

Region 6 - Enforcement & Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	02/25/2020	
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
George Peterson	City of Artesia	Lead Operator
David Esparza	USEPA	Environmental Engineer
EPA Lead Inspector Signature/Date		
	David Esparza	Date
Supervisor Signature/Date		
	Carol Peters	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector David Esparza, PE, arrived at the City of Artesia Wastewater Treatment Plant (WWTP) (hereinafter referred to as WWTP) at approximately 10:00 AM on February 25, 2020 for an unannounced inspection. I met with Ms. Patsy Hernandez, Wastewater Supervisor, and Mr. George Peterson, Lead Operator, presented my credentials and informed them that this was an EPA inspection to determine the WWTP's 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 Artesia representatives, observations made by the United States Environmental Protection Agency (US EPA) inspector, and records and reports maintained by the permittee (Artesia), and the US EPA. Before leaving the facility, an exit briefing was held at 1:00 PM with Ms. Hernandez to explain areas of concern noted at the time of the inspection and request representative photograph copies of the WWTPs records.

FACILITY DESCRIPTION

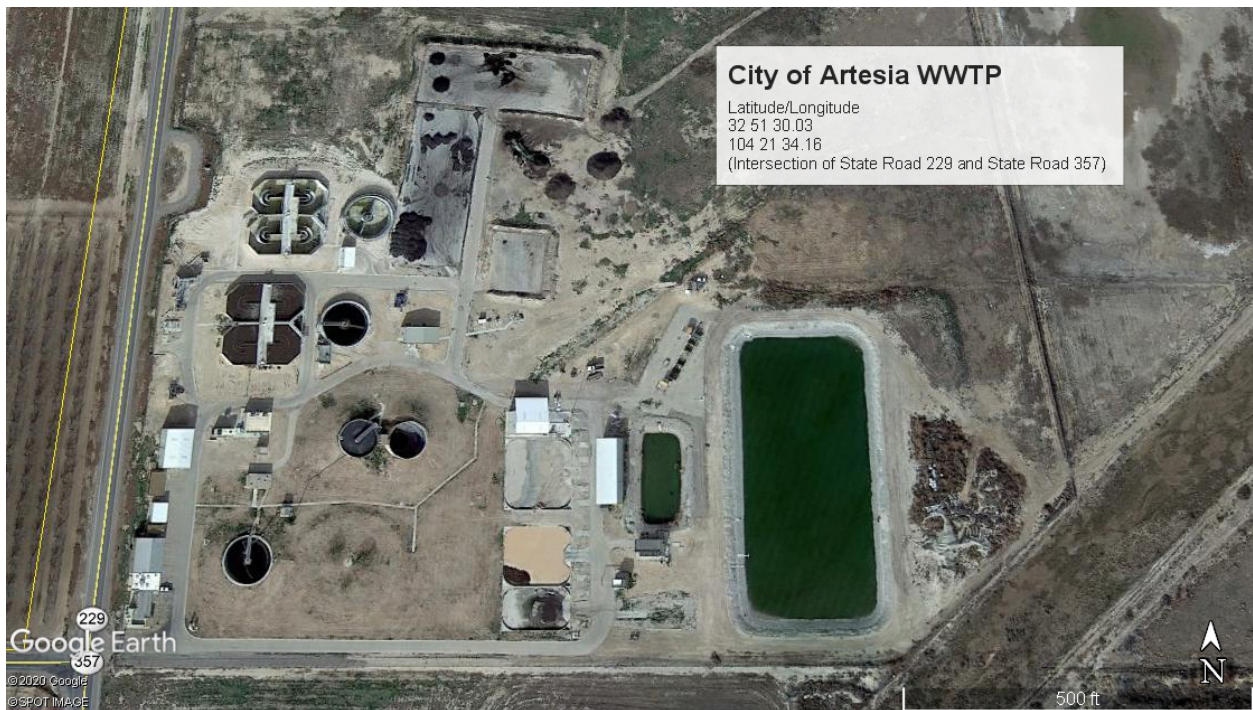
The WWTP is a major discharger with a design flow of 2.6 million gallons per day (MGD). The original WWTP was built to treat approximately 1.3 MGD of wastewater (Train #1 built in approximately 2003). A second treatment train, identical to the original was built in approximately 2007; thus, increasing 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 12,200 (2016 US Census) residents. The WWTP is operated by staff within the Public Works Department and consists of 8 full-time equivalent (FTE) positions, though two (2) are currently vacant, inclusive of administrative support during the hours of 6:00 AM to 4:00 PM seven (7) days 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.

