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**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

August 16, 2011

Ms. Ellen Lindsey, Interim City Manager
City of Truth or Consequences
505 Sims St.
Truth or Consequences, NM 87901

Re: Major Municipal, SIC 4952, NPDES Compliance Evaluation Inspection, Truth or Consequences Wastewater Treatment Plant, NM0020681, July 25, 2011

Dear Ms. Lindsey,

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.

Introduction, treatment scheme, and 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 the cooperation extended to the NMED personnel by Jesus Salayandia and Lynn Straughn while at the Truth or Consequences Wastewater Treatment Plant. If you have any questions about this inspection report, please contact me at (505) 222-9587 or sarah.holcomb@state.nm.us.

Sincerely,

Sarah Holcomb
Environmental Scientist/Specialist
NMED Surface Water Quality Bureau

Cc: Marcia Adams, USEPA (6EN-AS) by e-mail
Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
Diana McDonald, USEPA (6EN-WM) by e-mail
Samuel Tate, USEPA (6EN-AS) by e-mail
Larry Giglio, USEPA (6EN-P) by e-mail
Frank Fiore, NMED District 3 Manager (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	2	0	6	8	1	11	12	1	1	0	7	2	5	17	18	C	19	S	20	2
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					69	70	3				71	N	72	N	73									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) TRUTH OR CONSEQUENCES WASTEWATER TREATMENT PLANT, SIERRA COUNTY: FROM I-25, TAKE THE WILLIAMSBURG EXIT (EXIT 75) AND FOLLOW BROADWAY ST. TURN RIGHT ON HYDE AVE., AND RIGHT ON VEATER ST. PLANT ENTRANCE IS ON THE RIGHT.	Entry Time /Date 1045 hours / 7-25-2011	Permit Effective Date 3-1-2009
	Exit Time/Date 1545 hours / 7-25-2011	Permit Expiration Date 2-28-2014
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) MR. JESUS SALAYANDIA, SUPERINTENDENT (575) 894-7331 MS. LYNN STRAUGHN, LAB TECH	Other Facility Data GPS: N. 33° 06.835' W. -107° 16.915' SIC: 4952	
Name, Address of Responsible Official/Title/Phone and Fax Number MS. ELLEN LINDSEY, INTERIM CITY MANAGER 505 SIMS ST., TRUTH OR CONSEQUENCES, NM 87901 (575) 894-6673 x 320	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	U	Flow Measurement	M	Operations & Maintenance	N	CSO/SSO
U	Records/Reports	S	Self-Monitoring Program	S	Sludge Handling/Disposal	N	Pollution Prevention
S	Facility Site Review	N	Compliance Schedules	N	Pretreatment	N	Multimedia
S	Effluent/Receiving Waters	M	Laboratory	N	Storm Water	N	Other:

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

- INSPECTOR ARRIVED AT THE FACILITY AT 1045 HOURS ON JULY 25, 2011. THE INSPECTOR CONDUCTED AN ENTRANCE INTERVIEW WITH MR. JESUS SALAYANDIA, SUPERINTENDENT, WHERE SHE PRESENTED CREDENTIALS AND DISCUSSED THE PURPOSE OF THE INSPECTION.
- PLEASE SEE REPORT FOR FURTHER EXPLANATIONS.
- AN EXIT INTERVIEW TO DISCUSS THE PRELIMINARY FINDINGS OF THE INSPECTION WAS CONDUCTED WITH MS. ELLEN LINDSEY, INTERIM CITY MANAGER, AND MR. SALAYANDIA ON JULY 25, 2011 AT THE CITY'S OFFICES.

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

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 YES)

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?
 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 NO.)

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.
 DETAILS:

S M U NA (FURTHER EXPLANATION ATTACHED YES.)

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED.
 TYPE OF DEVICE 9 INCH PARSHALL FLUME

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.

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

LAB NAME	INTERLAB	SWAT LAB	WILKINS ENVIRONMENTAL
LAB ADDRESS	3655 RESEARCH DR. #108 LAS CRUCES, NM 88003	PGEL BUILDING, WESTSIDE ENTRANCE NMSU, LAS CRUCES, NM 88003	832 NW 67 th ST. OKLAHOMA CITY, OK73116
PARAMETERS PERFORMED	BOD, TSS, COPPER	E. COLI	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 PLEASE SEE PHOTO #2.

