



**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Surface Water Quality Bureau



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Secretary

RAJ SOLOMON, P.E
Acting Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 18, 2011

Joseph Gutierrez, Director
Community Services Department, County of Santa Fe
P.O. Box 276
Santa Fe, New Mexico 87504-0276

RE: Minor Non-Municipal, SIC 1799, NPDES Compliance Evaluation Inspection, County of Santa Fe, Santa Fe County Judicial Complex, NM0031046, December 28, 2010

Dear Mr. Gutierrez,

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 Paul Olafson, Director, Community Project Division, Community Services Department and Alan J. Eschenbacher, P.E., Souder Miller & Associates 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 Bates, 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
Paul Olafson, Dir, Community Project Division, Community Services Department, County of Santa Fe by e-mail



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 1 0 4 6 11 12 1 0 1 2 2 8 17 18 C 19 S 20 2					
Remarks					
T R E A T E D G R O U N D W A T E R / D E W A T E R					
Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved	
67 69	70 2	71 N	72 N	73	74 75 M I N 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) County of Santa Fe, Steve Herrera Judicial Complex, First Judicial District Court (Corner of Montezuma Street & Sandoval Street), Santa Fe, New Mexico 87501. Santa Fe County	Entry Time /Date 0900 hours / 12/28/2010	Permit Effective Date May 1, 2009
	Exit Time/Date 1150 hours / 12/28/2010	Permit Expiration Date April 30, 2014
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) -Paul M. Olafson / Director, Community Projects Division, Community Services Department, County of Santa Fe / 505-992-9866 and fax 992-9869, polafson@santafecounty.org -Alan J. Eschenbacker, P.E. / Souder Miller & Associates, Environmental Remediation Project Geoscientist / 505-473-9211, cell 690-9088, aje@soudermiller.com	Other Facility Data Outfall 001 Latitude N. 35.686368° Longitude W. -105.943024°	
Name, Address of Responsible Official/Title/Phone and Fax Number Joseph Gutierrez, County of Santa Fe, P.O. Box 276 (901 W. Alameda, Ste 20C), Santa Fe, New Mexico 87504-0276 / Director, Community Services Department / Main 505-986-6200, 992-9862, fax 992-9869, jgutierrez@co.santa-fe.nm.us	Contacted Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
SIC 1799		

Section C: Areas Evaluated During Inspection (S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	Permit	M	Flow Measurement	S	Operations & Maintenance	N	CSO/SSO
U	Records/Reports	U	Self-Monitoring Program	N	Sludge Handling/Disposal	N	Pollution Prevention
S	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)

1. SEE ATTACHED CHECKLIST REPORT WITH FURTHER EXPLANATIONS.

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 01/18/2011
Signature of Management QA Reviewer Richard E. Powell /s/ Richard E. Powell	Agency/Office/Phone and Fax Numbers NMED/SWQB/505-827-2798	Date 01/18/2011

SECTION A - PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS

S M U NA (FURTHER EXPLANATION ATTACHED No)

DETAILS: **Portland cement grout that entered dewatered groundwater and treatment system was discharged in June and July of 2010. Notification given to EPA after discharge. There was no evidence that treated groundwater used for construction dewatering for dust suppression in the construction excavated pit had discharged off site.**

- 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: **Reviewed submitted DMRs thru September 2010 and laboratory results for June and August 2010.**

- 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. **Not documented for pH.** Y N NA
 - d) RESULTS OF ANALYSES AND CALIBRATIONS. Y N NA
 - e) DATES AND TIMES OF ANALYSES. **Laboratory reports for COD and BTEX did not report time of analysis.** Y N NA
 - f) NAME OF PERSON(S) PERFORMING ANALYSES. Y N NA
- 3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE. **pH** 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 No)

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. **On-site Equipment Manual Brochures/Procedures** Y N NA
 STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED. **Written Water Treatment Data Forms** Y N NA
 PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED. **No written emergency treatment procedures** 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. **Not documented.** Y N NA
- a) SAMPLES REFRIGERATED DURING COMPOSITING. Y N NA
- b) PROPER PRESERVATION TECHNIQUES USED. **Not documented.** Y N NA
pH analyzed at commercial laboratory exceeded holding times.
- c) CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136.3. **Containers 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? **Not for pH. Not documented for total Lead.** Y N NA

