



NEW MEXICO  
ENVIRONMENT DEPARTMENT



*Surface Water Quality Bureau*

SUSANA MARTINEZ  
Governor

JOHN A. SANCHEZ  
Lieutenant Governor

Harold Runnels Building, N2050  
1190 South St. Francis Drive (87505)  
P.O. Box 5469, Santa Fe, NM 87502-5469  
Phone (505) 827-0187 Fax (505) 827-0160  
[www.nmenv.state.nm.us](http://www.nmenv.state.nm.us)

DAVE MARTIN  
Secretary

RAJ SOLOMON, P.E.  
Deputy Secretary

---

**Certified Mail - Return Receipt Requested**

July 20, 2011

Mr. Charles L. Kelly, Mayor  
City of Bayard  
P.O. Box 728  
Bayard, NM 88023

**Re: Minor-Municipal; SIC 4952; NPDES Compliance Evaluation; City of Bayard Waste Water Treatment Plant; NM0020231; July 13, 2011**

Dear Mayor Kelly,

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 Section E-Flow Measurement. 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](mailto:daniel.valenta@state.nm.us).

Sincerely,

*/s/Daniel Valenta*

Daniel Valenta  
Environmental Scientist/Specialist  
Surface Water Quality Bureau

Cc: Marcia Adams, EPA, Enforcement Section (6EN-AS) by e-mail  
Samuel Tate, EPA (6SF) by e-mail  
Carol Peters-Wagnon, EPA (6EN-WM) by e-mail  
Diana McDonald, EPA (6EN-WM) by e-mail  
Larry Giglio, EPA (6WQ-PP) by e-mail  
NMED District III, by e-mail



**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.  S  M  U  NA (FURTHER EXPLANATION ATTACHED *No.*)

1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRs. **Facility does not discharge.**  Y  N  NA

2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE.  S  M  U  NA

a) DATES, TIME(S) AND LOCATION(S) OF SAMPLING  Y  N  NA

b) NAME OF INDIVIDUAL PERFORMING SAMPLING  Y  N  NA

c) ANALYTICAL METHODS AND TECHNIQUES.  Y  N  NA

d) RESULTS OF ANALYSES AND CALIBRATIONS.  Y  N  NA

e) DATES AND TIMES OF ANALYSES.  Y  N  NA

f) NAME OF PERSON(S) PERFORMING ANALYSES.  Y  N  NA

3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE.  S  M  U  NA

4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT MAINTENANCE AND REPAIR.  S  M  U  NA

5. EFFLUENT LOADINGS CALCULATED USING DAILY EFFLUENT FLOW AND DAILY ANALYTICAL DATA.  Y  N  NA

**SECTION C - OPERATIONS AND MAINTENANCE**

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

1. TREATMENT UNITS PROPERLY OPERATED.  S  M  U  NA

2. TREATMENT UNITS PROPERLY MAINTAINED.  S  M  U  NA

3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED. **Two generators available.**  S  M  U  N

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

**SECTION D - SELF-MONITORING**

- PERMITTEE SELF-MONITORING MEETS PERMIT REQUIREMENTS.  S  M  U  NA (FURTHER EXPLANATION ATTACHED NO).  
 DETAILS:
1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT. **Site does not discharge, no samples taken.**  Y  N  NA
2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.  Y  N  NA
3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT.  Y  N  NA
4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT.  Y  N  NA
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT.  Y  N  NA
6. SAMPLE COLLECTION PROCEDURES ADEQUATE  Y  N  NA
- a) SAMPLES REFRIGERATED DURING COMPOSITING.  Y  N  NA
- b) PROPER PRESERVATION TECHNIQUES USED.  Y  N  NA
- c) CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136.3.  Y  N  NA
7. IF MONITORING AND ANALYSES ARE PERFORMED MORE OFTEN THAN REQUIRED BY PERMIT, ARE THE RESULTS REPORTED IN PERMITTEE'S SELF-MONITORING REPORT?  Y  N  NA

