NEW MEXICO
ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau

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TOM SKIBITSKI
Acting Director
Resource Protection Division

CERTIFIED MAIL RETURN RECEIPT REQUESTED

February 22, 2013

Mr. Byron J. Landfair, Infrastructure Director
City of Artesia
612 N. Roselawn St.
P.O Box 1310
Artesia, NM 88211-1310

Re: Major Municipal; SIC 4952; Compliance Evaluation Inspection; Artesia Wastewater Treatment Plant; NPDES Permit No. NM0022268; January 23, 2013

Dear Mr. Landfair:

Enclosed, please find a copy of the report for the referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U.S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas, for their review. These inspections are used by USEPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with requirements of the Clean Water Act.

Problems noted during this inspection are discussed in the Further Explanations section of this inspection report. You are encouraged to review the inspection report, and required to correct any problems noted during the inspection, and to modify your operational and/or administrative procedures, as appropriate. Further, you are encouraged to notify, in writing, both USEPA (Diana McDonald, USEPA (6EN-WC), 1445 Ross Ave., Dallas, TX 75202) and NMED (at the above address) regarding modifications and compliance schedules. Thank you for the cooperation and assistance of Jake Prentiss, Frank Trujillo and Patsy Hernandez during this inspection. If you have any questions about this inspection report, please contact me at 505-827-0212 or barbara.cooney@state.nm.us

Sincerely,
/S/ Barbara Cooney

Barbara Cooney
Surface Water Quality Bureau

Cc: Rashida Bowlin, USEPA (6EN-AS) by email
Diana McDonald, USEPA (6EN-WM) by email
Hannah Branning, USEPA (6EN-AS) by email
Darlene Whitten-Hill, USEPA (6EN-AS) by email
Carol Peters-Wagnon, USEPA (6EN-WM) by email
Larry Giglio, USEPA (6EN-PP) by email
Michael Kesler, NMED Dist. 3 Mgr, by email
Jerry Schoeppner, Chief, NMED GWQB (by email)
John Kieling, Chief, NMED HWB (by email)
Carl Chavez, ENMRD (by email)
John Penland, USEPA, by email
Rudy Molina, USEPA (6EN-P) by email
Anthony Loston, USEPA (6EN-WM) by email
Mayor Phil Burch, City of Artesia PO Box 1310, Artesia, NM 88211-1310

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspec. Type	Inspector	Fac Type
N	NM0002226	130123	C	S	1

Remarks: ARTESIA CITY OF WWTP

Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved
1	2	N	N	MAJOR

Section B: Facility Data

Name and Location of Facility Inspected *(For industrial users discharging to POTW, also include POTW name and NPDES permit number)*
City of Artesia
Waste Water Treatment Plant
1702 Halderman Road
Artesia, New Mexico 88210
Driving Directions: South on Hwy 285 from Roswell – go to Main Street in town and turn Left (East) onto East Main Street (US82) travel approximately 2.14 mile to Halderman Road → turn Left (North) travel 1 mile to WWTP Entrance on Right (East) side of road.
Eddy County

Entry Time /Date
0830 / 23 January 2013

Exit Time/Date
1530 / 23 January 2013

Permit Effective Date
01 June 2007

Permit Expiration Date
30 April 2012

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
Jake Prentiss, Wastewater Supervisor (Operator Level IV) 575-748-0260
Frank Trujillo, Operator Level III 575-746-9651
Patsy Hernandez, Operator Level IV

Other Facility Data
Latitude 32.85555900
Longitude -104.35837000
SIC 4952

Name, Address of Responsible Official/Title/Phone and Fax Number
Byron Landfair, Infrastructure Director
612 N. Roselawn St. Street
P.O. Box 1310
Artesia, NM 88211-1310

Contacted: Yes * No

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

U	Permit	U	Flow Measurement	U	Operations & Maintenance	N	CSO/SSO
M	Records/Reports	M	Self-Monitoring Program	S	Sludge Handling/Disposal	N	Pollution Prevention
U	Facility Site Review	N	Compliance Schedules	N	Pretreatment	N	Multimedia
U	Effluent/Receiving Waters	S	Laboratory	N	Storm Water	N	Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

See Further Explanations For Details.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone/Fax	Date
/S/ Barbara Cooney	NMED/SWQB 505-827-0212	*February 22, 2013*
Signature of Management QA Reviewer */S/ Bruce Yurdin*	**Agency/Office/Phone and Fax Numbers** 505-827-0187	**Date** *February 25, 2013*

City of Artesia Wastewater Treatment Plant	PERMIT NO. NM0022268

SECTION A - PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS ☐ S ☐ M ☒ U ☐ NA (*FURTHER EXPLANATION ATTACHED YES*)

DETAILS:

1. CORRECT NAME AND MAILING ADDRESS OF PERMITTEE	☒ Y ☐ N ☐ NA
2. NOTIFICATION GIVEN TO EPA/STATE OF NEW DIFFERENT OR INCREASED DISCHARGES	☐ Y ☒ N ☐ NA
3. NUMBER AND LOCATION OF DISCHARGE POINTS AS DESCRIBED IN PERMIT	☒ Y ☐ N ☐ NA
4. ALL DISCHARGES ARE PERMITTED	☒ Y ☐ N ☐ NA

