalytic cracking) in accordance with Petroleum Refining Effluent Guidelines and Standards ([40 CFR Part 419](#)). This process breaks large, heavy hydrocarbons from topping process into smaller hydrocarbons

Section II – OBSERVATIONS

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

- The WWTP's grit chamber was rehabilitated in mid-2020.

- An update to the previous 2014 wastewater agreement between the COA and Navajo is currently awaiting signature (approval) due to the current Renewable Diesel Unit (RDU) and Pretreatment Unit (PTU) project.
- In accordance with conditions of the Navajo and COA Agreement, a WWTP (access only) sampling point and totalizing meter were installed within a locked building situated at the approximate southwest corner of North Freeman and East Logan Streets (Latitude/Longitude 32° 51' 11.305" North 104° 23' 45.142" West). WWTP personnel collect samples daily for pH and chlorine (CL) analysis. The observed Omega® type C7.00 meter (serial number 56448/17) is scheduled for calibration/certification on an annual basis.
- The WWTP on-site laboratory maintains and updates its written SOP's as necessary, inclusive of appropriate annual equipment certifications and/or calibrations.
- 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 Integrated Compliance Information System (ICIS) database for the period from February 25, 2020 to September 22, 2021 (Appendix 1 ICIS Database Report) indicates the following:

- NPDES permit excursion- Quarterly Monitoring Report – January 2020, April 2020, October 2020, January 2021, April 2021, and July 2021.
- NPDES permit excursion- Selenium – January 2020, February 2020, and March 2020.
- NPDES permit excursion- Nonylphenol- January 2020, February 2020, and January 2021.
- **Note:** most of the permit excursions have been resolved except for the July 2021 excursion

Section IV – RECOMMENDATIONS

- Preparation of a Sanitary Sewer Overflow (SSO) Protocol.
- Preparation and implementation of a written Fats, Oils and Grease (FOG) program.
- Preparation of a Sewer Use Ordinance to address the existing and/or future Industrial Users.

Section V – FOLLOW UP

The following information was received by EPA on December 2, 2021, after exiting the Facility on September 22, 2021:

- The locations and status of the City of Artesia's 7 Lift Stations.

Section V – LIST OF APPENDICES

Appendix 1 – A Review of the Integrated Compliance Information System (ICIS) Database for the
period from February 25, 2020 to September 25, 2021

Appendix 1

A Review of the Integrated Compliance Information System (ICIS) Database for the Period from February 25, 2020 to September 25, 2021

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List of Violations Related to the Permit

Record Numbers 1 to 32

Violation Type	Violation Information	Violation Code	Violation Date	RNC Detection Code-Date	RNC Resolution Code-Date	Action
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C10	04/15/2020			
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C20	04/15/2020			
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C30	04/15/2020	N-05/16/2020	2-08/12/2021	
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C40	04/15/2020	N-05/16/2020	2-08/12/2021	
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C10	10/15/2020			
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C20	10/15/2020			
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C30	10/15/2020	N-11/15/2020	2-08/12/2021	
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C40	10/15/2020	N-11/15/2020	2-08/12/2021	
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C10	01/15/2021			
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C20	01/15/2021			
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C30	01/15/2021	N-02/15/2021	2-08/12/2021	
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C40	01/15/2021	N-02/15/2021	2-08/12/2021	
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C10	04/15/2021			
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C20	04/15/2021			
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C30	04/15/2021	N-05/16/2021	2-08/12/2021	

Violation Type	Violation Information	Violation Code	Violation Date	RNC Detection Code-Date	RNC Resolution Code-Date	Action
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C40	04/15/2021	N-05/16/2021	2-08/12/2021	
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C10	07/15/2021			
Schedule Violation	1 P QUMTR Quarterly Monitoring Report	C20	07/15/2021			
DMR Non-Receipt Violation	001 A 01147 Selenium, total [as Se] Effluent Gross Season ID:0 C3	D80	02/29/2020	K-04/15/2020	2-07/10/2020	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 Q1	D80	02/29/2020	N-04/15/2020	2-07/10/2020	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 Q2	D80	02/29/2020	K-04/15/2020	2-07/10/2020	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 C2	D80	02/29/2020	N-04/15/2020	2-07/10/2020	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 C3	D80	02/29/2020	K-04/15/2020	2-07/10/2020	
DMR Non-Receipt Violation	001 A 01147 Selenium, total [as Se] Effluent Gross Season ID:0 C3	D80	03/31/2020	K-05/16/2020	1-05/16/2020	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 Q1	D80	03/31/2020	N-05/16/2020	1-05/16/2020	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 Q2	D80	03/31/2020	K-05/16/2020	1-05/16/2020	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 C2	D80	03/31/2020	N-05/16/2020	1-05/16/2020	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 C3	D80	03/31/2020	K-05/16/2020	1-05/16/2020	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 Q1	D80	01/31/2021	N-03/18/2021	1-03/18/2021	
DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 Q2	D80	01/31/2021	K-03/18/2021	1-03/18/2021	
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DMR Non-Receipt Violation	001 A 51568 Nonylphenol Effluent Gross Season ID:0 C3	D80	01/31/2021	K-03/18/2021	1-03/18/2021	

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