SECTION H - SLUDGE DISPOSAL

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

1. SLUDGE MANAGEMENT ADEQUATE TO MAINTAIN EFFLUENT QUALITY. 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: COMPOST - 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

**Compliance Evaluation Inspection
Truth or Consequences Wastewater Treatment Plant
NPDES Permit No. NM0020681
July 25, 2011**

Introduction

On July 25, 2011, Sarah Holcomb of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the Truth or Consequences Wastewater Treatment Plant (WWTP). The Truth or Consequences WWTP has a design flow capacity of 1.06 MGD (million gallons per day) and is classified as a major industrial 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 NM0020681. This permit regulates the WWTP discharge to the Rio Grande in Segment 20.6.4.103 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 irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life, secondary contact, and warmwater aquatic life.

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 1045 hours on July 25, 2011, the inspector conducted an entrance interview with Mr. Jesus Salayandia, Superintendent, where she made introductions, presented credentials and explained the purpose of the inspection. Mr. Salayandia conducted a tour of the facility. An exit interview was conducted with Ms. Ellen Lindsey, Interim City Manager, and Mr. Salayandia at the city offices at approximately 1530 hours on July 25, 2011 to present the preliminary findings of the inspection.

Treatment Scheme

The Truth or Consequences (T or C) WWTP serves the city of Truth or Consequences and the Village of Williamsburg for a total population of approximately 8,000. The WWTP is an extended aeration activated sludge treatment system with chlorine disinfection and dechlorination. Wastewater gravity flows into the facility from seven lift stations and enters the headworks where a mechanical bar screen and backup manual screen are located. Materials collected from the bar screen are stored in a trash can, and then are spread out in one of the facility's sludge beds to dry. Once dry, the material is buried at the landfill. Wastewater passes through the screen where rags and other large debris are removed, flows into a wet well equipped with three 20 HP submersible pumps, and then pumped to a grit separator and removal system. The grit system consists of a cylindrical circulating tank where grit settles out and then passes through a fine mesh screen; grit is collected in a dumpster and remaining liquid from this process is returned to the headworks.

Wastewater from the grit chamber gravity flows into a racetrack type extended aeration basin equipped with three surface power brush rotors that are used for aeration. Scum troughs in the aeration basins collect excess foam that is sent directly to the sludge drying beds. Return Activated Sludge (RAS) from the clarifiers enters the aeration basin at the corner opposite from the grit chamber.

Wastewater exits the aeration basin and gravity flows into a splitter box and is then divided between two parallel secondary clarifiers. The splitter box contains a manual bar screen for additional solids removal before the wastewater enters the clarifiers. New metal rectangular weirs were installed in both clarifiers in 2004 to replace the old deteriorated fiberglass weirs. Waste Activated Sludge (WAS) from the clarifiers is sent to the vacuum drying beds. The clarifiers exhibit signs of age through rust in the outer ring, spalling and cracking concrete in the outer wall structure.

Clarified wastewater enters a chlorine contact chamber that consists of two parallel rectangular concrete basins that receive 30 minutes of contact time in each basin. Disinfection is accomplished with chlorine gas. Both chambers are also equipped with an overhead water sprayer that pushes solids to the far end of the basin for manual removal; this practice helps prevent solids from exiting the chamber. The chlorine contact chamber is cleaned on a weekly basis by draining one basin at a time and pressure washing it while the other basin continues to function. The chlorine chamber is showing its age with cracks on the outside wall of the structure. Disinfected wastewater is dechlorinated with sulfur dioxide gas in a basin following the chlorine chamber. Both gas tanks for chlorine and sulfur dioxide are equipped with an automatic switchover device to ensure there are no lapses in chemical feed. The wastewater flow rate and chemical amounts are not automatically calibrated to maximize efficiency. Instead, rates are set at approximately 20 lbs of chlorine and 15 lbs of sulfur dioxide and this ratio apparently works effectively for the plant. However, the operators may want to consider an automatic feed system based on flow in order to reduce the amount of chemicals used.

Dechlorinated effluent flows through a 9" Parshall flume where flow is measured by an ultrasonic totalizer meter. Effluent is then discharged through Outfall 001 to the Rio Grande. Rip-rap has been installed directly below the outfall pipe to increase aeration and reduce bank erosion. A portion of the effluent is also diverted to an effluent reuse pond for land application on city parks and golf

courses (this discharge is regulated by the NMED Ground Water Quality Bureau under Discharge Permit #1162.) Some area contractors also use the effluent for dust control on construction projects.

