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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**

September 22, 2011

Ms. Sue Padilla, Assistant County Manager  
845 North Motel Blvd.  
Las Cruces, New Mexico 88007

Re: **Major Municipal; SIC 4952; NPDES Compliance Evaluation Inspection; Dona Ana County South Central Wastewater Treatment Plant; NM0030490; August 22, 2011**

Dear Ms. Padilla:

Enclosed, please find a copy of the report 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.

The main discussions were found in the area of Operation and Maintenance, Sludge, and Effluent/Receiving Waters Observation. Please refer to the Further Explanations section of the report for more detail.

I wish to thank you for the cooperation extended the NMED personnel while at the Dona Ana County South Central WWTP. If you have any questions about this inspection report, please contact me at (575) 647-7981.

Sincerely:

Steven M. Baumgarn  
Environmental Specialist  
Surface Water Quality Bureau

Ms. Sue Padilla Letter  
September 22, 2011  
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cc: NMED District III, District Manager  
Samuel Tates (6EN-AS) Sent Electronically  
Carol Peters-Wagnon (6EN-WM) Sent Electronically  
Marcia Adams (6EN-AS) Sent Electronically  
Larry Giglio (6WQ-PT) Sent Electronically  
Diana McDonald (6EN-WM) Sent Electronically  
Kurt Moffatt, 845 N. Motel Blvd, Las Cruces, NM 88007  
Sonia Hall and Hannah Branning, USEPA (6EN-WC) Sent Electronically



### 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 3 0 4 9 0 11 12 1 1 0 8 2 2 17 18 C 19 S 20 1					
Remarks					
M A J O R M U N I C I P A L W W T P					
Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved	
67 1 69	70 3	71 N 72 N 73	74 75	M A J 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) SOUTH CENTRAL REGIONAL WWTP – SOUTHWEST OF VADO, TAKE VADO (EXIT 155) EXIT OFF OF I-10, HEAD WEST (NM227) TO NM 478, TAKE A LEFT (SOUTH) TO NM89, TAKE A RIGHT (WEST) PROCEED WEST ACROSS RIVER TO AN UNMARKED GRAVEL ROAD (IMMEDIATELY WEST OF A DITCH) - LOOK FOR BLACK AND YELLOW CAUTION SIGNS APPROXIMAELY 0.5 MILES FROM RIVER) AND TAKE A LEFT (SOUTH) – THIS IS OR TURNS INTO MONTES ROAD, PROCEED SOUTH 1.6 MILES TO E. SLOAN RD, TAKE LEFT (EAST) AND FOLLOW TO TREATMENT PLANT	Entry Time /Date 1000 HOURS 8/22/2011	Permit Effective Date 6/1/08
	Exit Time/Date 1230HOURS 8/22/2011	Permit Expiration Date 5/31/13
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) MIREYA CARNEOS, LEAD OPERATOR	Other Facility Data	
Name, Address of Responsible Official/Title/Phone and Fax Number MS. SUE PADILLA, ASSISTANT COUNTY MANAGER. 575-647-7142 845 NORTH MOTEL BLVD. LAS CRUCES, NEW MEXICO 88007	Contacted Yes <input type="checkbox"/> * No <input type="checkbox"/>	LATITUDE 32° 05' 22"  LONGITUDE 106° 39' 36"  SIC 4952

#### Section C: Areas Evaluated During Inspection

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

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

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

SEE THE FURTHER EXPLANATIONS SECTION OF THE ATTACHED REPORT

Name(s) and Signature(s) of Inspector(s) STEVEN M. BAUMGARN	Agency/Office/Telephone/Fax NMED/SWQB 575-647-7981	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

 S  M  U  NA (FURTHER EXPLANATION ATTACHED YES )

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 NO )

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.

 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. 2/11/11

 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.

 S  M  U  NA (FURTHER EXPLANATION ATTACHED YES )

DETAILS:

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?  Y  N  NA  
 IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED?  Y  N  NA  
 HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS?  Y  N  NA

10. HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT?  Y  N  NA  
 IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT?  Y  N  NA

## SECTION D - SELF-MONITORING

PERMITTEE SELF-MONITORING MEETS PERMIT REQUIREMENTS.  S  M  U  NA (FURTHER EXPLANATION ATTACHED NO ).  
 DETAILS:

1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT.  Y  N  NA

2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.  Y  N  NA

3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT.  Y  N  NA

4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT.  Y  N  NA

5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT.  Y  N  NA

6. SAMPLE COLLECTION PROCEDURES ADEQUATE  Y  N  NA

a) SAMPLES REFRIGERATED DURING COMPOSITING.  Y  N  NA

b) PROPER PRESERVATION TECHNIQUES USED.  Y  N  NA

c) CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136.3.  Y  N  NA

7. IF MONITORING AND ANALYSES ARE PERFORMED MORE OFTEN THAN REQUIRED BY PERMIT, ARE THE RESULTS REPORTED IN PERMITTEE'S SELF-MONITORING REPORT?  Y  N  NA