SECTION B - RECORDKEEPING AND REPORTING EVALUATION

RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT. ☐ S ☐ M ☒ U ☐ NA (*FURTHER EXPLANATION ATTACHED YES*)
DETAILS:

1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRs.	☒ Y ☐ N ☐ NA
2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE.	☐ S ☐ M ☒ U ☐ NA
a) DATES, TIME(S) AND LOCATION(S) OF SAMPLING	☐ Y ☒ N ☐ NA
b) NAME OF INDIVIDUAL PERFORMING SAMPLING	☒ Y ☐ N ☐ NA
c) ANALYTICAL METHODS AND TECHNIQUES.	☒ Y ☐ N ☐ NA
d) RESULTS OF ANALYSES AND CALIBRATIONS.	☒ Y ☐ N ☐ NA
e) DATES AND TIMES OF ANALYSES.	☒ Y ☐ N ☐ NA
f) NAME OF PERSON(S) PERFORMING ANALYSES.	☒ Y ☐ N ☐ NA
3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE.	☒ S ☐ M ☐ U ☐ NA
4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT MAINTENANCE AND REPAIR.	☒ S ☐ M ☐ U ☐ NA
5. EFFLUENT LOADINGS CALCULATED USING DAILY EFFLUENT FLOW AND DAILY ANALYTICAL DATA. Influent Flow Data Used for Loading Calculations	☐ Y ☒ N ☐ NA

SECTION C - OPERATIONS AND MAINTENANCE

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED. ☐ S ☐ M ☒ U ☐ NA *(FURTHER EXPLANATION ATTACHED YES)*
DETAILS:

1. TREATMENT UNITS PROPERLY OPERATED.	☐ S ☐ M ☒ U ☐ NA
2. TREATMENT UNITS PROPERLY MAINTAINED.	☐ S ☐ M ☒ U ☐ NA
3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED.	☒ S ☐ M ☐ U ☐ NA
4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE.	☒ S ☐ M ☐ U ☐ NA
5. ALL NEEDED TREATMENT UNITS IN SERVICE.	☐ S ☐ M ☒ U ☐ NA
6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED.	☐ S ☒ M ☐ U ☐ NA
7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED.	☒ S ☐ M ☐ U ☐ NA
8. OPERATION AND MAINTENANCE MANUAL AVAILABLE.	☐ Y ☐ N ☒ NA
STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED.	☒ Y ☐ N ☐ NA
PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED.	☒ Y ☐ N ☐ NA

City of Artesia Wastewater Treatment Plant	PERMIT NO. NM0022268

SECTION C - OPERATIONS AND MAINTENANCE (CONT'D)

9. HAVE BYPASSES/OVERFLOWS OCCURRED AT THE PLANT OR IN THE COLLECTION SYSTEM IN THE LAST YEAR?	☐ Y ☒ N ☐ NA
IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED?	☐ Y ☒ N ☐ NA
HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS?	☐ Y ☐ N ☒ NA
10.HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT?	☒ Y ☐ N ☐ NA
IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT?	☐ Y ☒ N ☐ NA

SECTION D - SELF-MONITORING

PERMITTEE SELF-MONITORING MEETS PERMIT REQUIREMENTS. ☐ S ☐ M ☒ U ☐ NA *(FURTHER EXPLANATION ATTACHED YES__).*
DETAILS:
Influent flows from industry is not adequately monitored

1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT.	☒ Y ☐ N ☐ NA
2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.	☒ Y ☐ N ☐ NA
3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT.	☒ Y ☐ N ☐ NA
4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT.	☒ Y ☐ N ☐ NA
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT.	☒ Y ☐ N ☐ NA
6. SAMPLE COLLECTION PROCEDURES ADEQUATE	☐ Y ☒ N ☐ NA
a) SAMPLES REFRIGERATED DURING COMPOSITING.	☒ Y ☐ N ☐ NA
b) PROPER PRESERVATION TECHNIQUES USED.	☒ Y ☐ N ☐ NA
c) CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136.3.	☒ Y ☐ N ☐ NA
7. IF MONITORING AND ANALYSES ARE PERFORMED MORE OFTEN THAN REQUIRED BY PERMIT, ARE THE RESULTS REPORTED IN PERMITTEE'S SELF-MONITORING REPORT? There are indications that not all samples are included in reports.	☐ Y ☒ N ☐ NA

SECTION E - FLOW MEASUREMENT

PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS. ☐ S ☐ M ☒ U ☐ NA *(FURTHER EXPLANATION ATTACHED YES)*
DETAILS:

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED. TYPE OF DEVICE	☐ Y ☒ N ☐ NA
2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED.	☐ Y ☒ N ☐ NA
3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED.	☐ Y ☒ N ☐ NA
4. CALIBRATION FREQUENCY ADEQUATE. *(DATE OF LAST CALIBRATION* UNKNOWN)	☐ Y ☒ N ☐ NA
RECORDS MAINTAINED OF CALIBRATION PROCEDURES.	☐ Y ☒ N ☐ NA
CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE.	☐ Y ☒ N ☐ NA
5. FLOW ENTERING DEVICE WELL DISTRIBUTED ACROSS THE CHANNEL AND FREE OF TURBULENCE.	☐ Y ☒ N ☐ NA
6. HEAD MEASURED AT PROPER LOCATION.	☐ Y ☒ N ☐ NA
7. FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGE OF FLOW RATES.	☐ Y ☒ N ☐ NA

SECTION F – LABORATORY

PERMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS. ☒ S ☐ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED YES)*
DETAILS:

1. EPA APPROVED ANALYTICAL PROCEDURES USED *(40 CFR 136.3 FOR LIQUIDS, 503.8(b) FOR SLUDGES)*	☒ Y ☐ N ☐ NA

City of Artesia Wastewater Treatment Plant	PERMIT NO. NM0022268

SECTION F - LABORATORY (CONT'D)

2. IF ALTERNATIVE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED ☐ Y ☐ N ☒ NA

3. SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT. ☒ S ☐ M ☐ U ☐ NA

4. QUALITY CONTROL PROCEDURES ADEQUATE. ☒ S ☐ M ☐ U ☐ NA

5. DUPLICATE SAMPLES ARE ANALYZED. 10__ % OF THE TIME. NEED TO DO DUPLICATE SAMPLING ☐ Y ☒ N ☐ NA

6. SPIKED SAMPLES ARE ANALYZED. _10__ % OF THE TIME. THE LABORATORY TAKES PART IN THE DMR-QA STUDY PROGRAM. ☐ Y ☐ N ☒ NA

7. COMMERCIAL LABORATORY USED. ☒ Y ☐ N ☐ NA

LAB NAME

LAB ADDRESS

PARAMETERS PERFORMED

SECTION G - EFFLUENT/RECEIVING WATERS OBSERVATIONS. ☐ S ☐ M ☒ U ☐ NA *(FURTHER EXPLANATION ATTACHED YES__).*

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	FLOAT SOL.	COLOR	OTHER
	NO	NO	YES	SLIGHT	YES	OPAQUE GREEN GREY	

RECEIVING WATER OBSERVATIONS

SECTION H - SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. ☒ S ☐ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED YES __).*
DETAILS:

1. SLUDGE MANAGEMENT ADEQUATE TO MAINTAIN EFFLUENT QUALITY. Solids age in basin is older than optimal. This is covered in O/M ☐ S ☒ M ☐ U ☐ NA

2. SLUDGE RECORDS MAINTAINED AS REQUIRED BY 40 CFR 503. ☒ S ☐ M ☐ U ☐ NA

3. FOR LAND APPLIED SLUDGE, TYPE OF LAND APPLIED TO: CITY PARKS AND BALL FIELDS_ (e.g., FOREST, AGRICULTURAL, PUBLIC CONTACT SITE)

SECTION I - SAMPLING INSPECTION PROCEDURES *(FURTHER EXPLANATION ATTACHED _NO__).*

1. SAMPLES OBTAINED THIS INSPECTION. ☐ Y ☒ N ☐ NA

2. TYPE OF SAMPLE OBTAINED

GRAB _____ COMPOSITE SAMPLE ___ METHOD _____ FREQUENCY

3. SAMPLES PRESERVED. ☐ Y ☐ N ☒ NA

4. FLOW PROPORTIONED SAMPLES OBTAINED. ☐ Y ☐ N ☒ NA

5. SAMPLE OBTAINED FROM FACILITY'S SAMPLING DEVICE. ☐ Y ☐ N ☒ NA

6. SAMPLE REPRESENTATIVE OF VOLUME AND MATURE OF DISCHARGE. ☐ Y ☐ N ☒ NA

7. SAMPLE SPLIT WITH PERMITTEE. ☐ Y ☐ N ☒ NA

8. CHAIN-OF-CUSTODY PROCEDURES EMPLOYED. ☐ Y ☐ N ☒ NA

9. SAMPLES COLLECTED IN ACCORDANCE WITH PERMIT. ☐ Y ☐ N ☒ NA

Introduction

On January 23, 2013 a Compliance Evaluation Inspection (CEI) was conducted at the City of Artesia Wastewater Treatment Plant (WWTP) by Barbara Cooney, Bruce Yurdin and Sarah Holcomb of the State of New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB). The inspection was conducted by NMED for the US Environmental Protection Agency (USEPA), Region VI, under the National Pollutant Discharge Elimination System (NPDES) permit program, in accordance with the Federal Clean Water Act. These inspections are conducted under contract with the USEPA and are used by USEPA to evaluate compliance with the NPDES permit program. This inspection report is based on information supplied by the City of Artesia representatives (the permittee), observations made by the NMED inspectors, reports and records kept by the permittee and/or NMED.