Solids Management

WAS from the clarifiers is sent to two vacuum assisted drying beds where a cationic polymer is added and liquid is drawn through the porous blocks that make up the beds. The sludge solids stay on top of the blocks and recovered liquid from this process is returned to the headworks. Sludge is then removed and stockpiled on concrete drying beds and windrowed for further drying. Class A is achieved by meeting the temperature requirements for pathogen reduction (i.e., Alternative 1 in Part IV, Section I.3 of the permit) and the percent solids requirement for vector attraction reduction (i.e., Alternative 7 in Part IV, I.4 of the permit). The Class A material is made available free to the public and applied to city parks.

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 *Unsatisfactory*

The permit requires in Part III.C.2:

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

In EPA's Reporting Requirements Handbook in Part H (issued by Region 6, Revised August 25, 2004), it states:

*Some parameters in the permit are limited in terms of pounds per day (lbs/day). Although all of these parameters are measured initially in milligrams per liter (mg/L), conversion to pounds per day can be achieved by using the following formula. **Always be sure to use the flow measurement determined on the day sampling was done.***

Findings for Recordkeeping and Reporting:

The months of July 2009 and February 2011 were reviewed for data accuracy and completeness during this inspection. Please note that there was a different lab technician at the facility for each month reviewed. In order to be as clear as possible, the following inspection findings for Recordkeeping and Reporting are discussed by month reviewed.

July 2009

Of the **BOD** tests reviewed for this month, none of the tests met the 0.6-1.0 seed correction value required for QA/QC purposes. This resulted in only one test being acceptable for reporting purposes. Because the seed correction value was so low, this indicates that there was not enough bacteria in the sample to create an acceptable oxygen demand. In the tests run on 7-1-09 and 7-29-09, none of the sample bottles depleted enough oxygen (depletion of at least 2.0 mg/L) to meet quality parameters.

On 7-1-2009, the lab personnel did not document completed calculations of the BOD tests, however, there were reported numbers in the DMR worksheet for the month. Although that number is correct, the calculations should be documented on the worksheet.

There were no BOD worksheets for the samples reported on the DMR spreadsheet for 7-8-09 and 7-15-09, therefore, it was not possible for the inspector to double check the work on those dates.

TSS tests saw some of the same issues. There was no TSS bench sheet for the date of 7-8-09, however, there was data reported on the DMR spreadsheet.

On 7-22-09 and 7-29-09, the blank filters that were run for QC purposes were not completely dried. Standard Methods requires that the filters have no more than 0.0002 gm of difference between dryings to be considered completely dry. On these dates, the difference between dryings was 0.0003 gm and 0.0009 gm, respectively.

Fecal coliform paperwork showed similar trends. First of all, the method being run is not documented on the bench sheet. The DMR indicates that the facility was supposed to be running E. coli tests, as per their new permit, however, the bench sheets indicate that a fecal coliform test was still being performed. The lab tech was only running 25 mls of sample per filter, which did not result in the desired 20-80 colonies per plate number. However, the data does not show any attempt by the lab tech to adjust sample volumes in order to be within that range.

Bench sheets show that not all calculations were documented. On 7-1-09 and 7-29-09, the final calculation was not documented on the bench sheet, but was entered into the DMR spreadsheet. Additionally, on 7-29-09, the bench sheet shows that the plates were read to show no colonies, the data was scratched out, and no calculation was run. However, there was a value of 1.204 cfu/100 mls entered into the DMR spreadsheet for that day. Please see Addendum 1 to this report.

Of interest during review of the fecal coliform bench sheets was the fact that chlorine values were consistently reported at high levels -

Date	Chlorine residual (mg/L)
7-1-09	0.52
7-8-09	0.32
7-15-09	0.59
7-20-09	0.58
7-29-09	0.61

Therefore, it draws into question not only the lab tech's thoroughness in documentation and procedures, but also where the sample was being taken for analysis (perhaps prior to the final treatment unit, if chlorine levels were that high.)

A review of the **chlorine** bench sheets for the facility during this month show much different values at the outfall. Please see Addendum 2 to this report.

pH values seemed to be obtained properly from the paperwork, for the most part. On 7-23-09, the sample exceeded the 15 minute holding time before analysis was completed. On 7-10-09, there was no sample and no analysis time, but there was a pH value reported on the DMR spreadsheet for the month.

