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ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau

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RON CURRY
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Deputy Secretary

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August 20, 2010

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Dr. Jorge A. Garcia, Utilities Director
City of Las Cruces
P.O. Box 20000
Las Cruces, New Mexico 88004

Re: Major-Municipal, SIC 4952, NPDES Compliance Evaluation Inspection, City of Las Cruces, East Mesa Water Reclamation Facility, NM0030872, Doña Ana County, New Mexico, July 7, 2010

Dear Dr. Garcia:

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 your staff during this 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 Bohling, USEPA (6EN-AS) by e-mail
Samuel Tates, USEPA (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
Eric R. Lopez, Plant Manager by e-mail (eric.lopez@las-cruces.org)



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 3 0 8 7 2 11 12 1 0 0 7 0 7 17 18 C 19 S 20 1					
Remarks					
M U N I C I P 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 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 Cruces, East Mesa Water Reclamation Facility, 5150 E. Lohman Ave, Las Cruces. From I-25, take Exit 3 (E. Lohman Ave approx 1.9 mi), continue on dirt road to locked gate. Doña Ana County	Entry Time /Date 1215 hours / 07/07/2010	Permit Effective Date November 1, 2007
	Exit Time/Date 1728 hours / 07/07/2010	Permit Expiration Date October 31, 2012
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) Randy Gelaz / WWTP staff / East Mesa Cell 575-202-5033 Dez Stuart / WWTP Operator Supervisor / 575-521-4195 Eric R. Lopez / Plant Manager, City of Las Cruces / 575-528-3599, cell 642-7013 or 644-9806	Other Facility Data Outfall 001 Latitude N 32.33022 Longitude W 106.71729	
Name, Address of Responsible Official/Title/Phone and Fax Number Dr. Jorge A. Garcia / City of Las Cruces, 680 Motel Blvd, Las Cruces, NM 88005 / Utilities Director / 575-528-3502 and 528-3511	Contacted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
SIC 4952		

Section C: Areas Evaluated During Inspection

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

M	Permit	M	Flow Measurement	M	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	N	Pretreatment	N	Multimedia
U	Effluent/Receiving Waters	M	Laboratory	N	Storm Water	N	Other:

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

- SEE ATTACHED CHECKLIST REPORT WITH FURTHER EXPLANATIONS AND PHOTO LOG.**
- A COMPLIANCE EVALUATION INSPECTION REPORT FOR THE ABOVE FACILITY FOR INDUSTRIAL STORMWATER MULTI SECTOR GENERAL PERMIT (NPDES TRACKING NO. NMU001664) WAS SUBMITTED UNDER A SEPARATE EPA 3560 FORM.**

Name(s) and Signature(s) of Inspector(s) Erin S. Trujillo /s/ Erin S. Trujillo	Agency/Office/Telephone/Fax NMED/SWQB/505-827-0418	Date 08/20/2010
Signature of Management QA Reviewer Richard E. Powell /s/ Richard E. Powell	Agency/Office/Phone and Fax Numbers NMED/SWQB/505-827-2798	Date 08/20/2010

SECTION A - PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS S M U NA (FURTHER EXPLANATION ATTACHED Yes)
 DETAILS: **Notification was not given to EPA of initial and/or different discharges**

- 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: **Laboratory reports, bench sheets and sample collection records for March, April and May 2010 DMRs reviewed.**

- 1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRs. **No – See E.coli daily max on May 2010 DMR** 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. **pH logs had analyses and calibration results** 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. **pH logs had calibration records** 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: **Untreated wastewater from drum screen cleanout allowed to drain on ground (see Photo #1).**

