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ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau

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RON CURRY
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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

September 30, 2010

Cynthia Nava, Superintendent
Gadsden Independent School District #16
Gadsden Administrative Complex
P.O. Drawer 70
Anthony, New Mexico 88021

RE: Minor-Non-Municipal, SIC 8211, NPDES Compliance Evaluation Inspection, Gadsden Independent School District #16, Waste Water Treatment Facility, NM0028487, Anthony, New Mexico, August 26, 2010

Dear Ms. Nava,

Enclosed, please find a copy of the report for the referenced inspection that the New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) conducted at your facility on behalf of the U.S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas for their review. These inspections are used by USEPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with requirements of the federal Clean Water Act.

Problems noted during this inspection are discussed in the Further Explanations section of the inspection report. You are encouraged to review the inspection report, required to correct any problems noted during the inspection, and to modify your operational and/or administrative procedures, as appropriate. Further, you are encouraged to notify in writing, both the USEPA and NMED regarding modifications and compliance schedules at the addresses below:

Diana McDonald
US Environmental Protection Agency
Allied Bank Tower
Region VI Enforcement Branch (6EN-WM)
1445 Ross Avenue
Dallas, Texas 75202-2733

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

I appreciate the cooperation of Alfredo C. Holguin and Mario Apadoca of your staff during the inspection. If you have any questions about this inspection report, please contact me at 505-827-0418.

Sincerely,

/s/ Erin S. Trujillo

Erin S. Trujillo
Surface Water Quality Bureau

cc: Marcia Gail Adams, USEPA (6EN-AS) by e-mail
Samuel Tates, EPA (6EN-AS) by e-mail
Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
Diana McDonald, USEPA (6EN-WM) by e-mail
Larry Giglio, USEPA (6WQ-PP) by e-mail
Frank Fiore NMED District III Manager by e-mail
Alfredo C. Holguin by e-mail (alholguin@gisd.k12.nm.us)
Richard G. Chavez by e-mail (vgchavez@gisd.k12.nm.us)



Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspec. Type	Inspector	Fac Type
1 N 2 5 3	N M 0 0 2 8 4 8 7	11 12 1 0 0 8 2 6 17	18 C	19 S 20	2
Remarks					
I N D U S T R I A L D O M E S T I C W W T P					
Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved	
67 69	70 2	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) Gadsden Independent School District #16, Middle School, 1301 W. Washington and High School, 6301 Highway 28 Drive, Anthony, NM 88021. Doña Ana County	Entry Time /Date 0833 hours / 08/26/2010	Permit Effective Date July 1, 2008
	Exit Time/Date 1330 hours / 08/26/2010	Permit Expiration Date June 30, 2013
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) -Alfredo C. Holguin / Gadsden ISD, Director, Physical Plant / 575-882-6903 & fax 882-2508 -Mario Apadoca / Gadsden ISD, Building Mechanic, Physical Plant -Richard G. Chavez / Gadsden ISD, Associate Superintendent / 575-882-6215 & fax 882-6239 -Raul Sanchez / Gadsden ISD, WWTF operator / 575-882-6914	Other Facility Data Outfall 001 Latitude 31.999280° N Longitude -106.635388° W	
Name, Address of Responsible Official/Title/Phone and Fax Number Cynthia Nava, Gadsden Administrative Complex, P.O. Drawer 70, Anthony, NM 88021/ Superintendent / 575-882-6203 or 882-6200	SIC 8211	
Contacted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

Section C: Areas Evaluated During Inspection

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

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

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

1. SEE ATTACHED CHECKLIST REPORT WITH FURTHER EXPLANATIONS AND PHOTO LOG.

Name(s) and Signature(s) of Inspector(s) Erin S. Trujillo	Agency/Office/Telephone/Fax NMED/SWQB/505-827-0418	Date 09/30/2010
/s/ Erin S. Trujillo		
Signature of Management QA Reviewer Richard E. Powell	Agency/Office/Phone and Fax Numbers NMED/SWQB/505-827-2798	Date 09/30/2010
/s/ Richard E. Powell		

SECTION A - PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS DETAILS: S M U NA (FURTHER EXPLANATION ATTACHED Yes)

- 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 **See Further Explanations** 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)
Reviewed DMRs submitted since last inspection (April 2008 thru June 2010) and readily available or submitted records for March, April, May and June 2010. All requested copies of chain of custody (COC) forms and commercial laboratory bench sheets had not been retained or provided by the date of this report.