SECTION E - FLOW MEASUREMENT

PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS. S M U NA (FURTHER EXPLANATION ATTACHED Yes)
 DETAILS: **Estimate flow measurement not subject to accuracy provisions.**

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED. Y N NA
 TYPE OF DEVICE **Neptune Totalized Meter (gallons)**
2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED. **Measurement frequency not daily or not 24-hour period.** Y N NA
3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED. Y N NA
4. CALIBRATION FREQUENCY ADEQUATE. 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 Yes)
 DETAILS: **Commercial laboratories not inspected.**

1. EPA APPROVED ANALYTICAL PROCEDURES USED (40 CFR 136.3 FOR LIQUIDS, 503.8(b) FOR SLUDGES) **Not documented for on-site pH** 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. **On-site pH** S M U NA

4. QUALITY CONTROL PROCEDURES ADEQUATE. S M U NA

Field/trip blank sample submitted for analysis, but no field duplicate samples collected.

5. DUPLICATE SAMPLES ARE ANALYZED. 0 % OF THE TIME. **Record keeping did not document lab duplicates.** Y N NA

6. SPIKED SAMPLES ARE ANALYZED. ~100 % OF THE TIME. Y N NA

7. COMMERCIAL LABORATORY USED. Y N NA

LAB NAME **1) Hall Environmental Analysis Laboratory, Inc., 4901 Hawkins NE, Ste D, Albuquerque, NM 87109 (TSS, Lead, & Nitrate+Nitrite)**
 LAB ADDRESS **2) Anatek Labs, Inc., 1282 Alturas Dr, Moscow, ID 83843, 208-883-2839 (COD & BTEX by EPA Method 624)**
 PARAMETERS PERFORMED **3) Pace Analytical Services, Inc., 1636 Roseytown Rd, Ste 2,3,4, Greensburg PA 15601, 724-860-5800 (Radiological)**

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	No Discharge						

RECEIVING WATER OBSERVATIONS: **Flow in Santa Fe River was low. Available information and test results indicate pH effluent limits were exceeded in June and July of 2010.**

SECTION H - SLUDGE DISPOSAL

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

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

Santa Fe County Judicial Complex
NPDES Permit No. NM0031046
Compliance Evaluation Inspection
December 28, 2010

Further Explanations

Introduction

On December 28, 2010, Erin Trujillo of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the Steve Herrera Judicial Complex, First Judicial District Court (Corner of Montezuma Street & Sandoval Street), Santa Fe in Santa Fe 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 NM0031046, which regulates discharge treated groundwater to a storm ditch thence to the Santa Fe River in Segment 20.6.4.98 *State of New Mexico Standards for Interstate and Intrastate Surface Waters, 20.6.4 New Mexico Administrative Code (NMAC)* of the Rio Grande Basin.

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 inspector, and records and reports kept by the Permittee and/or NMED.

Upon arrival at the site at approximately 0900 hours on the day of the inspection, the inspector presented credentials to Paul M. Olafson, Director, Community Projects Division, Community Services Department, County of Santa Fe and Alan J. Eschenbacher, P.E., Souder Miller & Associates, Environmental Remediation Project Geoscientist and explained the purpose of the inspection. The inspector, Mr. Olafson and Mr. Eschenbacher toured the on-site treatment system and outfall location at the Santa Fe River. The inspector conducted an exit interview to discuss preliminary findings with Mr. Olafson and Mr. Eschenbacher on site. The inspector and Mr. Eschenbacher traveled to Souder Miller & Associates offices at 1201 Parkway Drive, Santa Fe, New Mexico, 87507-7258 at approximately 1017 hours to review recordkeeping. The inspection ended at 1150 hours on the day of the inspection. Preliminary findings of the inspection were discussed with Mr. Joseph Gutierrez, Director, Community Services Department, County of Santa Fe by telephone on December 29, 2010. Additional information was provided by Mr. Eschenbacher on January 5, 2011.

