



SUSANA MARTINEZ  
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## NEW MEXICO ENVIRONMENT DEPARTMENT

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RYAN FLYNN  
Cabinet Secretary

BUTCH TONGATE  
Deputy Secretary

### Certified Mail - Return Receipt Requested

October 24, 2014

Mr. Rick Tafoya, Utilities Director  
Village of Angel Fire  
P.O. Box 610  
Angel Fire, NM 87710

Re: Minor Municipal; SIC 4952; Compliance Evaluation Inspection; Angel Fire Wastewater Treatment Plant; NPDES Permit No.NM0030503, September 25, 2014

Dear Mr. Tafoya:

Enclosed please find a copy of the report and check list 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 federal Clean Water Act.

You are encouraged to review the inspection report, required to correct any problems noted during the inspection, and advised to modify your operational and/or administrative procedures, as appropriate. If you have comments on or concerns with the basis for the findings in the NMED inspection report, please contact us (see the address below) in writing within 30 days from the date of this letter. Further, you are encouraged to notify in writing both the USEPA and NMED regarding modifications and compliance schedules at the addresses below:

Racquel Douglas  
US Environmental Protection Agency, Region VI  
Enforcement Branch (6EN-WM)  
1445 Ross Avenue  
Dallas, Texas 75202-2733

Bruce Yurdin  
New Mexico Environment Department  
Surface Water Quality Bureau  
Point Source Regulation Section  
P.O. Box 5469  
Santa Fe, New Mexico 87502

Angel Fire WWTP  
October 24, 2014  
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If you have any questions about this inspection report, please contact Barbara Cooney at (505) 827-0212 or at [barbara.cooney@state.nm.us](mailto:barbara.cooney@state.nm.us).

Sincerely,  
*/S/ Bruce J. Yurdin*

Bruce J. Yurdin  
Program Manager  
Point Source Regulation Section  
Surface Water Quality Bureau

cc: Rashida Bowlin, USEPA (6EN-AS) by e-mail  
Raquel Douglas, USEPA (6EN-WM) by e-mail  
Gladys Gooden-Jackson, USEPA (6EN) by e-mail  
NMED District I, by e-mail



### 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 3 0 5 0 3 11 12 1 4 0 9 2 5 17 18 C 19 S 20					
Remarks					
A N G E L F I R E W W T P M I N O R M U N I C I P					
Inspection Work Days	Facility Evaluation Rating	BI	QA	-----Reserved-----	
67 1 69	70 3	71 N 72 N 73	74 75	M I N 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)  <b>ANGEL FIRE WWTP, COLFAX COUNTY, NEW MEXICO: ANGEL FIRE WWTP – NM HWY 434 TO ANGEL FIRE, AT MILEPOST 35 TURN EAST ON CAMINO GRANDE AND GO 0.5 MILE, TURN LEFT ON SERVICES RD &amp; GO 0.6 MILES (PAST VILLAGE SOLID WASTE FACILITY) TO WWTP ENTRANCE.</b>	Entry Time /Date 13:00 Hours / September 25, 2014	Permit Effective Date November 1, 2007
	Exit Time/Date 16:00 Hours / September 25, 2014	Permit Expiration Date October 31, 2012
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) Mr. Amos Torres, Operations Manager 575-377- 1677 Mr. Rick Tafoya, Public Works Director 575-377-3232	Other Facility Data  GPS: N. 36° 24.246' W. -105° 17.013' SIC: 4952	
Name, Address of Responsible Official/Title/Phone and Fax Number Mr. Rick Tafoya, Public Works Director Village of Angel Fire P.O. Box 610 Angel Fire, NM 87710	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	M	Flow Measurement	M	Operations & Maintenance	N	CSO/SSO
M	Records/Reports	M	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)

PLEASE SEE INSPECTION REPORT FOR FURTHER DETAILS.

Name(s) and Signature(s) of Inspector(s) /S/ Barbara Cooney	Agency/Office/Telephone/Fax NMED/SWQB 505-827-0212 / 505-827-0160	Date October 23, 2014
Signature of Management QA Reviewer /S/ Shelly Lemon	Agency/Office/Phone and Fax Numbers 505-827-2819 / 505-827-0160 / 505-827-0160	Date October 24, 2014

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:

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 Two sampling locations are used – at the end of UV and at the stream outfall  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. UV – some lights not at full strength  S  M  U  NA

2. TREATMENT UNITS PROPERLY MAINTAINED. UV system  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. UV lights  S  M  U  NA

6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED.  S  M  U  NA

7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED. UV system  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?  
 IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED?  
 HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS?