- 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 **Copy of April and June 2010 COC not provided** Y N NA
 - b) NAME OF INDIVIDUAL PERFORMING SAMPLING **Copy of April and June 2010 COC not provided** Y N NA
 - c) ANALYTICAL METHODS AND TECHNIQUES. **pH and TRC method not documented** Y N NA
 - d) RESULTS OF ANALYSES AND CALIBRATIONS. **pH** Y N NA
Copy of laboratory bench sheets not provided.
 - e) DATES AND TIMES OF ANALYSES. **Laboratory reports did not record date and times of analysis** Y N NA
 - f) NAME OF PERSON(S) PERFORMING ANALYSES. **Not identified/documented on laboratory reports** Y N NA
- 3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE. **Not documented for pH or TRC** Y N 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. **Mobile diesel generator at HS WWTP** S M U NA
- 4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE. **Lights alarms at lift stations** S M U NA
- 5. ALL NEEDED TREATMENT UNITS IN SERVICE **Blowers could not be alternated** 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. **Yes – HS WWTP, No – MS WWTP** Y N NA
 STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED. Y N NA
 PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED. Y N NA

SECTION C - OPERATIONS AND MAINTENANCE (CONT'D)

9. HAVE BYPASSES/OVERFLOWS OCCURRED AT THE PLANT OR IN THE COLLECTION SYSTEM IN THE LAST YEAR? Y N NA
 IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED? Y N NA
 HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS? Y N NA
10. HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT? Y N NA
 IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT? Y N NA

SECTION D - SELF-MONITORING

- PERMITTEE SELF-MONITORING MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED Yes).
- DETAILS:
1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT. Y N NA
2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES. Y N NA
3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT. Y N NA
4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT. **Not for E.coli** Y N NA
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT. **Not for E.coli** Y N NA
6. SAMPLE COLLECTION PROCEDURES ADEQUATE **Not documented.** Y N NA
- a) SAMPLES REFRIGERATED DURING COMPOSITING. Y N NA
- b) PROPER PRESERVATION TECHNIQUES USED. **Not documented for E. coli.** Y N NA
- c) CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136.3. **pH exceeded 15 minute holding time** 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? **Not reported per form instructions** 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 **MS WWTP = "Trapezoid" or Modified "V" Notched Weir and HS WWTP = "V" Notched Weir**
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. Y N NA
 RECORDS MAINTAINED OF CALIBRATION PROCEDURES. **Last calibrated on 01/22/2009** Y N NA
 CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE. Y N NA
5. FLOW ENTERING DEVICE WELL DISTRIBUTED ACROSS THE CHANNEL AND FREE OF TURBULENCE. **MS WWTP – no channel** Y N NA
6. HEAD MEASURED AT PROPER LOCATION. **MS WWTP - not documented.** Y N NA
7. FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGE OF FLOW RATES. **Not documented.** Y N NA

SECTION F – LABORATORY

- PERMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED Yes).
- DETAILS: **TRC & pH is to be conducted within 15 minutes of collection (on-site). Did not inspect contract laboratory.**
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. **Not documented for TRC.** S M U NA

4. QUALITY CONTROL PROCEDURES ADEQUATE. **No written procedures** S M U NA

5. DUPLICATE SAMPLES ARE ANALYZED. **TSS (100), pH, E.Coli, TRC, BOD5 (not documented)** % OF THE TIME. Y N NA

6. SPIKED SAMPLES ARE ANALYZED. **Not documented** % OF THE TIME. Y N NA

7. COMMERCIAL LABORATORY USED. Y N NA

LAB NAME **Water Technology Associates, Douglas Roby**
 LAB ADDRESS **3501 Mesilla Hills Drive, Las Cruces, New Mexico 88005, 575-524-2056**
 PARAMETERS PERFORMED **BOD, TSS, E.coli bacteria (pH was not in accordance 40 CFR 136.3 Holding Times)**

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
01A	None	None	None	None	None	Clear	None
01B	None	None	None	None	None	Clear	None
001	None	None	None	None	None	Clear	None

RECEIVING WATER OBSERVATIONS: **See further explanations for reported pH excursions and E.coli bacteria exceedances. Rio Grande was turbid on day of inspection.**

SECTION H - SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED No).