**SECTION E - FLOW MEASUREMENT**

- PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS.  S  M  U  NA (FURTHER EXPLANATION ATTACHED Yes)  
 DETAILS:
1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED.  Y  N  NA  
 TYPE OF DEVICE **A Rectangular Sharp Crested Weir without end constrictions measured with an Ultrasonic Flow meter.**
2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED.  Y  N  NA
3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED  Y  N  NA  
**No staff gage present at outfall – only a Ultrasonic Flow meter**
4. CALIBRATION FREQUENCY ADEQUATE. (DATE OF LAST CALIBRATION Never)  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. \_\_\_\_ % 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 \_\_\_\_ **Water Technology Associates- Dona Ann Community College**  
 LAB ADDRESS\_\_ **3400 S. Espina, Las Cruces, N.M. 88003**  
 PARAMETERS PERFORMED **BOD & TSS**

**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
<b>001</b>	<b>No Discharge</b>						

RECEIVING WATER OBSERVATIONS:

**SECTION H - SLUDGE DISPOSAL**

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS.  S  M  U  NA (FURTHER EXPLANATION ATTACHED No.)  
 DETAILS: **Sludge will be taken to landfill.**

- 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  
Bayard Waste Water Treatment Plant  
NPDES Permit No. NM0020231  
July 13, 2011**

**Introduction**

On July 13, 2011 a Compliance Evaluation Inspection (CEI) was conducted at the City of Bayard Wastewater Treatment Plant (WWTP) by Mr. Daniel Valenta of the State of New Mexico Environment Department (NMED). This facility is classified as a Minor Municipal under the federal Clean Water Act (CWA), Section 402 National Pollutant Discharge Elimination System (NPDES) permit program and is assigned permit number NM0020231. The WWTP has a design flow capacity of 0.6 Million Gallons per Day (MGD). This facility discharges to Whitewater Creek an unclassified tributary to the Mimbres River in the South-Western Closed Basin.

The NMED performs a certain number of CEI's for the U.S. Environmental Protection Agency (USEPA) each year. The purpose of this inspection is to provide USEPA with information to evaluate the permittee's compliance with the NPDES permit. This report is based on review of files maintained by the permittee and NMED, on-site observation by NMED personnel, and verbal information provided by the permittee's representative. Finding of the inspection are detailed on the attached EPA form 3560-3 and in the narrative Further Explanations section of the report.

At 1410 hours on July 13, 2011, the inspector made introductions, presented credentials and explained the purpose of this inspection to Mr. David Chavez, Wastewater Superintendent. The Inspector and Mr. Chavez toured the facility. An exit interview to discuss preliminary findings was conducted with Mr. Chavez at the WWTP office, the inspection ended at 1555 hours on July 13, 2011.

**Treatment Scheme**

This plant started operations July 2008. An NPDES permit has been issued for this facility; however the facility is designed to discharge on the top of the tailings pile for Phelps Dodge mine south of the Village of Hurley. Effluent from the treatment plant enters a lift station to be pumped to the top of the tailing piles.

The design flow for this facility is 0.6 MGD and was designed by Molzen Corbin. Influent is collected from Bayard, Santa Clara, and Fort Bayard. They will soon be collecting influent from the Village of Hurley, which will contribute approximately 0.1 MGD. Plans are presently being developed to complete Phase II of this project to better facilitate Hurley's collection flow and add reuse options.

The headworks consist of a mechanical bar screen set on a timer, grit selector, and a lift station to send contents to the aeration basins. All these units seem to be working properly. The aeration basins have fine bubble diffusers within two tanks. Final clarifiers are two conal units after the post aeration unit and the aeration basins. After the clarifiers the UV units disinfect the effluent. UV disinfection consists of two circular units having 4 bulbs in each. When opacity gets to a low level it switches over to the other unit automatically.

**Compliance Evaluation Inspection  
Bayard Waste Water Treatment Plant  
NPDES Permit No. NM0020231  
July 13, 2011**

**Sludge**

The two digesters are alternated to allow for decanting to take place. Two large drying beds with rounded corners are located near the digesters. There is a large sludge pad that is being used for storage with some sludge being used on site. The dried sludge will be land filled this September/October at the new facility in Deming.