Treatment Scheme

The County of Santa Fe's judicial complex is an active construction site for a multi-story courtroom and hearing room building with a two-level below-ground parking garage. The site's soil and groundwater has been impacted by multiple-area releases of petroleum hydrocarbons. Petroleum contaminated groundwater is approximately 30 feet below the ground surface at the site. On the day of the inspection, construction activities had temporarily ceased for the holidays, but an extraction well system continued to dewater the excavated pit to approximately 40 feet below the ground surface.

Five horizontal trenches with 6-inch extraction wells dewater the construction excavation. Initially, contaminated groundwater entered an on-site oil-water separator, but this pre-treatment was not needed according to the Permittee's on-site representative. After bypassing the on-site oil-water separator, contaminated water enters a sediment tank, then flows by gravity to a modified lined roll-off container to allow additional solid settling. Four float switch pumps in the modified roll-off turn on at various water levels to regulate flow. If the water level rises too high, an overflow valve and pipe returns flow back to the first sediment tank. As a back up, an auto-dialer alarm notifies remediation staff prior to the water level rising to the overflow valve. The auto dialer also notifies remediation staff of a power outage greater than five minutes.

Santa Fe County Judicial Complex
NPDES Permit No. NM0031046
Compliance Evaluation Inspection
December 28, 2010

Once there is sufficient water in the modified roll-off, water is pumped to two 25-micron bag filters then three 5,000-pound granular activated carbon treatment tanks installed in series. After the activated carbon treatment, water passes through a zeolite filled tank to remove dissolved lead then another two 0.5-micron bag filters to remove filter media and remaining particulate lead. An on-site tank can provide temporary storage of groundwater (treated, partially treated or un-treated) for one day.

After treatment, a piping system allows effluent to be discharged to a Montezuma Street storm sewer drop inlet at the southwest corner of the site thence to the Santa Fe River; or an on-site sanitary sewer thence to the City of Santa Fe wastewater treatment plant. Treated groundwater had also been used for construction dewatering for dust suppression in the construction excavation according to the Permittee's on-site representatives. During discharge to the storm sewer, a Neptune totalizing flow meter was installed in the effluent pipe according to the Permittee's on-site representatives. On the day of this inspection, the manual shut off valve was closed to the discharge pipe leading to the storm sewer and both the sample port and flow meter had been removed. The flow meter was installed in the pipe to the sanitary sewer.

In June and July of 2010, Portland cement grout for repairs and modifications to a grout barrier wall installed around the perimeter of the excavation entered the dewatering groundwater treatment system. Alan J. Eschenbacher, P.E., Souder Miller & Associates letter to the Mary Simmons, EPA dated July 26, 2010 states, "*On July, 16, 2010, Santa Fe County became aware the pH of the discharged water was above the upper discharge limitation of 9.0. The samples collected of June 30, 2010, July 7, 2010, and July 16, 2010 had pH readings of 10.18, 11.50, and 11.27, respectively.*" After obtaining effluent pH results from a commercial laboratory that exceeded permit limits on July 16, 2010, discharge was temporarily stopped. On July 18, 2010, a hydrochloric acid (HCL) injection system was installed to treat the groundwater for high pH. Treated water was temporarily retained on site in the holding storage tank and tested prior to discharge to the storm sewer. During the additional HCL treatment, an effluent sampling port was temporarily installed after a buffer holding tank before discharge through a second hose to the storm sewer according to Permittee's on-site representative. On the day of this inspection, the buffer tank had been removed from the effluent pipe.

Discharge to the storm sewer and Santa Fe River was stopped on December 15, 2010 due to increasing nitrate concentrations in the pre-treated groundwater according to the Permittee's on-site representatives. The County of Santa Fe may decide to resume discharge to the Santa Fe River if pretreatment concentrations of nitrates in the groundwater are below NMED Groundwater Quality Bureau discharge limits of 10 milligrams per liter (mg/L).