The Artesia WWTP is classified as a major municipal discharger under the Federal Clean Water Act (CWA), section 402 NPDES permit program, and is assigned NPDES permit number NM0022268. The Standard Industrial Classification Code (SIC) is 4952. The facility is permitted for a design flow of 1.3 Million Gallons per Day (MGD). The discharge for the WWTP enters the Pecos River in Water Quality Segment 20.6.54.206 NMAC at Latitude 32° 51'48.12" North, Longitude 104° 20'52.91"West. The Designated Uses for this segment of the river are: irrigation, livestock watering, wildlife habitat, secondary contact and warmwater aquatic life.

Inspection Details

The inspectors arrived at the Artesia WWTP at 0830 hours and met with Mr. Jake Prentiss, Wastewater Supervisor and Mr. Frank Trujillo, Wastewater Forman, showed their credentials and explained the purpose of the inspection. Mr. Prentiss and Mr. Trujillo accompanied the inspectors on a tour of the facility. A records review and laboratory inspection was conducted later that day with Patsy Hernandez, Laboratory Manager. An exit interview was conducted on site with Mr. Byron Landfair and the afore mentioned facility representatives. Preliminary findings were discussed during the exit interview. The inspectors left the facility at approximately 1500 hours.

At the time of this inspection, the NMED, SWQB Water Quality Survey team was conducting sampling of the Pecos River and at the outfall of this facility. This survey is part of a larger Pecos River Watershed Survey, conducted periodically by NMED to evaluate water quality throughout the river system. Those sample results are not included in this report and may be available from NMED upon request.

Treatment Scheme

Raw Sewage is delivered to the City of Artesia Wastewater Treatment Plant (WWTP) through a collection system that extends 56 miles with five lift stations. The service area is slightly more than two square miles and includes a population of approximately 11,320 persons. Contributing industries include: Navajo Refining Company LLC, oil and gas industry support businesses, restaurants, hotels, carwashes, gas stations, laundromats, schools and the Federal Law Enforcement Training Center.

A septage receiving station is located at the WWTP wet well before the raw sewage enters the treatment works. At the head of the treatment plant, the influent gravity flows to the first of two automatic bar screens for large solids removal. The majority of the treatment units are above ground due to the high water table in the area. Following the first bar screen are a set of Flygt pumps that lift the sewage to the second bar screen and to the influent flow measurement Parshall flume with a staff gauge and a Drexelbrook differential pressure sensor that records the totalized flow. The original plant design had only one bar screen located after the Flygt pumps. Large solids were damaging to the pumps so the additional bar screen was built. The influent stream is

somewhat turbulent and does not have a steady laminar flow as it enters the Parshall flume flow measurement device. Following is a rectangular aerated grit removal chamber. The solids removed from the screens and from the grit chamber are dried and after passing the paint filter test, disposed of at the county landfill between Carlsbad and Hobbs, New Mexico. The treatment plant is monitored with a SCADA control system. An alarm call out system is in place with the Operators phone numbers programed in. The facility has a backup diesel generator for power that is exercised weekly.

Following grit removal, the liquid waste is sent to one of four oxidation ditches, extended air treatment units. These are built as two parallel trains. Each train can also be run parallel. At the time of the inspection, only one set of oxidation ditches (the north units) were in operation. The Mixed Liquor Suspended Solids (MLSS) in the first phase oxidation ditch was 1920 mg/L according to the operators. It was noted that a few months earlier, in October and November 2012, the MLSS was down as low as 200mg/L. The oxidation ditches are run through four phases a day lasting eight hours each. The cycles rotate between aerobic and anaerobic, mixing and settling. According to the operators, the DO in the basin during the aerated cycles is measured from one location a few feet below the surface and is recorded to be >1.0mg/L. The anoxic phase DO levels are typically 0.0mg/L to 0.6 mg/L. Solids are wasted to the digester every 3 hours for 45 minutes. Approximately 11,000 gallons a day are wasted.

The south oxidation ditch units were not in operation and were dry. Because of the duplicate units, the WWTP design capacity is actually double that of the NPDES permitted 1.3 MGD capacity that is used to calculate effluent loading. The increased capacity is available for the use if the WWTP were to receive higher volumes of sewage for treatment. In that even, changes to the NPDES permit may be required.

Following the oxidation ditches are two secondary clarifies, one each for the separate units. Only one secondary clarifier was in operation at the time of the inspection. The clarifiers are not plumbed to be run in series. Solids are wasted from the oxidation ditches and the secondary clarifiers. The clarifier in use had an approximately 2 foot sludge blanket. The floor of the basin is flat so there is no sloping to concentrate settleable solid in the center of the basin. The sweeper arm does not reach the side walls and solids accumulate along the edges of the bottom of the basin. Some of these older solids were observed floating up to the surface around the rim. Return Activated Sludge is sent back to the head of the plant from the clarifier.

Decant from the secondary clarifier is sent to the ultraviolet disinfection system, consisting a single channel with three banks of lights. Following disinfection is the effluent flow meter Parshall flume with a staff gauge and a Drexelbrook differential pressure sensor that records the totalized flow. The effluent flow meter is not installed correctly and thought was recording measurements, was not being used for NPDES reporting. The influent flow was being used for reporting at the time of the inspection.

