NEW MEXICO
ENVIRONMENT DEPARTMENT

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BUTCH TONGATE
Cabinet Secretary

J. C. BORREGO
Deputy Secretary

Certified Mail – Return Receipt Requested

January 18, 2018

Honorable Linda Calhoun
Mayor Town of Red River
P.O. Box 1020
Red River, New Mexico 87558

Re: Town of Red River Waste Water Treatment Plant; Minor Individual Permit; SIC 4952; NPDES Reconnaissance Inspection; NM0024899; January 8, 2018

Dear Mayor Calhoun:

Enclosed please find a copy of the report for the referenced inspection following a reported caustic soda solution tank overflow during filling and spill on January 5, 2018 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.

Further explanations and problems noted during this inspection are discussed in the attached completed form and report. You are encouraged to review the inspection report, required to correct any problems noted during the inspection, and advised to modify your operational and/or administrative procedures, as appropriate. If you have comments on or concerns with the basis for the findings in the NMED inspection report, please contact us (see the address below) in writing within 30 days from the date of this letter. Further, you are encouraged to notify in writing both the USEPA and NMED regarding modifications and compliance schedules at the addresses below:

David Long
NPDES Enforcement Coordinator
Environmental Protection Agency, Region 6
NPDES Enforcement Branch (6EN-WM)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Sarah Holcomb
Program Manager
New Mexico Environment Department
Surface Water Quality Bureau (N2050)
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

If you have any questions about this inspection report, please contact Erin Trujillo at 505-827-0418 or erin.trujillo@state.nm.us.

Sincerely,

/s/Sarah Holcomb

Sarah Holcomb
Program Manager
Point Source Regulation Section
Surface Water Quality Bureau

cc:

Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
David Long, USEPA (6EN-WM) by e-mail
David Esparza, USEPA (6EN-WM) by e-mail
Amy Andrews, USEPA (6EN-WM) by e-mail
Michael (Mike) Tillman, USEPA (6EN-WM) by e-mail
Nancy Williams, USEPA (6EN-WC) by e-mail
Brent Larsen and Tung Nguyen, USEPA (6WQ-PP) by e-mail
Robert Italiano, NMED District II by e-mail
Eric Frey, Sports Fish Program, New Mexico Department of Game & Fish by e-mail
Jack Lewis, District Ranger, Questa District, Carson National Forest by e-mail
Robert Italiano, NMED District II by e-mail
Stephen Connolly, Hazardous Waste Bureau by e-mail
Shelly Lemon, Bureau Chief, NMED Surface Water Quality Bureau
Michelle Hunter, Bureau Chief, NMED Groundwater Quality Bureau by e-mail
Eric Hall, Program Manager, NMED DWS Utility Operator Certification Program by e-mail
Russell Church, Environmental Compliance Director, Town of Red River by e-mail
Georgiana Rael, Municipal Clerk & Town Administrator, Town of Red River by e-mail

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

NPDES Compliance Inspection Report

Section A: National Data System Coding

1	2	3	NPDES	11	12	yr/mo/day	17	18	Inspec. Type	19	Inspector	20	Fac Type
	Transaction Code												
	N	5	NM0002489			180108			R		S		1

Remarks: MINOR MUNICIPAL WWTP

Inspection Work Days		Facility Evaluation Rating		BI		QA		Reserved	
67	69	70	1	71 N	72	N	73	74	75 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)*
Red River Waste Water Treatment Plant. From Questa, NM, drive approximately 12.2 miles east on Hwy 38. Before Red River, NM, take facility entrance on Straight Creek Trail on north side of Hwy 38. Taos County

Entry Time /Date
~ 1115 hours / 01/08/2018

Exit Time/Date
~ 1410 hours / 01/08/2018

Permit Effective Date
May 1, 2017

Permit Expiration Date
April 30, 2022

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)

On-Site at WWTP during this Inspection
-Jimmy Baca, Operator Supervisor, WW Systems Level 3, 575-754-6671
-Patrick Jaramillo, WW Systems Level 1
-Miguel De La Mata, WW Systems Level 1

Off-Site at Town Administration Building
-Russell Church, Environmental Compliance Director / Grant Administrator, WW Systems Level 3 Operator / 575-754-2277
-Georgiana Rael / Municipal Clerk & Town Administrator / 575-754-2277

Other Facility Data (Source Google Earth)

Facility Entrance
Latitude: 36.707795°
Longitude: -105.444139°

Approximate Monitoring Location at Plant for Outfall
Latitude: 36.708438°
Longitude: -105.446217°

Approximate Plant Elevation
8575 feet

SIC 4952

Name, Address of Responsible Official/Title/Phone and Fax Number

Mayor Linda Calhoun / Town of Red River, P.O. Box 1020, Red River, 87558 / 575-754-2277

Contacted: Yes [ ] No [*]

Section C: Areas Evaluated During Inspection

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

N	Permit	N	Flow Measurement	U	Operations & Maintenance	N	CSO/SSO
M	Records/Reports	M	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. See attached report and further explanations.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone/Fax	Date
Erin S. Trujillo */s/Erin S. Trujillo*	NMED / SWQB / 505-827-0418	01/18/2018
Signature of Management QA Reviewer	**Agency/Office/Phone and Fax Numbers**	**Date**
Sarah Holcomb */s/Sarah Holcomb*	NMED / SWQB / 505-827-2798	01/18/2018

Town of Red River Wastewater Treatment Plant
NPDES Permit NM0024899
Reconnaissance Inspection
January 8, 2018

FURTHER EXPLANATIONS

Introduction

On January 8, 2018, a Reconnaissance Inspection (RI) was conducted at the Town of Red River Wastewater Treatment Plant (WWTP) located at 2 Straight Creek Trail (near Mile Marker 10 on Highway 38) west of Red River by Erin S. Trujillo, accompanied by Daniel Valenta, both of the Point Source Regulation Section and accompanied by Adam Ullom of the Monitoring Assessment and Standards Section (MASS), of the State of New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB). This inspection followed a verbal spill and non-compliance report by a Permittee representative to NMED SWQB of caustic soda solution tank overflow, spill and exceedance of National Pollutant Discharge Elimination System (NPDES) effluent limits at the plant on January 5, 2018.

NPDES Permit and Receiving Water Overview

The Town of Red River WWTP is classified as a minor discharger by the United States Environmental Protection Agency (USEPA) under the federal Clean Water Act (CWA), Section 402 NPDES program and is assigned permit number NM0024899. A scanned copy of the current renewed NPDES permit effective May 1, 2017 from the USEPA is available at:

https://www.env.nm.gov/swqb/NPDES/Permits/NM0024899-RedRiver.pdf.

The NPDES permit authorizes discharge of treated municipal wastewater to Red River. Red River from the Rio Grande upstream to Placer Creek is in State of New Mexico Standards for Interstate and Intrastate Surface Waters (Water Quality Standards or WQS) Segment 20.6.4.122 New Mexico Administrative Code (NMAC) of the Rio Grande Basin. Designated uses of this segment of Red River are coldwater aquatic life, fish culture, irrigation, livestock watering, wildlife habitat and primary contact. The use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the designated uses, except that the following segment-specific criteria apply: the monthly geometric mean of E. coli bacteria is 126 colony forming units (cfu)/100 milliliter (mL) or less, and single sample is 235 cfu/100 mL or less. Coldwater aquatic life numeric criteria for pH are within the range of 6.6 to 8.8 standard units (su). In the State of New Mexico CWA §303(d)/§305(b) Integrated List & Report approved by USEPA, this segment of Red River is fully supporting for all designated uses, except fish culture which was not assessed. NMED SWQB MASS is conducting a two-year water quality survey in the Upper Rio Grande from Cochiti Lake to the Colorado Border during 2017 and 2018.

Inspection Overview

On the day of the inspection, Ms. Trujillo contacted Mr. Russell Church, Environmental Compliance Director / Grant Administrator and Wastewater Systems (WW) Level 3 Operator at Town of Red River by telephone to provide an approximate time of arrival at the plant. Upon arrival at approximately 1115 hours, Ms. Trujillo conducted an entrance interview with Mr. Jimmy Baca, Operator Supervisor, Waste Water (WW) Systems Level 3 Operator; Mr. Patrick Jaramillo, WW Systems Level 1 Operator; and Mr. Miguel De La Mata, WW Systems Level 1 Operator. The inspector made introductions, presented federal credentials, and discussed the purpose of the inspection. A tour of the plant and outfall discharge location was conducted with the WWTP operators. NMED inspectors and staff then observed dead fish downstream of the outfall structure to the inlet of Fawn Lake. NMED SWQB inspector and staff updated New Mexico Department of Game and Fish (NMDGF) staff of stream observations by telephone while on site. Ms. Trujillo conducted an exit interview at the Town Administration Building to discuss purpose and

preliminary findings of this inspection with Mr. Church, Mr. Baca, Mr. De La Mata and Ms. Georgiana Rael, Municipal Clerk & Town Administrator. The NMED SWQB inspectors and staff left the Town Administration Building at approximately 1410 hours on the day of this inspection. After leaving the Town's offices, NMED inspectors and staff made additional visual observations of Red River at various locations downstream of Fawn Lake and provided a brief update to NMDGF staff.

NMED SWQB performs a certain number of inspections for the USEPA each year funded by Section 106(e)(1) of the federal CWA grants. The purpose of this inspection is to provide USEPA with information to evaluate the Permittee's compliance with the NPDES permit. The purpose is also to obtain information on the water quality of Red River and compliance with State of New Mexico regulations and standards (e.g., Ground and Surface Water Protection Regulations in 20.6.2 NMAC and surface WQS in 20.6.4 NMAC).

This report is based on review of files maintained by both the Permittee and NMED, on-site observation by NMED personnel, and written and verbal information provided by Permittee representatives during and following this inspection. This report includes analytical results of samples taken by NMED SWQB MASS staff on the day of this inspection, and NMDGF's report of their investigation conducted on January 9, 2018. Following this inspection, the Permittee submitted a written non-compliance report on January 11, 2018 and additional monitoring results to USEPA with a copy to NMED.

Treatment Scheme Overview

The Facility's treatment scheme is described in a report of the previous NPDES Compliance Evaluation Inspection (CEI) conducted on June 30, 2016 available on-line at NMED SWQB's web site at https://www.env.nm.gov/swqb/NPDES/Inspections/NM0024899_20160630.pdf. According to State of New Mexico Utility Operator Certification Program records, Town of Red River WWTP is listed as a WW Level 3 Operator facility.

The WWTP is located within a multilevel building to protect it from cold weather during the winter months. In summary, the wastewater treatment system treatment scheme consists of a gravity collection system, lift station, entrance works (headworks) consisting of a bar screen and a grit removal system, grit cyclone, fine mesh screen filter system, three trains of Rotating Biological Contactors (RBCs)--one for BOD removal and two for ammonia removal, two parallel final clarifiers, three parallel ultra-violet (UV) disinfection units, and step aerator. After the aerator, effluent is discharged to the Red River from a diffused pipe and rock structure in the bottom of the receiving stream. The outfall structure is located at the Fawn Lakes Campground, Questa District, Carson National Forest. Solids are wasted from the secondary clarifiers and pumped up hill to drying beds. Town of Red River WWTP also has a State of New Mexico Ground Water Quality Bureau (GWQB) Discharge Permit (DP-268) for the sludge drying beds. WWTP operators described that required grab samples (e.g., pH. bacteria) for monitoring under the NPDES permit are collected at the top of the step aerator. Flow weighted composite samples (e.g., BOD5, TSS) are collected by an ISCO auto sampler.

