



NEW MEXICO
ENVIRONMENT DEPARTMENT



Surface Water Quality Bureau

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Deputy Secretary

CERTIFIED MAIL – Return Receipt Requested

August 30, 2010

Ms. Bobby Rose
City Manager
P.O. Box 1188
Tucumcari, NM 88401

RE: Major Municipal, SIC 4952, NPDES Compliance Evaluation Inspection, Tucumcari Wastewater Treatment Plant, NPDES Permit No. NM0020711 July28, 2010

Dear Ms. Rose:

Enclosed, please find a copy of the report for the above referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U.S. Environment Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas, TX 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 federal Clean Water Act.

Problems noted during the inspection are discussed in the Further Explanation section of the inspection report. You are encouraged to review the inspection report, required to correct any problems noted during the inspection, and modify your operational and/or administrative procedures, as appropriate.

I wish to thank you for the cooperation that was extended by you and facility staff, Ms. Janet Garcia and Mr. Michael Rivera. If you have questions please feel free to contact me at the above address or by telephone at (505) 827-0212.

Sincerely,

/S/

Barbara Cooney
Environmental Scientist – Specialist

Cc: Marcia Gail Bohling (6EN-AS), EPA, Dallas, TX via email
Samuel Tates (6EN-AS), EPA, Dallas, TX via email
Carol Peters-Wagnon (6EN-WM), EPA, Dallas, TX via email
Diana McDonald (6EN-WM), EPA, Dallas, TX via email
Larry Giglio (6WQ-P), Permits Branch, EPA, Dallas, TX , via email
NMED DistrictIV, via email



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
1 N 2 5 3 N M 0 0 2 0 7 1 1 11 12 1 0 0 7 2 8 17 18 c 19 S 20 1					
Remarks					
T U C U M C A R I W W T P M U N I C I P A L					
Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved	
67 1 69	70 3	71 N	72 N	73	74 75 M A J O R 80

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number) TUCUMCARI WASTEWATER TREATMENT PLANT NORTH ON 1ST, CROSS BRIDGE OVER RR TRACKS, 0.4 MILES TO MAPLE ST TURN R ONTO MAPLE, THEN L ONTO ROCK ISLAND TO WWTP	Entry Time /Date 12:30 a.m. / July 28, 2010	Permit Effective Date February 1, 2008
	Exit Time/Date 17:26 p.m. / July 28, 2010	Permit Expiration Date January 31, 2013
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) Janet Garcia, Laboratory Analyst 575-461-4372 Michael Rivera, Plant Operator Level III WW, 575-461-4542	Other Facility Data Major Municipal SIC 4952 Latitude = N 35° 11' 49.776" Longitude = W 103° 43' 5.088"	
Name, Address of Responsible Official/Title/Phone and Fax Number Ms. Bobby Rose, City Manager P.O. Box 1188 Tucumcari, NM 88401 575-461-3451	Contacted Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Section C: Areas Evaluated During Inspection

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

S	Permit	S	Flow Measurement	U	Operations & Maintenance	N	CSO/SSO
S	Records/Reports	S	Self-Monitoring Program	S	Sludge Handling/Disposal	N	Pollution Prevention
S	Facility Site Review	N	Compliance Schedules	N	Pretreatment	N	Multimedia
M	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) Barbara Cooney /S/	Agency/Office/Telephone/Fax NMED/SWQB	Date 30 August 2010
Signature of Management QA Reviewer Richard Powell /S/	Agency/Office/Phone and Fax Numbers	Date 30 August 2010

SECTION A - PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS

 S M U NA (FURTHER EXPLANATION ATTACHED No)

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 No)

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.

 Y N NA

SECTION C - OPERATIONS AND MAINTENANCE

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED.

 S M U NA (FURTHER EXPLANATION ATTACHED Yes)

DETAILS:

Collection System Overflows - Some Treatment Units Out of Operation

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

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? Since the last inspection corrective actions are in place. 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:

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? Y N NA

SECTION E - FLOW MEASUREMENT

PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED No.)
 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 in 2009)
 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 No.)
 DETAILS:

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

City of Tucumcari Wastewater Treatment Plant
NPDES Permit Number NM0020711 Compliance Evaluation Inspection
State of New Mexico Environment Department, Surface Water Quality Bureau
July 28, 2010

INTRODUCTION

A Compliance Evaluation Inspection (CEI) was conducted at the City of Tucumcari Waste Water Treatment Plant (WWTP) by Ms. Barbara Cooney of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) on July 28, 2010. The inspection was conducted by NMED for the U. S. Environmental Protection Agency (USEPA), Region 6, under the National Pollutant Discharge Elimination System (NPDES) permit program, in accordance with the Federal Clean Water Act. These inspections are conducted under agreement with USEPA and are used by the USEPA to determine compliance with the NPDES permit program.

The City of Tucumcari WWTP is classified as a major municipal discharger under the Federal Clean Water Act (CWA), section 402 National Pollutant Discharge Elimination System (NPDES) permit program, and is assigned permit number NM0020711. The Standard Industrial Classification Code ((SIC) is 4952. The discharge from the WWTP enters Breen's Pond, thence flows to No Name Creek, a tributary to Pajarito Creek, thence the Canadian River Basin, in segment number 20.6.4.303 with the designated uses of irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat, and secondary contact.

