NEW MEXICO ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau

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DAVE MARTIN
Secretary

BUTCH TONGATE
Acting Deputy Secretary

Certified Mail - Return Receipt Requested

September 29, 2011

Mr. Bryan Romero
Division Director
City of Santa Fe
200 Lincoln Avenue
P.O. Box 909
Santa Fe, NM 87504-0909

Re: Major Municipal; SIC 4952; NPDES Compliance Evaluation Inspection; City of Santa Fe Wastewater Treatment Plant; NM0022292; August 31, 2011

Dear Mr. Romero:

Enclosed, please find a copy of the report for the referenced inspection that the New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) 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 federal Clean Water Act.

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

I wish to thank you for your cooperation and the cooperation of the City of Santa Fe representatives including yourself, Mr. Lois Orozco, Ms. Patricia Rosacker, Mr. Kenneth Espinosa, Mr. Johnny Valdiviezo and Ms. Kathleen Garcia during the inspection. If you have any questions about this inspection report, please contact me at (505) 827-0212.

Sincerely,

Barbara Cooney
Surface Water Quality Bureau

cc: Marcia Gail Adams, USEPA (6EN-AS) by e-mail
Samuel Tates, USEPA (6EN-AS) by e-mail
Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
Diana McDonald, USEPA (6EN-WM) by e-mail
Larry Giglio, USEPA (6WQ-PP) by e-mail
Sonia Hall and Hannah Branning, USEPA (6EN-WC)
NMED District II Manager by e-mail

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 2 2 9 2 11	12 1 1 0 8 3 1 17	18 C	19 S 20	1

Remarks

M A J O R M U N I C I P A L

Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved
67 2 69	70 4	71 N 72	N 73 74	75 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)*	Entry Time /Date	Permit Effective Date
The City of Santa Fe WWTP is located on Airport Road aprox.3 miles west of Cerrillos Road and past the intersection of State Hwy 599 on the right past the Santa Fe Airport.	12:30 hours / 31 August 2011	2010 Aug 01
	Exit Time/Date 12:00 hours / 01 September 2011	Permit Expiration Date 2015 Jul 31

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
Bryan Romero, Division Director and Engineer Supervisor 505-955-4623
Patricia Rosacker, Wastewater Laboratory Manager 505-955-4621
Luis Orozco, Wastewater Plant Superintendent 505-955-4615

Other Facility Data

Latitude 35°37'30" North

Longitude 106 °05'19"West

SIC 4952

Name, Address of Responsible Official/Title/Phone and Fax Number
Bryan Romero, Division Director and Engineer Supervisor 505-955-4623
City of Santa Fe
P.O.Box 909
Santa Fe, NM 87504-0909

Contacted: Yes * No

Section C: Areas Evaluated During Inspection

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

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

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

SEE FURTHER EXPLANATIONS SECTIONS OF THIS REPORT FOR DETAILS

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone/Fax	Date
BARBARA COONEY	**NMED/SWQB 505-827-0212 / 505-827-0160**	
Signature of Management QA Reviewer	**Agency/Office/Phone and Fax Numbers**	**Date**
RICHARD POWELL	**505-827-2798 / 505-827-0160**	

City of Santa Fe WWTP	PERMIT NO. NM0022292

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 YES*)

DETAILS: Reporting for Flow is rounded to the nearest MGD on the DMRs. It is not reported accurately.

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:

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? ☐ 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.SEE COMMENTS IN FURTHER EXPLAINATIONS ☒ 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 YES)*
DETAILS: See Further Explanations for Monitoring and Reporting for Flow.

