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NEW MEXICO
ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau

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BUTCH TONGATE
Deputy Secretary

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

Certified Mail - Return Receipt Requested

June 4, 2012

Joshua W. Ray, City Manager
City of Aztec
201 West Chaco
Aztec, New Mexico 87410

Re: **Minor Industrial; SIC 4941; NPDES Compliance Evaluation Inspection; City of Aztec
Water Treatment Plant; NM0028762; May 24, 2012**

Dear Mr. Ray,

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. The main problems were found in the area Record Keeping & Reporting, Operations & Maintenance, and Effluent/Receiving Waters. 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, Region VI
Enforcement Branch (6EN-WM)
Allied Bank Tower
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

If you have any questions about this inspection report, please contact me at (505) 827-2575 or daniel.valenta@state.nm.us.

Sincerely,

/s/Daniel Valenta

Daniel Valenta
Environmental Scientist/Specialist
Surface Water Quality Bureau

Cc: Marcia Gail Adams, USEPA (6EN-AS) by e-mail
Samuel Tate, USEPA (6EN-AS) by e-mail
Carol Peters, USEPA (6EN-WM) by e-mail
Diana McDonald, USEPA (6EN-WM) by e-mail
Larry Giglio, USEPA (6WQ-PP) by e-mail
Hannah Branning, USEPA (6EN-WC) by e-mail
NMED District II by e-mail



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

NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code			NPDES										yr/mo/day					Inspec. Type		Inspector			Fac Type					
1	N	2	5	3	N	M	0	0	2	8	7	6	2	11	12	1	2	0	5	2	4	17	18	C	19	S	20	2
Remarks																												
W A T E R T R E A T M E N T P L A N T																												
Inspection Work Days						Facility Evaluation Rating						BI		QA		-----Reserved-----												
67						70						71		72		73 74 75 80												

Section B: Facility Data

Name and Location of Facility Inspected <i>(For industrial users discharging to POTW, also include POTW name and NPDES permit number)</i>		Entry Time /Date		Permit Effective Date	
City of Aztec, Water Treatment Plant, Navajo Dam Rd. Aztec NM 87410		0903/May 24, 2012		October 1, 2009	
Travel one mile north of NM 516 and US 550 intersection in Aztec, NM, turn right on NM 173 (Navajo Dam Road), travel 1/10 mile. Facility on left. San Juan County		Exit Time/Date		Permit Expiration Date	
		1320/May 24, 2012		September 30, 2014	
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)				Other Facility Data	
Mr. Andrew Galloway/Water and Wastewater Supervisor/505-334-7612/fax 505-334-6776/cell 505-793-0241				LAT 36.83611 N	
Name, Address of Responsible Official/Title/Phone and Fax Number				LONG -107.97722 W	
Mr. Joshua W. Ray, City of Aztec, 201 West Chaco, Aztec, New Mexico 87410/City Manager/ 505-334-7606/fax 505-334-7609				SIC 4941	
				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	S	Flow Measurement	S	Operations & Maintenance	N	CSO/SSO
M	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	S	Laboratory	N	Storm Water	N	Other:

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

1. SEE REPORT AND FURTHER EXPLANATIONS.

Name(s) and Signature(s) of Inspector(s)		Agency/Office/Telephone/Fax		Date	
DANIEL VALENTA /s/Daniel Valenta		NMED/SWQB 505-827-2575		6/4/2012	
Signature of Management QA Reviewer		Agency/Office/Phone and Fax Numbers		Date	
RICHARD E. POWELL /s/Richard Powell		NMED/SWQB 505-827-0418		6/4/2012	

SECTION A - PERMIT VERIFICATION

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

1. CORRECT NAME AND MAILING ADDRESS OF PERMITTEE Y N NA
2. NOTIFICATION GIVEN TO EPA/STATE OF NEW DIFFERENT OR INCREASED DISCHARGES Y N NA
3. NUMBER AND LOCATION OF DISCHARGE POINTS AS DESCRIBED IN PERMIT Y N NA
4. ALL DISCHARGES ARE PERMITTED Y N NA

SECTION B - RECORDKEEPING AND REPORTING EVALUATION

RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT. S M U NA (FURTHER EXPLANATION ATTACHED Yes.)
 DETAILS:

1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRs. Y N NA
2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE. S M U NA
- a) DATES, TIME(S) AND LOCATION(S) OF SAMPLING Y N NA
- b) NAME OF INDIVIDUAL PERFORMING SAMPLING Y N NA
- c) ANALYTICAL METHODS AND TECHNIQUES. **EPA Method on pH calibration sheet has been withdrawn.
Repeat finding of 2010 inspection.** Y N NA
- d) RESULTS OF ANALYSES AND CALIBRATIONS. Y N NA
- e) DATES AND TIMES OF ANALYSES. **Date and time of analyses for TSS missing, repeat finding of 2010 inspection.** Y N NA
- f) NAME OF PERSON(S) PERFORMING ANALYSES. **Repeat finding of the 2010 inspection.** 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
TRC loading calculations are in error.