The County of Santa Fe is coordinating with the NMED Petroleum Storage Tank Bureau (PSTB) on clean up activities according to the Permittee's on-site representatives. The County of Santa Fe may decide to continue dewatering after the construction of the below-ground parking garage to assist PSTB's soil vapor extraction remediation of the site. The below-ground parking garage will not have sumps and the County of Santa Fe does not anticipate that dewatering will be needed after construction of the judicial complex building based on information from the Permittee's on-site representatives.

Santa Fe County Judicial Complex
NPDES Permit No. NM0031046
Compliance Evaluation Inspection
December 28, 2010

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

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

Section E - Flow Measurement – Overall Rating of “M = Marginal”

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

Section G - Effluent – Overall Rating of “U = Unsatisfactory”

Permit Requirements for Recordkeeping and Reporting, Self-Monitoring, Flow Measurement, Laboratory and Effluent Limitations

Part I.A (Limitations and Monitoring Requirements) of the permit states that the discharge limitations for pH are 6.6 to 9.0 standard units to be monitored at a measurement frequency of once per week. The permit states that the measurement frequency for flow is daily with an estimate sample type and “*Flow may be estimated using sound analytical techniques.*”

Part II.A (Other Conditions, Minimum Quantification Level (MQL)) of the permit states:

For pollutants listed on Appendix A of Part II below with MQL’s, analyses must be performed to the listed MQL. If any individual analytical test result is less than the MQL listed, a value of zero (0) may be used for that pollutant result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

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 (Standard Conditions, Monitoring Procedures) of the permit states:

- a. 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.*
- c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.*

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.

Santa Fe County Judicial Complex
NPDES Permit No. NM0031046
Compliance Evaluation Inspection
December 28, 2010

Findings for Recordkeeping and Reporting, Self-Monitoring, Flow Measurement, Laboratory and Effluent Limitations
pH Monitoring, Laboratory and Effluent Limitations

As previously discussed, effluent limitations for pH were reported to have been exceeded in June and July of 2010. This non-compliance was reported on the June and July 2010 DMRs signed/certified by the Permittee on July 27, 2010 and October 26, 2010, respectively.

Reported effluent monitoring for pH of samples analyzed by a commercial laboratory did not conform to maximum holding times in 40 CFR 136.3 Table II--in this case analyzed within 15 minutes of sample collection. For example, a sample collected on June 30, 2010 at 1001 hours was not analyzed by the commercial laboratory until July 2, 2010 at 1850 hours. Had monitoring been conducted according to approved holding times, the Permittee would have had more opportunity before July 16, 2010 to halt discharge of groundwater not properly treated to address infiltration of Portland cement grout between June 30, 2010 and July 15, 2010.

Increased monitoring frequency of the effluent for pH was not reported on DMRs. Record keeping in reviewed field notebooks did not document the pH analytical method as required by the permit. Based on information in the reviewed field notebooks and from the Permittee's representative, on-site testing for pH may have been conducted using test procedures approved in 40 CFR 136.3, but the results and actual frequency of analysis were not reported on DMRs submitted after June 2010. For example, on-site effluent testing for pH was increased from once per week as required in Part I of the permit to daily for at least seven days in July 2010. The frequency of analysis for pH monitoring was reported on the July 2010 DMR as the permit frequency "01/07" instead of the actually frequency by approved methods.

Record Keeping, Reporting and Monitoring

Record keeping on quality control/quality assurance Chain of Custody (COC) forms and reviewed commercial laboratory sample receipt checklists did not document specific sample preservation techniques and containers used for effluent monitoring to verify conformance with approved methods in 40 CFR 136.3; for example:

- Only the word "*various*" was written for container type on reviewed COC forms. Reviewed sample receipt checklists also did not indicate specific containers.

Note: In Table II in 40 CFR 136.3, containers include polyethylene, fluoropolymer, or glass containers are required for samples collected for COD, Lead, Nitrate-nitrite, TSS and radiological tests; and glass or fluoropolymer-lined septum containers are required for samples collected for Benzene/BTEX testing.