Y  N  NA  
 Y  N  NA  
 Y  N  NA

10. HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT?  
 IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT?

Y  N  NA  
 Y  N  NA

## SECTION D - SELF-MONITORING

PERMITTEE SELF-MONITORING MEETS PERMIT REQUIREMENTS.  
 DETAILS:

S  M  U  NA (FURTHER EXPLANATION ATTACHED YES.)

1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT. Two sample locations are used that are not defined in the 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.  
 DETAILS:

S  M  U  NA (FURTHER EXPLANATION ATTACHED YES.)

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) Inline totalizing flow meter  
 RECORDS MAINTAINED OF CALIBRATION PROCEDURES.  
 CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE.

Y  N  NA  
 Y  N  NA  
 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.  
 DETAILS:

S  M  U  NA (FURTHER EXPLANATION ATTACHED YES.)

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. 10\_\_% OF THE TIME.  Y  N  NA
7. COMMERCIAL LABORATORY USED.  Y  N  NA

LAB NAME Inter Lab Red River WWTP

LAB ADDRESS P.O. Box 3497 / Las Cruces, NM HWY 38, Mile Marker 10, Red River, NM 87558

PARAMETERS PERFORMED BOD / TKN / NO3 Chlrde / Aluminum E.coli Bacteria

**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
Holding pond	None	None	Slight	None	None	Clear	

## RECEIVING WATER OBSERVATIONS -

There was no discharge to the river at the time of the inspection so the observations made are for the treated water entering the holding pond  
Effluent exceedences for E. coli bacteria are the reason for the Marginal rating for this section.

**SECTION H - SLUDGE DISPOSAL**

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS.  S  M  U  NA (FURTHER EXPLANATION ATTACHED NO.)  
DETAILS:

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: Rio Rancho Land Fill - Surface Disposal (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 September 25, 2014, Barbara Cooney of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the Angel Fire Wastewater Treatment Plant (WWTP). The Angel Fire WWTP has a design flow capacity of 0.5 MGD (million gallons per day) and is classified as a minor municipal discharger under the Federal Clean Water Act, Section 402, of the National Pollutant Discharge Elimination System (NPDES) permit program. It is assigned NPDES permit number NM0030503. This permit regulates the WWTP discharge to the Cieneguilla Creek in Segment 20.6.4.309 of the Canadian River Basin according to the *State of New Mexico Standards for Interstate and Intrastate Surface Waters, 20.6.4 NMAC*. This segment includes the designated uses of domestic water supply, irrigation, high quality coldwater aquatic life, livestock watering, wildlife habitat, and primary contact; and public water supply on specific segments.

The NMED performs a certain number of CEIs for the U.S. Environmental Protection Agency (USEPA), Region VI, under the NPDES permit program, in accordance with the Federal Clean Water Act. USEPA uses these inspections to determine compliance with the NPDES permit program. This inspection report is based on information provided by the permittee's representatives, observations made by the NMED inspector, and records and reports kept by the permittee and/or NMED.

Upon arrival at the WWTP at 13:00 hours September 25, 2014, the inspector met Plant Managing Operator, Mr. Amos Torres, showed her credentials, explained the purpose of the inspection and conducted the entrance interview. Mr. Torres accompanied the inspector on a tour of the facility. A review of records and the laboratory commenced thereafter. An exit interview was conducted with Mr. Rick Tafoya, Public Works Director and Mr. Amos Torres following the inspection. The inspector left the facility at 16:00 hours.

## **Treatment Scheme**

The Angel Fire WWTP is a Sequential Batch Reactor (SBR) system with ultra-violet (UV) disinfection that began operating in November 1999. The plant design capacity is 0.5 MGD and the average influent rate is currently approximately 0.1 MGD (the max rate in the winter/busy season is about 0.3 MGD). In addition to the SBR system, this facility also has one synthetically lined lagoon that stores wastewater prior to discharge to either the receiving stream or to a land application area. The NMED Ground Water Quality Bureau regulates the discharges to the land application area under Discharge Permit #156. The facility began discharging from NPDES outfall 001 for the first time on May 16, 2005. Wastewater is pumped by three lift stations in town to a large lift station south of the SBR plant. A septage dump station with bar screen is also available for use at the large lift station by septic haulers. Currently, there are three septic haulers that use the facility with one hauler being from out of town. Influent enters the wet well, flows into a mixer tank (where water is added for dilution), then goes through a bar screen which is manually cleaned. Debris and screenings removed from the headworks are disposed at the solid waste facility across the street from the lift station/headworks. Wastewater is then pumped from the lift station up to the splitter box that serves the SBR basins.