DETAILS: **Biosolids removed by liquid waste septic hauler to South Central Regional WWTF**

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: **NA** (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

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Further Explanations

Introduction

On August 26, 2010, Erin Trujillo, New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the Gadsden Independent School District (ISD) #16 Waste Water Treatment Facility in Anthony, Doña Ana County, New Mexico. Gadsden ISD's facility, consisting of two separate treatment plants with one at the High School and one at the Middle School, has a design flow capacity of 0.09 MGD (million gallons per day) and is classified as a minor 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 NM0028487 which regulates discharge of wastewater from Outfall 001 to the Rio Grande (*Segment 20.6.4.101 State of New Mexico Standards for Interstate and Intrastate Surface Waters, New Mexico Administrative Code (NMAC)*).

The NMED performs a certain number of CEIs each year for the U.S. Environmental Protection Agency (USEPA), Region VI. The purpose of this inspection is to provide the USEPA with information to evaluate the Permittee's compliance with the NPDES permit. This inspection report is based on information provided by the Permittee's representatives, observations made by the NMED inspectors, and records and reports kept by the Permittee and/or NMED.

The inspector arrived at the facility's physical plant offices in Anthony, New Mexico at approximately 0833 hours on the day of the inspection, made introductions and explained the purpose of the inspection to the physical plant office staff who contacted Mr. Alfredo C. Holguin, Director, Physical Plant, Gadsden ISD. The inspector also contacted the Gadsden ISD superintendent's office to inform Ms. Cynthia Nava of the inspection. Upon Mr. Holguin's arrival, the inspector made introductions, explained the purpose of the inspection and presented credentials. The inspector toured the facilities with Mr. Holguin and Mr. Mario Apadoca, Building Mechanic, Physical Plant, Gadsden ISD. Following the tour, a preliminary exit interview was conducted with Mr. Holguin and Mr. Richard G. Chavez, Gadsden ISD, Associate Superintendent on site. The inspection ended at 1330 hours on August 26, 2010. Additional information was obtained by telephone from Mr. Raul Sanchez, GSD ISD WWTF operator on September 1, 2010.

Treatment Scheme

Middle School

The Middle School Waste Water Treatment Plant (WWTP), oldest of the two treatment plants at this facility, was constructed in the 1970's. Recent work completed in December of 2009 at this plant included refurbishing the main lift station with submersible pumps, relining (re-coating) basins, and upgrading and replacing aeration pipes and diffusers.

Raw wastewater from the Middle School (approximately 1,000 students and faculty), cafeteria, supporting ISD buildings, on-site caretaker residence, and vehicle maintenance shop floor drains where fleet vehicles are washed with detergents enters the plant via a lift station east of the aeration basin. Both the Middle School cafeteria and ISD physical plant vehicle wash bays have grease traps before the lift station. The lift station is located in a covered building which pumps wastewater from a wet well to the aeration basin. A light alarm at the lift station is visible from the on-site caretaker residence.

Lifted wastewater then enters the treatment plant through a screening basket. Screenings are placed in buckets and allowed to dry for final disposal at a municipal solid waste landfill in Sunland Park, New Mexico. After being screened, the wastewater enters a rectangular, baffled aeration basin. Wastewater

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then flows to the clarifier unit. Return Activated Sludge (RAS) from the secondary clarifier enters the aeration basin near the head of the aeration basin. Air is provided through aerators by two blowers. The blowers provide the lift needed to continuously remove RAS to the aeration basin. On the day of the inspection, only one of the two blowers was working. On-site permittee representatives stated that the blowers could not be alternated.

Floating material is removed manually from the clarifier. Flow leaving the clarifier then enters the chlorine contact chamber. Chlorination is provided by the chlorine (Calcium hypochlorite) pellet tube unit as the flow enters the chamber. Flow is measured leaving the chlorine contact chamber. As flow exits the chlorine contact chamber, it passes over a notched weir. The notch in the flow measurement weir did not appear "V"-shaped, but modified or worn down to a trapezoid. There was no channel box before the weir. The ultrasonic transducer is mounted to the side (not directly upstream) of the weir in the chlorine contact chamber. The automatic ISCO 4210 Ultrasonic Flow Meter readout mounted in the lift station stopped recording flow measurements approximately 3 weeks prior to the day of the inspection according to the permittee representatives.