2011

Just after July 2009, the facility hired a new lab tech, Lynn Straughn. The inspector would like to commend the facility on the hiring of Ms. Straughn, because she has adjusted the lab program so that it is much more reliable and trustworthy than it was in 2009.

Review of the bench sheets for February 2011 shows a much more conscientious approach to documentation and calculation of the results for NPDES purposes.

In the TSS tests run this month, the test on 2-3-11 showed that one of the effluent batches did not meet the preferred marker of obtaining 0.0025 gm of dried material, and the lab technician did not include that filter in the final calculation. Standard Methods does not indicate that a filter should not be included if this happens, so the calculation for that day should be a bit different. The lab obtained a value of 3.5 mg/L for this day and the inspector calculated a value of 3.08 mg/L.

In the BOD test, seed correction values were still low (below 0.6-1.0). The facility is currently using influent for their seed source, and it appears that it may not be strong enough to obtain the required oxygen depletion in the test.

Section C - Operations and Maintenance Evaluation – Overall rating of *Marginal*

The permit requires 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 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.

Findings for Operations and Maintenance:

On the day of this inspection, some plant equipment was down and in the process of being maintained. The grit separator had been down for about a week but facility representatives expected to have it back in operating condition within a day or two of the inspection. A brush aerator was also down, and the facility staff was delayed in repairing the brush because of an old part that was difficult to locate. Facility staff expected to have the brush up and running again within the next couple of days.

The facility is currently operating with three certified operators - one Level IV, one Level III and one Level II. There are two laborers in addition, but the facility representative indicated that two additional Level IIIs were truly needed to operate the plant most effectively. The City is working on hiring one more Level III currently. Because of the lack of staff, it appears that the staff are hard pressed to keep up with the maintenance and operation of the plant. The additional Level III will help the situation; it is strongly recommended that the City hire the additional position as soon as possible.

Section E – Flow Measurement – Overall rating of *Unsatisfactory*

The permit requires 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.

The permit requires 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 rate of less than 10% from true discharge rates throughout the range of expected discharge volumes.

Findings for Flow Measurement:

During the inspection of the facility's flow measurement equipment, the equipment installed appeared to be functioning properly and was well maintained. However, when questioned about calibration of the equipment, the facility representative indicated that calibrations had been done at some point in 2010. EPA strongly recommends that calibrations are performed once per year to ensure that the meter is reading within 10% of the actual flow rate. Permit loading limits are based on flow, so in order to report accurately, it is imperative that flow meters are working properly. The facility representative indicated that a new flow meter and a new totalizer were due to be installed within the next month. Once the new meter and totalizer are installed, the facility must ensure that calibration checks are performed often enough to be sure that flows are reported correctly.

Section F – Laboratory – Overall rating of *Marginal*

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

Findings for Laboratory:

In April 2007, EPA retracted approval for many 40 CFR Part 136 approved methods, many of which were EPA methods for analysis of wastewater. One of those methods that was retracted was the method for TSS, which is commonly referred to as the “shake and pour” method. The replacement method from Standard Methods instead requires that in place of agitation and pouring, that the sample is pipetted into the filter for analysis. For facilities like T or C, this presents a problem due to the available size of pipettes (which are relatively small compared to the sample size) and the associated large volumes of sample that are being analyzed.

Because of the difficulty in running the approved method, this facility is still running the older “shake and pour” method that was previously approved.

Other wise, it appeared from the review during this inspection that the proper methods and QA/QC were being performed in order to assure that the data quality coming from this laboratory was at the highest level possible.

The lab technician indicated that she has not been in lab specific training since she obtained her Level II lab certification. There is a lack of general lab-specific training in New Mexico, but if the opportunity presents itself in the future, it is strongly encouraged that Ms. Straughn be allowed to attend in order to stay up to date on current methodologies and procedures.

Section H – Sludge Disposal – Overall rating of *Satisfactory*

The permit requires in Part IV, Element 1, Section I.B.1:

Sewage sludge shall be tested once during the life of the permit within one year from the effective date of the permit in accordance with the method specified at 40 CFR 268, Appendix I (Toxicity Characteristic Leaching Procedure (TCLP)) or other approved methods. Sludge shall be tested after final treatment prior to leaving the POTW site.