There are two reactor basins, each equipped with a decant arm. Currently only one basin is used at a time for treatment while the other basin is used to handle and store waste sludge generated from the treatment basin. Since influent rates are much lower than the design capacity, the facility alternates use of the reactor basins every other year without compromising treatment efficiency, according to the permittee's representatives. However, the facility is expecting to receive an increase in influent in the near future. The SBR unit operates on a 4-hour cycle of aeration, settling and decanting controlled by a computerized control system (Cutler-Hammond Panel Mate). Scum, debris, and solids are manually skimmed off the surface of the basin on a daily basis and taken to an off-site landfill for disposal. After final treatment in the SBR basin, wastewater enters the UV system for disinfection. The UV system (Aqua Ray 40) consists of five banks of lights situated over a concrete channel. The lights are cleaned monthly with citric acid and the channel is cleaned with wire brushes weekly.

Wastewater leaves the UV channel, and either enters the WWTP lagoon or flows through a pipeline to the effluent pump house located near the outfall. The pump house and outfall pipe are located off Flamingo Road south of the SBR plant

site. The pump house contains both an in-line flow meter to measure effluent and a sampling port to collect effluent samples directly from the pipeline. The effluent pipeline leaves the pump house and discharges to outfall 001 a short distance away. The pipe comes directly out of the stream bank under a culvert and discharges into Cieneguilla Creek.

### **Solids Management**

Waste sludge from one SBR basin is first stored in the unused reactor basin before it goes into the aerobic digester. The digester is situated on the south side of the reactor basins. Sludge from the digester is sent to the sludge belt press, which is located in a building next to the SBR plant. Sludge from the press is placed into a roll off container and delivered to the Waste Management Sanitary Landfill in Rio Rancho, NM for final disposal.

### **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.

### **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. 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 performed the sampling or measurements;*
- c. The date(s) and time(s) analyses were performed;*
- d. The individual(s) who performed the analyses;*
- e. The analytical techniques or methods used; and*
- f. The results of such analyses.*

### **Findings For Recordkeeping and Reporting:**

A records review for the previous two years and focusing on February 2014 was done.

1. The sample location is not clearly identified for the samples taken. Some effluent samples are being taken at the end of the Ultraviolet Disinfection basin and some samples are being taken at the outfall pipe. Both locations are identified only as "Effluent" in the records. All sampling should be done at the same location at the end of the treatment works.

### **Self-Monitoring**

Overall Rating For Self Monitoring (Marginal)

### **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.*

#### *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 performed the sampling or measurements;*
- c. The date(s) and time(s) analyses were performed;*
- d. The individual(s) who performed the analyses;*
- e. The analytical techniques or methods used; and*
- f. The results of such analyses.*

The permit requires in Part II.C.1. Contributing Industries

*1. The following pollutants may not be introduced into the treatment facility:*

*c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;*

*2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.*

#### **Findings For Self Monitoring:**

1. Effluent samples are taken from different locations because of the configuration of the reuse pond and the outfall point at the river.
2. Other than the discharge location noted in item "1" of this section, the permittee is monitoring effluent and retaining other as required in the permit.
3. The Village of Angel Fire does not have an active sewer and grease ordinance monitoring program. Restaurants are not monitored.

#### **Operations and Maintenance**

##### **Overall Rating For Operations and Maintenance (Marginal)**

#### **Permit Requirements For Operations and Maintenance**

The permit states in Part III.B.3.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 effectively 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...*

#### **Findings for Operations and Maintenance:**

1. Ultra Violet (UV) disinfection light banks had some bulbs that were either burned out or were not working at full strength.
2. Operators were not able to order replacement parts for the UV unit.
3. The headworks located a half mile away from the SBR has a manual and mechanical bar screen. Some large solids are getting past these units. Operators indicated there are plans to install a "muffin monster" grinder that would break up any solids that interfere with the lift station and following treatment works.

## **Flow Measurement**

### **Overall Rating for Flow Measurement (Marginal)**

#### **Permit Requirements For Flow Measurement**

The permit states, in Part III.C.6

*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 flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.*

#### **Findings for Flow Measurements:**

The effluent flow meter is an inline system that has no back up. There was no indication in records for how the meter could be checked for accuracy.

## **Laboratory**

### **Overall Rating For Laboratory (Satisfactory)**

#### **Permit Requirements For Laboratory**

The perm requires in Part III. 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.*
- c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy*

#### **Findings For Laboratory:**

1. Reagent bottles for pH did not have the "open date" written on the bottles. The reagents were within the expiration date as listed by the manufacture. As part of a quality control practice, it is recommended that all reagents and standards have the "open date" clearly marked on containers.