After the weir, flow enters a pipe with a de-chlorination (Sodium sulfite) pellet tube unit. Piped effluent (Outfall 01A inside the facility) enters an open vertical concrete pipe then mixes with the effluent flow from the High School WWTP before discharging to the Rio Grande at Outfall 001. Some exhibits submitted with the permit applications incorrectly show the location of the outfall. Outfall 001 is located on the bank of the Rio Grande beneath the southeast corner of Washington Street bridge.

High School

The High School WWTP was constructed in 1993 to accommodate increased flow at this facility. The design flow at this treatment plant is 55,000 gallons per year. The collection system includes 3 lift stations with alarm lights. Raw wastewater from the High School (approximately 2,070 students and faculty), cafeteria, vehicle shop, biology lab, chemical lab, and an on-site caretaker residence enters the plant via a lift station and passes through a static screen for solids removal. Similar to the Middle School WWTP, screenings are placed in buckets and allowed to dry for final disposal at municipal solid waste landfill in Sunland Park, New Mexico.

After the lift stations and screen, wastewater then enters an aeration basin. Aeration is provided by two blowers. The blowers provide lift for the RAS to be moved on a continuous basis back to the aeration basin. A diesel generator mounted on a trailer is located at the High School WWTP. Gadsden ISD has a contract for preventative maintenance and exercises the generator once each quarter.

Flow from the aeration basin enters a rectangular clarifier basin. Flow is measured after the clarifier before the chlorine contact chamber using a V-notch weir and ultrasonic transducer device. The weir is located in an open channel box and the transducer is located upstream of the weir. On the day of the inspection, solids had accumulated in the weir box. An automatic ISCO 4210 Ultrasonic Flow Meter was mounted in the pump and blower control room and displayed instantaneous flow rate, time, totalized flow and head measurement. The printed flow measurement readouts recorded a totalized daily interval (0800 to 0800 hours) flow volume; and average, max and min flow rate and head. Print outs were stapled together and filed with the laboratory reports for this facility.

After measurement, flow passes through a chlorine pellet tube unit and then drops into a wet well. The chlorine contact chamber acts also as a lift station to pump treated effluent to the outfall line at the Middle School WWTP. Effluent is pumped in batches through a pipe to the Middle School WWTP. De-chlorination (Sodium sulfite) is accomplished when the effluent reaches the Middle School WWTP through a pellet unit. After de-chlorination, effluent (Outfall 01B inside the facility) enters the previously

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discussed open vertical concrete pipe then mixes with the effluent flow from the Middle School WWTP before discharging to the Rio Grande at Outfall 001.

Sludge Management

Biosolids produced at the treatment plants are pumped out of the clarifiers on a monthly basis and transported by a contracted septic tank and cesspool service to the Doña Ana County South Central Regional WWTF.

Section A - Permit Verification - Overall Rating of "S = Satisfactory"

The number and location of discharge points is as described in the permit. In considering unsatisfactory flow measurement and sample collection monitoring findings discussed below, the Permittee may want to consider contacting the USEPA to request a permit modification. It appears that measuring and monitoring only the discharge from Outfall 01A and Outfall 01B may be sufficient to comply with provisions of the Clean Water Act. However, additional sample collection and analyses of E.coli bacteria, pH and TRC for both Outfall 01A and Outfall 01B would be needed.

Section C - Operations and Maintenance – Overall Rating of "U = Unsatisfactory"

Permit Requirements for Operations and Maintenance

Part II.D (Pollution Prevention Requirements) of the permit states:

The permittee shall continue a program directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

- a. The influent loadings, flow and design capacity;*
- b. The effluent quality and plant performance;*
- c. The age and expected life of the wastewater treatment facility;s equipment;*
- d. Bypasses and overflows of the tributary sewerage system and treatment works;*
- e. New developments at the facility;*
- f. Operator certification and training plans and status;*
- g. The financial status of the facility;*
- h. Preventative maintenance programs and equipment conditions and;*
- i. An overall evaluation of conditions at the facility.*

Part III.B.3 (Standard Conditions, Proper Operation and Maintenance) of the permit states:

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. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

b. The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

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Findings for Operation and Maintenance

Neither plant of the facility has adequate operating staff or back up in case of leave. State of New Mexico Regulations for Wastewater and Water Supply Facilities, Utility Operator Certification, 20.7.4.13.A NMAC requires public wastewater facilities using physical and chemical treatment processes with populations between 501 to 5,000 to have an operator with a level 3 wastewater (WW3) certification. As of April 2010, the facility has had only one WW3 operator for both plants.