Caustic soda or sodium hydroxide (NaOH) solution is used for pH adjustment and is stored in a 4,000-gallon fiber-glass lined tank in the lower level chemical storage room. A second tank also exists in the lower level chemical storage area labeled as alum which was previously used for pH adjustment. The caustic soda solution tank is marked with fill levels in 250 gallon increments and has a clear PVC pipe for operators to visually compare liquid levels with the fill levels marked on the tank.

Caustic soda solution is delivered by truck that connect to a fill pipe at the upper level vehicle and equipment storage bay. The caustic soda solution tank has a PVC overflow pipe that is plumbed to a sump in the lower level chemical storage room. An approximately 8-inch raised concrete wall separates the chemical tank area from the rest of the chemical storage room. The concrete wall would provide an estimated 2,100 gallons of containment, but open floor drains exist on both sides of the wall. No plugs or other devices to

prevent flows from entering floor drains at the plant were described. In addition to the caustic soda solution tank overflow pipe, all floor drains on the lower level, rest rooms, lab area, shop drains are plumbed to the lower level sump. An automatic-float system in the sump pumps contents to the entrance works.

Caustic Soda Solution Chemical Tank Overflow and Spill on January 5, 2018

During this inspection, Mr. Baca described that he had ordered 3,000 gallons of caustic soda from DPC Industries, Inc. (DPC), Albuquerque, New Mexico, 1-800-445-0533. Mr. Baca was not on-site during the delivery. The WWTP operator on-site during delivery described that there was 600 gallons in the plant's caustic soda solution tank before delivery started. WWTP operators described that the dimensions of the sump are 12 ft x 8 ft x 5 ft. (i.e., 480 cubic feet or approximately 3,590 U.S. liquid gallons). WWTP operators did not know the level of contents in the sump prior to delivery.

DPC's Certificate of Analysis describes the ordered product as caustic soda, liquid 50% bulk. During this inspection, WWTP operators provided a copy of Dx/DPC Safety Data Sheet (SDS) for caustic soda solution (all grades) with sodium hydroxide and sodium chloride ingredients, which among other things, lists and describes emergency response telephone numbers, hazards, including a pH of 14, personal protective equipment, accidental release measures, reactivity, ventilation requirements, conditions to avoid, exposure controls, environmental precautions, ecological toxicity and disposal considerations. Examples of precautionary statements and cautions on the SDS include: *"Hazardous to the aquatic environment, acute hazard," "Use caution when combining with water."* The SDS also states *"Reacts violently with strong acids"* and *"Corrosive to metals."*

DPC's Straight Bill of Landing form indicates 1) a date ordered on 01/02/2018, 2) carrier as "OUR TRUCK," and 3) description of 100 mg/L caustic soda liquid 50 %, bulk and weight 40,000.00 lbs. Groendyke Transport, Inc., Enid, Oklahoma, 580-234-4663 delivery memo states that the quantity ordered as 45,000.00 lbs (pre-printed), and includes hand written annotations of the delivery driver times (arrived after 6:30, started work 7:15 and departed 8:10).

WWTP operators described that they did not know the calculations or conversion of the caustic soda solution from pounds to gallons or amount spilled during delivery. The WWTP operator that was on the lower level during delivery described that the clear PVC fill level pipe was checked, but not watched during the entire delivery. Caustic soda solution was described to have spilled out of the tank overflow pipe plumbed to the sump, the solution was spilling out where the overflow pipe enters the floor, and solution flowed to the floor drain plumbed to the sump. The WWTP operator described that the caustic soda solution overflow and spill was flushed with potable water for approximately ½ hour into the floor drain plumbed to the sump until approximately 9:00 am.

WWTP operators on site during the tank overflow and spill described that effluent at the plant's monitoring location was a brown color when a sample for daily pH was collected. The Town of Red River WWTP Bench Sheet shows that the pH of a sample collected at the plant at 1320 (1:20 pm) hours and analyzed at approximately 1325 hours was 11.48. Permittee record keeping of pH monitoring upstream and downstream of the outfall structure was 7.52 and 9.45, respectively, at approximately 1335 hours (1:35 pm).

Verbal Reporting and Following Actions by Permittee

During verbal reporting to NMED SWQB of spill and non-compliance at the plant between 2 and 2:20 pm on January 5, 2018, Mr. Church described to Ms. Trujillo that pH levels in the plant were expected to decrease with the wastewater flows through the plant. Recorded results of additional pH monitoring on January 5th thru January 6th, obtained during this inspection and provided in the Permittee's non-compliance report, show that pH levels at the monitoring location did not decrease below NPDES permit effluent

limitation (maximum pH 8.8) until January 6, 2018. At approximately 1710 hours on January 6, 2018, recorded pH was 8.71). Permittee record keeping of the pH level of Red River downstream of the outfall structure was 8.00 on January 6, 2018.

Additional Information / Example Calculations

Following this inspection, Mr. Baca described to Ms. Trujillo that he obtained a conversion factor of 12.75 lbs per gallon based on his conversations with a DPC representative and that DPC estimated the spill amount to 244 gallons. Based on the provided conversion factors, the 45,000 pounds of caustic soda solution indicated on the delivery memo and described tank volume of 600 gallons on the day of delivery exceeded the marked volume of the tank.

The following are example calculations based on records from a past shipment (August 2017) and records or information provided for the January 2018 delivery:

-Invoice for Ship Date 08/14/2017 of 40,260 lbs x 1 gallon / 12.75 lbs = 3,157.65 gallons

-Verbal Order (described by operator) of 3,000 gallons x 12.75 lbs /gallon = 38,250 lbs

-Bill of Landing form listing 40,000 lbs x 1 gallon / 12.75 lbs = 3,137.25 gallons

-Deliver memo pre-printed with 45,000 lbs x 1 gallon / 12.75 lbs = 3,529.41 gallons

-600 gallons in tank (described by operator) + 3,529.41 gallons (deliver memo quantity ordered) = 4,129.41 gallons

WWTP operators described that flow thru the treatment system takes approximately 3 to 4 hours. Based on those times, flows at the entrance works impacted from the spill would have been expected at the end of treatment (effluent monitoring location at step aerator) at approximately 1110 hours to 1210 hours using 8:10 am as the starting time (delivery driver's recorded depart time); or at approximately 12 to 1 pm using 9:00 am as the starting time (written non-compliance report) on January 5, 2018.

AREAS EVALUATED DURING INSPECTION (SEE USEPA FORM 3560-3)

Facility Site Review = "M" Marginal and Operations and Maintenance – Overall Rating of "U" = Unsatisfactory

Permit Requirements

- Part I.F (Pollution Prevention Requirements) of the Permit states *"The permittee shall institute a program within 12 months of the effective date of the permit (or continue an existing one) directed towards optimizing the efficiency and extending the useful life of the facility."* Items listed in the program include preventative maintenance programs and equipment conditions, overall evaluation of conditions at the facility, operator certification and training plans and status.

- 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 Operations 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. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to 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.

Findings

- Standard operator procedures for or during chemical product delivery and tank filling were not adequate to prevent overflows or spills. For example, there were no on-site written procedures to check (calculate) chemical delivery amounts before filling.

- Written emergency procedures did not adequately describe facility-specific emergency treatment controls if a caustic soda solution tank overflow occurred (e.g., during delivery) and spills of caustic soda solution entered the plant.

- Written emergency procedures did not describe process control monitoring or inspection (condition and integrity) of treatment system, sump and caustic soda solution tank system or other equipment following a tank overflow. For example, written procedures did not include times based on flow rates through the treatment system for additional monitoring of the process waters or effluent.

- An adequate operating staff which was duly qualified to carry out operations to take delivery of chemicals at the plant by an outside contractor (delivery company) and prevent overflows during tank filling does not appear to have been provided. A WW Level 3 operator was not on site at the plant during chemical delivery, tank overflow and spill, spill response measures, or subsequent effluent monitoring.

- Adequate safeguards (or controls) were not provided to prevent the overfilling of the caustic soda solution tank, spilled caustic soda solution from entering the treatment system resulting in the exceedance of effluent limitations based on WQS numeric criteria to protect aquatic life. Provisions for an adequate alarm system or tank overfill protection was not described. For example, the tank system did not have working or adequate overfill prevention and the plant did not have adequate spill containment controls.

- Following the spill, additional and/or regularly scheduled process monitoring and maintenance may not have been adequate on the day of this inspection. At the caustic soda solution tank location, residues were observed on the tank and tank system pipes and valves. Solids were observed on the clarifier weir. Mr. Baca described that the UV system is usually cleaned on Monday morning, but was not cleaned until Tuesday following this inspection. Additional information on effluent and Red River sampling conducted by NMED is discussed below.

Recordkeeping and Monitoring – Rating of "M" = Marginal

Permit Requirements

- Part III.C.4 (Monitoring and Records) of the Permit states *"Records of monitoring information shall include…date, exact place and time of sampling or measurements...time(s) analyses were performed."*

- Part III.C.5.a (Monitoring Procedures) of the Permit states *"Monitoring must be conducted according to test procedures approved under 40 CFR Part 136…."*

- 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."*

Findings

- Sampling and analyses recordkeeping by WWTP operators reviewed during this inspection for additional pH monitoring did not include times of sample collection following the tank overflow and spill. The pH monitoring in the Permittee's submitted non-compliance report appear to have estimated times for sample collection and/or analysis. Monitoring times are important to document that pH analysis met required holding times in 40 CFR 136.3 Table II, in this case, within 15 minutes of collection.

Comments

- Monitoring for Biological Oxygen Demand 5 day (BOD5) for a sample collected on January 9, 2018 by WWTP operators did not meet sample dilution requirements in the method according to the Permittee Representative. The unseeded dilution water blanks were below <0.2 mg/L (e.g., 0.13 and 0.19 mg/L) after 5 days of incubation. This test is invalid. The test is to be repeated according to the Permittee Representative.

- Results of all valid additional effluent monitoring results following the caustic soda solution tank overflow and spill shall be included in both the applicable daily max and average calculations for concentration and loading on the January 2018 Discharge Monitoring Report (DMR) as required by the Permit.

Effluent/Receiving Waters Observation – Overall Rating of "U" = Unsatisfactory

Permit Requirements and Findings

- Effluent limitations for pH in Part I.A (Limitations and Monitoring Requirements) of the Permit are minimum of 6.6 and maximum of 8.8 su. Following the caustic soda solution tank overflow, pH monitoring of at the plant's effluent monitoring location exceeded maximum permit limitations.

- During this inspection, flow thru the plant appeared cloudy before entering and leaving the UV system and at the step aerator before flowing to the outfall discharge location.

- Effluent limitations for E. coli bacteria in Part I.A (Limitations and Monitoring Requirements) of the Permit include a daily maximum of 126 CFU/100 ml or most probable number (MPN).

  For informational purposes, below is a summary of analytic results of samples collected on the day of this inspection by NMED SWQB MASS staff.

  Summary of Bacteria Monitoring Results, Sample Collected January 8, Read on January 9, 2018

Location	Total Coliform Bacteria	Escherichia Coli Bacteria	Units
Red River Above WWTP	8.6	<1	MPN
Red River WWTP Monitoring Location (Leaving Plant)	>2419.6	>2419.6	MPN
Red River below WWTP	>2419.6	1119.9	MPN

Source: NMED SWQB MASS

Note: NMED results for samples collected on January 8, 2018 were verbally provided to Permittee representatives after the required incubation and measurements were available on January 9, 2018. Subsequent effluent monitoring results provided by the WWTP operators (65, 20.5 and 7.2 MPN for samples collected on January 9, 11 and 16, 2018, respectively) for E.coli bacteria were below daily maximum permit limits.

- NMED SWQB inspectors and staff observed dead fish downstream of the outfall location structure. NMDGF's report of a fish kill investigation conducted on January 9, 2018 is attached.