## **Effluent And Receiving Water**

### **Overall Rating For Effluent And Receiving Water (Marginal)**

#### **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 discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coating on stream banks.*

The permit requires in Part I. Final Effluent Limits –0.5 MGD Design Flow

*E. coli bacteria 30 Day Average = 126 cfu*

*E. coli bacteria Daily Maximum = 235 cfu*

**Findings For Effluent And Receiving Water:**

1. A slight amount of floating solids and foam was observed entering the UV chamber.

2. Effluent Exceedences since July 2012:

Date	Parameter	Effluent Exceedence	Permit Limit
March 2014	E.coli Bacteria 30 Day Average / Colony Forming Units / 100 ML (CFU)	272 CFU	126 CFU
November 2013	E.coli Bacteria 30 Day Average / Colony Forming Units / 100 ML (CFU)	310 CFU	126 CFU
November 2013	E.coli Bacteria Daily Maximum/ Colony Forming Units / 100 ML (CFU)	2419 CFU	235 CFU

**SLUDGE HANDLING**

**Overall Rating For Sludge Handling (Satisfactory)**

MED/SWQB  
Official Photograph Log  
Photo # 1

Photographer: Google Earth

Date: 25 September 2014

Time: Unknown

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Angel Fire WWTP Aerial View of the Sequencing Batch Reactors (SBR), Administrative Building, Solids Handling Building and Ultraviolet Treatment Unit.



Google earth

feet 600  
meters 100



NMED/SWQB  
Official Photograph Log  
Photo # 2

Photographer: B. Cooney

Date: 25 September 2014

Time: Unknown

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Influent headworks and lift station are located nearly one half mile away from the main treatment plant. A lift station and forced main line transports the raw sewage from the headworks to the Sequencing Batch Reactors (SBRs).



Google earth

feet  
meters

2000

800



NMED/SWQB  
Official Photograph Log  
Photo # 3

Photographer: Google Earth

Date: 25 September 2014

Time: Unknown

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: WWTP SBR and Lagoon; Influent Headworks; Outfall location. The Outfall to Cieneguilla Creek is nearly a mile away from the main treatment plant.



Google earth

feet 4000  
km 1



NMED/SWQB  
Official Photograph Log  
Photo # 4

Photographer: B. Cooney

Date: 25 September 2014

Time: 13:27 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Above ground SBR treatment system The treatment units and the concrete appeared to be in good condition, maintained and free of concrete cracking and obvious deterioration.



NMED/SWQB  
Official Photograph Log  
Photo # 5

Photographer: B. Cooney

Date: 25 September 2014

Time: 13:30 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Splitter box that controls the flow to the SBR basins. The basin can be run in parallel if needed.



NMED/SWQB  
Official Photograph Log  
Photo # 6

Photographer: B. Cooney

Date: 25 September 2014

Time: 13:31 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: The Sequencing Batch Reactor System – two trains. One basin was being used for solids and the other for water treatment.



NMED/SWQB  
Official Photograph Log  
Photo # 7

Photographer: B. Cooney

Date: 25 September 2014

Time: 13:31 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: The Sequencing Batch Reactor System and the reuse holding pond.



NMED/SWQB  
Official Photograph Log  
Photo # 8

Photographer: B. Cooney

Date: 25 September 2014

Time: 13:34 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Influent to the pre-activation basin. Water from this basin can be split to two basins. At the time of the inspection the influent was not being split. Instead, one basin was being used for solids.



NMED/SWQB  
Official Photograph Log  
Photo # 9

Photographer: B. Cooney

Date: 25 September 2014

Time: 13:41 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Solids settling basin. Note some older floating solids in the basin.



NMED/SWQB  
Official Photograph Log  
Photo # 10

Photographer: B. Cooney

Date: 25 September 2014

Time: 13:47 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Decant arm in SBR. Decant is sent to a secondary holding basin that equalize the flow levels being sent through the UV disinfection system.



NMED/SWQB  
Official Photograph Log  
Photo # 11

Photographer: B. Cooney

Date: 25 September 2014

Time: 13:48 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Secondary basin and pump that send treated wastewater to the Ultraviolet disinfection system. Note that what appears to be floating debris is leaves blown into the open air unit.



NMED/SWQB  
Official Photograph Log  
Photo # 12

Photographer: B. Cooney

Date: 25 September 2014

Time: 13:49 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: The Ultraviolet Disinfection unit and the reuse holding pond. In order to do maintenance at the UV system a pulley can crane system are in place.



