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**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Surface Water Quality Bureau

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DAVE MAKIIN
Secretary

BUTCH TONGATE
Deputy Secretary

JAMES H. DAVIS, Ph.D.
Director
Resource Protection Division

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 2, 2012

Mr. Randall Camp, Utilities Director
Village of Ruidoso
313 Cree Meadows Dr.
Ruidoso, NM 88345

Mr. Cleatus Richards, Utilities Director
City of Ruidoso Downs
P.O. Box 348
Ruidoso Downs, NM 88346

Re: Major Municipal, SIC 4952, NPDES Compliance Evaluation Inspection, Ruidoso/Ruidoso Downs WWTP, NM0029165, July 30, 2012

Dear Mr. Camp and Mr. Richards,

Enclosed, please find a copy of the report and checklist 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.

Findings are based on the inspector's observations in regards to specific requirements of the NPDES permit. The Ruidoso WWTP received an overall evaluation rating of "4" on a scale of 1 to 5. The evaluation indicates the quality of the self-monitoring program for a specific facility. The highest rating of "5" is used for facilities with very reliable self-monitoring programs, a "3" is considered satisfactory, and a "1" is used for very unreliable self-monitoring programs.

The main issues were found in the areas of Recordkeeping and Reporting, Self-Monitoring and Laboratory. Please refer to the Further Explanations section of the report for more detail.

I wish to thank you for the cooperation extended to the NMED while at the Ruidoso Wastewater Treatment Plant by Bobby Snowden and Isaac Garcia. If you have any questions about this inspection report, please contact me at (505) 222-9587 or sarah.holcomb@state.nm.us.

Sincerely,
/s/ Sarah Holcomb
Sarah Holcomb
Environmental Scientist/Specialist
Surface Water Quality Bureau

Cc: Carol Peters-Wagnon, USEPA (6EN-WM) by email
Hannah Branning, USEPA (6EN-AS), by email
Samuel Tate, USEPA (6EN-AS) by email
Rashida Bowlin, USEPA (6EN-AS) by email

Larry Giglio, USEPA (6WQ-P) by email
Diana McDonald, USEPA (6EN-WM) by email
Frank Fiore, NMED District III Manager, by email



NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspec. Type	Inspector	Fac Type	
1 <input type="text" value="N"/> 2 <input type="text" value="5"/> 3 <input type="text" value="N"/> <input type="text" value="M"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="2"/> <input type="text" value="9"/> <input type="text" value="1"/> <input type="text" value="6"/> <input type="text" value="5"/> 11 <input type="text" value="1"/> 12 <input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="7"/> <input type="text" value="3"/> <input type="text" value="0"/> 17 18 <input type="text" value="C"/> 19 <input type="text" value="S"/> 20 <input type="text" value="1"/>	Remarks					
<input type="text" value="M"/> <input type="text" value="A"/> <input type="text" value="J"/> <input type="text" value="O"/> <input type="text" value="R"/> <input type="text" value="W"/> <input type="text" value="W"/> <input type="text" value="T"/> <input type="text" value="P"/>						
Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved		
67 <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> 69	70 <input type="text" value="4"/>	71 <input type="text" value="N"/>	72 <input type="text" value="N"/>	73 <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/>	74 75 <input type="text" value=""/> 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) RUIDOSO DOWNS WWTP, LINCOLN COUNTY, NEW MEXICO; DRIVE THROUGH RUIDOSO, TURN EAST ON NM70. TRAVEL THROUGH RUIDOSO DOWNS; FACILITY IS AT 26675 US 70.	Entry Time /Date 1245 HOURS / 7-30-2012	Permit Effective Date 9-1-2007
	Exit Time/Date 1615 HOURS / 7-30-2012	Permit Expiration Date 8-31-2012
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) MR. BOBBY SNOWDEN, DEPARTMENT MANAGER (575) 378-8417 MR. ISAAC GARCIA, CHIEF OPERATOR	Other Facility Data	
Name, Address of Responsible Official/Title/Phone and Fax Number MR. RANDALL CAMP, UTILITIES DIRECTOR, VILLAGE OF RUIDOSO 313 CREE MEADOWS DR, RUIDOSO, NM 88345 MR. CLEATUS RICHARDS, UTILITIES DIRECTOR, CITY OF RUIDOSO DOWNS PO BOX 348, RUIDOSO DOWNS, NM 88346	Contacted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> *	GPS: N. 33° 21' 38" W. -105° 32' 36" SIC: 4952

Section C: Areas Evaluated During Inspection

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

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

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

- INSPECTOR ARRIVED AT THE FACILITY AT 1245 HOURS ON JULY 30, 2012. CONDUCTED ENTRANCE INTERVIEW WITH MR. BOBBY SNOWDEN AND MR. ISAAC GARCIA. THE INSPECTOR MADE INTRODUCTIONS, PRESENTED HER CREDENTIALS AND DISCUSSED THE PURPOSE OF THE INSPECTION.
- PLEASE SEE INSPECTION REPORT FOR FURTHER DETAILS.