Town of Red River Wastewater Treatment Plant
NPDES Permit NM0024899
Reconnaissance Inspection
January 8, 2018

ATTACHMENTS

Attachment A – Photo Documentation

Attachment B – Permittee Records, including Safety Data Sheet

Attachment C – NMED Sample Results

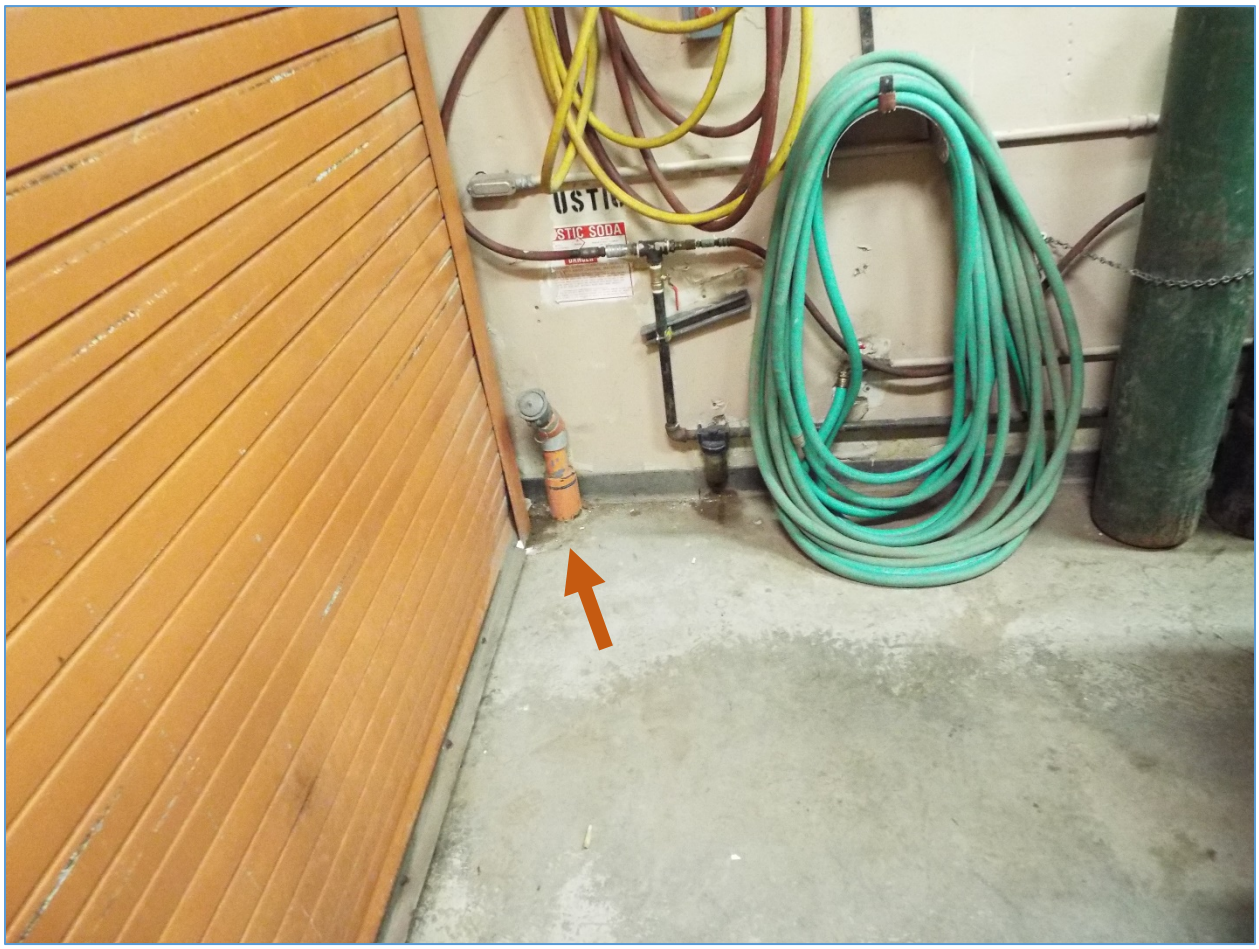
Attachment D – NMDGF Investigation Report

Attachment E – Permittee Non-Compliance Report

Attachment F – Additional Permittee Monitoring Results

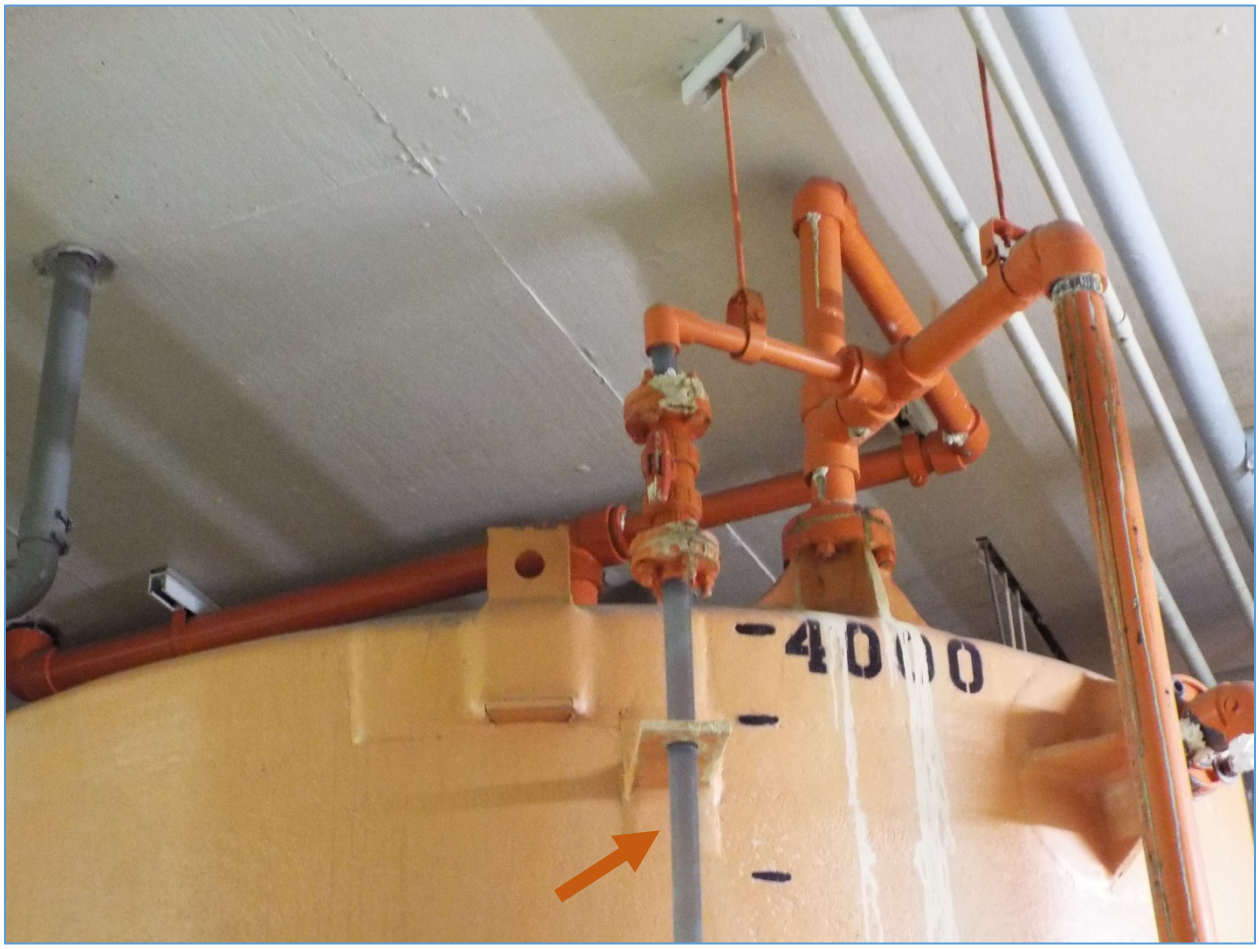
Attachment A – Photo Documentation

NMED/SWQB Official Photograph Log Photo # 1		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1125 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Arrow points to fill pipe at the upper level vehicle and equipment storage bay.		



NMED/SWQB Official Photograph Log Photo # 2		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1129 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Caustic Soda Solution Tank in Lower Level		

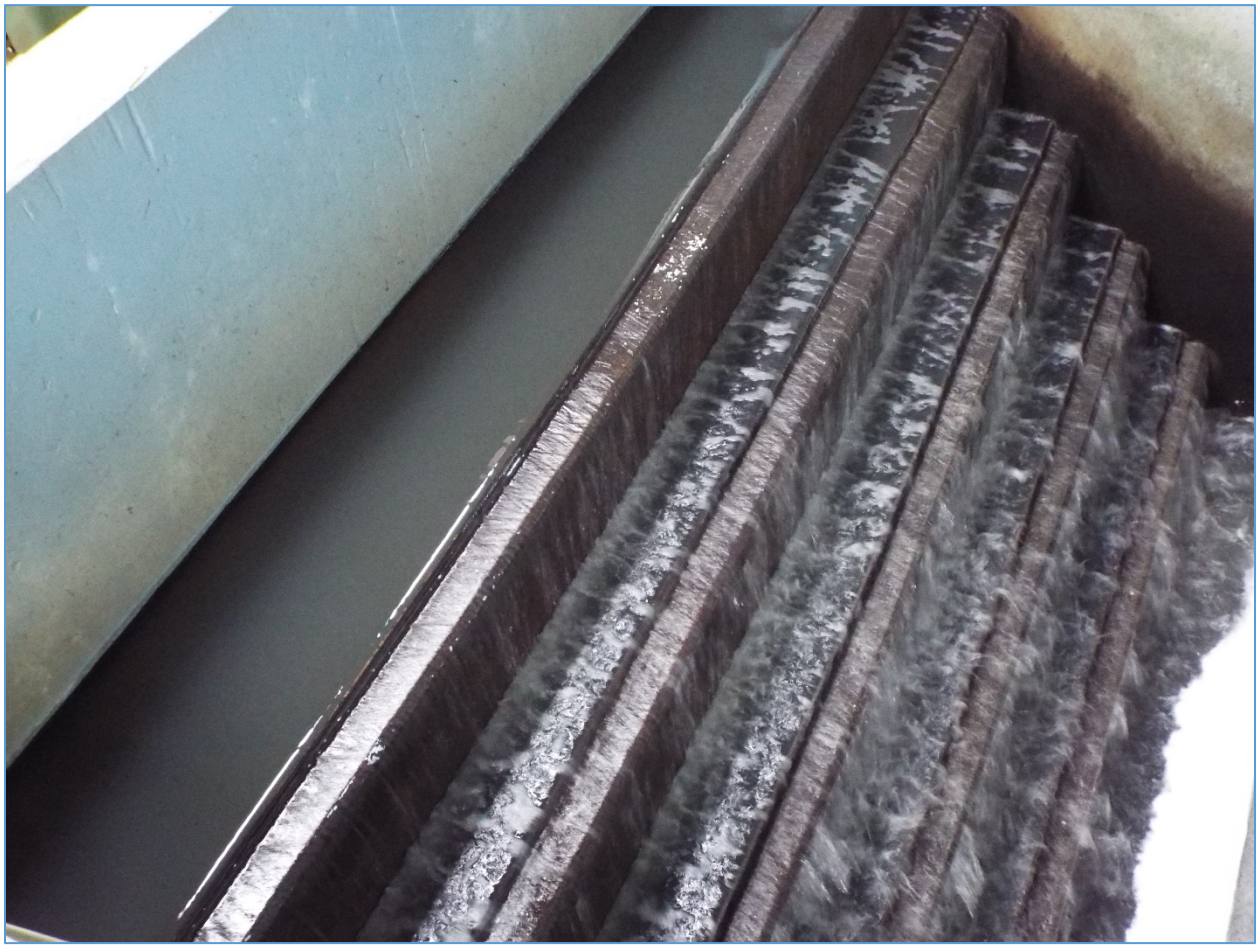
NMED/SWQB Official Photograph Log Photo # 3		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1132 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: White product residues or crystals were on tank, piping and valves of tank. Arrow point to clear PVC fill check pipe.		