## SECTION E - FLOW MEASUREMENT

PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS.  S  M  U  NA (FURTHER EXPLANATION ATTACHED NO ).  
 DETAILS:

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED.  Y  N  NA  
 TYPE OF DEVICE

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 3/15/11 )  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



**Dona Ana County South Central Regional WWTP  
Compliance Evaluation Inspection  
NPDES Permit #NM0030490  
August 22, 2011**

**Introduction**

On August 22, 2011, a Compliance Evaluation Inspection (CEI) was conducted at the Dona Ana County South Central Regional Waste Water Treatment Plant (WWTP) located near Vado, New Mexico by Steven M. Baumgarn of the State of New Mexico Environment Department (NMED). The plant is operated by Dona Ana County. The South Central Regional WWTP has a design flow of 1.05 MGD, is classified as a major municipal discharger under the federal Clean Water Act, Section 402 National Pollutant Discharge Elimination System (NPDES) permit program and is assigned permit #NM0030490. This permit allows discharges to the Rio Grande in segment number 20.6.4.101NMAC of the Lower Rio Grande Basin.

The inspection was conducted by NMED for the US Environmental Protection Agency (USEPA), Region VI, under the NPDES permit program, in accordance with the federal Clean Water Act. These inspections are conducted under contract with the USEPA and are used by EPA to evaluate compliance with the NPDES permit program. This inspection report is based on information supplied by the Village of Cimarron representatives (the permittee), observations made by the NMED inspector, reports and records kept by the permittee and/or NMED.

An entrance interview was conducted with Ms. Mireya Carneos, Lead Operator, at approximately 1000 hours on August 22, 2011. The inspector made introductions, presented credentials and discussed the purpose of the inspection.

**Treatment Scheme**

Raw sewage collected from 21 lift stations enters the WWTP plant lift station (used for recirculation) and is pumped to the entrance works via two, 5 horsepower flight pumps.

At the entrance works, raw sewage flows through a 5 horsepower JWC Environmental shredder and then through a JWC Auger Monster. Rags are separated and dropped down a chute and into a container. A manual bar screen is available as a by-pass during maintenance. Influent then flows through a US Filter Link-Belt C&9 Grit Collector. The collector is cleaned out once per month. Flow is then routed through a grit chamber and then passes to an equalization basin. There are two SBR reactors at the facility. Currently only one SBR Basin is being operated at a time (the south one at the time of this inspection). There is an aerobic digester unit adjacent to the north of SBR #1 (north). The north SBR basin is presently being used to treat septage being trucked to the facility by contract septage haulers. After treatment in this unit the septage is sent to the digester in preparation to be mixed with the digested activated sludge and sent on to the belt filter press. Six, four-hour cycles are run per day in the unit used to treat wastewater. The facility operators attempt to

collect floating solids and scum manually every other day. The decant water flows to the WEDECO UV disinfection unit. This unit contains five modules with four ultra violet lamps located within each module (20 lamps total). A supplemental barrel of liquid chlorine is on site when the ultra violet (UV) unit is not working properly. Effluent flow is measured by an 18" Parshall flume and a Milltronics ultrasonic level transducer.

Sludge is wasted six times per day at a rate of 100 gallons per minute. Wasting time is six minutes per cycle. Waste activated sludge is pumped to the aerobic digester for dewatering and thickening. The thickened sludge is pumped to a 2 meter belt filter press. Flow from the plant wash down and decant from the belt press are returned to the plant lift station and recirculated. A polymer is added to the sludge to enhance processing. Processed sludge is currently being hauled to the Corralitos Landfill.

**Dona Ana County South Central WWTP  
NPDES Compliance Inspection Report  
Permit Number NM0030490  
August 22, 2011**

**Further Explanations**

**Note:** The sections are arranged according to the format of EPA Form 3560-3 and checklist, attached, rather than being ranked in order of importance.

**Permit Verification**

**Permit Requirements** for Permit Verification

The permit requires, in Part III, Section A.7, Duty to Provide Information

*The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.*

The permit also requires, in Part III, Section D.1.b, Municipal Permits

*Any changes in the facility discharge (including the introduction of any new source of significant discharge or significant changes in quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that will cause violation of the effluent limitations, specified herein.*

**Findings** for Permit Verifications

The operator indicated during the inspection that this facility would be taking on additional flow when the Village of Mesquite is added to the collection system. This flow could substantially increase the volume of wastewater entering the treatment plant. Notice of the increased flow is required to be submitted to both EPA and NMED to determine if changes to the existing NPDES permit need to be made.

**Operation and Maintenance**

**Permit Requirements** for Operation and Maintenance

The permit requires, in Part III, Section B.3, Proper Operation and Maintenance

*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 Operation and Maintenance

The design for this facility is 1.05 Million Gallons per Day (MGD). They are presently treating approximately 0.3 MGD, but they are using only one of the aeration basins. The operator indicated that they are presently getting ready to accept wastewater from the Village of Mesquite. This will greatly change the balance of the WWTP process. Presently only one of the aeration/mixing and decant basins is being used for wastewater treatment. They are treating septage in the other basin prior to going to the aerated digester and mixed with the sludge.