Treatment Scheme

Within the collection system of the City of Tucumcari, eleven lift stations deliver wastewater to the WWTP. Each lift station has two pumps. Movable pumps are available for back up if the lift stations fail. Alarms are located at four of the eleven lift station and are sounded in the event of an overflow. Two portable generators are available at the WWTP to provide power for the lift station pumps in the event of a power outage.

The head works are designed so that sewage enters the WWTP through an automatic bar screen, and a bypass manual bar screen. At the time of the inspection, the automatic bar screen was out of order and had been for many months. Sewage was passing through the manual bar screen only. Sewage then flows through an aerated grit chamber or through a bypass grit chamber. An auger system removes the grit. The Grit and screening are collected into hoppers for disposal at the landfill. A 9-inch Parshall flume with an ultrasonic recording instrument follows the grit chambers. The flow continues to two primary Flygt pumps. These Flygt pumps replaced the failed suction pumps that replaced the original screw pumps. Both Flygt pumps were running at the time of the inspection. There are no back up pumps in place. In the past when there was a failure at the head works, the City borrowed submersible pumps from neighboring towns as the back up.

Sewage is lifted via both primary Flygt pumps to a splitter box. The flow continues to the two primary clarifiers. Both primary clarifier are 40 feet in diameter and 9 feet deep. The scum box located in the number one primary clarifier is where septage haulers pump the contents of their tanks. The contents of the scum boxes are pumped to the anaerobic digester 3 times per week. Each clarifier is fixed with skirts on the inside of the weirs. The skirts extend approximately 1/2 to 1 foot above and below the surface, and contain most of the floating solids on the surface of the clarifiers. Skimmer arms collect the floating material and deposits it into the scum boxes. Sludge is pumped from the primary clarifiers to the anaerobic digester every 60 minutes for a 45 second duration. The detention time in the clarifiers is approximately 6 hours.

City of Tucumcari Wastewater Treatment Plant
NPDES Permit Number NM0020711 Compliance Evaluation Inspection
State of New Mexico Environment Department, Surface Water Quality Bureau
July 28, 2010

The wastewater flow from the two primary clarifiers is combined and travels to a rock roughing trickling filter. This filter is 80 feet in diameter, and approximately 6 feet deep at the center. The rock media in the roughing is relatively large, 3 to 5 inches in diameter. It is made from local granite.

Wastewater flows by gravity from the trickling filter through a submersible pump box. Two secondary submersible pumps move the flow to a splitter box, which evenly distributes wastewater to the two trains of Rotating Biological Contactors (RBC). Each train consists of 3 RBCs. The dimensions of the RBCs are approximately 12 feet diameter by 24 feet length. One RBC on the west train was out of order at the time of the inspection.

Effluent from the two RBC banks flows to 2 secondary clarifiers. Sludge is continually pumped from these clarifiers to keep the sludge blanket down, and to eliminate the possibility of sludge bulking. The clarifiers each have a skirt similar to the primaries; preventing floating solids from going over the weirs. Detention time for the secondary clarifiers is approximately 4 hours. Skimming arms remove floating material to scum boxes. The contents of the scum boxes are also pumped continuously and removed with the sludge. This sludge is sent to the anaerobic digesters.

After final clarification takes place, the wastewater enters a pipe to the chlorine contact chamber. Enroute, chlorine gas is injected into the wastewater. Piping facilitates mixing prior to the flow entering the chlorine contact chamber. The chlorinated flow enters a 9-inch Parshall flume channel, where the flow is recorded and totalized before it enters the chlorine contact chamber. The gas chlorination building has an alarm system, which warns the operator if a chlorine gas leak is occurring. The chlorine contact chamber has a serpentine baffle design to lengthen the contact time in the chamber, and to prevent short-circuiting. Detention time in the chamber is approximately 2 1/2 hours. Following the Chlorine contact chamber De-chlorination takes place by the introduction of Sodium Sulfite into the treated water stream before it reaches the manhole where effluent samples are taken.

Solids from treatment units are sent to the anaerobic sludge digester. A new roof has recently been installed on the digester.

A new activated sludge wastewater treatment plant is under construction at this site. There is extensive construction activity in the area. A large area has been excavated and the removed soil is mounded on site without any containment. Large tracks of soil were observed to be spilling over onto the public road.

FURTHER EXPLANATIONS

Note: The sections are arranged according to the format of the enclosed EPA Inspection Checklist (Form 3560-3), rather than being ranked in order of importance.