- Only the word "*various*" was written for preservation type on reviewed COC forms. Reviewed sample receipt checklists also did not provide specific preservation information. For example, sample receipt checklists for samples collected on August 4 and August 11, 2010 refer to preserved bottles checked for pH, but not which bottles. Handwritten comments on the sample receipt checklist for samples collected on August 11, 2010 state, "*Samples preserved with HCL*", but do not indicate if the sample for total Lead was preserved. Sample receipt checklists were not included in record keeping for samples collected on June 18, June 24 and June 30, 2010.

Note: In Table II in 40 CFR 136.3, preservation requirements for samples analyzed for COD and Nitrate+Nitrite require acid preservation using H₂SO₄ to pH<2; total Lead require acid preservation using HNO₃ to pH<2 or at least 24 hours prior to analysis; radiological tests require acid preservation using HNO₃ to pH<2; and Benzene/BTEX require acid preservation with HCl to pH 2 or if the sample is not adjusted to pH 2, then the sample must be analyzed within seven days of sampling.

Santa Fe County Judicial Complex
NPDES Permit No. NM0031046
Compliance Evaluation Inspection
December 28, 2010

- Container/temp blank temperatures could not be read on copies of COC forms for June 30, 2010. Cooling preservation (Cool, $\leq 6^{\circ}\text{C}$) is required for samples collected for COD, Nitrate+Nitrite, TSS, and Benzene/BTEX. Also, reviewed analytical reports did not contain completed COC forms to confirm cooling preservation during transfer of collected samples to other laboratories. For example, the use of ice for cooling preservation was recorded on reviewed COC forms for samples sent to Hall Environmental Analysis Laboratory, Inc. But, cooling preservation for samples collected on June 18, June 30, August 4, and August 18, 2010 for COD and Benzene/BTEX monitoring sent from Hall Environmental Analysis Laboratory, Inc. to Anateck Labs, Inc. was not documented in record keeping. Insufficient cooling preservation for COD, TSS and Benzene/BTEX is discussed below.

Analyses for COD and Benzene/BTEX did not include times of analysis as required by the permit. Because time of analysis was not included, it could not be confirmed from record keeping that Benzene/BTEX monitoring for samples collected on August 4, 2010 and analyzed on August 11, 2010 conformed to previously discussed preservation requirements listed in 40 CFR 136.3 Table II. Sample receipt checklists for samples collected on August 4, 2010 at 1:00 pm did not sufficiently document preservation nor did the laboratory results for Benzene/BTEX analyzed on August 11, 2010 document that the sample was tested within seven days (168 hours) of sampling.

Analytical results were inconsistent with data reported on DMRs for total Lead. Total Lead monthly average and daily max of 0.36 $\mu\text{g/L}$ and 0.57 $\mu\text{g/L}$, respectively, were reported on both the June and August 2010 DMRs. In June 2010, the total Lead daily max was 0.73 $\mu\text{g/L}$ for a sample collected on June 18, 2010 and the calculated monthly average was 1.2 $\mu\text{g/L}$ ($0.73 \mu\text{g/L} + 0.29 \mu\text{g/L} + <2.5 \mu\text{g/L} / 3$). In August 2010, the total Lead daily max was 0.67 $\mu\text{g/L}$ for a sample collected on August 11, 2010 and the calculated monthly average was 0.39 $\mu\text{g/L}$ ($0.31 \mu\text{g/L} + 0.67 \mu\text{g/L} + 0.20 \mu\text{g/L} / 3$). Also, the reported frequency of analysis of "08/30" on the June and August 2010 DMRs was not supported by record keeping. Therefore, June, July, August, and September 2010 DMRs with total Lead frequency of analysis reported as "08/30" are suspected to be incorrect.

A discrepancy was found on the Daily Visible Oil Sheen Monitoring Log record keeping. Part II.E of the permit states that Visible Oil Sheen monitoring "observation shall be made on a daily log." A recorded time of sample collection and that there was no visible oil sheen was recorded on the on-site log for each day in July 2010, including July 17, 2010 at 1005 hours. However, the monthly flow meter readings for July for that time period indicate that there was no discharge between July 16, 2010 at 1313 hours and July 18, 2010 at 1322 hours.