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED. ☒ Y ☐ N ☐ NA
TYPE OF DEVICE

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* (2011 April 18) ☒ 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. Slight rippling is noted but the Staff gauge and ultrasonic meter are w/in 10% of each other ☒ 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

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. ☒ Y ☐ N ☐ NA

6. SPIKED SAMPLES ARE ANALYZED. Yearly % OF THE TIME. ☒ Y ☐ N ☐ NA

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

LAB NAME Bio Aquatics

LAB ADDRESS Carrollton, TX

PARAMETERS PERFORMED Bio Monitoring

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
01	None	None	None	Slight from aeration	None	Clear	

RECEIVING WATER OBSERVATIONS

SECTION H - SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. ☐ S ☐ M ☐ U ☒ NA *(FURTHER EXPLANATION ATTACHED NO__).*
DETAILS: Solids Processing facility not evaluated during this inspection

1. SLUDGE MANAGEMENT ADEQUATE TO MAINTAIN EFFLUENT QUALITY. ☐ 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: Surface Disposal and Composting (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 August 31, and September 01, 2011 a Compliance Evaluation Inspection (CEI) was conducted at the City of Santa Fe Wastewater Treatment Plant (WWTP) by Barbara Cooney 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 NPDES permit program, in accordance with the federal Clean Water Act. These inspections are conducted under contract with the USEPA and are used by EPA to evaluate compliance with the NPDES permit program. This inspection report is based on information supplied by the City of Santa Fe representatives (the permittee), observations made by the NMED inspector, reports and records kept by the permittee and/or NMED.

The City of Santa Fe WWTP is classified as a major municipal discharger with a design flow of 13 MGD. The discharge for the WWTP enters the Santa Fe River in water quality segment 20.6.4.113 NMAC, at Latitude 35°37'30" North, Longitude 106 °05'19" West. The Designated Uses for this segment of the river are: irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life, secondary contact, and warmwater aquatic life.

Inspection Details

The inspector arrived at the City of Santa Fe WWTP administrative offices on Wednesday August 31, 2011 at 12:30 hours and met with Mr. Bryan Romero, Division Director, Ms. Patricia Rosacker Laboratory Manager and Mr. Luis G. Orozco, Wastewater Plant Superintendent. The inspector presented credentials and explained the purpose of the inspection. The inspection lasted through 17:30 hours on Wednesday August 31, 2011 and was continued the following morning September 1, 2011 at 9:15 hours. The analytical laboratory was inspected, the treatment works were toured, and records were reviewed. The Sludge processing, composting and surface disposal for sludge portions of the treatment process were not reviewed as part of this inspection. Accompanying the inspector were the above mentioned persons and Mr. Kenneth Espinosa, Operations Supervisor, Mr. Johnny Valdiviezo, Maintenance Supervisor and Ms. Kathleen Garcia, Engineer. An exit interview was conducted to discuss preliminary findings following the inspection on September 1, 2011. Present during the exit interview were the above mentioned persons. The inspector left the facility at shortly after 12:00 hours.

Treatment Scheme

The City of Santa has a population of approximately 75,000 people. Three hundred miles of sewer lines carries wastewater to the head works of the WWTP. The 13 Million Gallon Per Day WWTP consists of head-works, primary clarifiers, bio-selectors, anaerobic basins, sludge thickeners, sludge digesters and storage units, aeration basins, secondary clarification, disc filters, sand filtration, Ultra Violet Disinfection with back up chlorination, post aeration, effluent flow meters and final discharge to reuse or to the Santa Fe River.

The head-works includes a bar screen to remove large trash - plastic products, paper and rags. These items are sent into the rag press where most of the liquid is removed and the solids are sent to the dumpster through delivery chutes. The mechanical bar screen is followed by an aerated grit trap that removes sand, silt and inorganic wastes while allowing organic material to pass though to the wet well for distribution to the next treatment units. The grit is removed by an auger and conveyor belt system and also sent to a dumpster for disposal at the landfill.

From the wet well, wastewater is divided evenly between the two primary clarifiers. Each clarifier has a 586,600 gallon capacity. Heavy solids settle to the bottom of the clarifiers and are collected by a rotating scrapper arm then sent to the digester. Floating materials are removed by surface skimmers, mixed with the other solids and also sent to the digester.