**Further Explanations**

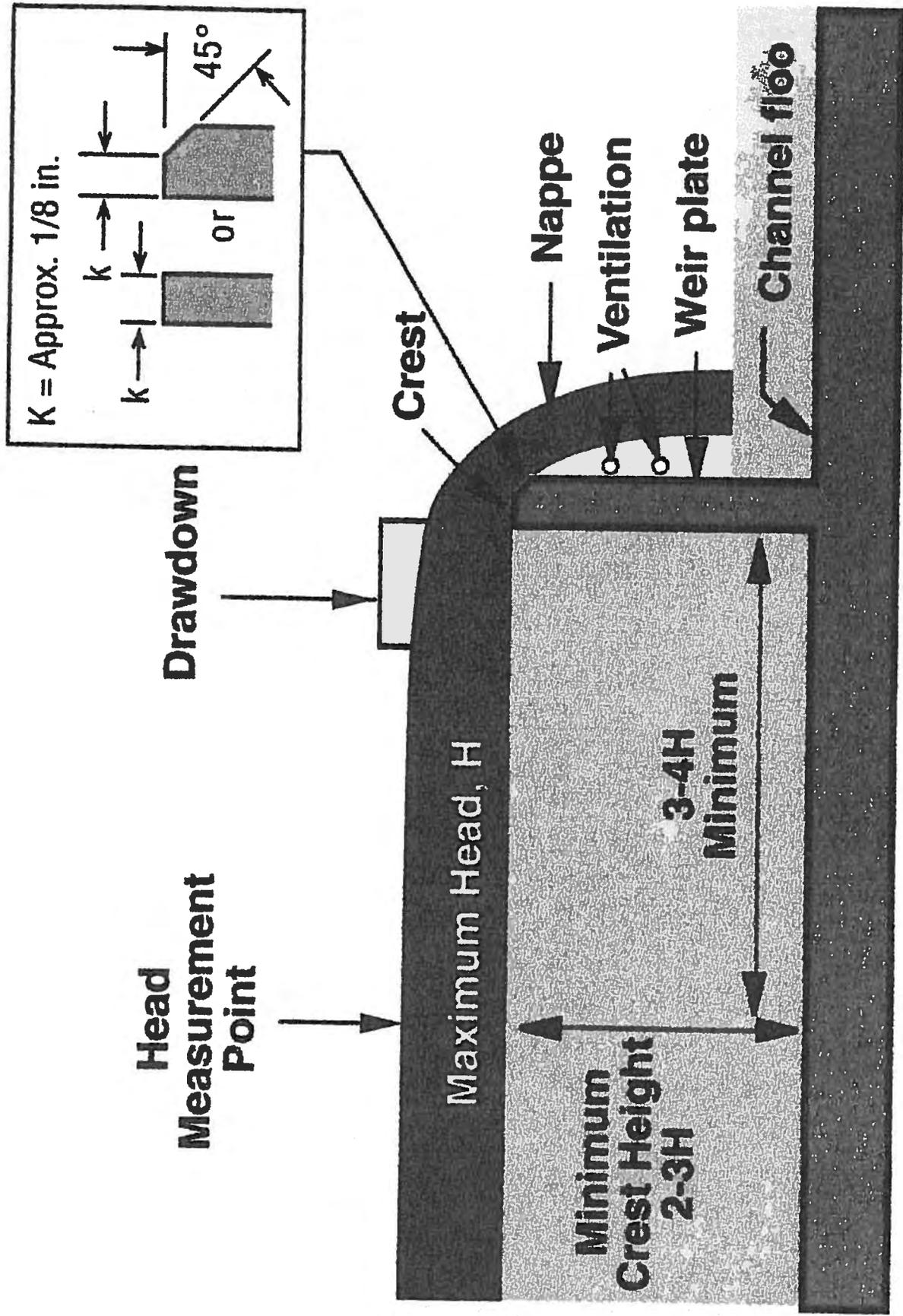
**Section E-Flow Measurements-Overall Rating of “Marginal”**

Permit Requirements Per Part III, C, 6: Monitoring and Records

*Flow Measurements*

*“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.”*

The discharge effluent is measured continuously by the use of an ultrasonic flow meter mounted above the discharge channel. Per the Superintendent the meter has not been calibrated since the opening of the facility in July 2008. The effluent flows over a Rectangular Sharp Crested weir. However no staff gage has been mounted to check the accuracy of the ultrasonic flow meter. The discharge over the weir can also be checked by measuring the maximum head over the weir with a ruler, although the accuracy of this measurement will be off somewhat due to the drawdown at the crest. The measurement should take place a minimum of 3 to 4 maximum head distances away from the weir, see attachment.



**Figure 3-2: Sharp-crested Weir**