- 1. TREATMENT UNITS PROPERLY OPERATED. S M U NA
- 2. TREATMENT UNITS PROPERLY MAINTAINED. **Algal growth on weirs before UV system (see Photo #2)** 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 **1 of 5 blowers down, but only 2 needed for train per on-site rep** S M U NA
- 6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED. S M U NA
- 7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED. **List compiled, but inventory control not established** S M U NA
- 8. OPERATION AND MAINTENANCE MANUAL AVAILABLE. Y N NA
 STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED. **Preventative Maintenance Schedule, but no SOP** Y N NA
 PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED. **Also, no updated written spill reporting SOP** 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? **5/10/2010** Y N NA
 IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED? **No notification to EPA. Verbal to NMED 5/11/10** Y N NA
 HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS? **Not documented** 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 during Dec 2009 & Jan 2010** Y N NA
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT. **Not during Dec 2009 & Jan 2010** 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. **Not documented** 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? **No - See E.coli frequency on May 2010 DMR** Y N NA

SECTION E - FLOW MEASUREMENT

- PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED **No**)
- DETAILS: **Flow measurement meter recently installed with secondary SCADA system. Calibration w/portable meter not recorded.**
1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED. **Installation documentation not on-site** Y N NA
 TYPE OF DEVICE **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
4. CALIBRATION FREQUENCY ADEQUATE. **Documentation not on-site** 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. **Documentation not on-site** Y N NA

SECTION F - LABORATORY

- PERMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED **Yes**)
- DETAILS: **Staff from Jacob A. Hands WWTP laboratory travel to the East Mesa Facility to collect samples for effluent monitoring. Commercial laboratories and Jabob A. Hands WWTP Laboratory not inspected.**
1. EPA APPROVED ANALYTICAL PROCEDURES USED (40 CFR 136.3 FOR LIQUIDS, 503.8(b) FOR SLUDGES) Y N NA

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PERMIT NO. **NM0030872**

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. **Labs not inspected** S M U NA

4. QUALITY CONTROL PROCEDURES ADEQUATE. **Labs not inspected** S M U NA

5. DUPLICATE SAMPLES ARE ANALYZED. **~10 (E.coli), 0 (pH, TSS and BOD5)** % OF THE TIME. Y N NA

6. SPIKED SAMPLES ARE ANALYZED. **~100 (pH)** % OF THE TIME. Y N NA

7. COMMERCIAL LABORATORY USED. Y N NA

LAB NAME	Jacob A. Hands WWTP Lab	Continental Analytical Services, Inc.	Environ International Corporation
LAB ADDRESS	2851 W. Amador, Las Cruces	POB 3737 Salina, KS 67402	201 Summit View Drive, STE. 300, Brentwood, TN 37027
PARAMETERS PERFORMED	pH (on-site), E.coli, TSS, BOD5	Once Per Permit Term	WET

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
001	None	None	None	None	None	No	No

RECEIVING WATER OBSERVATIONS: **E.coli daily max exceeded in May 2010. Substantial algal growth (often an indicator of nutrients in effluent) observed along water course made effluent appear slightly green from bank, but effluent/receiving water was clear (see Photos #3 and #4).**

SECTION H - SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED Yes).

DETAILS: **East Mesa Water Reclamation Facility sludge transported off-site to Jacob A. Hands WWTP.**

1. SLUDGE MANAGEMENT ADEQUATE TO MAINTAIN EFFLUENT QUALITY. S M U NA

2. SLUDGE RECORDS MAINTAINED AS REQUIRED BY 40 CFR 503. **See further explanations** S M U NA

3. FOR LAND APPLIED SLUDGE, TYPE OF LAND APPLIED TO: **Compost – Public** (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 July 7, 2010, Erin Trujillo, accompanied by Sandra Gabaldón, both of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the City of Las Cruces, East Mesa Water Reclamation Facility in Doña Ana County, New Mexico. The facility has a design flow capacity of 1.0 MGD (million gallons per day) and is classified as a major municipal 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 NM0030872 which regulates discharge of treated sanitary wastewater from Outfall 001 to the Southfork of the Las Cruces Arroyo, thence to the Alameda Arroyo, thence to the Las Cruces Lateral, thence to the Rio Grande in Segment 20.6.4.101 (*State of New Mexico Standards for Interstate and Intrastate Surface Waters, 20.6.4 New Mexico Administrative Code (NMAC)*) of the Rio Grande Basin.