SECTION C - OPERATIONS AND MAINTENANCE

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED. S M U NA (FURTHER EXPLANATION ATTACHED (NO))
 DETAILS:

1. TREATMENT UNITS PROPERLY OPERATED. S M U NA
2. TREATMENT UNITS PROPERLY MAINTAINED. **Settling (backwash) pond is only treatment unit.** S M U NA
3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED. **No backup power in place. Inlet flow can be closed coming from storage lagoons.** S M U N
4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE. **Light flashes if system power fails.** S M U NA
5. ALL NEEDED TREATMENT UNITS IN SERVICE. S M U NA
6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED. **6 level four operators.** S M U NA
7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED. S M U N
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. S M U NA (FURTHER EXPLANATION ATTACHED No.)
 DETAILS: **No TDS sample data for the second quarter of 2011 due to incorrect information on lab submission form.**

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 No.)
 DETAILS:

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED.

Y N NA

TYPE OF DEVICE **Acoustic measurements taken on inlet flows, permit require estimates only.**

2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED.

Y N NA

3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED

Y N NA

4. CALIBRATION FREQUENCY ADEQUATE. (DATE OF LAST CALIBRATION _____)

Y N NA

RECORDS MAINTAINED OF CALIBRATION PROCEDURES.

Y N NA

CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE.

Y N NA

5. FLOW ENTERING DEVICE WELL DISTRIBUTED ACROSS THE CHANNEL AND FREE OF TURBULENCE.

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 No.)
 DETAILS:

1. EPA APPROVED ANALYTICAL PROCEDURES USED (40 CFR 136.3 FOR LIQUIDS, 503.8(b) FOR SLUDGES)

Y N NA

SECTION F - LABORATORY (CONT'D)

- 2. IF ALTERNATIVE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED Y N NA
- 3. SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT. S M U NA
- 4. QUALITY CONTROL PROCEDURES ADEQUATE. S M U NA
- 5. DUPLICATE SAMPLES ARE ANALYZED. 0 % OF THE TIME. **No duplicate samples taken. Repeat finding of the 2010 inspection.** Y N NA
- 6. SPIKED SAMPLES ARE ANALYZED. % OF THE TIME. Y N NA
- 7. COMMERCIAL LABORATORY USED. Y N NA

LAB NAME San Juan Health Dept. - Laboratory Hall Environmental Analysis Lab.
 LAB ADDRESS 281 Sawyer Dr., P.O. Box 140, Durango, CO 81303 4901 Hawkins NE
Durango, CO 81303 Albuquerque, NM 87109
 PARAMETERS PERFORMED TSS, TDS ALUMINUM TEST

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	NO	NO	Cloudy	NO	NO	NO	NO

RECEIVING WATER OBSERVATIONS:

SECTION H - SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED no.).
 DETAILS: **Accumulated solids in settling pond are removed when needed and stored on site.**

- 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: (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
Aztec Water Treatment Facility
NPDES Permit No. NM0028762
March 24, 2012**

Further Explanations

Introduction

On May 24, 2012 Daniel Valenta of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the City of Aztec Water Treatment Plant (WTP) located on New Mexico State Highway (NM) 173 (Navajo Dam Drive) in Aztec, San Juan County, New Mexico. The City of Aztec WTP 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 NM0028762 which regulates discharge of backwash water to the Lower Animas Ditch, thence to the Animas River in Segment 20.6.4.403 *State of New Mexico Standards for Interstate and Intrastate Surface Waters, 20.6.4 New Mexico Administrative Code (NMAC)*, thence to the San Juan River of the San Juan Basin.

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. Upon arrival at the City of Aztec WTP at approximately 0903 hours on May 24, 2012 the inspector presented credentials to Mr. Mike Huber, Public Works Director, City of Aztec, explained the purpose of the inspection, and toured the facility with Mr. Andrew Galloway, Plant Superintendent. Following the inspection, an exit interview to discuss preliminary findings was conducted with Mr. Galloway at the facility. The City Manager was invited for the exit interview on the day of the inspection, but was unavailable to attend. The inspector left the facility at approximately 1320 hours on May 24, 2012.