And, the permit requires in Part IV, Element 1, Section I.B.2:

Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the final pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Element 1, Section I.C.

TABLE 1

Pollutant	Ceiling Concentration (mg/KG)
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

And, the permit requires in Part IV, Element 1, Section I.B.3:

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by either the Class A or Class B pathogen requirements. Sewage sludge that is applied to a lawn or home garden shall be treated by the Class A pathogen requirements. Sewage sludge that is sold or given away in a bag shall be treated by Class A pathogen requirements.

Findings for Sewage Sludge:

The inspector received a complaint prior to the inspection at this facility indicating that the sludge practices at the T or C WWTP were less than desirable, and resulted in a vector problem (flies) and the complainant was also concerned about the quality of the sludge being given away for application on city parks and in home gardens.

The inspector reviewed the available data from the TCLP tests and Part 503 metals test, as well as taking a closer look at the material on site. The facility is composting their sludge to meet Class A requirements. The quality of the composted material on site appeared to be very good and the inspector did not note a vector problem on the day of the inspection.

TCLP and 503 metals

Toxicity Characteristic Leaching Procedure				
Test Method: EPA 1311 per Federal Register Vol. 55 No. 123, June 29, 1990, EPA 8270, 8080				
Parameter	HW No.	CAS No	Final Result (ppm)	Quantitation Limit (ppm)
Cresol-Total	D026	Total	<0.01	0.01
1,4-Dichlorobenzene	D027	106-46-7	<0.001	0.001
1,4-Dinitrotoluene	D030	121-14-2	<0.01	0.01
Hexachlorobenzene	D032	118-74-1	<0.001	0.001
Hexachlorobutadiene	D033	87-68-3	<0.001	0 001
Hexachloroethane	D034	67-72-1	<0.001	0.001
Nitrobenzene	D036	98-95-3	<0.001	0.001
Pentachlorophenol	D037	87-86-5	<0.01	0.01
Pyridine	D038	110-86-1	<0.01	0.01
2,4,5-Trichlorophenol	D041	95-95-4	<0.01	0.01
2,4,6-Trichlorophenol	D042	88-06-2	<0.01	0.01
Endrin	D012	72-20-8	<0.0002	0.0002
Lindane	D013	58-89-9	<0.0002	0.0002
Heptachlor & Heptachloride	D031	76-44-8	<0.0002	0.0002
Methoxychlor	D014	72-43-5	<0.0002	0.0002
Chlordane	D020	57-74-9	<0.0002	0.0002
Toxaphene	D015	8001-35-2	<0.0002	0.0002
2,4-D (2,4-Dichlorophenoxy acetic acid)	D016	94-75-7	<0.5	0.5
2,4,5-TP Silvex	D017	93-72-1	<0.5	0.5
Benzene	D018	71-43-2	<0.001	0.001
Carbon Tetrachloride	D019	56-23-5	<0.001	0.001
Chlorobenzene	D021	108-90-7	<0.001	0.001
Chloroform	D022	67-66-3	<0.001	0.001
1,2-Dichloromethane	D028	107-06-2	<0.001	0.001
1,1-Dichloroethylene	D029	75-35-4	<0.001	0.001
Methyl Ethyl Ketone	D035	78-93-3	<0.001	0.001
Tetrachloroethylene	D039	127-18-4	<0.001	0.001
Trichloroethylene	D040	79-01-6	<0.001	0.001
Vinyl Chloride	D043	75-01-4	<0.001	0.001
Arsenic	D004	7440-38-2	0.11	0.02
Barium	D005	7440-39-3	0.19	0.02
Cadmium	D006	7440-43-9	0.03	0.02
Chromium	D007	7440-47-3	<0.02	0.02
Lead	D008	7439-92-1	<0.02	0.02
Mercury	D009	7439-97-6	<0.002	0.002
Selenium	D010	7782-49-2	<0.02	0.02
Silver	D011	7440-22-4	<0.02	0.02

Analyte	Test Method	LOQ	Final Result	Units
PCB-1016	EPA 8082	0.5	<0.5	Mg/kg
PCB-1221	EPA 8082	0.5	<0.5	Mg/kg
PCB-1232	EPA 8082	0.5	<0.5	Mg/kg
PCB-1242	EPA 8082	0.5	<0.5	Mg/kg
PCB-1248	EPA 8082	0.5	<0.5	Mg/kg
PCB-1254	EPA 8082	0.5	<0.5	Mg/kg
PCB-1260	EPA 8082	0.5	<0.5	Mg/kg

Fecal coliform was present in the sample at a result of 48.1 colony forming units/100 mls. The requirement for Class A sludge is that fecal coliform be present at a concentration of <1000 MPN per gram.