NMED/SWQB Official Photograph Log Photo # 4		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1336 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Base of tank and concrete wall. White residues are on base of tank.		

NMED/SWQB Official Photograph Log Photo # 5		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1205 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Flow in clarifier was cloudy. Clarifier weir teeth had solids buildup.		

NMED/SWQB Official Photograph Log Photo # 6		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1205 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Flow in trough above step aerator was cloudy.		



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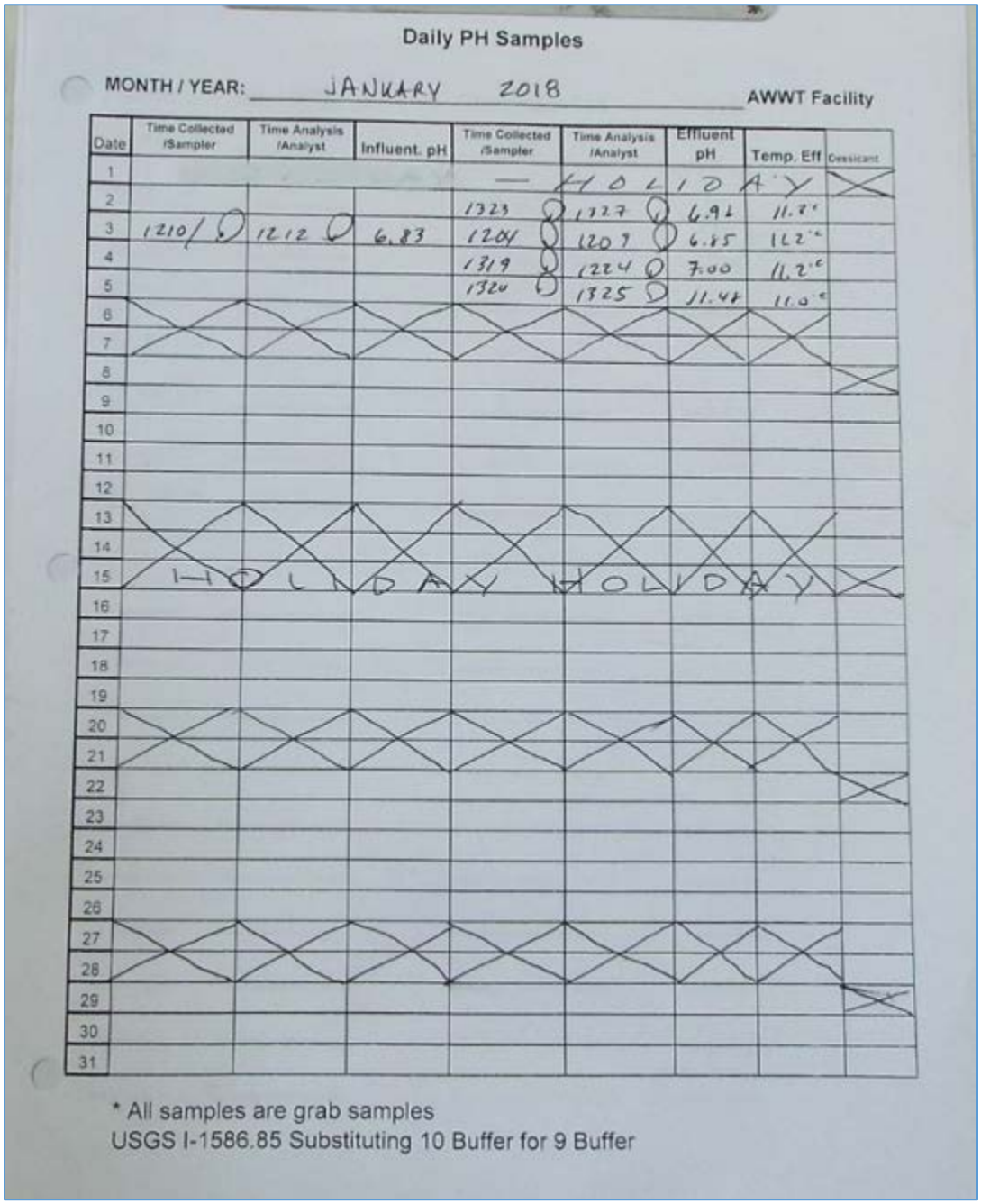
NMED/SWQB Official Photograph Log Photo # 7		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1225 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Daily pH readings on Town of Red River WWTP Bench Sheet shows the effluent pH on 01/05/2018 of a sample collected at 1320 hours and analyzed at 1325 hours was 11.48. Image below was clipped from original photo for this report.		



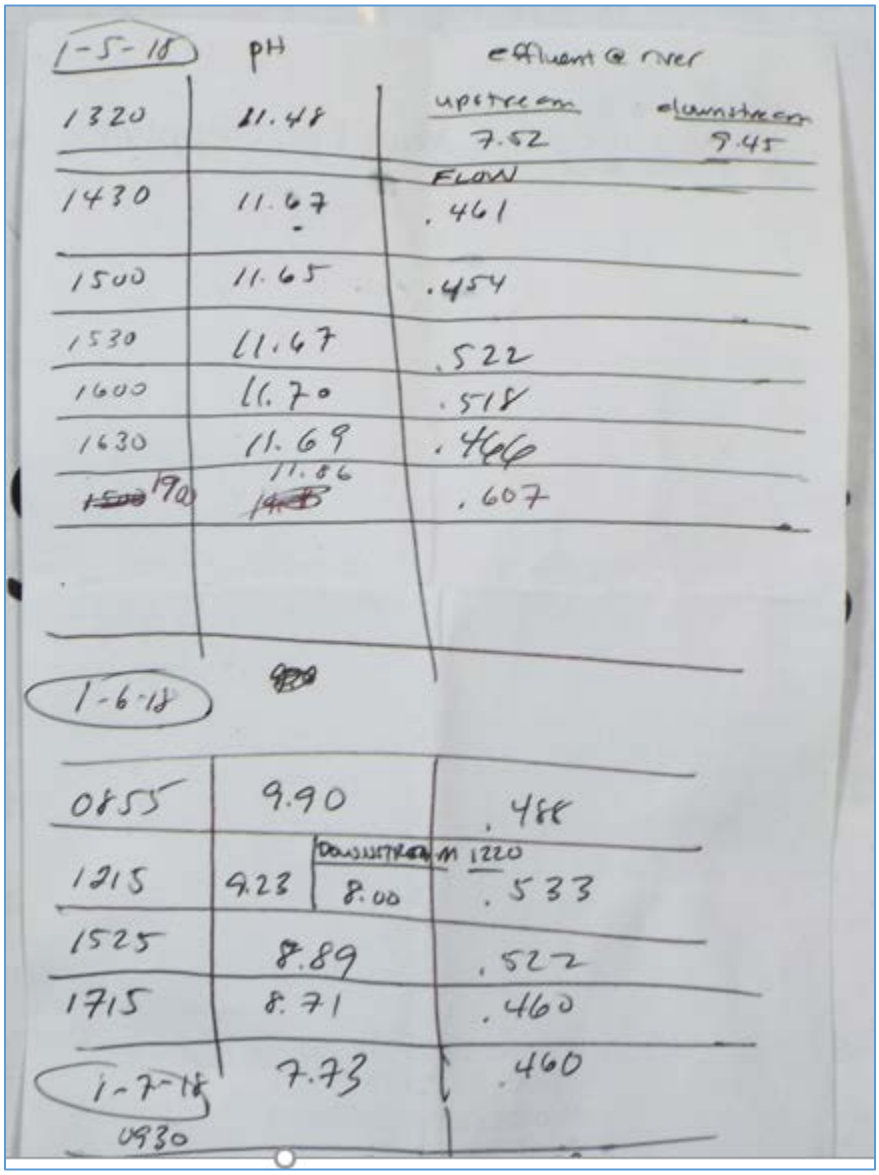
Daily PH Samples

MONTH / YEAR: JANUARY 2018 AWWT Facility

Date	Time Collected /Sampler	Time Analysis /Analyst	Influent. pH	Time Collected /Sampler	Time Analysis /Analyst	Effluent pH	Temp. Eff	Desiccant
1				—	HOLIDAY			X
2				1323	1327	6.91	11.9°C	
3	1210	1212	6.83	1204	1209	6.85	11.2°C	
4				1319	1324	7.00	11.2°C	
5				1320	1325	11.48	11.0°C	
6	X	X	X	X	X	X	X	
7								
8								X
9								
10								
11								
12								
13	X	X	X	X	X	X	X	
14								
15	HOLIDAY			HOLIDAY				X
16								
17								
18								
19								
20	X	X	X	X	X	X	X	
21								
22								X
23								
24								
25								
26								
27	X	X	X	X	X	X	X	
28								
29								X
30								
31								

* All samples are grab samples
USGS I-1586.85 Substituting 10 Buffer for 9 Buffer

NMED/SWQB Official Photograph Log Photo # 8		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1225 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Record keeping of additional pH monitoring. Image below was rotated and clipped from original photo for this report.		



NMED/SWQB Official Photograph Log Photo # 9		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1247 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Sludge drying bed #4. Waste activated sludge (WAS) from clarifiers went to drying bed #4 following caustic soda solution tank overflow and spill according to WWTP operators.		

NMED/SWQB Official Photograph Log Photo # 10		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1308 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Red River near buried outfall structure		

NMED/SWQB Official Photograph Log Photo # 11		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1309 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Example of two dead fish that were removed from stream for photo documentation.		

NMED/SWQB Official Photograph Log Photo # 12		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1311 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Example of dead fish on the bed of Red River		

NMED/SWQB Official Photograph Log Photo # 13		
Photographer: Daniel Valenta	Date: 01/08/2018	Time: 1312 hours
City/County: Red River / Taos County		State: New Mexico
Location: Town of Red River WWTP, NPDES Permit NM0024899		
Subject: Example of dead fish on the bed of Red River		

Attachment B – Permittee Records, including Safety Data Sheet

DPC INDUSTRIES, INC.

3501 2ND STREET SW
ALBUQUERQUE,NM 87105

WWW.DPCINDUSTRIES.COM

Tel: 800-445-0533

CERTIFICATE OF ANALYSIS

Product: CAUSTIC SODA LIQ 50%, BULK

Sample Origin: Albuquerque

Date Sampled: 01-04-2018

Date of manufacture: 01-04-2018

Bill of Lading Number: 7074-18-000010-1

Sample Number: 383

Lot number: 74010418

Trailer Number: 207472

Seal Numbers: 230288, 230289

Customer P.O. Number: 24045

Resource code: 127009

Sold to: VILLAGE OF RED RIVER

WASTEWATER PLANT-AWWT
2 STRAIGHT CREEK TRAIL
RED RIVER,NM 87558

Property	Specification	Results
Sodium Hydroxide, Wt.%	49.00 - 51.00	49.9500
Sodium Oxide, Wt. %	38.00 - 39.60	38.7200
Specific Gravity	-	1.5200
Sodium Carbonate, Wt.% Max	0.2	-
Sodium Chloride , Wt.% Max	1.1	-
Sodium Chlorate, Wt.%	0.35	-
Sodium Sulfate, Wt.% Max	0.075	-
Iron, Max	5	-

The data submitted in the table above refers to the results of the analysis at the time of sample collection only.