Treatment Scheme

City of Aztec's WTP is four plants, operated separately, at the same location using a combination of coagulation, flocculation, and various media filters, including anthracite coal, plastic pellets, and garnet and silica sand, depending upon the plant. There are two older plants constructed during the 1940s and 1950s (Plants #1 and #2), and two plants constructed in the late 1990s (Plants #3 and #4). All four plants are used year round. The intake water source for all four plants is the Animas River. Intake water is treated with aluminum sulfate and a non-ionic polyacrylamide polymer (coagulation and flocculation depending upon the plant), clarification, and filtering prior to disinfection and then distribution. Two of the four plants (#3 and #4) go through a flush cycle with raw water approximately every four to five hours. Filter backwash using potable water occurs from once per day to once every three to four days depending on the plant and the time of year.

Backwash and system flush flows through the WTP's sump system to an on-site settling pond (called "backwash pond" by the plant operators), with an outlet to an open ditch, then thru a driveway culvert, then thru a pipe to an open channel to the Lower Animas Ditch. Samples are collected by plant operators prior to discharge at the entrance to the pipe leading to the open channel to the Lower Animas Ditch.

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Solids are removed from the settling pond once every year, stacked on the sides, and stockpiled adjacent to the pond to dry. The sediment stockpile is tested (Toxicity Characteristic Leaching Procedure), and depending upon test results, the sediment is either sent to Bondad Landfill/WCA in Durango, Colorado or provided to the public.

Further Explanations

Section B-Recordkeeping & Reporting Evaluation-Overall Rating of “Marginal”

Permit Requirements – for Recordkeeping and Reporting Evaluation: Part I.A.1 of permit #NM0028762 requires:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Standard Units					
POLLUTANT	STORET CODE	MINIMUM		MAXIMUM		MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.6		9.0		1/Week (*1)	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		lbs/day, unless noted		mg/l, unless noted			
POLLUTANT	STORET CODE	MONTHLY AVG	DAILY MAX	MONTHLY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	***	***	2/Week (*1)	Estimate (*2)
Total Suspended Solids	00530	Report	Report	20	30	1/Week (*1)	Grab
Total Residual Chlorine	50060	Report	Report	N/A	19 ug/l	1/Day (*1)	Grab
Aluminum, Dissolved	01106	Report	Report	Report	Report	1/Quarter (*1)	Grab
Total Dissolved Solids	70295	Report	Report	Report	Report	1/Quarter (*1)	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE MONITORING		MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY (48-Hour Static Renewal) (*3)		30-DAY AVG MINIMUM	7-DAY MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex		Report	Report	Once/Term (*4)	24-Hr Composite
Pimephales promelas		Report	Report	Once/Term (*4)	24-Hr Composite

A review of analytical results for April 2011 was conducted after the inspection using records maintained by the permittee for outfall 001. The permit limits are set based on the facilities 0.551 MGD discharge flow. TSS/Al/TRC lab sample results were reviewed for April 2011.

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DMR Calculations Review

Total Suspended Solids 30-Day Average mg/l

$$10.0 \text{ mg/l} + 10.0 \text{ mg/l} + 10.0 \text{ mg/l} + 10.0 \text{ mg/l} = 40.0/4 = 10.0 \text{ mg/l}$$

Value reported 9.90 mg/l

Total Suspended Solids 30 Day Average lbs/day

April 3 – (0.096 MGD) (<10 mg/l) (8.34 lbs/gal) = 8.00 lbs/day
April 10– (0.096 MGD) (<10 mg/l) (8.34 lbs/gal) = 8.00 lbs/day
April 17 – (0.096 MGD) (<10 mg/l) (8.34 lbs/gal) = 8.00 lbs/day
April 24 – (0.096 MGD) (<10 mg/l) (8.34 lbs/gal) = 8.00 lbs/day

$$(8.00 \text{ lbs/day} + 8.00 \text{ lbs/day} + 8.00 \text{ lbs/day} + 8.00 \text{ lbs/day})/4 = 8.00 \text{ lbs/day}$$

Value reported 7.9 lbs/day

Total Residual Chlorine ug/l

The permit requires testing for and reporting TRC, daily maximum values, and the monthly average loading. In order to calculate the monthly average loading (flow on day of sample) X (sample concentration) X (8.34) values are needed. TRC daily maximum values are reported in ug/l, however the sample concentration must be in milligrams not in micrograms for the loading calculation. It does not appear from the submitted data this conversion was made before calculating monthly average loading values.

Due to this the TRC levels reported may be elevated and should be recalculated and new DMR's submitted.

Dissolved Aluminum mg/l

The permit requires testing quarterly for Dissolved Aluminum, a sample was submitted to Hall Environmental Analysis on 4/21/2011. The sample was tested with EPA Method 6010B resulting in 0.14 mg/l of dissolved aluminum.

EPA Method 6010B is not an accepted testing method for Dissolved Aluminum per 40 CRF Part 136.3. It is unknown if permit limits were exceeded due to using an unapproved lab method.