Improvements to the Middle School WWTP had been made since the last inspection, but additional maintenance or work on the blowers was needed. The epoxy bubbling at the High School WWTP chlorine contact chamber and leaking beneath the chlorine tablet tube feeder discussed in the previous NMED SWQB CEI report had still not been fixed on the day of the inspection.

Written SOPs had not been prepared. The facility had daily maintenance and process control sheets. But, there were no written SOPs, including no readily available written procedures for emergency treatment, or spill response and reporting. Up to date O&M manuals and written SOPs for both plants can be valuable tools to train new staff or during emergencies. Although some aspects of the facility's written 2004 Pollution Prevention Plan were outdated, the plan had procedure recommendations that may still be applicable in optimizing the efficiency and extending the useful life of the facility.

The facility also did not have written quality control/quality assurance procedures or copies of analytical methods for pH and TRC monitoring (see further explanations below).

Section B - Recordkeeping and Reporting Evaluation – Overall Rating of “U = Unsatisfactory”,
Section D - Self-Monitoring – Overall Rating of “U = Unsatisfactory”,
Section E - Flow Measurement – Overall Rating of “U = Unsatisfactory”,
Section F - Laboratory – Overall Rating of “U = Unsatisfactory”, and
Section G - Effluent/Receiving Waters – Overall Rating of “U = Unsatisfactory”

Permit Requirements for Recordkeeping and Reporting; Self-Monitoring; Flow Measurement; Laboratory; and Effluent/Receiving Waters

Part I.A.1 (Effluent Limitations and Monitoring Requirements, Outfall 001) of the permit requires pH, TRC and E.coli bacteria effluent monitoring at a frequency of once/month and grab sample type representative of final effluent prior to the discharge into the receiving stream.

Part I.A.1 (Outfall 001) of the permit requires flow measurement at a frequency daily and instantaneous sample type. Monthly average and daily maximum are to be reported on DMRs. Part I.A.2 (Outfalls 01A and 01B) of the permit requires flow measurement at a frequency daily and estimate sample type.

Part III.C.2 (Standard Conditions, Representative Sampling) of the permit states:

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

Part III.C.4 (Standard Conditions, Record Contents) of the permit states:

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;

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- 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.*

Part III.C.5 (Standard Conditions, Monitoring Procedures) of the permit requires:

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 of all required analytical results shall be maintained by the permittee or designated commercial laboratory. c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

Part III, Section C.6 of the permit states:

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.

Part III.D.4 (Standard Conditions, Discharge Monitoring Reports and Other Reports) of the permit states:

Monitoring results must be reported on Discharge Monitoring Report (DMR) Form EPA No. 3320-1 in accordance with the "General Instructions" provided on the form.

Part III.D.6 (Averaging Of Measurements) of the permit states:

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

Findings for Recordkeeping and Reporting; Self-Monitoring; Flow Measurement; Laboratory and Effluent/Receiving Waters

Sample Collection

Grab samples as required by the permit were not obtained for pH, TRC and E.coli bacteria effluent monitoring for Outfall 001. Based on information from the permittee representative, samples were collected for monitoring pH, TRC and E.coli bacteria when both Outfall 01A and Outfall 01B discharge. The operator adjusts similar flow rates for Outfalls 01A and 01B, then a composite sample is made from discharge from the two outfalls inside the facility--half from Outfall 01A and half from Outfall 01B. In addition to being composite samples, flow adjustments for sampling purposes may not be representative of the end of pipe discharge from Outfall 001.

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pH

April and December 2009 DMRs report that pH was 6.1 and 6.48 standard units, respectively, outside (below the minimum) permitted effluent concentration range of 6.6 to 9 standard units.