Name(s) and Signature(s) of Inspector(s) Sarah Holcomb /s/ Sarah Holcomb	Agency/Office/Telephone/Fax 505-222-9587	Date 8-2-2012
Signature of Management QA Reviewer Richard Powell /s/ Richard Powell	Agency/Office/Phone and Fax Numbers 505-827-2798	Date 8-2-2012

RUIDOSO/RUIDOSO DOWNS WWTP

PERMIT NO. NM0029165

SECTION A - PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS DETAILS: S M U NA (FURTHER EXPLANATION ATTACHED NO)

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. DETAILS: S M U NA (FURTHER EXPLANATION ATTACHED YES)

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. DETAILS: S M U NA (FURTHER EXPLANATION ATTACHED NO)

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. Facility employs 5 level IVs, 2 level III lab techs. 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 NO.)
 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 YES.)
 DETAILS:

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED. Y N NA
 TYPE OF DEVICE 12-inch Parshall flume
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. Last calibration performed was July 11, 2011. Y N NA
 RECORDS MAINTAINED OF CALIBRATION PROCEDURES. Y N NA
 CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE. Quarterly, however, checks are not documented. 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

RUIDOSO/RUIDOSO DOWNS WWTP

PERMIT NO. NM0029165

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, 0 % OF THE TIME. Y N NA

7. COMMERCIAL LABORATORY USED. Y N NA

LAB NAME	Summit Laboratories	Huther and Associates
LAB ADDRESS	900 Godfrey Ave. SW, Grand Rapids, MI 49503	1156 N. Bonnie Brae, Denton, TX 76201
PARAMETERS PERFORMED	Cyanide, Nitrogen, Phosphorus and Thallium	Biomonitoring

SECTION G - EFFLUENT/RECEIVING WATERS OBSERVATIONS.

S M U NA (FURTHER EXPLANATION ATTACHED NO.)

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	FLOAT SOL.	COLOR	OTHER
001	NONE	NONE	NONE	NONE	NONE	CLEAR	

RECEIVING WATER OBSERVATIONS NO EVIDENCE OF ALGAE DOWNSTREAM OF OUTFALL.

SECTION H - SLUDGE DISPOSAL

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

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: CLASS A - GIVEN AWAY (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 July 30, 2012, Sarah Holcomb of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the Ruidoso/Ruidoso Downs Wastewater Treatment Plant (WWTP). The Ruidoso/Ruidoso Downs WWTP has a design flow capacity of 2.7 MGD (million gallons per day) and is classified as a major 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 NM0029165. This permit regulates the WWTP discharge to the Rio Ruidoso in Segment 20.6.4.209 of the Pecos 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, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, public water supply and primary contact.

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 1245 hours on July 30, 2012, the inspector met Mr. Bobby Snowden, Department Supervisor, and Mr. Isaac Garcia, Chief Operator. Upon arrival, the inspector showed her credentials, explained the purpose of the inspection and conducted the entrance interview and went on a tour of the facility with Mr. Snowden and Mr. Garcia. Inspection of records and the laboratory commenced thereafter. An exit interview was conducted at 1600-1615 on July 30, 2012 with Mr. Snowden and Mr. Garcia at the facility. The inspector did discuss the use of NetDMR with the facility representatives, and Mr. Snowden indicated that the use of NetDMR is on his agenda for the near future.

Treatment Scheme

The Ruidoso/Ruidoso Downs WWTP is a new facility that was placed online in April 2011. The remnants of the old plant still exist on the site, but have been blocked off; the old components that still make up part of the facility footprint but are not used are the influent screw pumps and the old equalization and aeration basins.

Influent enters the facility through a 24-inch line to the influent lift station. The influent lift station is equipped with four Flygt influent pumps, which are each capable of handling a 3 million gallon flow. There is a dedicated backup generator for the influent pumps. The flow travels from the influent pump station into the facility through a 12 inch Parshall flume and Magmaster flow meter. It is then conveyed to the coarse bar screen. The bar screen is a mechanical Ovivo bar screen with 0.25" openings. The bar screen is set on a float timer, but also has a regular timer for redundancy. The coarse screening facility is equipped with an emergency bypass. The screenings are sent to a hopper located next to the screen and materials are taken to the landfill.

