



SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau

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



RYAN FLYNN
Cabinet Secretary-Designate

BUTCH TONGATE
Deputy Secretary

TOM SKIBITSKI
Acting Director
Resource Protection Division

Certified Mail - Return Receipt Requested

June 3, 2013

Mr. Dean Metcalf, Director
Southwestern Public Service Company
Eddy County Direct Current Terminal
P.O. Box 1261
Amarillo, Texas 79105-1261

**Re: Minor Non-Municipal; SIC 4911; NPDES Compliance Evaluation Inspection; Southwestern
Public Service Company; NM0029131; May 10, 2013**

Dear Mr. Metcalf,

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 Flow Measurement, and Self -Monitoring. 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: Rashida Bowlin, 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
Jan Walker, USEPA (6EN) by e-mail
NMED District III, Frank Ford 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. 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. 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 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. 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
At the time of the inspection no device or procedure in place to measure the discharge from the tank through the outfall. Permit requires estimate only of flow, not subject to accuracy provisions in Part III.C.6.
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 n/a) 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. **No for pH & TRC, yes for metals.** Y N NA
6. SPIKED SAMPLES ARE ANALYZED. ___ % OF THE TIME. Y N NA
7. COMMERCIAL LABORATORY USED. **If needed:** Y N NA

LAB NAME **SPSC Excel Energy Chemistry Resources** **The Seacrest Group**
 LAB ADDRESS **7201 N. Lakeside Rd., Amarillo, TX 79108** **1341 Cannon St. Louisville, Co 80027-1455**
 PARAMETERS PERFORMED **Arsenic** **WET**

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 Discharge						

RECEIVING WATER OBSERVATIONS: **Site discharges to dry arroyo, see photo.**

SECTION H - SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED No.)
 DETAILS:

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 **No Samples Taken** (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
Southwestern Public Service Current Terminal
NPDES Permit No. NM0029131
May 10, 2013

Introduction

On May 10, 2013, Daniel Valenta, of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the Southwestern Public Service Company (SPSC), Eddy County Direct Current (DC) Tie Terminal Facility on US 82, 9.5 miles east of Artesia, Eddy County, New Mexico.

The facility 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 NM0029131 which regulates discharge of cooling tower blowdown from Outfall 001 to an unnamed arroyo, thence to the dry arroyo named Hart Canyon of the Pecos River Basin in the unclassified segment 20.6.4.97 *State of New Mexico Standards for Interstate and Intrastate Surface Waters, 20.6.4 New Mexico Administrative Code* (NMAC). This segment includes the designated uses of livestock watering, wildlife habitat, limited aquatic life, and secondary contact.

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.

The inspector arrived at the Eddy County DC Tie Terminal Facility at approximately 0924 hours on May 10, 2013. The inspector made introductions, presented credentials and briefly discussed the purpose of the investigation to the Permittees on-site representatives, Gale Henslee, SPSC Xcel Energy Principal Environmental Analyst, and Mr. Danny Powers, SPSC Substation Working Foreman, The inspector toured the facility, including the outfall and on-site laboratory. An exit interview with on-site representatives to discuss the preliminary findings of this inspection was conducted at approximately 1307 hours at the facility.

Treatment Scheme and Schedule of Compliance

Water for the facility is obtained from ground water resources through Double Eagle Water out of Carlsbad, NM. There are three storage tanks on site that hold approximately 30,000 gallons of water. The Eddy County DCT Terminal converts alternating current electricity (AC) from the eastern electrical grid which comes in at 230k volts into direct current (DC), and back to a different AC frequency 345 volts, for use in the western electrical grid. This conversion is necessary because the two grids are incompatible. Electrical losses in the conversion to DC are a small percentage released as heat. This is released to the atmosphere through a combination wet/dry cooling tower. The previous cooling tower (8,000 gallon capacity) was replaced with a Wet Surface Air Cooler (WSAC) basin with a smaller capacity (800 gallon capacity) in 2002.

The cooling system design requires auxiliary cooling whenever the outside temperature exceeds 74° F. This process results in a small volume, automatic discharge of non-contact cooling water. The discharge piping was changed August 2012. Before August 2012 effluent exits the WASC basin, flows through an underground pipeline, daylight at outfall 001, and discharges onto a concrete splash pad.

**Compliance Evaluation Inspection
Southwestern Public Service Current Terminal
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Since then a large tank was brought in and installed at the site. The automatic discharge goes to the tank. A valve can be opened allowing the water to discharge out the outfall or trucked off site.

A program logic computer system continuously monitors and controls wastewater discharges for conductivity, pH, and temperature and the automatic discharge valve is triggered only when pH and temperature are within NPDES permit limits. To control pH levels, the WSAC basin is treated with sulfuric acid at a rate of approximately 1 lb/1000 gallons of water. Algal growth in the basin is controlled by adding liquid HTH (calcium hypochlorite).

Arsenic is in the source cooling water and accumulates in the cooling tower. The facility has implemented an arsenic treatment system from AdEdge Technologies. The source water contains 5-6 ppm arsenic; this is run through the treatment system/resin filtration and is stored until needed for use in the cooling towers. The two filters, which are run in series, are comprised of manganese dioxide coated silica sand and are regenerated once a week. Blackwash water is sent to a septic tank. A bleach water/iron solution is pumped onto the resin to supply iron for the arsenic removal process, and due to the bleach, no other chlorine has been needed to be added for algal control at this point in time.

Further Explanations

Note: The sections are arranged according to the format of the enclosed EPA Inspection Checklist (Form 3506-3)

Section E – Flow Measurement: Overall rating “Unsatisfactory”

Section G – Effluent/Receiving Waters: Overall rating of “Unsatisfactory”

EFFLUENT CHARACTERIS	lbs/day		ug/l	
	Monthly Ave	Daily Max	Monthly Ave	Daily Ave
Arsenic, total (*5)	N/A	N/A	Report	Report
Arsenic, total (*6)	N/A	N/A	8.9 ug/l	13.3 ug/l

**5 Requirements for arsenic are effective during the period beginning the effective date of the permit and lasting through one (1) day prior to three (3) years from the effective date of the permit.*

**6 Requirements for arsenic are effective during the period beginning three (3) years from the effective date of the permit and lasting through the expiration date of the permit.*

Compliance Evaluation Inspection
Southwestern Public Service Current Terminal
NPDES Permit No. NM0029131
May 10, 2013

Finding:

1. Southwestern Public Service was required by their permit to be in compliance with their arsenic limit starting October 1, 2009. The facility is not on line as much as it was previously. It is in the hotter summer months the plant goes on line and discharges may occur. The facility discharged July 2012 and August 2012. Under footnote 6 the permit limits above are in effect. In July 2012 the Monthly Average was 10.6 ug/l with a Daily Maximum of 30.5 ug/l. In August 2012 the Monthly Average was 18.4 ug/l with a Daily Maximum of 18.4 ug/l. These are above the permitted limits.

2. The permit requires the facility to estimate the discharge using sound analytical techniques if discharges occur. Without this measurement the permit required reporting of lbs/day cannot be calculated. At the time of the inspection no device or procedure was in place to meet this requirement.

**NMED/SWQB
Site Overview**

City/County: Bayard/Grant County	
Location: Southwestern Public Service Company Eddy County Direct Current Terminal, 9.5 miles east of Artesia, New Mexico	
Subject: Overview of facility and outfall 001 before a holding tank was brought on site.	