Based on reviewed laboratory reports and chain of custody form, pH results reported on DMRs did not conform to sample holding times in 40 CFR 136.3, in this case within 15 minutes of sample collection. As expected, the reviewed chain of custody form indicates that the time to transport samples from the facility to a commercial laboratory in Las Cruces exceeds 15 minutes. Additional on-site pH analyses had been conducted—mostly at Outfalls 01A and 01B. But, it was not documented if any of this additional monitoring would have been representative of effluent from Outfall 001 since the exact place of sampling was not always recorded. Also, the analytical method was not recorded to verify that results were valid for effluent monitoring and reporting purposes. Sample holding times of the additional analyses, in this case within 15 minutes of sample collection, did not always conform to 40 CFR 136.3 (e.g., March 3, 2010).

It was also noted that completed pH worksheets would not meet permit requirements for reporting purposes. Analytical methods used and information on calibration buffer expiration dates and buffer clarity was missing from the pH worksheets. Quality control/quality assurance duplicate analyses for pH was not documented in the reviewed records. Ten percent of the samples should be duplicated.

TRC

Based on reviewed daily maintenance and process control sheets with chlorine monitoring information, chlorine monitoring and analyses had been conducted in March, April and May of 2010, but the monitoring was not representative of effluent from Outfall 001 as previously discussed. No records were provided for TRC monitoring in June 2010.

It was also noted that the record keeping for TRC monitoring would not meet permit requirements. The facility record keeping sheets did not include the exact place of sampling and analytical method. The time of both sampling and analyses would be needed to verify that sample holding times, in this case within 15 minutes of sample collection, conform to 40 CFR 136.3. Part I.A of the permit states that the Outfall 001 TRC effluent limit is 19 micrograms per liter ($\mu\text{g/L}$) or 0.019 milligrams per liter (mg/L). Part II.A of this permit states, *“If any individual analytical test result is less than the minimum quantification level listed...a value of zero (0) may be used for that individual result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.”* The listed MQL for TRC in the permit is 100 ($\mu\text{g/L}$). Recorded TRC test result units and detection limits would be needed to support reporting a value of “zero” on DMRs. Quality control/quality assurance practices, including periodic duplicates and spikes, will also be needed. Ten percent of the samples should be duplicated. On the day of the inspection, only expired DPD Total Chlorine Reagent was observed at the facility. Documentation of reagent expiration dates on bench sheets or other record keeping would be needed.

E.coli Bacteria

The facility did not monitor bacteria as required starting the permit effective date on July 1, 2008. Fecal Coliform bacteria results were incorrectly reported as E.coli results on revised July thru December 2008 DMRs. After December 2008, E.coli bacteria daily max effluent limit of 410 colony forming units (CFU)/100 mL was exceeded in May 2009 (2,200 CFU/100 ml) and April 2010 (845 cfu/100 ml).

On the May 2009, December 2009 and April 2010 DMRs, E.coli monitoring was performed more often than required by the permit. But, the actual frequency of analysis (e.g., 02/30 in April of 2010) was not reported on the DMRs per the instructions on the form. Also, the E.coli Daily Max was not reported in the

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correct box on the May 2009 DMR. A calculated 30-Day Geometric Average was not correctly reported on the April 2010 DMR. The calculated monthly geometric average of the E.coli bacteria monitoring results in April 2010 (845 CFU/100 ml and 72 CFU/100 ml) is 247 CFU/100 ml. This calculated average exceeds the 30-Day Geometric Average effluent limit of 126 CFU/100 ml. The minimum result (72 CFU/100 ml) was incorrectly reported as the 30-day geometric average.

Work order logs and the reviewed chain of custody form indicate that samples transported to the commercial laboratory were iced. But, de-chlorination preservation of bacteria samples described in 40 CFR 136.3 (0.0008% sodium thiosulfate) was not documented.

Flow Measurement

The facility has neither a device nor record keeping to obtain an instantaneous measurement representative of flow for Outfall 001. The facility's reported flow measurement for Outfall 001 is not from instantaneous readings, but a combined average daily flow for the month for Outfalls 01A and 01B. A daily maximum flow measurement for Outfall 001 required by the permit is not reported on DMRs.

Neither flow measurement devices had been calibrated in over a year. **Inadequate flow calibration frequency is a Repeat Finding.** As discussed above, flow measurement devices at the Middle School WWTP did not appear properly installed and the secondary flow meter was down. A complete flow measurement system inspection, repair and calibration was needed. A check that correct flow measurement tables for the weir notch are used needs to be documented in the calibration report. Accumulated solids in the High School WWTP weir may alter the stable hydraulic conditions required for accurate discharge measurement. Weir box surfaces should be wiped down to remove slimes or other coatings and solids removed periodically.