NMED/SWQB  
Official Photograph Log  
Photo # 13

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:02 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Treated water entering the Ultra Violet (UV) disinfection basin. Note a light amount of dispersed foam and slight amount of floating solids in basin.



NMED/SWQB  
Official Photograph Log  
Photo # 14

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:02 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: The Ultra Violet (UV) disinfection lights. Note some of the lights are not operating at full intensity. The lights are cleaned weekly and were free of debris.



NMED/SWQB  
Official Photograph Log  
Photo # 15

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:06 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Effluent holding pond for reuse. Flow measurement for reuse is past the pond location.



NMED/SWQB  
Official Photograph Log  
Photo # 16

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:08 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Solids handling onsite included a dewatering belt press that is plumbed to send the liquids back to the headworks. The solids are deposited in a roll off dumpster that is hauled to the Rio Rancho Landfill for final surface disposal.



NMED/SWQB  
Official Photograph Log  
Photo # 17

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:12 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: A backup diesel generator is exercised weekly.



**NMED/SWQB  
Official Photograph Log  
Photo # 18**

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:13 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: On site pH meter.



**NMED/SWQB  
Official Photograph Log  
Photo # 19**

Photographer: B. Cooney

Date: 25 September 2014

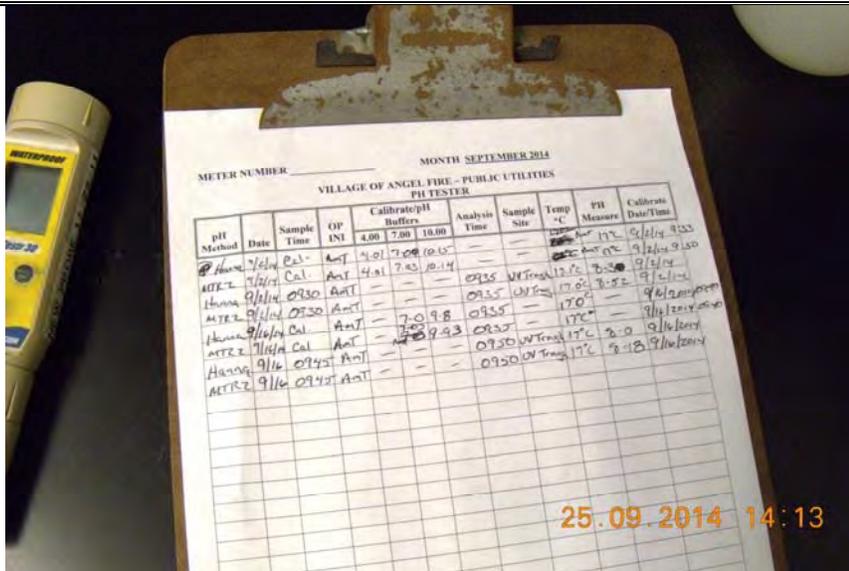
Time: 14:13 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: pH meter bench sheet.



NMED/SWQB  
Official Photograph Log  
Photo # 20

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:14 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: pH buffers were within the manufacture's expiration date. However bottles did not have a hand written "open date".



NMED/SWQB  
Official Photograph Log  
Photo # 21

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:24 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Headwork grit removal system. Solids are collected and after passing the paint filter test disposed of at a landfill.



NMED/SWQB  
Official Photograph Log  
Photo # 22

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:35 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Cieneguilla Creek approximately 20 feet below the effluent pipe. Effluent discharge location is in the Angel Fire Ski Resort "Bone Yard" a storage area. Note the debris in the stream channel. These items of debris are outside the authority of the Village of Angel Fire. Efforts should be made to remove any debris and to prevent debris and trash from entering the stream channel.



NMED/SWQB  
Official Photograph Log  
Photo # 23

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:36 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Effluent pipe is on the left side of this culvert. There was no discharge at the time of the inspection.



NMED/SWQB  
Official Photograph Log  
Photo # 24

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:36 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: The Cieneguilla Creek stream channel above the effluent pipe.



NMED/SWQB  
Official Photograph Log  
Photo # 25

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:37 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Building that houses the effluent sampling location and the effluent flow meter.



NMED/SWQB  
Official Photograph Log  
Photo # 26

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:38 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Effluent sampling port.



NMED/SWQB  
Official Photograph Log  
Photo # 27

Photographer: B. Cooney

Date: 25 September 2014

Time: 14:38 Hours

City/County: Angel Fire / Colfax County

State: New Mexico

Location: Angel Fire Wastewater Treatment Plant

Subject: Effluent flow meter is and inline totalizer.