Completed by: Bostic, Garr

Signature: Garr Bostic

NSF
Certified to NSF/ANSI 60

STRAIGHT BILL OF LADING-SHORT FORM – ORIGINAL - NOT NEGOTIABLE

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading.

AT ALBUQUERQUE, NM **FROM: DPC INDUSTRIES, INC.**

The property described below, in apparent good order, except as noted (contents and condition of contents of package(s) unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Delivery By Date	Customer No.	Customer Order No.	Shipping Date	Bill of Lading No.
01/05/2018	74079701	24045		7074-18-000010-1

Ordered by:	Date Ordered	Carrier
JIMMY 575-754-6671	01/02/2018	OUR TRUCK

CONSIGNED TO & DESTINATION
VILLAGE OF RED RIVER
WASTEWATER PLANT-AWWT
2 STRAIGHT CREEK TRAIL
RED RIVER,NM 87558

CUSTOMER INFORMATION

** PLEASE SEE OUR WEBSITE @ WWW.DPCINDUSTRIES.COM**

PLACARDS OFFERED ▫ YES ▫ NO - FURNISHED BY CARRIER PROD. INFO ▫ ERG ON BOARD ▫ ERG ATTACHED & EXPLAINED ▫ SPECIAL NOTICE PROVIDED ▫ SDS FURNISHED BY SHIPPER
DRIVER'S SIGNATURE

Car Initials & Number

QUANTITY	PKG TYPE	HM	DESCRIPTION OF MATERIALS, SPECIAL MARKS AND EXCEPTIONS	*WEIGHT (Sub to Cor.)	UOM	RESOURCE CODE	CLASS RATE	C.O.D. CHARGE Shipper ▫ TO BE PAID BY Consignee ▫
1	CT	X	UN1824, SODIUM HYDROXIDE, SOLUTION 8, II, RQ DOT ERG No.154 NSF MUL = 100 mg/l CAUSTIC SODA LIQ 50%, BULK, lb	40,000.00	LBS	127009		Subject to Section 7 of Conditions of applicable bill of lading. If this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement. The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. _____ Signature of Consignor _____ If charges are to be prepaid, write or stamp here: 'To be prepaid' _____ Received $_____ To apply in prepayment of the charges on the property described hereon. _____ Agent or Cashier per _____ (The signature here acknowledges only the amount prepaid) _____ Charges Advanced
			Total LBS.	40,000.00				

"Shipper's imprint in lieu of stamp, not a part of bill of loading approved by the Department of Transportation"

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation.

per Garcia, Camilo

▫ UNMANNED SITE

The unloading point has been verified and approved for the above named product. I have also confirmed the tank will hold the volume of product being unloaded.

per _____ date 1-5-18
Customer Signature

Company Shipper, Per Garcia, Camilo Agent: _____ Per _____

Permanent post-office address of shipper, P.O. BOX 301023, DALLAS, TX 75303-1023 *Customer Signature*

FOR 24 HOUR EMERGENCY INFORMATION CALL CHEMTREC: 1 (800) 424-9300

SEE BACK OF CUSTOMER COPY FOR NON-EMERGENCY NUMBERS

NOTE TO THE CUSTOMER ABOUT RETURNED CYLINDERS, TON CONTAINERS, AND DRUMS: CYLINDERS, CONTAINERS, AND DRUMS PLACED FOR PICK UP BY OUR DRIVERS ARE ASSUMED TO BE EMPTY TO THE MAXIMUM EXTENT PRACTICABLE UNLESS THE CUSTOMER GIVES ADVANCE NOTICE THAT A FULL OR PARTIALLY FULL CYLINDER, CONTAINER OR DRUM IS TO BE PICKED UP.

HM	Package Type	Returns Descriptions & Classifications	Quantity Returned	Deposit Charge	Gross Weight
	55 Gal. Drum	Residue: Last Contained UN1791, Hypochlorite Solution, 8, III			
	150 lbs. Cyl.	Residue: Last Contained UN1017, Chlorine, 2.3(5.1, 8), Poison-Inhalation Hazard Zone B			
	150 lbs. Cyl.	Residue: Last Contained UN1005, Ammonia, Anhydrous, 2.2, Inhalation Hazard			
	150 lbs. Cyl.	Residue: Last Contained UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C			
	Ton Container	Residue: Last Contained UN1017, Chlorine, 2.3(5.1, 8) , RQ, Poison-Inhalation Hazard Zone B, Marine Pollutant			
	Ton Container	Residue: Last Contained UN1017, Chlorine, 2.3(5.1, 8), RQ, Poison-Inhalation Hazard Zone B, Marine Pollutant, DOT-SP 5951			
	Ton Container	Residue: Last Contained UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C			
	Ton Container	Residue: Last Contained UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C, DOT-SP 5951			
	150 lbs. Cyl.	UN1017, Chlorine, 2.3(5.1, 8) , RQ, Poison-Inhalation Hazard Zone B			
	150 lbs. Cyl.	UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C			
	Ton Container	UN1017, Chlorine, 2.3(5.1, 8) , RQ, Poison-Inhalation Hazard Zone B, Marine Pollutant			
	Ton Container	UN1017, Chlorine, 2.3(5.1, 8) , RQ, Poison-Inhalation Hazard Zone B, Marine Pollutant, DOT-SP 5951			
	Ton Container	UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C			
	Ton Container	UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C, DOT-SP 5951			

No warranty express or implied, of merchantability, fitness for a particular purpose or otherwise, is made, except that the product conforms to COMPANY specifications. Buyer assumes all risk of use, storage and handling. The Company shall not be liable for any incident of consequential damages arising directly or indirectly in connection with the purchase, use, storage or handling of the product.

No. 12100681

GRTT

GRTT

GROENDYKE TRANSPORT, INC.

P.O. BOX 632
ENID, OK 73702-0632

580 234-4663
800 843-2103

DELIVERY MEMO

FOR INTERNAL USE ONLY

CUST. NO.	B/L NO.	ORDER NO.	TRUCK NO.	TRAILER NO.
BILDPC02	7074-18-000010-1	7000-18-000105	6939	DP990401

SHIPPER	DPC INDUSTRIES INC (DPCALB)	ORIGIN	3501 2nd St Sw ALBUQUERQUE,NM/BE
CONSIGNEE	VILLAGE OF RED RIVER (VILRED)	DESTINATION	Waste Water Treatment Plant RED RIVER,NM/TA 87558

PARTIAL LOADING OR UNLOADING POINTS

CARRIER PUMP REQUIRED ☐ Consignee Initial Here
TYPE OF HOSE REQUIRED
Rubber ☐ Other ☐ Number Feet
WAS TRAILER CLEANED AFTER UNLOADING? Yes ☐ No ☐
WERE YOU RELEASED OR DID YOU STAY WITH THE EQUIPMENT? RELEASED ☐ STAYED ☐

LOADING DEMURRAGE BILL TO:	BY(AGENT)	UNLOADING DEMURRAGE BILL TO:	BY(AGENT)
DPC INDUSTRIES INC			

ALBQ	LOADING DATE	ARRIVE	STARTED WORK	DEPART	TIME ZONE	DELIVERY DATE	ARRIVE	STARTED WORK	DEPART	TIME ZONE
SCHEDULED	1/5/2018	3:00			CT / (MT) / ET / PT	1/5/2018	12:00			CT / (MT) / ET / PT
ACTUAL	1-5-18	2:15	2:20	2:27		1-5-18	6:39	7:15	8:10	

REASON FOR LATE/EARLY LOADING

REASON FOR LATE/EARLY DELIVERY

QTY ORDERED	QTY SHIPPED	DESCRIPTION	
45,000.00 LBS		CAUSTIC SODA(SODIUM HYDROXIDE) **TRAILER# 207472**	CAU

CPT #5	CPT #4	CPT #3	CPT #2	CPT #1	<---COMMODITIES

TANK # AND DESCRIPTION	TANK GAUGE BEFORE	TANK GAUGE AFTER

BEFORE UNLOADING:
FOR THE CONSIGNEE: I have checked the documents pertaining to this shipment, verified the product to be received, certify to sufficient storage space, furnished unloading instructions to the driver, and approved hook-up to designated unloading line.

SIGNATURE M. Del. Nc DATE 1-5-18

AFTER UNLOADING:
FOR THE CONSIGNEE: Above described commodities received in good condition and accepted and unloaded as directed. (Except as noted).

BY SIGNATURE M. Del. Nt DATE 1-5-18

DRIVER #1 DAVIDSMITH 7927

DRIVER #2

THANK YOU! ***WE APPRECIATE YOUR BUSINESS***

TERMINAL APPROVAL ________ DATE ________

Refer to Shipper's Bill of Lading for 24 hour Emergency Response Number and Required Information.

TERMINAL COPY

dx/dpc

Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: **Caustic Soda (All Grades)**
Synonyms: Caustic Soda Solution, Sodium Hydroxide Solution
Intended use: pH neutralizer , Pulping and Bleaching, Detergent, Soaps
Uses Advised Against: None known

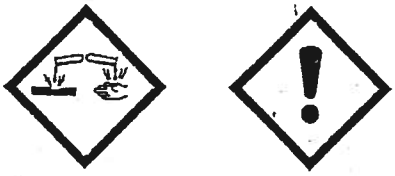
Company Identification:
DPC Industries, Inc.
DPC Enterprises, LP
DXI Industries, Inc.
DX Terminals
PO Box 24600
Houston , TX 77229-4600

Emergency :
CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No. (281) 457-4888
www.dxgroup.com

2. Hazard identification of the product

Physical hazards	Corrosive to metals	Category 1
Health hazards	Acute toxicity, oral Skin corrosion/irritation Serious eye damage/eye irritation	Category 4 Category 1 Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard.	Category 3

Label elements
Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Signal Word	**Danger**
Hazard Statements	Causes severe skin burns and eye damage. May be corrosive to metals. Harmful if swallowed.
Precautionary Statements	
Prevention	Keep only in original container. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Do not breathe mist or vapor. Wash thoroughly after handling. Avoid release to the environment.
Response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with shower/ water. Wash contaminated clothing before reuse. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - Continue rinsing. Immediately call a POISON CENTER or doctor / physician. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

Synonyms: Caustic Soda Solution, Sodium Hydroxide Solution

Ingredient	CAS Number	Weight %	
Sodium hydroxide	1310-73-2	10 - 52	Substance classified with a health or environmental hazard. Substance with a workplace exposure limit.
Sodium chloride	7647-14-5	1.0 - 10	Substance classified with a health or environmental hazard.

4. First aid measures

General	Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Inhalation	Move victim to fresh air. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one- way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Call emergency medical care.
Eyes	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical attention. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Skin	Remove contaminated clothing. Wash skin thoroughly with water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.
Ingestion	If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. Immediately rinse mouth and drink plenty of water. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to an unconscious person. Do not use mouth-to-mouth method if victim ingested the substance.

Most important symptoms and effects, both acute and delayed

Overview	Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Keep victim under observation. EYES: Causes serious eye damage. SKIN: May be harmful in contact with skin. Causes severe skin burns and eye damage.