COD, TSS and Benzene/BTEX Monitoring

Recorded cooling preservation did not conform to listed temperatures in 40 CFR 136.3 Table II for COD, TSS and Benzene/BTEX samples collected on August 4, 2010. Container/temp blank temperatures were 7.5°C when the samples arrived at Hall Environmental Analysis Laboratory, Inc. Based on recorded temperatures on reviewed COC forms, samples collected on other days had sufficient time to cool before arriving at the laboratory. Cooling preservation procedures need to be reviewed to ensure that sufficient ice and appropriate packing materials are being used to reduce sample temperatures to $<6^{\circ}\text{C}$.

Santa Fe County Judicial Complex
NPDES Permit No. NM0031046
Compliance Evaluation Inspection
December 28, 2010

Flow Measurement and Reporting

Actual flow measurement frequency for reporting purposes was not daily as required by Part I of the permit and the actual frequency of flow measurement (in this case totalized flow meter readings) was not reported on the DMRs. Flow measurement frequency on the June, July, August and September 2010 DMR was incorrectly reported as "01/01." Totalized flow was not read and recorded every 24 hour time period for reporting purposes. Some additional flow meter readings may be available according to the Permittee's representative; however, it was not used for reporting purposes.

Because flow measurement frequency was not conducted at the frequency required in the permit, calculated Monthly Average and Daily Max flow are not considered valid for reporting purposes. It was also noted that the recorded flow measurement data was inconsistent with reported Daily Max flow on the June, July and August 2010 DMRs (see calculation check at the end of this report provided for information purposes only).

Effluent Loading Reporting

Flow measurement frequency was daily in June and August 2010 on the day samples were collected for COD, total Lead, TSS, Benzene and BTEX monitoring, but the daily effluent flow was not representative of a 24-hour period for loading calculation reporting except on June 18, 2010. Therefore, Monthly Average and Daily Max loading calculations in June and August 2010 are not considered valid for reporting purposes. It was also noted that the recorded flow measurement and daily analytical data was inconsistent with the reported effluent loading for total Lead on the August 2010 DMR (see calculation check at the end of this report provided for information purposes only).

Effluent loadings for TSS, Benzene and BTEX were not calculated and/or reported as required by the permit using daily effluent flow estimates and daily analytical data. Reported concentration of TSS, Benzene, BTEX on the August 2010 DMR was <10 mg/L, <2.0 µg/L and <0.5 µg/L, respectively. The reported monthly average and daily max loading was incorrectly reported on the August 2010 DMR to be "Q". TSS does not have a USEPA Region 6 published MQL; therefore, the numeric value of the detection limit and the daily effluent flow estimate would be used in the loading calculation. As discussed in Part II of the Permit, USEPA Region 6 has listed MQLs for Benzene, Ethylbenzene and Toluene (10 µg/L), but not for Xylene. A value of zero (0) may not be used for BTEX for the DMR calculations and reporting unless granted by the USEPA. The test result for Benzene is less than the MQL and a value of zero (0) may be used for DMR calculations and reporting per Part II of the permit.

Revised or Corrected DMRs

Re-submitted DMRs to include valid concentrations, correct loading and actual frequency of monitoring using approved test procedures need to be clearly marked as revised or corrected. All reports of instances of noncompliance with monitoring requirements (containing the information listed at Part III.D.7 of the Permit) are to be signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person. USEPA Region 6's example signature delegation letter is available at <http://www.epa.gov/region6/gen/w/signature-delegation.pdf>.

**Santa Fe County Judicial Complex
NPDES Permit No. NM0031046
Compliance Evaluation Inspection
December 28, 2010**

Flow Measurement Calculation Check

(Using Permittee's Average Flow Data for Informational Purposes Only)

	Recorded Highest Ave Flow Rate	Calculation to covert gallons per minute (gpm) to million gallons per day (MGD)	Ave flow in MGD	Permittee's reported Daily Max (not valid) in MGD
June 2010 DMR	31.9 gpm	31.9 gallons/min x 60 min/hr x 24 hrs/day / 1,000,000	0.046	0.031*
July 2010 DMR	18.2 gpm	18.2 gallons/min x 60 min/hr x 24 hrs/day / 1,000,000	0.026	0.019*
Aug 2010 DMR	30.3 gpm	30.3 gallons/min x 60 min/hr x 24 hrs/day / 1,000,000	0.044	0.041*
Sept 2010 DMR	29.6 gpm	29.6 gallons/min x 60 min/hr x 24 hrs/day / 1,000,000	0.043	0.043

