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NEW MEXICO  
ENVIRONMENT DEPARTMENT

*Surface Water Quality Bureau*

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**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**



RON CURRY  
Secretary  
SARAH COTTRELL  
Deputy Secretary

December 10, 2010

Honorable Alfonso E. Ortiz, Jr.,  
City of Las Vegas  
P.O. Box 160, 905 12<sup>th</sup> Street  
Las Vegas, New Mexico 87701

**RE: Major-Municipal, SIC 4952, NPDES Compliance Sanitary Sewer Overflow (SSO) Inspection,  
Las Vegas Wastewater Treatment Plant, NM0028827, December 7, 2010**

Dear Mayor Ortiz, Jr.,

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.

I appreciate the cooperation of Mr. Robert Espinoza, City of Las Vegas, WWTP Laboratory Technician/Supervisor 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 Tate, 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  
Robert Italiano NMED District II Manager by e-mail (Santa Fe, Espanola, Las Vegas, Raton and Taos)  
Steve Medina, Wastewater Systems Operation Supervisor by e-mail ([emedina@ci.las-vegas.nm.us](mailto:emedina@ci.las-vegas.nm.us))  
Kenneth Garcia, Utility Director, City of Las Vegas by e-mail ([kgarcia@ci.las-vegas.nm.us](mailto:kgarcia@ci.las-vegas.nm.us))



### 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   8   2   7   11   12   1   0   1   2   0   7   17   18   &   19   S   20   1					
Remarks					
W   A   S   T   E   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       69	70   2	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) City of Las Vegas WWTP. From I-25 N, take Exit 343, turn right onto NM 518, immediately turn right onto frontage road, travel south to signed entrance, turn left, continue approximately 1/4 mile, cross railroad tracks, turn left, travel to locked gated entrance. San Miguel County	Entry Time /Date <b>1212 hours / 12/07/2010</b>	Permit Effective Date March 1, 2006
	Exit Time/Date <b>1527 hours / 12/07/2010</b>	Permit Expiration Date February 28, 2011
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) -Robert Espinoza / Lab Technician, Waste Water Operator, Supervisor / main 505-454-3832, 426-3334 and fax 425-6125, <a href="mailto:roberte@ci.las-vegas.nm.us">roberte@ci.las-vegas.nm.us</a> -Louie Esquibel / WWTP operator / 505-454-3832	Other Facility Data <b>Outfall 001</b> Latitude 35.566519°, Longitude -105.211706° <b>SIC 4952</b>	
Name, Address of Responsible Official/Title/Phone and Fax Number Honorable Alfonso E. Ortiz, Jr., City of Las Vegas, 905 12th Street, Las Vegas, New Mexico 8770 / Mayor / 866-454-1401, fax 505-425-7335	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)

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

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

**1) PERMITTEE VERBALLY REPORTED ON 12/07/2010 AN APPROXIMATE 75,000 TO 100,000 GALLON OVERFLOW OF INADEQUATELY TREATED WASTE DISCHARGE INTO THE GALLINAS RIVER THAT OCCURRED ON 12/06/2010. THE OVERFLOW OCCURRED IN THE PLANT'S TREATMENT WORKS.**

**2) SEE ATTACHED FURTHER EXPLANATIONS AND PHOTO LOG.**

**\*NOTE: PERMITEE HAS NOT SUBMITTED AN APPLICATION AT LEAST 180 DAYS BEFORE THE EXPIRATION DATE OF THIS PERMIT. NMED SWQB FILES DO NOT HAVE RECORD THAT USEPA REGION 6 GRANTED PERMISSION TO SUBMIT AN APPLICATION LESS THAN 180 DAYS IN ADVANCE OF PERMIT EXPIRATION.**