Beyond the effluent flow measurement devices, is a splitter well that can direct the effluent to either the outfall at the Pecos River or to a reuse holding pond. The outfall at the Pecos River is through an enclosed pipe approximately ½ to 1 mile to the North East. A rough rock structure has been installed at the outfall location to stabilize the soils, prevent erosion and to enhance aeration of the treated water as it enters the river. The reuse water is sent to parks in the city. This is regulated under the State of New Mexico, NMED Ground Water Quality Bureau (GWQB) Discharge Permit Number 258.

Solids wasted from the treatment units are sent through a belt filter press where a polymer is added for dewatering. They are then dried in concrete beds with under drains, mixed with mulch to achieve Class A

quality as defined under the 40CFR 503 sludge regulations for compost and used on parks in the City of Artesia. The under drains that collect the liquids are plumbed so liquids are sent back to the head of the treatment plant.

Further Explanations

Note: The sections are arranged according to the format of USEPA Form 3560-3 and checklist, attached, rather than being ranked in order of importance.

Permit

Overall Rating For Permit Verification (Unsatisfactory)

Permit Requirements For Permit

A. General Conditions 1. Introduction

In accordance with the provisions of 40 CFR Part 122.41 et. Seq., this permit incorporates by reference ALL conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (Hein after known as the "ACT") as well as ALL applicable regulations.

Findings For Permit

1. The current perm expired on April 30, 2012. EPA is in the process of reissuing this permit.
2. The current permit is based on domestic waste. The permit does not identify the industrial waste received form the Navajo Refinery. The renewed permit application does however identify the industrial contribution from Navajo Refinery to the influent waste stream.

Record Keeping and Reporting

Overall Rating For Record Keeping and Reporting (Marginal)

Permit Requirements For Record Keeping and Reporting

The permit requires, in Part III. D. Reporting Requirements.1.Planned Changes

b. Municipal Permit

Any change in the facility discharge (including the introduction of any new source or significant discharge or change in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no care are any new connections, increased flows, or significant changes in influent quality permitted that will cause of violation of the effluent limitation specified herein.

Findings For Recordkeeping and Reporting

1.Records obtained from the Navajo Refinery indicate that this facility has been discharging processed water to the City of Artesia collection system for many years. See Inspection report: ftp://ftp.nmenv.state.nm.us/www/swqb/NPDES/Inspections/NMU001842-20130122.pdf

The current Artesia WWTP permit and the application this permit is based upon have no indication that this processed water has been a part of the waste stream. The permittee has submitted an application for a renewed NPDES permit that does indicate the contributions from the Navajo Refinery to the influent waste stream.

2. The effluent flow meter is not installed correctly and cannot be used to measure nor to report effluent flow volumes and pollutant loading values. The influent flow meter flow values are being used for reporting purposes (See the section below "Flow Measurement" for permit requirements).

3. The permittee is not testing for Chlorine because of the use of Ultraviolet Disinfection. The Discharge Monitoring Reports show Zero for chlorine. This is not accurate. The DMRs should note that chlorine is not being tested.

4.The EPA is encouraging permittees to transition from submitting DMRs as paper copies to the NetDMR system. Information on the NetDMR training can be found at:
http://epa.gov/netdmr/about/training.html

Additionally, the State conducts classes on a periodic basis, through the Operator Certification Schools. Facility personnel are encouraged to attend these training sessions.

Operations And Maintenance

Overall Rating For Operation and Maintenance (Unsatisfactory)

Permit Requirements For Operation And Maintenance

The permit requires in Part III. B.

3. Proper Operations and Maintenance

a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner that which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the condition of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the opreation of back up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

b. The permittee shall provide an adequae oeprating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the condtions of this permit.

Findings For Operation and Maintenance

1. Effluent Flow meter is improperly installed. The meter cannot be used for flow measurements. Influent flow is being used for reporting.

2. The oxidation ditch/ extended areation basins, being used for secondary treatment were hydraulically overloded.

3.The Mixed Liquor Suspended Solids (MLSS) conscentration were low, 1200 mg/L and noted to be as low as 200 mg/L in previous months. This is one of several indications that an inadequate microbial population is being maintained. Operators indicated that because of the low MLSS, to compensate, they were limiting the volume of solids being wasted.

4. Flock shearing was noted in the oxidation ditch. This is an indication of interference with the optimal activated sludge process. The cause is not specifically identifed in this report, however this condition is consistent with an inteference occuring from unknown substances in the influent and improper mixing.

5. The color of the water in the oxydation ditches being used for secondary treatment was a dark grey brown. This is an indication of solids that are too old and an unhealthy microbial population. The color was atypical for an activated sludge process and indicated other contaminants may be in the system.

6.The secondary clarifier was opaque and grey green in color. This is atypical for the quality of the wastewater at this stage of the treatment process. It is also noted that some floating solids and pinfloc were in the basin, and being sent with the decant to the next treatment process, ultraviolet disinfection.

7.The untraviolet disinfection unit: the color of the wastewater was an opaque greenish grey color. For this treatment process to be effective, the wastewater must be clear and free of floating material. It was reported that effluent exceedences for E.coli bacteria occurred on the day of the inspection.