The liquid waste is sent to the rapid mix tank where it is combined with the Returned Activated Sludge (RAS) and other recycled liquids before being sent to the bio-selectors. The bio-selectors are 4 square basins where a combination of aerobic and anaerobic/anoxic zones occur for nitrification and de-nitrification treatment. The nitrification cycle process utilizes dissolved oxygen (DO), fed into the basins by the fine bubble diffusers to change ammonium to nitrite. The ammonia is stripped off with either increased air on converted from ammonia to nitrites by the aerobic microorganisms. The nitrite continues through the basin to the anoxic zone in the anoxic basins and is broken down from nitrite to nitrate by the facultative and anaerobic bacteria, then to the gaseous nitrous oxide, carbon dioxide and water.

The four bio-selector basins are constructed to have both aerobic and anaerobic zones. The DO concentrations can be adjusted throughout the basins to allow operators to best manage the biological treatment. The anoxic basins that follow the bio-selectors have a raceway configuration. The operators maximize the use of a low DO system, managing the Mixed Liquor Suspended Solids (MLSS) and soluble Carbonaceous Biochemical Oxygen Demand (CBOD) to reduce the nitrates and inhibit the growth of filamentous bacteria. At the time of the inspection, MLSS was being maintained at 1800 to 2000 mg/L in the summer and during the winter optimal MLSS is considered 3000 to 5000 mg/L by the operators.

From the anoxic basins the mixture of liquid and solids is sent to the secondary clarifieriers. The six 460,000 gallon secondary clarifiers are rectangular and allow the solids to settle to the bottom of the tanks where they are removed by suction pump and sent to a wet well, then to the Dissolved Air Floatation (DAF) chamber to be split into Returned Activated Sludge (RAS) or to be sent to the digesters. Automated surface skimmers scrape floating solids from the basins. The clear water flows over fiberglass weirs then to three disc filters and two sand filters before UV disinfection and post aeration. Following post aeration the flow is split and sent to either reuse or through the effluent Parshall flume for flow measurement before discharge to the Santa Fe River. At the time of this inspection there were at least 6 reuse recipients. Reuse of treated wastewater is subject to the NMED - Ground Water Discharge Permits.

Two backup generators, one diesel and one natural gas are exercised weekly. The WWTP is staffed 24 hours a day 7 days a week. The entire system is monitored electronically and immediate notification occurs for any unit failures.

Sludge Handling

Solids wasted from the secondary clarifiers are sent to the DAF. The DAF operates by pressurizing water in the tank and is introduced via a header along with the pumped sludge and a polymer thickening agent. The sludge, pressurized water and polymer enter into the the DAF tanks which are at atmospheric pressure. The difference in pressure causes air to come out of solution as fine bubbles and floats to the surface. The sludge attaches to the fine bubbles and floats to the surface too, where it is thickened and is further treated either by anaerobic digestion or by lime stabilization. The anaerobic digesters are a 462,000 gallon fixed-cover primary digester and 453,000 gallon floating-cover secondary digester. The digesters are heated by two hot water boilers using either natural gas or digester gas. The digester contents are also mixed by the use of digester gas as which is compressed and introduced into the mixing guns. Sludge can also be treated with a second method using lime stabilization.

Sludge is disposed of by the City using subsurface injection on the Paseo Real Sludge Disposal Injection field adjacent to the WWTP. During winter months when the ground is frozen and subsurface injection is not possible the sludge is stored in two holding tanks. The holding tank sizes are 660,000 gallons and 1,618,000 gallons respectively. Some portion of the sludge is composted and made available to the public.

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 Verification

Overall Rating For Permit Verification (Satisfactory)

Record Keeping and Reporting

Overall Rating For Record Keeping and Reporting (Unsatisfactory)

Permit Requirements for Record Keeping and Reporting

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 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 of less than 10% from the true discharge rates throughout the range of expected discharge volumes.

Findings for Record Keeping and Reporting

1. The effluent flow meters are capable of reading the effluent flow to within 10 % accuracy. However on the Discharge Monitoring Reports (DMRs) the permittee is rounding the values for the effluent flow volume to the nearest Million Gallons per Day (MGD). These values should not be reported on the DMRs as a rounded value of the weekly and monthly averages and of the daily maximum. These flow values reported should be the actual flows. The actual flow values should also be used to perform calculations for effluent loading. For example, at the time of the inspection, the effluent flow meter showed 3.77 MGD (see attached photo). When reported the daily flow, weekly average and monthly average, the values should be reported as recorded.