NMED/SWQB
Official Photograph Log
Photo # 1

Photographer: Sarah Holcomb	Date: 7-25-2011	Time: 1135 hours
City/County: Truth or Consequences/Sierra County		
Location: T or C WWTP		
Subject: Chlorine contact chamber. Please note the amount of solids contained on the chamber's surface. The inspector had facility staff run a sludge judge in the chamber and found a minimal amount of solids on the bottom.		



NMED/SWQB
Official Photograph Log
Photo # 2

Photographer: Sarah Holcomb	Date: 7-25-2011	Time: 1144 hours
City/County: Truth or Consequences/Sierra County		
Location: T or C WWTP		
Subject: Outfall to the Rio Grande.		



NMED/SWQB
Official Photograph Log
Photo # 3

Photographer: Sarah Holcomb	Date: 7-25-2011	Time: 1159 hours
City/County: Truth or Consequences/Sierra County		
Location: T or C WWTP		
Subject: Composted sludge at the facility.		



City of T or C WWTP Fecal Coliform Data Sheet

Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
5-20	FB	0	1000	date: 5-20	Q= .80	6/100 ml	Petri Dish:6110901T Filters:5432619 Medium:A8133 Pads:72405	TORC Plant new Broth
	25	2		Time: 1035				
	25	1		date: 5-21				
TRH	AB	0		Time: 1025				
			1010	Cl ₂ = .45	log= .803			
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
5-27-09	FB	0	1012	date: 5-27	Q= .80	16/100 ml	Petri Dish:6110901T Filters:5432619 Medium:A8133 Pads:72405	
	25	2		Time: 1055				
	25	5		date: 5-28				
TRH	AB	0		Time: 1010				
			1015	Cl ₂ = .62	log= 1.217			
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
6-3-09	FB	0	1002	date: 6-3	Q= .80	1.162 /100 ml	Petri Dish:6110901T Filters:5432619 Medium:A8133 Pads:72405	
	25	2		Time: 1045				
	25	4		date: 6-4				
TRH	AB	0		Time: 1040				
			1015	Cl ₂ = .42	log= 15.			
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
6-10	FB	0	1005	date: 6-10	Q= .70	17/100 ml	Petri Dish:6110901T Filters:5432619 Medium:A8133 Pads:72405	
	25	2		Time: 1048				
	25	5		date: 6-11				
TRH	AB	0		Time: 1045				
			1030	Cl ₂ = .58	log= 1.236			
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
6/17	FB	0	1007	date: 6/17	Q= .80	27/100 ml	Petri Dish:6110901T Filters:5432619 Medium:A8133 Pads:72405	
	25	5		Time: 1055				
	25	7		date: 6/18				
TRH	AB	0		Time: 1045				
			1012	Cl ₂ = .58	log= 1.435			
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
6/24	FB	0	1000	date: 6/24	Q= .80	23/100 ml	Petri Dish:6110901T Filters:5432619 Medium:A8133 Pads:72405	
	25	4		Time: 1038				
	25	0		date: 6/25				
TRH	AB	0		Time: 1041				
			1010	Cl ₂ = .61	log= 1.363			
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
7/1/09	FB	0	1006	date: 7/1	Q= .80	/100 ml	Petri Dish:6110901T Filters:5432619 Medium:A8133 Pads:72405	
	25	5		Time: 1100				
	25	10		date: 7/7				
TRH	AB	0		Time: 1010				
			1038	Cl ₂ = .52	log=			