Complete copies of requested daily flow measurement records (print outs for Outfalls 01A and 01B) were not received by the date of this report to check flow measurement estimates for Outfalls 01A and 01B reporting. The permit does not specify flow measurement reporting requirements for Outfalls 01A and 01B. But, an estimated daily flow on the day of sample collection is needed to calculate BOD5 and TSS loading (see further explanations below).

TSS and BOD5

Calculated TSS 30 DA AVG and 7 DA AVG were not correctly reported on the April and May DMRs. For example, two samples (sample and duplicate) were collected on April 15, 2010 for TSS monitoring from Outfall 01A and the results were 8.4 mg/L and 9.0 mg/L, respectively. On the April 2010 DMR, 8.4 mg/L was incorrectly reported as the 30 DA AVG and 9.0 mg/L was reported as the 7 DA AVG. The arithmetic mean (both the 30 DA AVG and the 7 DA AVG) is 8.7 mg/L.

Actual frequency of analysis for TSS reporting purposes is also not reported correctly on DMRs. For example, the actual frequency of analysis for TSS was 02/30 in April 2010 and 02/31 in May of 2010.

Laboratory reports for both TSS and BOD5 refer to Standard Methods 21st Edition, but this edition is not approved in 40 CFR 136.3 as of the date of this inspection report.

It appears that monthly average flow is incorrectly used to calculate BOD5 and TSS mass loading for reporting purposes. **This is a Repeat Finding.**

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Frequency of Analysis

As discussed above, the actual frequency of analysis for additional monitoring was not reported correctly on DMRs. Also, the actual days of the month were incorrectly reported on DMRs. For example, once/month frequency for 31 days in May was incorrectly reported as 1/30 instead of 01/31.

DMR Signature Authorization

NMED SWQB files do not contain a copy of a written authorization submitted to the USEPA authorizing Efren Yturralde, Deputy Superintendent to sign DMRs for Cynthia Nava, Superintendent (Part III.D.11 of the permit). Mr. Yturralde signed the July, August and September 2008; October, November, and December of 2008 and October, November, and December 2009 DMRs for Ms. Nava. On-site permittee representatives did not know if the deputy superintendent could sign DMRs as a principal executive officer under the Gadsden ISD board rules. If the deputy superintendent is not a principal executive officer, then signature authorization is needed. An example signature authorization letter from USEPA Region 6 DMR guidance was provided to on-site permittee representatives. If a principal executive officer, then the DMR forms are to be completed with the deputy superintendent name/title when signing per instructions on the form.

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**NMED/SWQB
 Official Photograph Log
 Photo # 1**

Photographer: Erin S. Trujillo	Date: 08/26/2010	Time: 0940 hours
City/County: Anthony / Doña Ana		State: New Mexico
Location: Gadsden Independent School District #16 WWTF		
Subject: MS WWTP "Trapezoid" Weir		



**NMED/SWQB
 Official Photograph Log
 Photo # 2**

Photographer: Erin S. Trujillo	Date: 08/26/2010	Time: 0941 hours
City/County: Anthony / Doña Ana		State: New Mexico
Location: Gadsden ISD (Middle School)		
Subject: MS WWTP flow measurement transducer located off to the side in the basin. Brightness of the photo has been increased for this report.		



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**NMED/SWQB
 Official Photograph Log
 Photo # 3**

Photographer: Erin S. Trujillo	Date: 08/26/2010	Time: 0951 hours
City/County: Anthony / Doña Ana		State: New Mexico
Location: Gadsden ISD		
Subject: Looking into vertical concrete pipe at treated effluent from MS WWTP and HS WWTP		



**NMED/SWQB
 Official Photograph Log
 Photo # 4**

Photographer: Erin S. Trujillo	Date: 08/26/2010	Time: 1055 hours
City/County: Anthony / Doña Ana		State: New Mexico
Location: Gadsden ISD		
Subject: HS WWTP open channel weir. Solids had settled in base of weir channel box below transducer, accumulated on sides of channel box, and in notch.		