5. Fire-fighting measures

Extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Use media appropriate for surrounding area.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire. Do not use halogenated extinguishing agents.
Special hazards arising from the substance or mixture	Sodium oxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas. Do not breathe mist / vapors / spray.
Special protective equipment and precautions for firefighters	Fire fighters should enter the area only if they are protected from all contact with the material. Full protective clothing, including self-contained breathing apparatus, coat, pants, gloves, boots and bands around legs, arms, and waist, should be worn. No skin surface should be exposed
Advice for fire-fighters	Fire fighters should enter the area only if they are protected from all contact with the material. Full protective clothing, including self-contained breathing apparatus, coat, pants, gloves, boots and bands around legs, arms, and waist, should be worn. No skin surface should be exposed. Move containers from fire are if you can do so without risk. Use water spray to cool containers. **ERG Guide No. 154**

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible and corrosion resistant. Observe good industrial hygiene practices. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained

6. Accidental release measures (Cont.)

Environmental precautions	Avoid discharge into drains, waterways or onto ground. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Following product recovery, flush area with water. Small Spills: Absorb spill with vermiculite or other inert material. Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.
Methods and material for containment and cleaning up	CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover. As an immediate precautionary measure, isolate spill or leak area in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate enclosed areas.

7. Handling and storage

Precautions for safe handling	Use caution when combining with water; DO NOT add water to caustic; ALWAYS add caustic to water while stirring to minimize heat generation. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible and corrosion resistant. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store in corrosive resistant container with a resistant inner liner. Store away from incompatible materials (Reacts with water, acids, metals and reducing sugars (fructose)). Store at temperatures not exceeding 40°C/104°F. Compatible storage materials may include, but not be limited to, the following: nickel and nickel alloys, steel, plastics, plastic or rubber-lined steel, FRP, or Derakane vinyl ester resin. Do not allow material to freeze.

8. Exposure controls and personal protection

Control Parameters

Occupational Exposure Limits

CAS No.	Ingestion	Source	Value
1310-73-2	Sodium hydroxide	OSHA	TWA 2 mg/m3
		ACGIH	Ceiling: 2 mg/m3
		NIOSH	Ceiling 2 mg/m3
7647-14-5	Sodium chloride	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit

Exposure controls

Eyes	Wear chemical goggles and/or face shield.
Skin	Chemical impervious gloves. Wear chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level, an approved respirator must be worn. Respirator type: Chemical respirator with organic vapor cartridge and full facepiece.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse. Routinely wash work clothing and protective equipment to remove contaminants.
Engineering Controls	Good general ventilation should be considered. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

9. Physical and chemical properties

Physical Sate	Liquid
Appearance	Colorless to Slightly Hazy Liquid
Odor	Odorless
Odor threshold	Not Measured
pH	14
Melting point / freezing point	50 - 53 °F (10 - 11.67 °C) (50% solution)
Initial boiling point and boiling range	266 - 284 °F (130 - 140 °C) (50% solution)
Flash Point	Not Applicable
Evaporation rate	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Not Measured
Vapor pressure (Pa)	23.76 mm Hg (approximately) (77 °F (25 °C))
Relative Density	1.525 (50% solution)
Specific Gravity	1.11 - 1.53
Solubility in Water	Complete
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature (°C)	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
VOC %	Not Measured

Other information

Molecular formula	NaOH
Molecular weight	40.1 g/mol

10. Stability and reactivity

Reactivity	Contact with metal may release flammable hydrogen gas.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals. Corrosive to aluminum, tin, zinc, copper and most alloys in which they are present including brass and bronze. Corrosive to steels at elevated temperatures above 40°C (104°F).
Incompatible materials	Oxidizing agents. Acids. Phosphorus. Aluminum. Zinc. Tin. Initiates or catalyzes violent polymerization of acetaldehyde, acrolein or acrylonitrile.
Hazardous decomposition products	Contact with metals (aluminum, zinc, tin) and sodium tetrahydroborate liberates hydrogen gas.

11. Toxicological information

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Sodium hydroxide - (1310-73-2)	6,600.00, Mouse - Category: NA	1,350.00, Rabbit - Category: 4	600.00, Mouse - Category: NA	No data available	No data available
Sodium chloride - (7647-14-5)	1,350.00, Rabbit - Category: 4	100.00, Rat - Category: 2	40.00, Mouse - Category: NA	10,500.00, Rat - Category: NA	No data available

Ingestion	Causes digestive tract burns. Harmful if swallowed.
Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes severe eye burns. Causes serious eye damage.

11. Toxicological information (Cont.)

Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result.
Acute toxicity	Harmful if swallowed
Acute Toxicity (mouth)	Not Applicable
Acute Toxicity (skin)	May be harmful in contact with skin.
Acute Toxicity (inhalation)	Not Applicable
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Eye damage/irritation	Causes serious eye damage.
Sensitization (respiratory)	Not Applicable
Sensitization (skin)	Not Applicable
Germ toxicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive Toxicity	No data available
Specific target organ systemic toxicity (single exposure)	Not available
Specific target organ systemic Toxicity (repeated exposure)	Not available
Aspiration hazard	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Chronic effects	Prolonged exposure may cause chronic effects.

12. Ecological information

Toxicity - Harmful to aquatic life.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Sodium hydroxide - (1310-73-2)	196.00, Poecilia reticulata	40.38, Ceriodaphnia dubia	Not Available
Sodium chloride - (7647-14-5)	1,100.00, Freshwater Fish	3,310.00, Daphnia magna	Not Available

Persistence and degradability	Expected to degrade rapidly in air.
Bioaccumulative potential	The product is not expected to bioaccumulate.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Waste treatment methods:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Waste from material:	The waste code should be assigned in discussion between the user, the producer and the waste disposal company. Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner .
Container Management:	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transport hazard class(es)	
UN / NA Number:	UN1824
UN Proper shipping name	Sodium hydroxide solution
DOT (Domestic Surface Transportation)	
DOT Proper Shipping Name:	Sodium hydroxide solution
DOT Hazard Class DOT Label:	8 8
DOT Packing Group:	II
CERCLA/DOT RQ:	1000 lbs.
Environmental hazards:	IMDG Marine Pollutant: No
Special precautions for user:	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory Information

Regulatory Overview:	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory.	
US EPA Tier II Hazards:	Fire:	No
	Sudden Release of Pressure:	No
	Reactive:	Yes
	Immediate (Acute):	Yes
	Delayed (Chronic):	No
SARA 302 Extremely Hazardous Substance:		No
SARA 311/312 Chemicals :		Yes
SARA 313 (TRI)		No
CAA Section 112 Hazardous Air Pollutant		No
CAA Section 112R Risk Management Plan		No
State Regulations:	N.J. RTK Substances (>1%)	Not listed
	Penn RTK Substances (>1%)	Listed
	California Prop 65	Not listed

16. Other Information

NSF Maximum Use Level (STD 60): Check BOL for facility Data. (100 to 250 mg/L)

Revision Information: 1/1/2017 – Section 3. Sodium hydroxide - Weight % corrected (10 – 52%).

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

THE USER IS CAUTIONED TO PERFORM HIS OWN HAZARD EVALUATION AND TO RELY ON HIS OWN DETERMINATIONS.

12.75 lbs/gallon

AUG 24 2017

CUSTOMER

REMIT TO	DIRECT INQUIRIES TO:	INVOICE NUMBER MUST APPEAR ON YOUR REMITTANCE
DPC INDUSTRIES, INC. P.O. BOX 301023 DALLAS,TX 75303-1023 USA	DPC INDUSTRIES, INC. 3501 2ND STREET SW ALBUQUERQUE,NM 87105 USA 800-445-0533	Invoice No. 747002071-17

Customer No	Date Ordered	Salesperson	Bill of Lading No.	Invoice and Ship Date
74079700	8/8/2017	Moss, Charles Alan	7074-17-002290-1	8/14/2017

Ordered By	Customer P.O. No.	Terms	Ship To
JIMMY 575-754-6671		Net 30	74079701

SOLD TO	SHIP TO
TOWN OF RED RIVER ACCOUNTS PAYABLE DEPT WWTP RED RIVER,NM 87558 USA	VILLAGE OF RED RIVER WASTEWATER PLANT RED RIVER,NM 87558 USA

F.O.B. TERMS	TERMS OF DELIVERY	CARRIER
FOB DESTINATION	PREPAID & ABSORBED	OUR TRUCK

Qty Shipped	Description	Quantity	Units	Unit Price	Amounts
40,260	CAUSTIC SODA LIQ 50%, BULK GROSS: 77,020 TARE: 36,760 NET: 40,260 ASSAY: 37.85	40,260	lb	0.2350	9,461.10

FUEL SURCHARGE	378.44
FREIGHT	0.00
TAX	0.00
SUBTOTAL	9,839.54

Returnable Container Deposit Charges

Less Deposit Charges on Containers Returned

PLEASE PAY THIS AMOUNT $9,839.54

PLEASE INCLUDE INVOICE NUMBER ON CHECK

PLEASE SHIP EMPTY RETURNABLE CONTAINERS PROMPTLY - NO MERCHANDISE RETURNABLE WITHOUT WRITTEN CONSENT

Attachment C – NMED Sample Results

Instructions: 1) Copy data from Bacteria Record Sheet to the form below. 2) Calculate MPN. 3) Review Qualifier Codes
4) Press Format Upload File Key. 5) Save File Upload worksheet as a .CSV in upload directory.

Calcul Format

Lab ID	RID	Method	Collection Date/Time	Incubation Start Date/Time	Date of Analysis	Analyte Name	Start Temp	End Temp	Quanti-Tray/2000 Positive Large Wells	Quanti-Tray/2000 Positive Small Wells	MPN	Lower95 /Tray	Upper95 /Tray	Qualifier	Comments	Analyst
SWQB Lab Unit	2512659	Colilert-182000	1/8/2018 13:04:00 PM	1/8/18 18:00	1/9/18 12:00	Total Coliform	35	35	8	0	8.6	4.5	16.9			A.Ullom
SWQB Lab Unit	2512659	Colilert-182000	1/8/2018 13:04:00 PM	1/8/18 18:00	1/9/18 12:00	Escherichia coli	35	35	0	0	<1	<1	<1			A.Ullom
SWQB Lab Unit	2512658	Colilert-182000	1/8/18 12:00	1/8/18 18:00	1/9/18 12:00	Total Coliform	35	35	49	48	>2419.6	>1630.4	>4716.10	E		A.Ullom
SWQB Lab Unit	2512658	Colilert-182000	1/8/18 12:00	1/8/18 18:00	1/9/18 12:00	Escherichia coli	35	35	49	48	>2419.6	>1630.4	>4716.10	E		A.Ullom
SWQB Lab Unit	2512660	Colilert-182000	1/8/18 13:00	1/8/18 18:00	1/9/18 12:00	Total Coliform	35	35	49	48	>2419.6	>1630.4	>4716.10	E		A.Ullom
SWQB Lab Unit	2512660	Colilert-182000	1/8/18 13:00	1/8/18 18:00	1/9/18 12:00	Escherichia coli	35	35	49	40	1119.9	754.6	1614.0			A.Ullom
SWQB Lab Unit	2512661	Colilert-182000	1/8/18 13:00	1/8/18 18:00	1/9/18 12:00	Total Coliform	35	35	0	0	<1	<1	<1	U		A.Ullom
SWQB Lab Unit	2512661	Colilert-182000	1/8/18 13:00	1/8/18 18:00	1/9/18 12:00	Escherichia coli	35	35	0	0	<1	<1	<1	U		A.Ullom

Bacteria Record Sheet

SWQB Contact:

SWQB Survey:

Unit (SWQB Lab or Mobile Unit)	RID	Station	Collection Date/Time	18 or 24	Initiate Incubation Date/time	Count Date/time	Temp @Start/ @Count	Analyte	Large	Small
LAB	2512659	Red River ↑ WWTP	1-8-18 13:00	18	1-8-18 18:00	1-9-18 1200	35.0 / 35.0	Total Coliforms	8	0
								E. coli	0	0
LAB	2512658	RED RIVER WWTP	1-8-18 12:00	18	1-8-18 1800	1-9-18 1200	35 / 35	Total Coliforms	49	48
								E. coli	49	48
LAB	2512660	Red River ↓ WWTP	1-8-18 1309	18	1-18-18 1800	1-9-18 1200	35 / 35	Total Coliforms	49	48
								E. coli	49	40
LAB	2512661	Blank	1-8-18 1300	18	1-8-18 1800	1-9-18 1200	35 / 35	Total Coliforms	0	0
								E. coli	0	0
								Total Coliforms		
								E. coli		
								Total Coliforms		
								E. coli		
								Total Coliforms		
								E. coli		
								Total Coliforms		
								E. coli		
								Total Coliforms		
								E. coli		
								Total Coliforms		
								E. coli		
								Total Coliforms		
								E. coli		
								Total Coliforms		
								E. coli		

Attachment D – NMDGF Investigation Report
(Release Authorized by Eric Frey, NMDGF on January 10, 2018)

Trujillo, Erin S, NMENV

From: Dalessandro, Laurence, DGF
Sent: Wednesday, January 10, 2018 1:02 PM
To: Holcomb, Sarah, NMENV; Trujillo, Erin S, NMENV; Maes, Gabe M., DGF; Peterson, Matthew, DGF; Gatlin, Michael R -FS (mrgatlin@fs.fed.us); Miller, Gregory; Lewis, Jack -FS; Garner, Eric D -FS; Cortez, Francisco -FS; Furr, Chris W -FS
Cc: Frey, Eric, DGF; Hansen, Richard, DGF
Subject: Red River Update

All,
As many of you know, there was a spill of approximately 500 gallons of caustic soda (sodium hydroxide) at the Waste Water Treatment Plant near the Village of Red River on Friday, January 5th 2018. The spill caused the pH in the river to spike for a short time, killing fish in close proximity downstream of the Plant.

Yesterday, 1/9/18, a team of four NMDGF biologists conducted a field investigation which included measuring water quality, estimating dead fish numbers, distance of kill, and searching for live fish. Electrofishing was conducted from the lower Fawn Lake outlet upstream to the WWTP outflow. Total electroshocking distance for this reach was approximately 600 meters. Within this reach we observed 45 dead brown trout of all sizes classes (see attached photo) indicating that a water chemistry event did occur and caused the fish kill. We also captured 4 live brown trout (2 juvenile and 2 adults) within this same reach. One of the live adults was captured immediately downstream of the WWTP outfall indicating the high pH event had concluded. We found 3 additional dead brown trout downstream of this reach. The lower most dead trout observed was about 1.2 kilometers downstream of the WWTP outflow indicating the total distance of kill.

We also observed 4 dead brown trout in the upper Fawn Lake. These fish were all located immediately within the lake inlet delta indicating they had died in the river and washed into the lake via the inlet. We did not observe dead fish in the other lakes. We believe the fish kill did not extend into Fawn Lakes.

Our total dead fish count is 52 brown trout.

Historic population surveys show low fish numbers in this reach of the Red River, so large scale mortality wasn't expected. For example, we electrofished from WWTP outfall along State highway 38 to approximately 500 meters upstream and did not observe any dead or live fish. This reach had high water velocities and very little fish habitat so this isn't too surprising.

Water quality measurements were taken around 11:30 AM both above and below the WWTP outflow pipe within the campground (see below).

Water quality
30 meters downstream of WWTP outflow pipe:
pH: 8.9
DO: 6.77%
T: 2.2°C

10 meters upstream of WWTP outflow pipe:
pH-8.7
DO-6.77%
T- 1.9°C

We also electrofished near the old La Bobita Campground within one of our historic fish survey population sites. This is located about 3.0 kilometers downstream of the WWTP outfall. We found healthy live fish in numbers expected based on our historic surveys.

It seems the caustic soda has moved through the system , and water quality is back to normal levels so the fish kill is presumed over. If anyone has any questions or more information is needed, please feel free to contact me.

Thanks,

Laurence

Laurence D'Alessandro
Coldwater Fisheries Biologist
New Mexico Department of Game and Fish
P.O. Box 25112
Santa Fe, NM 87507

Office: 505-476-8103
Fax: 505-476-8131
Laurence.Dalessandro@state.nm.us

CONSERVING NEW MEXICO'S WILDLIFE FOR FUTURE GENERATIONS

Attachment E – Permittee Non-Compliance Report

TOWN OF RED RIVER
(575) 754-2277
www.redriver.org
100 East Main Street
PO Box 1020
Red River, NM 87558

January 11, 2018

Ms. Nancy Williams
Water Enforcement Branch (6EN-WC)
EPA, Region 6
1445 Ross Ave., Suite 1200
Dallas, TX 75202-2733

RE: Chemical overflow NPDES Permit NM0024899

Ms. Jackson,

On January 5, 2018 the Town of Red River experience a chemical overflow during a delivery of Caustic Soda, which caused an upset in the wastewater plant. You will find attached to this letter, statements from the operators of what occurred. I was notified by the operator, Patrick Jaramillo about the chemical spill at approximately 2 pm MST, at which time I contacted NMED-SWQB and spoke to Erin Trujillo I also contacted EPA and spoke to Michael Tillman. The Dept of Game and Fish was also notified as well as the Carson National Forest.

The Supervisor, Jimmy Baca, had placed an order for 3000 gallons of Caustic Soda from DPC Industries, Inc., out of Albuquerque, NM. (Caustic has a weight of approximately 12.75 per gallon) The delivery was scheduled for the morning of January 5, 2018. The delivery was proceeding as usually until the operator, Patrick Jaramillo, could pick up an odor of the chemical. He then went downstairs to check on the storage tank when he noticed the overflow of chemical. The operator alerted the driver that there was a spill and the delivery of the caustic ceased. While the operator went back to check on the overflow, the driver packed up had his delivery ticket signed by another operator, Miguel De La Mata, and left the facility. The Supervisor has spoke to DPC Industries and they have estimated that the spill amounted to 244 gallons. The original paperwork showed 40,000 pounds ordered and the signed delivery memo shows 45,000 pounds delivered. The driver wasn't paying attention to how much he was delivering.

The overflow goes into a drain that leads to a sump in the chemical storage room. The sump receives flows from all floor drains on that level, as well as from the restrooms,

lab area, shop drains and the Rotating Biological Contactor Basins (RBC). This sump is on an automatic float system and pumps to the headwork's of the facility.

Samples were being collected and analyzed for pH. Beginning on January 5, 2018 at 1325 the pH was 11.48 at the outfall of the treatment facility. On January 6, 2018 at 1715 the pH was 8.71 which brought us back into compliance. (pH on permit is 6.6-8.8) The facility was out of compliance for roughly 28 hours because of the chemical spill. During this time pH was also being analyzed in the receiving stream. January 5, 2018 at 1345 the pH was 9.45 downstream of the outfall. On January 6, 2018 at 1230 the pH was 8.00.

Samples were taken at the outfall for **E. Coli** on January 9, 2018
Results are 65 MPN. Another sample is being analysis today January 11, 2018.
Sample results for **Total Suspended Solids** on January 9, 2018.
Average Effluent TSS = 7.6 mg/l Effluent loading 29.09 lbs/day
pH samples remain to be taken daily and all result are within the permit limits.

The facility is back to normal operations.

Preventive measures

This was the first time that the facility has ever had a chemical overflow. During this event it has pointed out some shortfalls and additional training that needs to be addressed.

1. For chemical spill or other hazards that occur at the facility the operator needs to call 911, notify the supervisor and administration of the incident.
2. In the event of a chemical spill in the chemical storage area, the sump should be shut off to prevent the chemical from being pumped to the headworks of the facility.
3. The facility has an emergency response plan that needs to be reviewed and added to cover a chemical spill within the facility. The Emergency response plan should be reviewed annually or as needed and updated. Since the plan was updated there has been personnel changes.
4. The Supervisor and operators are going to do some training on what procedures to follow during an emergency of a chemical spill or other emergency situations.
5. The operators will be trained to pay more attention while a delivery is being made. This will require that two operators be present during a delivery of chemicals. One operator watching the tank fill with chemical and another operator near the delivery truck to make sure things are being handled properly. The two operators need to be in contact with each other by radio. The operator watching the tank fill need to give the delivery driver enough notice when the tank is reaching capacity so that he can slow down the flow before the tank is full. A chemical delivery happens about every 10 months.
6. The Containment system around the Caustic Storage tank will hold 53% of the capacity of the tank. The Town is discussing with our engineer about why there is a

floor drain in the containment area. This looks like a design flaw from 1980 and we are considering correcting the problem so in the chance of a spill it won't happen again.

I am including the laboratory bench sheets, The operators statement of the event and the pH monitoring that was being done until the facility was back in compliance. If you need anything else please call me at 575-754-2277 or email rchurch@redriver.org.

Sincerely,

Russell Church
Environmental Compliance Manager
575-754-2277
rchurch@redriver.org

CC: Erin S. Trujillo, NMED (email)
Michael Tillman, EPA (email)
Mayor Linda Calhoun, town of Red River

Town of Red River

Advance Waste Water Treatment Plant
P.O. Box 1020 Red River, New Mexico 87558
Phone 575-754-6671 FAX 575-754-2968

January 9, 2018

Date January 5, 2018 at 6:35am I arrived at work we were waiting for a truck load of Caustic the truck was already waiting for us, we opened the gates top and bottom and he came into the plant we opened the garage door to where the driver would be unloading the caustic, he advised me that he had around 40,000 lbs of caustic which he stated was around 4,000 gallons of caustic. As he suited up to unload the caustic I started to do my morning rounds at the plant this was 6:50am, I started by making sure all the RBC are running okay then I check the clarifiers and their chain driven motors from there I check the slow mixers and the uv banks A-B and recorded temp on the auto sampler, from there I went to the chemical feed room to check the two fine screens and the bar screen this takes around 20 minutes. At 7:30am as I came back up the stairs I checked on the caustic tank and the plastic measuring tube that read 600 gallons as I came up the stairs I talked to the driver that was unloading the caustic he was sitting don on a chair that we have there outside of the garage I told him that we had coffee if he would likesome he said that he was good, I went back into the conference room and looked at the clock and it was 8:10am, I started to smell a strong smell of caustic so I went down to the chemical feed room and saw that the caustic tank was over filling so I went back upstairs and advised the driver that the tank was full and it was spilling over I also told him that I was going down stairs, as I got down stairs the caustic was still coming out through the over fill valve pipe. I Patrick Jaramillo started to clean up the overflow of caustic soda in the chemical room with water, I came back up stairs around 9:00am and asked Miguel what had happened to the driver and he said that he had already left I wanted to know what had happened to the remaining caustic and how much was left over but no driver. At 1:35pm Miguel our lab tech went down to get a PH sample and came back up with the sample looking very brown in color so he tested the Effluent sample and the reading came back at 11.48 we got two 300ml bottles and went down to the stream where our Effluent comes out, Patrick Jaramillo and Mark Boor got a sample up stream and another sample downstream we took the samples back to the lab and Miguel ran the test that came back as upstream 7.52 and downstream was 9.45, we then called our supervisor Jimmy Baca and he told us to call Russell Church our compliance officer but for us to keep getting PH samples every half hour from our Effluent TTSA, Russell Church advised us that he would take care of everything that needed to be done. Miguel took Effluent samples all the way up to 7:00pm om 1/5/2018 every half hour and then on Saturday 6, 2018 he took some more samples, he also took one more Effluent sample on Sunday 7, 2018 and he did record the results.