Section A – Permit Verification – Overall Rating of “Satisfactory”

Section B – Record Keeping and Reporting – Overall Rating of “Satisfactory”

Section C - Operation and Maintenance – Overall Rating of “Unsatisfactory”

Permit Requirements For Operation and Maintenance (O&M)

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 the treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup 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 adequate operation staff which is duly qualified to carry out the operation, maintenance and testing functions required to insure compliance with the conditions of this permit.*

Finding for O&M

1) Collection system at Elder Street: NMED notified the City of Tucumcari in a letter dated June 20, 2008 that complaints were made by residents, that failed portions of the collection system at Elder Street were causing sewage and gaseous backups to occur in residents homes. At the time of this inspection this portion of the collection system has not been repaired. According to Operators and the City’s Contract Engineer, Mr. DuBois, the replacement materials have been ordered and delivered. However the actual construction and repairs have not begun. It was unclear why this repair work has not even begun after the City had been notified two full years ago of this situation. This continued situation is causing potentially risk to the environment and health risks to the city’s residents.

2) Inadequate operational staff:

According to Plant Operators, the Assistant Superintendent has accepted a new job and is leaving. A replacement Assistant Superintendent and a full operational staff are necessary to properly operate the treatment plant. It must be stressed to City Management the importance of keeping an adequate trained and skilled staff at the WWTP. The WWTP is a complex system and requires highly trained and skilled Operators to prevent the types of failures that have occurred in the past, and to protect human health and the environment.

3) Inadequate backup equipment: There were not adequate backup pumps at the WWTP nor in the Town of Tucumcari to handle the volume of influent flow to the WWTP if the primary pumps were to fail.

4) The Head Works Mechanical Bar Screen Is Out Of Order: This has been out of order for many months.

5) Rotating Biological Chambers ((RBCs): RBC number 1 was not operational at the time of the inspection. This has been noted in previous inspections.

City of Tucumcari Wastewater Treatment Plant
NPDES Permit Number NM0020711 Compliance Evaluation Inspection
State of New Mexico Environment Department, Surface Water Quality Bureau
July 28, 2010

6) Anaerobic Digester: The hydraulic roof has been replaced on the digester. There was adequate wasting of solids at the WWTP. This is an improvement from the findings in the last inspection.

7) Standard Operating Procedures (SOPs): With the new Flygt pumps, new SOPs must be written. Additionally, SOPs must be updated for every treatment unit at the plant. Every operator at the WWTP must be informed and familiar with the new SOPs.

8) Operation Manuals: Operation Manuals are needed for the new Flygt pumps.

9) Aerated Grit Chamber: At the time of the inspection the aerators was turned off in the influent aerated grit chamber. Inspectors observed that very little grit was being removed with the aerator turned off. This is a repeat finding.

Section D - Self Monitoring – Overall Rating of “Satisfactory”

Permit Requirements For Self Monitoring

The permit requires in Part III. C. MONITORING AND RECORDS. 2. REPRESENTATIVE SAMPLING

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

Findings for Self Monitoring

The inspector reviewed laboratory data and monitoring records for the month of March 2010. It was observed that the Chlorine disinfection and De-chlorination dosages are manually controlled. The operators turn up the dosages in the morning and turn them down at the end of the day, presumably because the highest flows occur in the morning and during the day, with lower volumes at night. The Inspector requested 24 hour flow records for the month of March 2010. These records were not provided. Because effluent bacterial sampling is done during the day. It is unknown if adequate disinfection is occurring at night.

Section E – Flow Measurement – Overall Rating of “Satisfactory”

Section F – Laboratory – Overall Rating of “Satisfactory”

City of Tucumcari Wastewater Treatment Plant
 NPDES Permit Number NM0020711 Compliance Evaluation Inspection
 State of New Mexico Environment Department, Surface Water Quality Bureau
 July 28, 2010

Section G - Effluent and Receiving Water – Overall Rating of “Marginal”

Permit Requirements For Effluent/Receiving Waters

The permit requires in Part I. Section A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/L, unless otherwise specified)		Frequency	Sample Type
	30-Day Avg.	7-Day Avg.	30-Day Avg.	Daily Max		
<i>E coli Bacteria</i>	NA	NA	126 cfu	410 cfu	1/week	grab

Findings For Effluent/Receiving Waters

The Permittee exceed the effluent limits for E. coli bacteria March and April 2010 and January 2009. These exceedences are the reason for a “Marginal” rating for this section.

Section H – Sludge Disposal – Overall Rating “Satisfactory”

Permit Requirements For Solids Disposal

The permit requires in Part IV. Section I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE AND LAND APPLICATION:

a. General Requirements:

1. The permittee shall handle and dispose of sewage sludge in accordance with Section 405 of the Clean Water Act and all other applicable Federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.

Findings For Solids Disposal

Three new sludge drying beds have been constructed at the WWTP. These beds are designed with under drains that transport the water back to the head of the treatment plant. It was observed that the location of the PVC tubes extending up from the drying beds are located in the center and are in a position that is likely to be run over by the bobcats that move the solids in the beds. An Operator confirmed this has happened.

The solids are composted on site and final disposal is residential and agricultural fertilizer.

Storm Water

A Construction Storm Water Inspection was not conducted as part of this inspection. However, the Inspector did observe that proper controls for containment of disturbed soils and construction activities may not have been in place. The permittee is encouraged to review the requirements of the Construction Storm Water Permit and the Storm Water Pollution Prevention Plan (SWPPP) as found at the EPA website: <http://cfpub1.epa.gov/npdes/stormwater/cgp.cfm>