Operation and Maintenance

Overall Rating For Operation and Maintenance (Satisfactory)

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.

Findings for Operation and Maintenance

1) The anaerobic basins had some floating greasy foam identifiable by the shiny surface, in portions of the basins. This indicates that grease is entering the WWTP. The City has a grease ordinance and an active pollution prevention program staffed with inspectors who make regular rounds to restaurants and commercial businesses checking grease traps. Because of the large tourist industry and high number of restaurants, even with the active grease ordinances some amount of grease still enters the treatment system.

Self-Monitoring

Overall Rating For Self Monitoring (Satisfactory)

Flow Measurement

Overall Rating For Flow Measurement (Satisfactory)

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 of less than 10% from true discharge rates throughout the range of expected discharge volumes.

Findings For Flow Measurement

The 36 inch effluent Parshall Flume staff gauge and back up ultrasonic flow meter are within 2.24% of each other. The flow meters were calibrated on April 18, 2011.

For additional information on the Flow requirements for this facility please see the section on monitoring and reporting for flow.

Laboratory

Overall Rating For Laboratory (Satisfactory)

Permit Requirements For Laboratory

The permit requires in Part III. C. 5. MONITORING PROCEDURES

a. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.

b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.

Findings For Laboratory

1. On the day of the inspection, the facility was using chlorine as part of a cleaning process and effluent samples were taken and analyzed. It was found by the inspector that the sample exceeded the 15 minute holding time by a few minutes. Upon being informed of this, the Laboratory Manager promptly retested the sample and completed the analysis within the required time.
2. The Laboratory Manager stated that the version of Standard Methods being used was the 20th Edition. The bench sheets for BOD5 and the other parameters stated the Standard Methods Edition being used was the 18th Edition. It is correct as the Lab Manager stated at the time, that many procedures are the same in both editions. However differences do occur for some procedures including for BOD5. It is important that the correct edition be referenced on the bench sheets.

3. With the exception of the records of the Standard Methods Edition being used, and the TRC holding time, the laboratory records and analysis procedures are exceptionally well managed for this facility.

Effluent and Receiving Waters

Overall Rating For Effluent and Receiving Water (Satisfactory)

Permit Requirements For Effluent and Receiving Water

The permit requires in Part I.

OUTFALL 001: FINAL Effluent Limits – 13 MGD Design Flow
During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated municipal wastewater to the Santa Fe River, in Segment Number 20.6.4.113, from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

POLLUTANT	Lbs/day, unless noted			mg/l, unless noted			Monitoring Requirements	
	30-Day Avg	Daily Max	7-Day Avg	30-Day Avg	Daily Max	7-Day Avg	Meausrement Frequency	Sample Type
Flow Report	Report MGD	Report MGD	Report MGD	NA	NA	NA	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand, 5-day	709	NA	Report	10	NA	15	3Days/Week	24-Hour Composite
Total Suspended Solids	2127	NA	Report	30	NA	45	3Days/Week	24-Hour Composite
E. Coli Bacteria	NA	NA	NA	548	2507	NA	3Days/Week	Grab
Ammonia Nitrogen (Total as N)	141.8	Report	NA	2	Report	NA	3Days/Week	24-Hour Composite
Nitrate-Nitrite (as N)	212.7	Report	NA	3	Report	NA	NA	24-Hour Composite
Dissolved Oxygen	Report	NA	NA	Minimum 5 mg/L (24-Hr. Avg)			Daily	grab
Total Residual Chlorine	NA	NA	NA	NA	NA	11 ug/L	Daily	Instantaneous
	Minimum			Maximum				
pH	6.6 su			9.0 su			Daily	Grab
WHOLE EFFLUENT LETHALITY	MEASUREMENT FREQUENCY			SAMPLE TYPE				
Ceriodaphnia dubia	Once/Quarter			24-Hr Composite				
Pimephales promelas	Once/Quarter			24-Hr Composite				

Findings For Effluent and Receiving Water

This permit renewal became effective on September 1, 2010. From that time to the present the following effluent excursions have been reported on the Discharge Monitoring Reports

Date	Pollutant	Permit Limit	Concentration Reported on DMRs
June 2011	BOD5 Daily Max	15 mg/L	Invalid sample
October 2010	BOD5 Daily Max	15 mg/L	Invalid sample

Bio Monitoring testing has been conducted as required in this permit and to date, all tests have passed.