8.Floating solids were entering the Ultraviolet Disinfection System, and being discharged with the effluent to the Pecos River.

9. Collection system monitoring included sampling being done at the discharge location for the Navajo Refinery process water, and where that waste stream enters the City of Artesia collection system. That location has a flow meter, but there are no records for flow calibration. An additional, presumably domestic wastestream, is entering the City of Artesia collection system. However, there is no monitoring for pollutants, nor for volume from this wastestream. It is advisable for the City of Artesia to monitor this additional wastestream.

10. At the time of the inspection, the City of Artesia had five certified operators. It is noted however, that in the last year there were not enough qualified operators to properly maintain this facilty. The City of Artesia can find Oerator Certification Information at the New Mexico Environemnt Departments Website for the Operator Certification Program at: http://www.nmenv.state.nm.us/swqb/UOCP/Compliance/Survey/#Resources

11. There is no quality control, or monitoring of septage being accepted at the facility.

Self-Monitoring

Overall Rating For Self Monitoring (Unsatisfactory)

Permit Requirements For Self Monitoring

The permit requires in Part III. C. Monitoring and Records.

2. Representative Sampling
Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. Retention of Records
The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. The period may be extended by request of the Director at any time.

The permit requires in Part III. D. Reporting Requirements.1. Planned Changes.

b. Municipal Permits.
5. Additional Monitoring By the Permittee
If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40CFR Part 136 or as specified in this permit, the results of this monitoring

shall be included in the calculations and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such increased monitoring frequency shall also be indicated on the DMR.

Findings For Self Monitoring

1. The loading calculations on the Discharge Monitoring Reports (DMRs) are not being done with effluent flow readings. The effluent flow meter is not installed correctly and cannot be used to measure nor to report effluent flow volumes and pollutant loading values. The influent flow meter flow values are being used for reporting purposes.

2. The day of this inspection, the facility found that the E .coli bacteria results were Too Numerous To Count (TNTC). A review of the DMRs submitted to NMED over the last few years have no indication or record of effluent exceedences ever occurring at this facility. The laboratory records reviewed for the last three months from the facility also had no indication of any sample that exceeded effluent limits, even though operational problems have been reported. It is unlikely, therefore, that only at the time inspectors were at the facility, an effluent exceedences occurred. The permittee is advised that all sample and analysis results must be reported on the DMRs. All sample results must be maintained in the record by the facility.

Flow Measurement

Overall Rating For Flow Measurement (Unsatisfactory)

Permit Requirements For Flow Measurements:

The permit requires in Part III C. 6. FLOW MEASUREMENTS:
Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected, shall be capable of measuring flow with a maximum deviation 10% from true discharge tares throughout the range of expected discharge volumes.

Findings For Flow Measurements

1. The effluent flow meter is not installed correctly and cannot be used to measure nor to report effluent flow volumes and pollutant loading values. The influent flow meter flow values are being used for reporting purposes.

Laboratory

Overall Rating For Laboratory (Satisfactory)

Permit Requirements For Laboratory

The perm requires in Part C. Monitoring and Records. 4. Records Content

Records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who preformed the sampling or measurement;
c. The date(s) and time(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniqueor method used; and
f. The results of such analyses.

Findings For Laboratory

1. pH records do not correctly list calibration buffer valuses. The bench sheets are inconsistent with the buffers of pH4, 7 & 10 being used.

2. The day of the inspection an effluent exceedence occurred for E. coli bacteria. It is important for the permittee to maintain records of all sample results including exceedences, even in the event samples are collected again and retested.

3. No Duplicate samples were analyzed for quality control.

Effluent And Receiving Water

Overall Rating For Effluent And Receiving Water (Unsatisfactory)

Permit Requirements For Effluent And Receiving Water

The permit requires in Part I. page 4.

Floating Solids, Visible Foam And/Or Oils.
There shall be no dischare of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible flims of oil, globules of oil, grease or solids in or on the water, or coating on sream banks.

The permit requires in Part I. Final Effluent Limits – 1.3 MGD Design Flow

E. coli bacteria 30 Day Average = 548 cfu
E. coli bacteria Daily Maximum = 2, 507 cfu

Findings For Effluent And Receiving Water

1.On the day of the inspection, floating solids were noted in the discharge.

2. On the day of the inspection, effluent exceedences occurred for E. coli bacteria. The sample was reported to be TNTC.

SLUDGE HANDLING

Overall Rating For Sludge Handling (Satisfactory)

Findings For Sludge Handling

The solids in the oxydation ditch were being held longer than they should be because of the very dilute influent. This is not an optimal condition for an activated sludge treatment process.

NMED/SWQB Official Photograph Log Photo # 1		
Photographer: Google Earth	Date: June 10, 2011	Time: Unknown
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Aerial View of the Artesia WWTP		

NMED/SWQB Official Photograph Log Photo # 2		
Photographer: B. Yurdin	Date: January 23, 2013	Time: approximately 0900 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Two Influent bar screens for large solids removal.		

NMED/SWQB Official Photograph Log Photo # 3		
Photographer: S. Holcomb	Date: January 23, 2013	Time: 0904 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: The treatment unit in the background consists of Flygt pumps to lift influent to a second bar screen, influent flow measurement and grit removal system.		