City of T or C WWTP Fecal Coliform Data Sheet

Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
7/8/09	PB	0	0955	date: 1030	Q= .80	27/100 ml	Filters: 5432619	
	25	5		Time: 7/8				
	25	7	date: 7/8	Cl ₂ =	log=			
	AB	0	Time: 1025			32		
1080								
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
7/15/09	PB	0	1002	date: 7/15	Q= 70	29/100 ml	Filters: 5432619	0
	25	3		Time: 1045				
	25	5	date: 7/18	Cl ₂ =	log=			
	AB	0	Time: 1045			.59		
1009								
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
7/20	PB	2	1080	date: 7/20	Q= .80	34/100 ml	Filters: 5432619	0
	25	5		Time: 1039				
	25	10	date: 7/21	Cl ₂ =	log=			
	AB	0	Time: 1030			58		
1008								
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
7/29	PB	0	1050	date: 7/29	Q= .80	/100 ml	Filters: 5432619	0
	25	5		Time: 1041				
	25	10	date: 7/30	Cl ₂ =	log=			
	AB	0	Time: 1000			.61		
1015								
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
8-5	PB	0	1005	date: 8/5	Q= .70	14/100 ml	Filters: 5432619	0
	25	5		Time: 1019				
	25	1	date: 8/6	Cl ₂ =	log=			
	AB	0	Time: 1000			.51		
1010								
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
8-12	PB	0	1020	date: 1100	Q= .80	15/100 ml	Filters: 5432619	0
	25	9		Time: 812				
	25	8	date: 1000	Cl ₂ =	log=			
	AB	0	Time: 813			.51		
1049								
Date	Dish	Colony	Collected	In Incubator	Flow	Results	Lot #s	Comments
Sampler/Analyst	Volume	Count	Set Up	Out Incubator	Cl ₂ Res.			
8-17	PB	0	1100	date: 8/17	Q= .80	12/100 ml	Filters: 5432619	0
	25	1		Time: 1120				
	25	4	date: 8/18	Cl ₂ =	log=			
	AB	0	Time: 1110			.56		
1110								

WWTP TRC Worksheet

Preliminary Information:

Facility: City of Truth or Consequences, WWTP

Method: Colorimetric - DPD: Standard Methods, 19th Ed.: 4-45 - 4-46 (as modified by Hach)
Hach Pocket Colorimeter / DR2010 Color Spectrophotometer

Reagents: Hach Permachem reagents: DPD Total Chlorine - 10 ml sample

Sample:

Location: Outfall

Sample Type: Grab

Month: JULY

Year: 2009

Results:

Date	Time Collected	Flow (MGD)	Tanks (mg/l)	Outfall (mg/l)	Time OF Ran	Initial	Notes
7/2/2009	1249	.50	42	.01	1305	JRH	
7/3/2009	1209	.95	0.46	.02	1222	JE	
7/4/2009	1244	1.0	0.41	.02	1250	AE	
7/5/2009	1224	0.95	0.39	.01	1235	AE	
7/6/2009	1300	1.0	.42	.02	1310	JRH	
7/7/2009	1245	.40	.40	.01	1257	JRH	
7/8/2009	1248	.90	.42	.01	1259	JRH	
7/9/2009	1248	.40	.55	.02	1259	JRH	
7/10/2009	1300	.90	.51	.02	1310	JRH	
7/11/2009	1222	0.90	0.46	0.02	1233	JE	
7/12/2009	1242	0.95	0.47	0.02	1248	JE	
7/13/2009	1300	1.0	49	.02	1312	JRH	
7/14/2009	1300	1.0	52	.02	1314	JRH	
7/15/2009	1410	1.0	47	.02	1415	JRH	
7/16/2009	1400	.40	.40	.01	1406	JRH	
7/17/2009	1340	.90	153	.02	1340	JRH	
7/18/2009	1153	.90	152	.02	1201	JE	
7/19/2009	1157	.90	59	.02	1207	JE	
7/20/2009	1130	.80	.48	.01	1140	JRH	
7/21/2009	1400	.80	.44	.02	1430	JRH	
7/22/2009	1410	0.90	.45	.02	1416	JRH	
7/23/2009	1210	.90	.36	.02	1224	AE	
7/24/2009	1200	.90	0.52	0.02	1211	AE	
7/25/2009	1256	1.0	0.30	0.02	1308	AE	
7/26/2009	1222	1.0	0.34	0.02	1230	AE	
7/27/2009	1415	1.0	0.42	.02	1428	JRH	
7/28/2009	1430	8.0	0.40	.02	1450	JRH	
7/29/2009	1445	.90	46	.02	1500	JRH	
7/30/2009	1130	.70	56	.02	1140	JRH	
7/31/2009	1332	1.0	.37	.02	1340	JRH	