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 inspectors arrived at the facility at 1215 hours on July 7, 2010, introduced themselves to Mr. Randy Gelaz, East Mesa Water Reclamation Facility WWTP staff, explained the purpose of the inspection and contacted Mr. Eric R. Lopez, Plant Manager. Upon Mr. Lopez's arrival, the inspector made introductions, presented credentials and explained the purpose of the inspection. The inspectors, Mr. Lopez and Mr. Dez Stuart, WWTP Operator Supervisor, toured the facility. An exit interview to discuss preliminary findings was conducted with Mr. Lopez; Mr. Luis J. Guerra, Lead Lab Technician, City of Las Cruces; Mr. Mark A. Rodriguez, Acting Administrator, Utilities Department, and Mr. Gilbert Morales, Water Resources Administrator, Joint Utilities, City of Las Cruces at the City of Las Cruces Jacob A. Hands Waste Water Treatment Plant. The inspection ended at 1728 hours on July 7, 2010.

Treatment Scheme and Solids Management

Construction of the East Mesa Water Reclamation Facility was completed in December of 2009 and the facility is under warranty until April 2011. The collection system (interceptor, lift station and force main) allows domestic wastewater from the east mesa side of Las Cruces, including the Mountain View Regional Medical Center Hospital/Extended Care and a separate dialysis center, to be directed to the East Mesa Water Reclamation Facility. Previously wastewater from the east mesa side of Las Cruces was treated at the City of Las Cruces Jacob A. Hands Wastewater Treatment Facility (NPDES Permit No. NM0023311). The collection system still allows wastewater to pass to the Jacob A. Hands Wastewater Treatment Facility, if needed. The City of Las Cruces has a pretreatment program approved by USEPA on January 25, 1984 that is required to include all of the publically owned treatment plants owned and operated by the City.

Upon entering the facility, wastewater is first treated by a mechanical drum screen and spray wash. Screenings are collected and bagged at a compactor station for disposal. The plant has two identical treatment system trains (east and west). On the day of the inspection, only the west train of the treatment system was being operated. Influent in each train enters a selector tank followed by two first stage aeration tanks (1st stage aeration tanks A and B). A "blockout" in the aerator tanks can be operated to

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allow wastewater to flow to the second stage aeration tanks (2nd stage aeration tanks A and B). Solids from the 1st stage aeration tanks can be air-lifted to a digester tank (digester tanks A and B). Wastewater flows through an inlet screen in the 2nd stage aeration tanks to a rectangular clarifier basin. Return Activated Sludge (RAS) is airlifted to a trough then by gravity back to the aeration tanks. Following the clarifier, flows are collected below the water surface and through a regulating weir and orifice device to a cloth disc filter drum unit contained in a separate basin. Solids are backwashed from the cloth disc filter drum unit then pumped back to the treatment works. After the filter basin, effluent passes over six pipe weirs then through an open grated channel to an Ultra Violet (UV) unit for disinfection.

The aeration tanks and digester tanks have wall mounted aerators supplied by five air compressors. On the day of the inspection, one of the five blowers was not working. On-site permittee representatives stated that two blowers were sufficient to run the west train. The facility has a 24-hour diesel back up generator. The facility's supervisory control and data acquisition (SCADA) system can also be monitored at the Jacob A. Hands Wastewater Treatment Facility by City of Las Cruces Utility Department staff.

After disinfection, effluent is metered prior to discharge at Outfall 001. The Permittee's application indicated that limited discharge (estimated in the permit application to be 0.09 MGD) was to occur for 120 days during the months of November through February. Discharge to Outfall 001 may not be limited to certain months according to an on-site permittee representative. The City of Las Cruces has a State of New Mexico Ground Water Discharge Permit to use treated effluent (reclaimed wastewater) for irrigation at city parks, other locations, construction and dust control (NMED GWQB DP-1536). A reclaimed water line (approximately 0.5 MGD) from the reclamation facility to the Sonoma Ranch Golf Course had not yet been completed (not operational) on the day of the inspection.

Biosolids are transported using a 6,000 gallon truck to, and combined with, biosolids at the Jacob A. Hands Wastewater Treatment Facility. Sludge from the Jacob A. Hands Wastewater Treatment Facility is treated at the City of Las Cruces West Mesa Compost facility.