NMED/SWQB Official Photograph Log Photo # 4		
Photographer: S. Holcomb	Date: January 23, 2013	Time: 0915 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Influent Parshall Flume with a Drexelbrook pressure sensor. The influent flow is somewhat turbulent.		

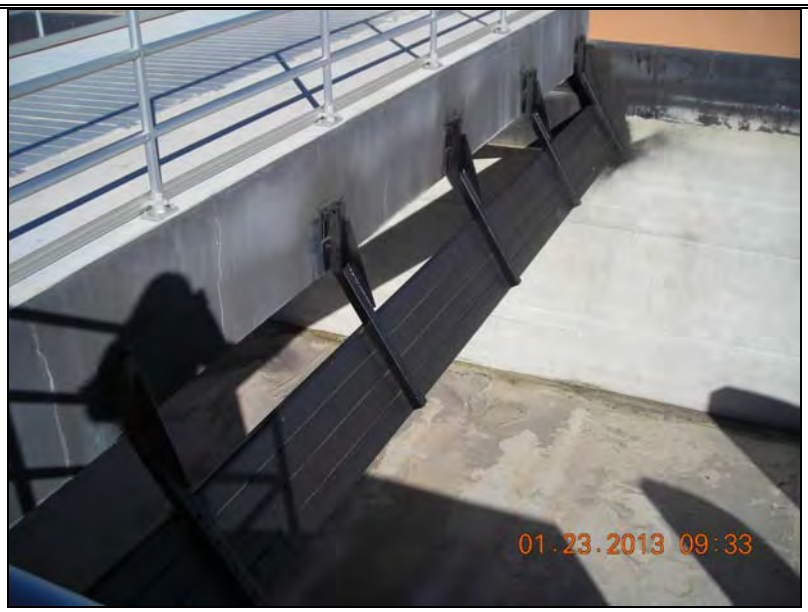
NMED/SWQB Official Photograph Log Photo # 5		
Photographer: S. Holcomb	Date: January 23, 2013	Time: 0916 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Influent Flow Meter - Drexelbrook pressure measurement system, readout meter.		

NMED/SWQB Official Photograph Log Photo # 6		
Photographer: S. Holcomb	Date: January 23, 2013	Time: 0918 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: North Oxidation Ditches, view from the influent grit chamber.		

NMED/SWQB Official Photograph Log Photo # 7		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0918 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: South Oxidation Ditches that were offline at the time of the inspection.		

NMED/SWQB Official Photograph Log Photo # 8		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0932 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Empty treatment units of the south oxidation ditches.		

NMED/SWQB Official Photograph Log Photo # 9		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0933 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Baffling and hydraulic arm of the empty oxidation ditches.		



NMED/SWQB Official Photograph Log Photo # 10		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0934 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Subsurface mixers in the empty oxidation ditches. These are set at approximately 8 feet deep.		

NMED/SWQB Official Photograph Log Photo # 11		
Photographer: S. Holcomb	Date: January 23, 2013	Time: 0934 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: another view of the empty oxidation ditch and unit configuration.		

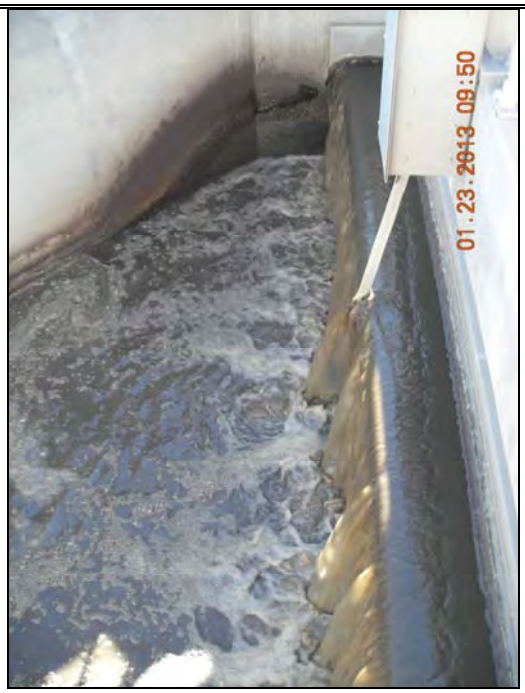
NMED/SWQB Official Photograph Log Photo # 12		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0941 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Oxidation ditch in use. The ditch is hydraulically overloaded as can be seen by the high water level and nearly submerged treatment unit walls. In the back the brush aerators are in operation. . Note the extremely dark grey color that is atypical for domestic activated sludge. This is an indication that inadequate biological activity is occurring to properly treat domestic waste.		

NMED/SWQB Official Photograph Log Photo # 13		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0942 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Oxidation ditch in use. The ditch is hydraulically overloaded as can be seen by the high water level and nearly submerged treatment unit walls. In the back the brush aerators are in operation. Note the extremely dark grey color that is atypical for domestic activated sludge. This is an indication that inadequate biological activity is occurring to properly treat domestic waste.		