Sludge Handling and Disposal

Overall Rating For Sludge Handling and Disposal (Not Evaluated)

NMED/SWQB Official Photograph Log Photo # 1		
Photographer: Google Earth	Date: 1996	Time: Unknown
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Wastewater Treatment Plant		
Subject: Wastewater Treatment Plant Aerial View		

NMED/SWQB Official Photograph Log Photo # 2		
Photographer: B. Cooney	Date: 01 September 2011	Time: 10:56 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Primary Clarifier following the head-works and bar screen		

NMED/SWQB Official Photograph Log Photo # 3		
Photographer: B. Cooney	Date: 01 September 2011	Time: 09:28 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Anoxic basins - Raceway configuration		

NMED/SWQB Official Photograph Log Photo # 4		
Photographer: B. Cooney	Date: 01 September 2011	Time: 10:34 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Anoxic Basin and foam. The shiny foam indicated grease is entering the treatment works. Foam can also indicate bulking solids. The facility manages bulking solids by maintaining low O2 levels in the basins.		

NMED/SWQB Official Photograph Log Photo # 5		
Photographer: B. Cooney	Date: 01 September 2011	Time: 10:24 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Secondary Clarifier		

NMED/SWQB Official Photograph Log Photo # 6		
Photographer: B. Cooney	Date: 01 September 2011	Time: 10:26 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Secondary Clarifier floating scum trough		

NMED/SWQB Official Photograph Log Photo # 7		
Photographer: B. Cooney	Date: 01 September 2011	Time: 10:25 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Secondary Clarifier Weirs		

NMED/SWQB Official Photograph Log Photo # 8		
Photographer: B. Cooney	Date: 01 September 2011	Time: 10:09 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Extra Disc filters - for filtration before UV disinfection.		

NMED/SWQB Official Photograph Log Photo # 9		
Photographer: B. Cooney	Date: 01 September 2011	Time: 10:06 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: UV Disinfection channels		

NMED/SWQB Official Photograph Log Photo # 10		
Photographer: B. Cooney	Date: 01 September 2011	Time: 10:08 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: UV Disinfection light bank		

NMED/SWQB Official Photograph Log Photo # 11		
Photographer: B. Cooney	Date: 01 September 2011	Time: 09:42 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Post Aeration just prior to outfall and effluent flow meter increases the Dissolved Oxygen (DO) concentration of the treated water as it is released to the Santa Fe River.		

NMED/SWQB Official Photograph Log Photo # 12		
Photographer: B. Cooney	Date: 01 September 2011	Time: 09:41 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Effluent Flow Meter - Note the Meter is recording effluent flow to two decimal points - 3.77 Million Gallons Per Day (MGD)		

NMED/SWQB Official Photograph Log Photo #13		
Photographer: B. Cooney	Date: 01 September 2011	Time: 09:40 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Staff gauge at effluent channel. Note some very slight foaming from the re-aeration may cause slight bumps in the flow reading also some very slight rippling in water surface.		

NMED/SWQB Official Photograph Log Photo #14		
Photographer: B. Cooney	Date: 01 September 2011	Time: 09:54 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Outfall configuration		

NMED/SWQB Official Photograph Log Photo # 15		
Photographer: B. Cooney	Date: 2011 September 01	Time: 09:40 hours
City/County: Santa Fe / Santa Fe		State: New Mexico
Location: Santa Fe WWTP		
Subject: Effluent Channel to the Santa Fe River		