Section A - Permit Verification – Overall Rating of “M = Marginal”

Permit Requirements for Permit Verification

Part III.D.9 (Standard Conditions, Other Information) of the permit states:

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

Findings for Permit Verification

Based on a review of the Permittee's application, relevant facts or correct information were not provided on effluent discharge characteristics during start-up operations. Although the treatment system had received RAS from the Jacob A. Hands Wastewater Treatment Facility, initially, the discharge was primarily potable water from leak testing of the treatment system basins. It is unknown if this source of discharge would have substantially change the nature or increase the quantity of pollutants, in this case, total residual chlorine, discharged.

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Section B - Recordkeeping and Reporting Evaluation – Overall Rating of “U = Unsatisfactory”

Section D - Self-Monitoring – Overall Rating of “U = Unsatisfactory”

Section F – Laboratory – Overall Rating of “M = Marginal”

Permit Requirements for Recordkeeping and Reporting; Self-Monitoring; and Laboratory

For pollutants with once/term measurement frequency, Part I.A (Limitations and Monitoring Requirements, Footnote 4) of the permit states, “*The permittee shall sample for these parameters within 90 days of the first discharge from the facility. Sample results for these parameters shall be reported to all agencies listed in Part III, Section D(4), as well as the NPDES Permits & Technical Section....*”

Part I.A (Limitations and Monitoring Requirements, Footnote 7) of the permit states, “*The permittee shall report the date of their first discharge to all agencies listed in Part III, Section D(4), as well as the NPDES Permits & Technical Section....*”

Part II.B (Other Conditions, 24-Hour Oral Reporting: Daily Maximum Limitation Violations) of the permit states:

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and concurrently to NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

TRC

E. coli bacteria

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;*
- 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.a (Standard Conditions, Monitoring Procedures) of the permit states:

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.

Part III.D.5 (Standard Conditions, Additional Monitoring by the Permittee) of the permit states:

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such increased monitoring frequency shall also be indicated on the DMR.

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Part III.D.7 (Standard Conditions, Twenty-Four Hour Reporting) of the permit states:

a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall be provided within 5 days of the time the permittee becomes aware of the circumstances. The report shall contain the following information: (1) A description of the noncompliance and its cause; (2) The period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and, (3) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. The following shall be included as information which must be reported within 24 hours: (1) Any unanticipated bypass which exceeds any effluent limitation in the permit; (2) Any upset which exceeds any effluent limitation in the permit; and, (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part II (industrial permits only) of the permit to be reported within 24 hours.

c. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

Findings for Recordkeeping and Reporting; Self-Monitoring; and Laboratory

DMRs for December 2009 and January 2010 incorrectly indicate that “no discharge” occurred. The plant received influent and started discharging to Outfall 001 on December 21, 2009 according to on-site permittee representatives. Also, the date of the first discharge was not reported to all agencies listed in Part III, Section D(4), as well as the NPDES Permits & Technical Section within five (5) days of the occurrence.

Effluent monitoring (sampling and analyses) was not performed as specified in the permit starting December 2009. BOD5 and TSS monitoring was not conducted at a frequency required by the permit in the first week of January 2010. Monitoring for BOD5, TSS, E. coli bacteria and pH was conducted in January, but not reported on the January 2010 DMR. BOD5 and TSS 30 DA Averages were not reported on the February 2010 DMR. It was also noted that DMRs submitted for February through June 2010 indicate a value of “0”, even though no TRC monitoring had been conducted.

A daily maximum effluent limitation violation of E. coli bacteria of a sample collected on May 4, 2010 was not reported orally to EPA Region 6 within 24 hours, followed by a written report in five days. Analytical results for E.coli bacteria monitoring were inconsistent with data reported on the May 2010 DMR. The highest daily discharge analytical result of a sample collected on May 4, 2010 for E.coli bacterial monitoring (629.4 CFU/100 ml) was not reported as the daily max on the May 2010 DMR. The effluent limit for E.coli bacteria (highest allowable “daily discharge” during the calendar month) is 410 CFU/100 ml. A weekly geometric average (7.1 colony forming units (CFU)/100 ml) was reported instead of the highest daily discharge. The actual frequency of analysis for E.coli bacteria was also not reported on the May 2010 DMR.