Name(s) and Signature(s) of Inspector(s) <b>Erin S. Trujillo</b> <i>/s/ Erin S. Trujillo</i>	Agency/Office/Telephone/Fax <b>NMED/SWQB/505-827-0418</b>	Date <b>12/10/2010</b>
Signature of Management QA Reviewer <b>Richard E. Powell</b> <i>/s/ Richard E. Powell</i>	Agency/Office/Phone and Fax Numbers <b>NMED/SWQB/505-827-2798</b>	Date <b>12/10/2010</b>

**City of Las Vegas Waste Water Treatment Plant**  
**NPDES Permit No NM0028827**  
**Sanitary Sewer Overflow Inspection**  
**December 7, 2010**

**Further Explanations**

**Introduction**

Upon arrival at the WWTP at 1212 hours on December 7, 2010, Erin Trujillo of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) presented credentials to Mr. Robert Espinoza, Laboratory Technician, Wastewater Operator and Supervisor and explained the purpose of the inspection. Mr. Espinoza contacted Mr. Estevan (Steve) Medina, Water Waste Systems Operation Supervisor, but he did not attend the inspection. Ms. Trujillo and Mr. Espinoza toured portions of the plant, including the outfall and receiving stream. NMED Monitoring and Assessment team was sampling the Gallinas River and arrived at the plant during the inspection. Ms. Trujillo left the plant at approximately 1300 hours to view the Gallinas River downstream of the outfall from public right of way and returned to the plant at approximately 1424 hours to continue the tour with Mr. Espinoza. Mr. Louie Esquibel provided verbal information on sludge blanket clarifier levels prior to and following the overflow. The inspector conducted a brief exit interview to discuss preliminary findings with Mr. Espinoza then left the plant at approximately 1527 hours on the day of the inspection. The inspector obtained additional information and discussed preliminary findings of the inspection with Mr. Medina by telephone on December 8, 2010.

**Previous Reported Sanitary Sewer Overflows (SSO) after January 6, 2010 CEI**

On February 11, 2010, the Permittee received a call of an approximate 5,000 gallon SSO from a city sewer main and notified EPA and NMED by telephone. The Permittee notified EPA and NMED by a letter dated February 16, 2010 that summarized summarizing steps taken to prevent reoccurrence and minimize impact to surface waters. No impact to receiving waters was reported.

On October 1, 2010, the Permittee received a call of an approximate 200 gallon SSO from a private sanitary sewer line. The Permittee notified EPA and NMED by telephone on October 4, 2010 and by letter dated October 15, 2010 that summarized steps taken to prevent reoccurrence and minimize impact to surface waters. No impact to receiving waters was reported.

**Permit Requirements**

Part I.A (Effluent Limitations) of the permit states:

*There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water or coatings on stream banks.*

Part I.C.6 (Reporting) of the permit states:

*The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary). Overflows which endanger health or the environment shall be orally reported to EPA at (214) 665-6595 and the NMED Surface Water Quality Bureau at (505) 827-0187. A written report of overflows that endanger health or the environment shall be provided to EPA and the NMED Surface Water Quality Bureau within 5 days of the time the permittee becomes aware of the circumstance.*

Part III.B.2 (Standard Conditions, Duty to Mitigate) of the permit states:

*The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.*

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.*

*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.*

### **Date, Time, Duration, Location, Estimated Volume, Cause of the Overflow, Discharge Location**

On Tuesday, December 7, 2010 Mr. Medina notified Sarah Holcomb, NMED SWQB at approximately 0800 hours and EPA hotline at 0804 hours by telephone of an overflow into the Gallinas River. The overflow was not from the WWTP's sanitary sewer collection system, but occurred in the plant's treatment works.

Approximately 75,000 to 100,000 gallons of inadequately treated waste was discharged into the Gallinas River starting about 2130 hours on December, 6, 2010 for approximately 3 hours. Wastewater, foam, solids and sludge was discharged through Outfall 001 into the Gallinas River. Mr. Medina stated that he would refine the overflow volume estimate for the written report. The Permit states the design flow capacity is 2.5 million gallons per day (MGD). Based on records reviewed and on-site representatives, the peak discharge was approximately 4 MGD during the overflow. By 0217 hours on December 7, 2010, the effluent discharge from Outfall 001 was 1.381 MGD.