The operator indicated that the County is changing out the existing ultra-violet (UV) disinfection system. They have had periodic problem with disinfection since the plant was built. Operators figured out, by reviewing the specifications for the UV treatment unit, that the design of the system was for the treatment of 1500 gallons per minute (GPM). The actual flow during decant periods is 2400 GPM. The operator indicated the new UV unit should be installed by the 19<sup>th</sup> of September and should enhance the disinfection capacity at this facility. At the time of this inspection, the under-sized UV disinfection system was in operation. No Chlorine disinfection was in use at the time. There was a possibility that effluent e-coli excursions were taking place at the time of this inspection.

**Effluent/Receiving Stream Observations**

**Permit Requirements** for Effluent Limitations and Monitoring Requirements

The permit requires, in Part I, Section A, Effluent Limitations and Monitoring Requirements

<i>Effluent Characteristics</i>	<i>Discharge Limitations</i>		
	<i>30 day Ave</i>	<i>7 day Ave</i>	<i>Daily Max</i>
<i>Biochemical Oxygen Demand (5-day)</i>	<i>30</i>	<i>45</i>	
<i>Total Suspended Solids</i>	<i>30</i>	<i>45</i>	
<i>E-coli (org/100ml)</i>	<i>126</i>		<i>410</i>

**Findings** for Effluent Limitations and Monitoring Requirements

As part of this inspection, the DMRs for this facility were reviewed for 2009, 2010 and 2011 (see the attached chart). There were no excursions of the NPDES permitted parameters during this period of review.

It was noted that in the treatment tank there was a substantial amount of floatable material including q-tips, paper, foam and chili seeds. Since the discharge goes through a swing arm siphon unit after settling, some of this material is being discharged to the receiving stream. It is suggested that the permittee evaluate means of removing this type of material prior to entering the treatment tank to ensure this material does not discharge.

## **Sludge**

### **Permit Requirements** for Sludge

The permit requires, in Part III, Section C.6, Removed Substances

*Unless otherwise authorized, solids, sewage sludges, filter backwash, or other pollutants remove in the course of treatment or wastewater control shall be disposed of in a manner such as to prevent any pollutants from such materials from entering navigable waters.*

### **Findings** for Sludge

At the present lime this facility is hauling sludge to a local landfill. With the addition of accepting wastewater from the Village of Mesquite and accepting septage the permittee is considering the possibility of composting sludge on site and either land applying sludge on the plant site or at local farming operations.

**Dona Ana County South Central WWTP  
Compliance Evaluation Inspection  
NM0030490  
August 22, 2011**

**Discharge Monitoring Report Review for 2009, 2010 and 2011**

Date	BOD(mg/l)		TSS(mg/l)		E-coli(org/100ml)	
	30d Avg	7d Avg	30d Avg	7d Avg	Avg	Max
01/09	4.74	5.22	5.48	6.9	1.16	1.8
02/09	3.46	4.29	4.1	4.8	1.64	7.2
03/09	5.83	8.38	6.64	8.22	1.77	9.91
04/09	7.52	12.98	8.91	12	1	1
05/09	11.25	13.67	8.54	10.29	1.57	6
06/09	7.29	9.86	6.27	15.63	1	1
07/09	3.59	5.2	2.64	5.15	1	1
08/09	6.35	7.63	6.06	8.06	2.32	32
09/09	4.39	7.44	5.48	8.7	1.48	7
10/09	5.39	7.62	3.48	4.17	1.21	2.12
11/09	3.2	5.38	2.93	4.4	1	1
12/09	7.15	8.45	3.09	4.29	1	1
01/10	3.62	6.07	3.24	5.56	1.52	3
02/10	4.7	5.72	6.81	8.16	1	1
03/10	5.18	9.63	7.3	15.56	1.82	10
04/10	7.95	12.2	7.83	11.79	2.11	20
05/10	2.7	4.27	3.58	5.56	1	1
06/10	7.45	15.96	6.3	10	1.15	2
07/10	3.76	6.77	4.21	5.88	1	1
08/10	5.72	9.34	3.3	5.56	1.19	2
09/10						
10/10	4.79	6.95	3.71	5.08	1	1
11/10	6.4	9.56	5.94	9.86	1	1
12/10	7.55	11.77	5.6	7.7	1.15	2
01/11	5.61	7.65	3.18	4.57	1.19	2
02/11	10.55	16.8	10.84	12.9	2.5	40
03/11	5.23	9.68	4.86	9.1	1	1
04/11	5.68	9.46	7.63	13.16	2.21	24
05/11	7.17	7.58	7.59	9.72	1	1
06/11	4.88	6.5	7.21	8.47	1.82	10
07/11	4.21	8.36	5.52	8.57	1.19	2
-----						
Permit Limits	30	45	30	45	126	410