Analytical results for pH monitoring in log books did not identify the time of collection, name of individual performing sampling, time of analysis, or analytical methods. Only one time entry was provided. Copies of log books for pH monitoring also did not record sample container type. Therefore, it was not documented that proper containers or sample holding times (in this case 15 minutes) conform to 40 CFR 136.3.

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Bench sheets do not refer to test procedures approved under 40 CFR 136.3. Bench sheets indicate that withdrawn EPA Method 160.2 was used to analyze TSS (see March of 2007 (*Federal Register/Vol. 72, No. 47/Monday, March 12, 2007/Rules and Regulations*)). Both TSS and BOD5 bench sheets 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. Hydrogen ion (pH), Standard Methods 4500–H+A referred to on laboratory bench sheets is also not approved by 40 CFR 136.3 (note Standard Methods 4500–H+B is approved). Bench sheets for E.coli bacteria monitoring did not refer to an analytical method listed in 40 CFR 136.3 for samples collected on March 2, 2010 and March 9, 2010.

It could not be verified from bench sheets that BOD5 monitoring was conducted in accordance with procedures approved under 40 CFR 136.3. The initial and final BOD5 Dissolved Oxygen (DO) time of analysis were short the required 5-day incubation, for example, approximately 3 hours from 3/24/10 (1300 hrs) to 3/29/10 (1000 hrs) and from 03/31/10 (1200 hours) to 04/05/10 (0900 hours); and approximately 4 hours from 05/21/10 (1329 hours) to 05/26/10 (0932 hours). Laboratory bench sheet did not record daily incubator temperatures to confirm that samples were incubated at 20°C ±1°C. BOD5 worksheets in March through May 2010 indicate that the recorded seed correction factors ranged from 0.33 to 0.56 mg/L. The DO uptake attributable to the seed added to each bottle should be between 0.6 and 1.0 mg/L. DO uptake outside this range does not invalidate analytical results, but subsequent BOD5 worksheets do not indicate if quality control adjustments to the seed were conducted in an attempt to correct this situation.

Duplicate samples for pH, TSS and BOD5 were not collected and analyzed for this facility from March thru May 2010. Ten percent of the samples should be duplicated. The Permittee should follow up with their laboratory to ensure that quality assurance/quality control procedures incorporate duplicates for this facility.

Incomplete record keeping and inconsistencies of the date of sample collection or recorded time off for the auto composite sampler were noted on facility and laboratory record keeping forms for TSS and BOD5 monitoring. For example, the *Composite Volume Calculation Sheet* indicates that a sample was collected on May 24, 2010, but the corresponding *Water Quality Laboratory Final Effluent Bench Sheet* indicates that the sample was obtained on May 25, 2010. Similar date or time inconsistencies were noted on *Composite 24 Hour Flows (FINEFF)*, *Composite Volume Calculation Sheet*, and *Water Quality Laboratory Final Effluent* record keeping for samples collected May 10, May 3, April 19, and April 9, March 14, and March 1, 2010. The reason for changing recorded hourly flow rates on March 29, 2010 was not documented on bench sheets and sample collection logs. No errors were found which would indicate analytical results were invalid or that monitoring reported on DMRs was incorrect. But, accurate and consistent reporting of sample collection times and flow rates is important to be able to verify that sample holding times conform to 40 CFR 136.3 and the correct daily flow measurement is used in loading calculations.

NMED SWQB files do not contain “No Discharge” DMRs (001A) for November 2007 thru August 2008, May 2009 and November 2009.

Pollutants with once/term measurement frequency were sampled within 90 days of the first discharge and a DMR was submitted to NMED SWQB, but NMED SWQB files do not have documentation that sample results of a sample collected on February 17, 2010 were sent to EPA NPDES Permits & Technical Section.