After the coarse materials are removed from the influent, the flow enters a Smith & Loveless grit chamber. The grit is also sent to a hopper which is then taken to the landfill after drying. At this point, the operators have the capability to send flows that are over 1400 gpm to the equalization (EQ) basin. The current EQ basin consists of the old aeration basins from the old facility. The facility has 660,000 gallons of storage available to them here. If there is influent in the EQ basin, it is bled back into the plant prior to the grit/fines removal when the influent flow is less than 700 gpm.

After the grit chamber, the flow enters the fine screens. The screens are equipped with a 0.3mm opening. The screened material then goes through a rinsing process and is then sent to compactors and the grit classifier, while the filtrate continues through the rest of the plant. After this filtration process, the nitrogen is typically less than 3 mg/L, according to the facility's representatives.

The filtered influent then proceeds to biological treatment. This plant is designed as an intensive nutrient removal MBR (membrane bioreactor), and consequently, the wastewater is sent through a number of specialized chambers prior to entering the membranes. The first chamber the wastewater enters in this phase is an anaerobic selector, which functions specifically for bio-phosphorus removal. From this area, the wastewater then flows into a de-oxygenation basin, where it is then mixed with RAS (return activated sludge). From this point, the wastewater is then sent to the pre-anoxic zone. This particular basin is equipped with submersible mixers in order to keep the solids in suspension while maintaining anoxic conditions. Next is the pre-aeration basin, which is equipped with fine bubble diffusers to facilitate nitrogen stripping. Yet another anoxic zone, referred to as the post-anoxic zone is the next step after the pre-aeration basin. At this point, facility operators have the option to add aluminum sulfate or methanol if needed to further reduce nitrogen and phosphorus levels in the wastewater. Solids from the post-anoxic basin are recycled back to the anaerobic basin to add food for the bio-phosphorus removal process. Currently, facility staff are relying on the biological methodology to remove as many nutrients as possible and are not adding chemicals.

At this point, the wastewater is sent to the MBR basins. There are three MBR trains, each capable of treating 900,000 gallons each. There is the capability to build the plant out to accommodate another train (capable of treating another 900,000 gallons) if the facility needs to do so in the future – there is an empty MBR basin at this time. Within each MBR basin, there are 8 lower and 8 upper cassettes. Each cassette contains 200 filters, which means there are approximately 3,200 filters in each basin (19,200 filters in total). These filters are equipped with a 10 year warranty. The MBR basins are where biological treatment as well as more filtration of the wastewater occurs.

From the MBR basins, the treated wastewater is conveyed to the UV disinfection facility. This facility is equipped with two UV banks, one of which is currently online. After disinfection, the effluent is pumped into the washwater wet well. Any effluent not pumped here then travels through an 18 inch Parshall flume and through an 18 inch line to the Rio Ruidoso.

Solids

WAS (waste activated sludge) is removed from the MBR and sent to the thickener. The thickener, with the assistance of a polymer, thickens the sludge to about 2.5-3%, and is then sent to the digester for stabilization. The digester contains 3 cells (and can be expanded to 4 cells if needed in the future). From the digester, sludge is sent to the belt filter press, and is then transferred outside to “cook” to meet the requirements of Class A sludge. The facility typically wastes 5 days a week and runs their filter press two days per week. When ready, the sludge is given away for beneficial use.

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 B – Recordkeeping and Reporting Evaluation – Overall Rating of “Satisfactory”

Standard Methods 5210-B – 2001 states:

Make several dilutions of sample that will result in a residual DO of at least 1 mg/L and a DO uptake of at least 2 mg/L after a 5-d incubation.

And,

If more than one sample dilution meets the criteria of a residual DO of at least 1 mg/L and a DO depletion of at least 2 mg/L and there is no evidence of toxicity at higher sample concentrations or the existence of an obvious anomaly, average results in the acceptable range.

Findings for Recordkeeping and Reporting:

During records review post-onsite inspection, the inspector noted that the BOD analysis for the date of 11-17-2011 had a few issues. It appears that too much seed was used in the analysis, causing none of the BOD sample bottles to be reportable; none of the BOD sample bottles resulted in at least a 1.0 mg/L residual BOD value. All of the sample bottles resulted in negative BOD results. Although this was not an acceptable test, it appears that the test was used in the monthly reporting calculations anyway. The test should have been resampled and reanalyzed, or the missed test noted on the DMR and this result not included in the monthly calculations.