During this inspection, the Permittee's on-site representative described previous testing, recommendations by an outside consultant and actions to increase dissolved oxygen levels in the aeration basin raceway to try to address the WWTP's filamentous bacteria and associated nitrification problems. The filamentous bacteria and nitrification problems led to the plant's secondary clarifier sludge blanket lifting, clogging of the disc filters, and overflow. Based on information from the Permittee's on-site representatives, the sludge blanket in the 15 foot clarifier was 6½ feet at approximately 0730 hours then increased to 11 feet by approximately 1530 hours on the day of the overflow. On-site representative stated that the clarifier is typically operated with a 4 to 5 foot sludge blanket.

### **Permittee's Actions Taken to Address the Overflow**

After the end of the work shift at 1630 hours, the WWTP's auto dialer system notified plant operators of a disc filter equipment failure (high level alarm that occurred at 2208 hours) on December 6. Within 30 minutes, operators arrived and took the aeration basin racetrack offline, they proceeded to drain the west clarifier (clarifier with the lifted blanket) while only running the east clarifier. Mr. Medina stated that the plant did not have sufficient storage to divert the overflow and the disc filters were bypassed. Clean up of the treatment works disc filters by WWTP staff occurred between approximately 2230 hours on December 6 to 0030 hours on December 7. Permittee on-site representative stated that staffing at the WWTP was increased on December 7 to handle operation and maintenance and they were taking sludge blanket measurements in the clarifiers every hour. Records of sludge blankets were only logged at the beginning of the work shift. Based on information from the on-site representatives, the sludge blanket in the east and west clarifiers had been reduced to 1 foot and 5 feet.

During this inspection, both clarifiers were discharging during this inspection. Substantial foam and floating solids were observed in both clarifiers. Sheens, possibly from oil, were also observed. Dark gray coated filamentous bacteria was observed below the outer effluent weir of the clarifier that had lifted the night before. Additional skimming and cleaning of the clarifiers was needed as a result of the overflow. The Permittee's on-site representative stated he would follow up to see if additional cleaning of the clarifiers could be done before the maintenance typically conducted on Mondays.

**Observed Environmental Impacts from the Overflow**

During this inspection, the effluent was clear and did not have noticeable oil sheen, grease, turbidity, visible foam, float solids or color. However, immediately below the outfall and in some locations along the bank of the receiving stream, floating solids had accumulated. Mr. Medina stated he would re-inspect the receiving water banks below the outfall to see if the remaining solids could be removed.

Downstream of the WWTP, public access to the Gallinas River is limited. Approximately 8 miles downstream near San Agustin, white foam was observed in the Gallinas River and had accumulated in some locations along the bank. The white foam easily dissipated when disturbed. A faint ammonia odor was noticeable while walking along the stream banks. One location of brown foam accumulated at the edge of the river also had a faint ammonia odor. Due to the distance below the WWTP's outfall and that no floating solids were observed, it cannot be determined if the foam and odor is attributed to the WWTP's overflow.

The following preliminary NMED MAS analytical test results of samples taken from the Gallinas River on December 7, 2010 are provided below for informational purposes:

	Total Coliform (cfu/100 ml)	E.coli by Colilert® IDEXX Laboratories, Inc. (cfu/100 ml)
Gallinas River above WWTP	387.3	5.2
Gallinas River below WWTP	1,167.7	57.6
Gallinas River @ San Augustin	238.2	1.0