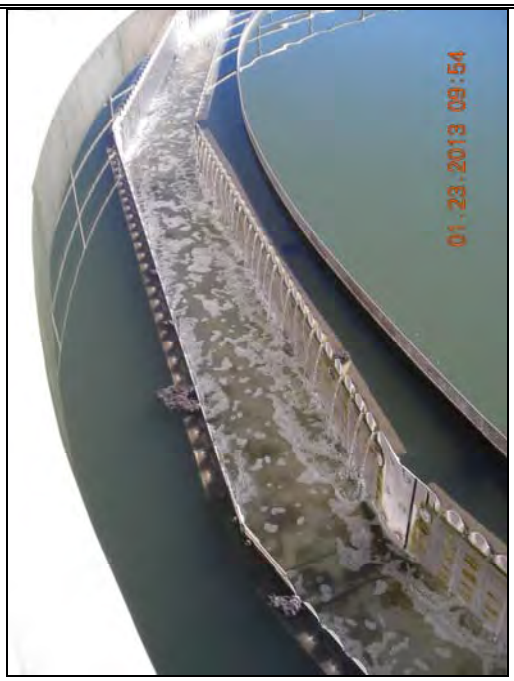
NMED/SWQB Official Photograph Log Photo # 14		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0942 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Oxidation ditch in the anaerobic phase.		

NMED/SWQB Official Photograph Log Photo # 15		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0947 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Oxidation ditch in the anaerobic phase.		

NMED/SWQB Official Photograph Log Photo # 16		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0950 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Decant from the oxidation ditch to the secondary clarifier.		



NMED/SWQB Official Photograph Log Photo # 17		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 0954 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Secondary Clarifier. Note the very turbid opaque grey green color. Also note the floating solids, indicating very old solids in the sludge blanket.		



NMED/SWQB Official Photograph Log Photo # 18		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 1027
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Water entering the Ultraviolet Disinfection System. Note the floating solids and the opaque grey green color. The UV lights cannot adequately penetrate the water for effective disinfection.		

NMED/SWQB Official Photograph Log Photo # 19		
Photographer: B. Yurdin	Date: : January 23, 2013	Time: approximately 1028 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Ultra Violet Disinfection System consisting of three sequential banks of lights.		

NMED/SWQB Official Photograph Log Photo # 20		
Photographer: S. Holcomb	Date: January 23, 2013	Time: 1031hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Effluent Parshall Flume – Turbulent flow is a result of an improperly installed channel. The effluent flow meter cannot be used and cannot be reported on the NPDES permit or on the NMED Ground Water Discharge Permit.		

NMED/SWQB Official Photograph Log Photo # 21		
Photographer: S. Holcomb	Date: January 23, 2013	Time: 1032 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: staff gauge at the effluent flow channel. Flows from this meter are inaccurate and cannot be used for permit reporting. Floating Solids and turbid water were observed.		

NMED/SWQB Official Photograph Log Photo # 22		
Photographer: S. Holcomb	Date: : January 23, 2013	Time: 1043 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Effluent well – splitter location. Flow can be sent either to the Pecos River or to the reuse holding pond.		

NMED/SWQB Official Photograph Log Photo # 23		
Photographer: S. Holcomb	Date: January 23, 2013	Time: approximately 1043 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Effluent well – splitter location. Flow can be sent either to the Pecos River or to the Reuse holding pond.		

NMED/SWQB Official Photograph Log Photo # 24		
Photographer: S. Holcomb	Date: January 23, 2013	Time: 1042 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Effluent Reuse holding pond.		

NMED/SWQB Official Photograph Log Photo # 25		
Photographer: B. Yurdin	Date: : January 23, 2013	Time: Approximately 1415 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Outfall to the Pecos River from the Artesia WWTP. Note the rough rocks lining the bank for stabilization and to assist in re-aerating the effluent as it enters the river.		

NMED/SWQB Official Photograph Log Photo # 26		
Photographer: B. Yurdin	Date: January 23, 2013	Time: approximately 1000 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Sludge processing, Piles have been mixed with mulch for composting. The piles are warmed in the sun and biologically for pathogen reduction.		

NMED/SWQB Official Photograph Log Photo # 27		
Photographer: B. Yurdin	Date: : January 23, 2013	Time: Approximately 1025 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Artesia WWTP		
Subject: Sludge processing, Piles have been mixed with mulch for composting. The piles are warmed in the sun and biologically for pathogen reduction.		

NMED/SWQB Official Photograph Log Photo # 28		
Photographer: S. Holcomb	Date: : January 22, 2013	Time: 1515 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Navajo Refining Company, LLC		
Subject: Isco compositing sampler at the Navajo Refinery, processed water point where it enters the City of Artesia collection system for wastewater.		

NMED/SWQB Official Photograph Log Photo # 29		
Photographer: S. Holcomb	Date: : January 22, 2013	Time: 1516 hours
City/County: Artesia/ Eddy County		State: New Mexico
Location: Navajo Refining Company, LLC		
Subject: Carlon H-400 effluent meter installed at the city-only access point from Navajo to the City of Artesia sewer line.