* = Inconsistent with recorded data

Effluent Loading Calculation Check for Total Lead

(Using Permittee's Average Flow Data for Informational Purposes Only)

June 2010

<u>Sample Collection</u>	<u>Result</u>	<u>Period of Flow Estimate at Sample Collection</u>	<u>Average Flow Rate</u>
06/18/10 @ 7:30 am	0.00073 mg/L	06/18/10 @ 0655 hrs to 1300 hrs (6:05)	*See Note Below
06/24/10 @ 12:10 pm	0.00029 mg/L	06/24/10 @ 1204 hrs to 06/25/10 @ 0910 hrs (21:06)	12.9 gpm (0.018576 MGD)
06/30/10 @ 10:01 am	<0.0013 mg/L	06/30/10 @ 0953 hrs to 07/01/10 @ 1151 hrs (25:58)	9.1 gpm (0.013104 MGD)

Calculated Loading

06/18/10 (0.00073 mg/L x 0.031326 MGD x 8.34) = 0.00019 lbs/day (**Daily Max Loading**)

06/24/10 (0.00029 mg/L x 0.018576 MGD x 8.34) = 0.000045 lbs/day

06/30/10 (<MQL or 0 x 0.013104 MGD x 8.34) = 0 lbs/day

Monthly Ave Loading = (0.00019 + 0.000045 + 0) / 3 = 0.000078 lbs/day

August 2010

<u>Sample Collection</u>	<u>Result</u>	<u>Period of Flow Estimate at Sample Collection</u>	<u>Average Flow Rate</u>
08/04/10 @ 1:00 pm	0.00031 mg/L	08/03/10 @ 1014 hrs to 08/04/10 @ 1500 hrs (28:46)	10.6 gpm (0.015264 MGD)
08/11/10 @ 7:20 am	0.00067 mg/L	08/10/10 @ 0902 hrs to 08/11/10 @ 0802 hrs (23:00)	18.7 gpm (0.026928 MGD)
08/18/10 @ 7:15 am	0.00020 mg/L	08/17/10 @ 0725 hrs to 08/18/10 @ 0809 hrs (24:44)	20.8 gpm (0.029952 MGD)

**Santa Fe County Judicial Complex
NPDES Permit No. NM0031046
Compliance Evaluation Inspection
December 28, 2010**

Calculated Loading

08/04/10 (0.00031 mg/L x 0.015264 MGD x 8.34) = 0.000039 lbs/day

08/11/10 (0.00067 mg/L x 0.026928 MGD x 8.34) = 0.00015 lbs/day (**Daily Max Loading**)

08/18/10 (0.00020 mg/L x 0.029952 MGD x 8.34) = 0.000050 lbs/day

Monthly Ave Loading = (0.000039 + 0.00015 + 0.000050) / 3 = 0.000080 lbs/day

Comparison

	NMED SWQB Calculated Monthly Ave Loading	NMED SWQB Calculated Daily Max Loading	Permittee's Reported Monthly Ave Loading	Permittee's Reported Daily Max Loading
	lbs/day	lbs/day	lbs/day	lbs/day
June 2010 DMR	0.000078	0.00019	0.000078	0.00019
August 2010 DMR	0.000080	0.00015	0.000072*	0.000128*
* = Reported values inconsistent with recorded data				

Notes

Flow (gallons / min or gpm) x 60 min / hr x 24 hrs / day x 1 MGD / 1,000,000 gallons = Flow (MGD)

Flow on day of sampling (MGD) x concentration (mg/L) x 8.34 (lbs/gal) = Loading (lbs/day)

Based on totalized meter readings record keeping, the actual daily flow on the first day discharge and sample collection on 06/18/10 was 0.031326 MGD (31,426 gallons – 100 gallons = 31,326 gallons / 1,000,000).