**Permittee's Steps to Reduce, Eliminate, and Prevent Recurrence of an Overflow**

Mr. Medina stated that an outside consultant was scheduled for an on-site visit to discuss problems at the WWTP on Friday, December 10, 2010. City of Las Vegas' written report is due December 11, 2010 to EPA and the NMED SWQB 5 days from the time the Permittee was aware of the spill on December 6, 2010. As previously discussed, a high sludge blanket was measured in the clarifier prior to the overflow. The high sludge blanket measured in the clarifier appears to have contributed to the overflow's magnitude. When questioned about what steps would be taken to reduce, eliminate, and prevent recurrence of an overflow if the blanket started to lift again, Permittee representatives described adjustments of the clarifiers to allow the blanket to settle when the plant was staffed. The Permittee's written corrective action report can further detail steps to address the overflow (e.g., cleaning of the clarifiers); remove floating solids from the receiving stream; and prevent recurrence of an overflow (e.g., review practices for accepting septage; review procedures and determine adequate staffing levels when a clarifier sludge blanket starts to lift; and outline additional efforts to address the filamentous bacteria problem).

NMED/SWQB  
Official Photograph Log  
Photo # 1

Photographer: Erin S. Trujillo	Time: 12/07/2010	Time: 1239 hours
City/County: Las Vegas / San Miguel County		State: New Mexico
Location: City of Las Vegas Wastewater Treatment Plant, NPDES Permit No. NM0028827		
Subject: Arrows point to floating solids in Gallinas River where effluent discharge from Outfall 001 enters the receiving stream.		



NMED/SWQB  
Official Photograph Log  
Photo # 2

Photographer: Erin S. Trujillo	Time: 12/07/2010	Time: 1240 hours
City/County: Las Vegas / San Miguel County	State: New Mexico	
Location: City of Las Vegas Wastewater Treatment Plant, NPDES Permit No. NM0028827		
Subject: Arrow points to an example of floating solids along bank of Gallinas River downstream of Outfall 001.		



NMED/SWQB  
Official Photograph Log  
Photo # 3

Photographer: Erin S. Trujillo	Time: 12/07/2010	Time: 1241 hours
City/County: Las Vegas / San Miguel County		State: New Mexico
Location: City of Las Vegas Wastewater Treatment Plant, NPDES Permit No. NM0028827		
Subject: Another example of floating solids in Gallinas River downstream of Outfall 001.		



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

Photographer: Erin S. Trujillo	Time: 12/07/2010	Time: 1350 hours
City/County: Las Vegas / San Miguel County		State: New Mexico
Location: Gallinas River near San Augustin		
Subject: Brown foam observed along bank approximately 8 miles downstream of the Las Vegas WWTP that had a faint ammonia odor. As discussed above, it cannot be determined if the foam and odor is attributed to the WWTP's overflow.		



NMED/SWQB  
Official Photograph Log  
Photo # 5

Photographer: Erin S. Trujillo	Time: 12/07/2010	Time: 1456 hours
City/County: Las Vegas / San Miguel County		State: New Mexico
Location: City of Las Vegas Wastewater Treatment Plant, NPDES Permit No. NM0028827		
Subject: Foam and floating solids in west clarifier—example of additional action (skimming and cleaning of the clarifiers) still needed as a result of the overflow on the day of the inspection.		



NMED/SWQB  
Official Photograph Log  
Photo # 6

Photographer: Erin S. Trujillo	Time: 12/07/2010	Time: 1506 hours
City/County: Las Vegas / San Miguel County		State: New Mexico
Location: City of Las Vegas Wastewater Treatment Plant, NPDES Permit No. NM0028827		
Subject: Coated filamentous algae below effluent weirs in west clarifier—example of additional action (skimming and cleaning of the clarifiers) still needed as a result of the overflow on the day of the inspection.		



12/07/2010 15:06

NMED/SWQB  
Official Photograph Log  
Photo # 7

Photographer: Erin S. Trujillo	Time: 12/07/2010	Time: 1506 hours
City/County: Las Vegas / San Miguel County		State: New Mexico
Location: City of Las Vegas Wastewater Treatment Plant, NPDES Permit No. NM0028827		
Subject: Floating solids in west clarifier—example of additional action (skimming and cleaning of the clarifiers) still needed as a result of the overflow on the day of the inspection.		