Septage and domestic (typically greywater) wastewater 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) racetrack design oxidation ditches, and extended air treatment units. The WWTP's existing grit chamber identified for rehabilitation in the completed Smith Engineering Preliminary Engineering Report (PER) commenced on January 6, 2020 (Beginning of Project-BOP) by the

issuance of the Notice to Proceed (NTP) under project number COA-PS-18-0005 for a scheduled completion date (End of Project-EOP) of 180-days, or approximately June 6, 2020. Each day, each racetrack rotates through periods of anoxic and aerobic mixing and settling. The racetracks discharge to two (2) secondary clarifiers which discharge effluent to a new 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. 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.



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

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.

Currently the only established Industrial User (IU) is the Holly Frontier (Navajo Refining Company, LLC-Artesia Refinery). 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, this 2013 agreement 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 the 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 GPD or a total combined discharge of not to exceed 237,000 GPD. The observed Omega® type C7.00 meter (serial number 56448/17) was a replacement due to the previous meters' failure. This observed totalizing meter is scheduled for calibration/certification by Yukon on March 19, 2020. 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 existing grit chamber identified for rehabilitation in the completed Smith Engineering Preliminary Engineering Report (PER) commenced on January 6, 2020 (Beginning of Project-BOP) by the issuance of the Notice to Proceed (NTP) under project number COA-PS-18-0005 for a scheduled completion date (End of Project-EOP) of 180-days, or approximately June 6, 2020.
- 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) was a replacement due to the previous meters' failure. This observed meter is scheduled for calibration/certification by Yukon on March 19, 2020.
- 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

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

Section IV – FOLLOW UP

The following information was received by EPA on February 28, 2020, after exiting the Facility on February 25, 2020:

- The make, model, and serial number of the flow rate metering device, inclusive of installation and calibration dates, with respect to the WWTP/Refinery sampling point.
- WWTP flow rate totals (daily and monthly) for Navajo Refining with respect to December 2017, and January thru May 2018.
- WWTP analytical results for Navajo Refining with respect to December 2019, January and February 2020.
- The beginning of project (BOP) and end of project (EOP) dates with respect to the new grit chamber.

No additional information was received by EPA after exiting the Facility on [last day].

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 6 photos taken 2/25/2020

Appendix 1

Photograph Log



Photo File Name: City of Artesia (COA) WWTP (DSCN1726)

Date of Photo: 02/25/2020

Time of Photo: 12:40 PM

Photographer: D. Esparza

Description: View of the WWTP bar screen/headworks prior to entering the grit chamber.



Photo File Name: City of Artesia WWTP (DSCN1727)

Date of Photo: 02/25/2020

Time of Photo: 12:40 PM

Photographer: D. Esparza

Description: View of a portion of the grit chamber and some of the piping undergoing rehabilitation.



Photo File Name: City of Artesia WWTP (DSCN1728)

Date of Photo: 02/25/2020

Time of Photo: 12:40 PM

Photographer: D. Esparza

Description: A more detailed view of some of the piping within the grit chamber undergoing rehabilitation under project number COA-PS-18-0005.



Photo File Name: City of Artesia WWTP (DSCN1724)

Date of Photo: 02/25/2020

Time of Photo: 12:15 PM

Photographer: D. Esparza

Description: View of automatic sampler (auto sampler) installed in accordance with the City of Artesia and Navajo Refining wastewater agreement. The auto sampler is located within a locked building at the approximate southwest corner of North Freeman and East Logan. Note: Only WWTP personnel have access to this building.



Photo File Name: City of Artesia WWTP (IMG_0168)

Date of Photo: 02/25/2020

Time of Photo: 11:27 AM

Photographer: D. Esparza

Description: View of Omega® meter model specifications within the locked building to record Navajo Refining discharge flow volumes delivered to the WWTP.



Photo File Name: City of Artesia WWTP (IMG_0167)

Date of Photo: 02/25/2020

Time of Photo: 11:20 AM

Photographer: D. Esparza

Description: View of Omega® type C7.00 totalizing meter digital display installed in-line.
Note: This meter was scheduled for calibration/certification by Yukon on March 19, 2020.