NMED SWQB files do not contain “No Discharge” quarterly toxicity monitoring DMRs (TX1Q) from the effective date of the permit, November 2007 thru October 2008, and May 2009 thru April 2010. A “No

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Discharge” quarterly toxicity monitoring DMRs (TX1Q) was received for October 2009, but the monitoring period quarter was not accurately reported. DMRs for toxicity testing conducted in the February thru April 2010 monitoring period were due in May of 2010. This DMR has not been received by the date of this report.

NMED SWQB files do not contain an updated pretreatment program status report referring to this facility. Part III.D.d (Contributing Industries and Pretreatment Requirements) of the permit states “*during the month of February the permittee shall submit an updated pretreatment program status report to EPA and the State.*” The City of Las Cruces’ pretreatment program has not been updated to make specific references to the East Mesa Water Reclamation Facility according to permittee representatives.

NMED SWQB files do not contain annual sludge DMRs for 2007, 2008 and 2009 referring to this facility. Part IV (Major - Sewage Sludge Requirements, Element 1 - Land Application) of the permit has requirements applying to all sewage sludge land application, including reporting. Because the biosolids are combined, there is no separate biosolid recordkeeping, treatment, or monitoring for this facility’s sludge once it enters the Jacob A. Hands Wastewater Treatment Facility. Therefore, any reporting of “No Discharge” for this facility would appear to need further explanation on sludge DMRs.

Section C - Operations and Maintenance – Overall Rating of “M = Marginal”

Permit Requirements for Operations and Maintenance

Part III.B.3.a (Standard Conditions, Proper Operation and Maintenance) of the permit states, “*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.*”

Part III.B.6 (Standard Conditions, Removed Substances) of the permit states, “*Unless otherwise authorized, solids, sewage sludges, filter backwash, or other pollutants removed in the course of treatment or wastewater control shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.*”

Findings for Operation and Maintenance

An approximately 6,000 gallon overflow occurred at the facility’s drum screen on May 6, 2010 according to record keeping for the facility. Wastewater was contained in the lined landscaping pond and vacuumed back into the sewer system. The drum screen went into alarm and shut down restricting flow to the plant causing it to overflow onto the ground. Record keeping for the spill did not indicate if correction action had been taken or if additional procedures were needed to prevent additional overflows.

Staining was observed on the concrete pad below a drain spout from drum screen cleanout. On-site permittee representatives stated that other practices or measures to prevent wastewater from draining to the ground would be investigated.

The algal growth on weirs below the disc filter system before UV disinfection unit was also observed. Algae was also noted on TSS bench sheets for an effluent composite sample collected on May 3, 2010. Additional maintenance and cleaning (e.g., spray washing, more frequent cleaning) appears needed to prevent future maintenance issues of the UV disinfection unit and/or exceedances of E. coli bacteria or TSS permit effluent limits.

NMED/SWQB
Official Photograph Log
Photo # 1

Photographer: Erin S. Trujillo	Date: 07/07/2010	Time: 1323 hours
City/County: Las Cruces / Doña Ana County		State: New Mexico
Location: East Mesa Water Reclamation Facility		
Subject: Staining from wastewater on concrete pad below drain spout from drum screen cleanout.		



NMED/SWQB
Official Photograph Log
Photo # 2

Photographer: Erin S. Trujillo	Date: 07/07/2010	Time: 1355 hours
City/County: Las Cruces / Doña Ana County		State: New Mexico
Location: East Mesa Water Reclamation Facility		
Subject: Algal growth on weirs below filter system before UV disinfection unit.		



NMED/SWQB
Official Photograph Log
Photo # 3

Photographer: Erin S. Trujillo	Date: 07/07/2010	Time: 1408 hours
City/County: Las Cruces / Doña Ana County	State: New Mexico	
Location: East Mesa Water Reclamation Facility		
Subject: Discharge from Outfall 001 and algal growth on concrete pad below outfall.		



NMED/SWQB
Official Photograph Log
Photo # 4

Photographer: Erin S. Trujillo	Date: 07/07/2010	Time: 1411 hours
City/County: Las Cruces / Doña Ana County	State: New Mexico	
Location: East Mesa Water Reclamation Facility		
Subject: Algal growth mat in receiving stream channel.		