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

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:

Even though this is a brand new facility, proper flow measurement checks are still important to determine the accuracy of the plant's monitoring data. The facility's records reviewed on site showed that the last flow device calibration completed by an outside source was done in July 2011. During records review after the inspection, the inspector made note of a memo written on a lab bench sheet that indicated another flow calibration was done at the facility in November 2011.

Facility staff indicated that they do formal quarterly checks to ensure that the plant is measuring $\pm 10\%$ of actual flow rates, but that this is not documented. The inspector recommended that formal records are kept of the measurement checks.

Section F - Laboratory Evaluation – Overall Rating of “Marginal”

The permit states in Part III.C.5.a, Monitoring Procedures:

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.

40 CFR Part 136.3 states in Table I.B:

<i>Parameter</i>	<i>Methodology</i> ⁵⁸	<i>EPA</i> ⁵²	<i>Standard methods</i>	<i>ASTM</i>	<i>USGS/AOAC/Other</i>
<i>9. Biochemical oxygen demand (BOD5), mg/L</i>	<i>Dissolved Oxygen Depletion</i>		<i>5210 B-2001</i>		<i>973.44³, p. 17.⁹, I-1578-78,⁸ See footnote.^{10,63}</i>

And, Standard Methods 5210 B – 2001 states:

...Stopper tightly, water-seal, and incubate for 5 d at 20°C.

The permit states in Part III.C.5.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:

At the time of this inspection, it was very evident that the facility prides themselves on doing a consistent job keeping accurate data on the capabilities of their plant. The lab and procedures appeared to be well managed and well monitored. However, during a review of lab equipment, the inspector noted that the BOD incubator was set at a temperature of 23°C. Standard Methods indicates that the incubator should be kept at 20°C. The inspector discussed possible reasons for the temperature increase with the facility representatives, including a brief review to determine proper placement of the incubator within the lab, and temperature of the lab itself. Facility representatives indicated they would solve the issue ASAP.

Discharge Monitoring Report Calculation Check

The DMR calculation check was conducted for the parameters of BOD and TSS for the months of November 2011 and May 2012.

✓ = in agreement with calculation result submitted on facility's DMR.

<u>Date</u>	<u>BOD Result</u>
11-2-2011	0.64 mg/L
11-9-2011	0.61 mg/L
11-16-2011	Not reportable
11-22-2011	0.38 mg/L
11-30-2011	0.42 mg/L

Loading:

November's 30-day average :

$$0.64 \text{ mg/L} \times 8.34 \times 1.47 \text{ mgd} = 7.85 \text{ lbs/day}$$

$$0.61 \text{ mg/L} \times 8.34 \times 1.45 \text{ mgd} = 7.38 \text{ lbs/day}$$

$$0.38 \text{ mg/L} \times 8.34 \times 1.43 \text{ mgd} = 4.53 \text{ lbs/day}$$

$$0.42 \text{ mg/L} \times 8.34 \times 1.40 \text{ mgd} = 4.90 \text{ lbs/day}$$

$$\text{Avg: } (7.85 + 7.38 + 4.53 + 4.90)/4 = 6.17 \text{ lbs/day (This was reported as 5.1 lbs/day)}$$

$$\text{November's 7-day average} = 7.85 \text{ lbs/day (This was reported as 8.0 lbs/day) } \checkmark$$

Concentration:

$$\text{November's 30-day average} = (0.64 \text{ mg/L} + 0.61 \text{ mg/L} + 0.38 \text{ mg/L} + 0.42 \text{ mg/L})/4 = 0.51 \text{ mg/L (this was reported as } <2 \text{ mg/L) } \checkmark$$

$$\text{November's 7-day average} = 0.64 \text{ mg/L (This was reported as } <2 \text{ mg/L) } \checkmark$$

<u>Date</u>	<u>TSS Result</u>
11-2-2011	0.7 mg/L
11-9-2011	0.73 mg/L
11-16-2011	0.3 mg/L
11-22-2011	1.13 mg/L
11-29-2011	0.9 mg/L

Loading:

November's 30-day avg:

$$0.7 \text{ mg/L} \times 8.34 \times 1.47 \text{ mgd} = 8.58 \text{ lbs/day}$$

$$0.73 \text{ mg/L} \times 8.34 \times 1.45 \text{ mgd} = 8.83 \text{ lbs/day}$$

$$0.3 \text{ mg/L} \times 8.34 \times 1.38 \text{ mgd} = 3.45 \text{ lbs/day}$$

$$1.13 \text{ mg/L} \times 8.34 \times 1.43 \text{ mgd} = 13.48 \text{ lbs/day}$$

$$0.9 \text{ mg/L} \times 8.34 \times 1.40 \text{ mgd} = 10.51 \text{ lbs/day}$$

$$\text{Avg: } (8.58 + 8.83 + 3.45 + 13.48 + 10.51)/5 = 8.97 \text{ lbs/day (This was reported as 9.3 lbs/day) } \checkmark$$

November's 7-day avg loading:

$$13.48 \text{ lbs/day (This was reported as 14.4 lbs/day)}$$

Concentration:

$$\text{November's 30-day avg concentration: } (0.7 + 0.73 + 0.3 + 1.13 + 0.9)/5 = 0.75 \text{ mg/L (This was reported as 0.8 mg/L) } \checkmark$$

$$\text{November's 7-day avg concentration: } 1.13 \text{ mg/L (Reported as 1.13 mg/L) } \checkmark$$

<u>Date</u>	<u>BOD Result</u>
5-3-2012	0.94 mg/L
5-9-2012	0.8 mg/L
5-16-2012	0.58 mg/L
5-23-2012	0.72 mg/L
5-30-2012	0.78 mg/L

Loading:

0.94 mg/L x 8.34 x 1.39 mgd = 10.9 lbs/day
0.8 mg/L x 8.34 x 1.42 mgd = 9.47 lbs/day
0.58 mg/L x 8.34 x 1.59 mgd = 7.69 lbs/day
0.72 mg/L x 8.34 x 1.40 mgd = 8.41 lbs/day
0.78 mg/L x 8.34 x 1.64 mgd = 10.67 lbs/day

May 30d Loading: $(10.9 + 9.47 + 7.69 + 8.41 + 10.67)/5 = 9.43$ lbs/day (this was reported as 9.8 lbs/day) ✓

May 7d Loading: 10.9 lbs/day (this was reported as 11.0 lbs/day) ✓

Concentration:

May's 30-day avg concentration:

Avg: $(0.94 + 0.8 + 0.58 + 0.72 + 0.78)/5 = 0.76$ mg/L (this was reported as <2 mg/L) ✓

May's 7-day avg concentration: 0.94 mg/L (this was reported as <2 mg/L) ✓

<u>Date</u>	<u>TSS Result</u>
5-3-2012	0.43 mg/L
5-9-2012	0.3 mg/L
5-16-2012	0.3 mg/L
5-23-2012	0.17 mg/L
5-30-2012	0.23 mg/L

Loading:

0.43 mg/L x 8.34 x 1.39 mgd = 4.98 lbs/day
0.3 mg/L x 8.34 x 1.42 mgd = 3.55 lbs/day
0.3 mg/L x 8.34 x 1.59 mgd = 3.98 lbs/day
0.17 mg/L x 8.34 x 1.4 mgd = 1.98 lbs/day
0.23 mg/L x 8.34 x 1.64 mgd = 3.15 lbs/day

May 30d Loading: $(4.98 + 3.55 + 3.98 + 1.98 + 3.15)/5 = 3.53$ lbs/day (this was reported as 3.7 lbs/day) ✓

May 7d Loading: 4.98 lbs/day (this was reported as 5.0 lbs/day) ✓

Concentration:

May's 30-day avg concentration: $(0.43 + 0.3 + 0.3 + 0.17 + 0.23)/5 = 0.29$ mg/L (this was reported as 0.3 mg/L) ✓

May's 7 day avg concentration: 0.43 mg/L (this was reported as 0.43 mg/L) ✓

NMED/SWQB

Official Photograph Log

Photo # 1

Photographer: Sarah Holcomb	Date: 7-30-2012	Time: 1350 hours
City/County: Ruidoso Downs/Lincoln County		
Location: Ruidoso WWTP		
Subject: One of three new MBR basins at the facility. There is still a lot of grease coming into the plant.		



NMED/SWQB

Official Photograph Log

Photo # 2

Photographer: Sarah Holcomb	Date: 7-30-2012	Time: 1421 hours
City/County: Ruidoso Downs/Lincoln County		
Location: Ruidoso WWTP		
Subject: Final sludge product waiting for hauling offsite for beneficial use.		