Patrick Jaramillo, Plant Operator
Operator's # NM 18393

Jimmy Baca, Plant Supervisor

Town of Red River

Advance Waste Water Treatment Plant
P.O. Box 1020 Red River, New Mexico 87558
Phone 575-754-6671 FAX 575-754-2968

9 January 9, 2018

On 5 January 2018, at approximately 0800, I arrived at the treatment plant and immediately observed the tanker at the garage door entrance making the delivery of caustic soda, with the driver standing by the vehicle. I entered the plant and began my day in the plant when approximately at 0820 I was approached by the driver to sign off on the delivery. I assumed that Pat Jaramillo was still downstairs and signed off on the invoice, making small talk. Not once in the course of our conversation was there any indication that a spill had occurred, he simply had me sign, used our restroom and departed the premises.

Previous to my going downstairs to retrieve my effluent sample to do my daily pH testing, Pat and Mark Boor made some mention of the spill, but the magnitude of the spill did not fully register with me until I made my way downstairs and the fumes was obvious even up in the garage level, getting stronger as I made my way downstairs and on my way to the step aerator where I retrieve my sample. Immediately I noticed the color of the water and when I ran the test, the pH registered at 11.48 (see attached timeline). I discussed with Pat that perhaps check the outfall at the river and maybe notify someone. Pat suggested we call Jimmy Baca, our supervisor, after Pat and Mark retrieved samples from the river, one downstream and one upstream, for me to test in the lab. Once we recorded the results we called Jimmy and informed of what had occurred. Jimmy immediately had us contact Russell Church, our compliance officer, who then informed Pat that he will contact all the parties that needed to be involved. After a short time, I was contacted by Russell and was instructed to test every hour on the hour, retrieving samples from the step aerator. Not long after, Jimmy called and I updated him on what Russell wanted me to do and Jimmy instructed me to test every 30 minutes, recording the pH, times, results and the flows off the flowmeter after each test. The pH at the end of Friday was 11.86 and was instructed by Jimmy to come in the morning and continue my testing (I was scheduled to be on call and do rounds through the weekend). On the morning of 6 January 2018 at 0855, the pH result was 9.9, and I continued to test every few hours through out the day, even retrieving another downstream sample, which tested at 8.00. At 1715, the pH registered at 8.71. Throughout the whole process, I was in constant communication, via text or phone calls, with either Jimmy and/or Russell. I again tested the following morning at 0930 (7 January 2018), registering the pH at 7.73, and did not test again until Monday morning (8 January 2018) registering the pH at 7.32.

Miguel De La Mata, Lab Tech

Jimmy Baca, Plant Supervisor

Town of Red River

Advance Waste Water Treatment Plant
P.O. Box 1020 Red River, New Mexico 87558
Phone 575-754-6671 FAX 575-754-2968

9 January 2018

Date	Time Sample Retrieved	Time Sample Tested	pH	Flow rate (MGD)
1/5/18 (FRI)	1320	1325	11.48	N/A
Upstream	1335	1345	7.52	N/A
Downstream	1335	1345	9.45	N/A
	1425	1430	11.67	.461
	1455	1500	11.65	.454
	1525	1530	11.67	.522
	1555	1600	11.70	.518
	1625	1630	11.69	.466
	1855	1900	11.86	.607
1/6/18 (SAT)	0850	0855	9.90	.488
	1210	1215	9.23	.533
Downstream	1220	1230	8.00	N/A
	1520	1525	8.89	.522
	1710	1715	8.71	.460
1/7/18 (SUN)	0925	0930	7.73	.460
1/8/18 (MON)	0820	0825	7.32	.439

TOTAL SUSPENDED SOLIDS

Sampler [illegible]

Time Collected 1000 - 1600

Date Collected 1-9-18

Type of Sample 6 HR COMP

Location- TTSA

Analysts [illegible]

Date Analyzed 1-10-18

Method- Standard Methods, 22nd ed. 2540, D.

Mass Flow (24 hrs) .459

(8am to 8am) of date sample collected

Dish #	A	B	C	D		7
Sample type	Blank	Effluent	Effluent	Effluent		Influent
Sample Volume	300	100	50	50		~~25~~ 10
Dish Weight	1.1399	1.1248	1.1196	1.1257		1.1290 ~~1.1440~~
1st dry	-6 1.1397	14 1.1262	10 1.1201	12 1.1263		440 1.1374
2nd dry	-1 1.1396	11 1.1259	4 1.1198	10 1.1262		440 1.1334
3rd dry	1.1396	11 1.1259	2 1.1197	10 1.1262		420 1.1332
Results mg/l	-1	11	2	10		420

AVERAGE EFFLUENT = 7.6 mg/l

$11+2+10/3 = 7.6$

Effluent Loading 29.09 lbs/day

$7.6 \times 8.34 \times .459 = 29.09$

	Time	Date	Initial
Placed in drying oven:	0907	1-10-18	
Placed in dessicator:	1037	1-10-18	
Read 1st dry:	1055	1-10-18	
Placed in drying oven:	1059	1-10-18	
Placed in dessicator:	1312	1-10-18	
Read 2nd dry:	1340	1-10-18	
Placed in drying oven:	1346	1-10-18	
Placed in dessicator:	1501	1-10-18	
Read 3rd dry:	1519	1-10-18	

$\frac{420 - 7.6}{420} \times 100 = 98.19\%$

Repeat cycle of drying, cooling, desiccating and weighting until a constant weight is obtained or a weight change is less than 0.5 mg/l.

Calculation: Dry weight - Dish weight = weight

Weight x 1000 /mls of sample x 1000 = milligrams per liter

mg/l x 8.34 lbs/gal x flow mgd = lbs/day

revised 10-31-13

Town of Red River
P.O. Box 1020
Red River, NM 87558

Phone #: 575-754-6671
Fax#: 575-754-2968
E-mail: awwtplant@gmail.com

AWWT Lab

PROJECT NAME RED RIVER

E. Coli Worksheet Wastewater Effluent

Sampler: Q

Date of Sampling: 1-9-18

Time of Sampling: 1107

Type of Sample GRAB

Flow .421 MGD

Sampling Location: TTSA

Method: S.M. 22nd Edition 9223 Colilert QT

Analysis

Placed in Incubator : Time: 1120 Date: 1-9-18 Temp In: 35.0

Lab area disinfected ? Yes / No

Analysts: Q

Required Temp 35.0 +/- 0.5 degrees C
Incubate for 24 hrs
Count positive wells that are Yellow and Florescent
Use IDEXX QT 2000 MPN Tables

Quanti-Tray 2000

Sample Number	# 1		# 2		#
Sample Type	Effluent		Effluent		Influent
Volume	100 ml		100 ml		
Count # of Yellow and Florescent Wells	large wells	Small wells	large wells	Small wells	large wells / Small wells
	37	3	32	7	
IDEXX Quanti-tray 2000 MPN Table results	69.1		60.9		

Remove from incubator: Time: 1125 Date: 1-10-18 Temp Out: 35.0

Calculation Area:

69.1 + 60.9 / 2 = 65

Read By: Q

Results: 65 : MPN

LOG=: 1.81 =

Lot #: CN328B

Exp Date: 5-6-18

Daily PH Samples

MONTH / YEAR: JANUARY 2018 AWWT Facility

Date	Time Collected /Sampler	Time Analysis /Analyst	Influent. pH	Time Collected /Sampler	Time Analysis /Analyst	Effluent pH	Temp. Eff	Dessicant
1				—	HOLIDAY			X
2				1323 Q	1327 Q	6.92	11.3°C	
3	1210 Q	1212 Q	6.83	1204 Q	1209 Q	6.85	16.2°C	
4				1319 Q	1224 Q	7.00	11.2°C	
5				1320 Q	1325 Q	11.44	11.0°C	
6	X	X	X	X	X	X	X	
7	X	X	X	X	X	X	X	
8				1320 PJ	1324 PJ	7.41	10.6	X
9				1323 Q	1325 Q	7.32	10.1	
10				1314 Q	1318 Q	7.26	10.5	
11								
12								
13	X	X	X	X	X	X	X	
14								
15	HOLIDAY			HOLIDAY				X
16								
17								
18								
19								
20	X	X	X	X	X	X	X	
21	X	X	X	X	X	X	X	
22								
23								X
24								
25								
26								
27	X	X	X	X	X	X	X	
28	X	X	X	X	X	X	X	
29								
30								X
31								

* All samples are grab samples
USGS I-1586.85 Substituting 10 Buffer for 9 Buffer

STRAIGHT BILL OF LADING-SHORT FORM – ORIGINAL - NOT NEGOTIABLE

RECEIVED subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading

AT ALBUQUERQUE, NM **FROM: DPC INDUSTRIES, INC.**

The property described below, in apparent good order, except as noted (contents and condition of contents of package(s) unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Delivery By Date	Customer No.	Customer Order No.	Shipping Date	Bill of Lading No
01/05/2018	74079701	24045		7074-18-000010-1

Ordered by	Date Ordered	Carrier
JIMMY 575-754-6671	01/02/2018	OUR TRUCK

CONSIGNED TO & DESTINATION

VILLAGE OF RED RIVER
WASTEWATER PLANT-AWWT
2 STRAIGHT CREEK TRAIL
RED RIVER,NM 87558

CUSTOMER INFORMATION

** PLEASE SEE OUR WEBSITE @ WWW.DPCINDUSTRIES.COM**

PLACARDS OFFERED ☐ YES ☐ NO - FURNISHED BY CARRIER ☐ PROD INFO ☐ ERG ON BOARD ☐ ERG ATTACHED & EXPLAINED ☐ SPECIAL NOTICE PROVIDED ☐ SDS FURNISHED BY SHIPPER

DRIVER'S SIGNATURE

Car Initials & Number

QUANTITY	PKG TYPE	HM	DESCRIPTION OF MATERIALS, SPECIAL MARKS AND EXCEPTIONS	*WEIGHT (Subject to Corr.)	UOM	RESOURCE CODE	CLASS RATE	C.O.D. CHARGE Shipper ☐ TO BE PAID BY Consignee ☐
1	CT	X	UN1824, SODIUM HYDROXIDE, SOLUTION 8, II, RQ DOT ERG No 154 NSF MCL = 100 mg/l CAUSTIC SODA LIQ 50% BULK, lb	40,000.00	LBS	127009		Subject to Section 7 of Conditions of applicable bill of lading. If this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement. The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. _____ Signature of Consignor _____ If charges are to be prepaid, write or stamp here "To be prepaid" _____ Received $ _____ To apply in prepayment of the charges on the property described hereon. _____ Agent or Cashier per _____ (The signature here acknowledges only the amount prepaid) _____ Charges Advanced
			Total LBS.	40,000.00				

"Shipper's imprint in lieu of stamp, not a part of bill of lading approved by the Department of Transportation"

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation

per Garcia, Camilo

☐ UNMANNED SITE

The unloading point has been verified and approved for the above named product. I have also confirmed the tank will hold the volume of product being unloaded.

per _____ date 1-5-18

Customer Signature

Company Shipper, Per Garcia, Camilo Agent _____ Per _____

Permanent post-office address of shipper, P.O. BOX 301023, DALLAS, TX 75303-1023

Customer Signature

FOR 24 HOUR EMERGENCY INFORMATION CALL CHEMTREC: 1 (800) 424-9300

SEE BACK OF CUSTOMER COPY FOR NON-EMERGENCY NUMBERS

NOTE TO THE CUSTOMER: ABOUT RETURNED CYLINDERS, TON CONTAINERS, AND DRUMS: CYLINDERS, CONTAINERS, AND DRUMS PLACED FOR PICK UP BY OUR DRIVERS ARE ASSUMED TO BE EMPTY TO THE MAXIMUM EXTENT PRACTICABLE UNLESS THE CUSTOMER GIVES ADVANCE NOTICE THAT A FULL OR PARTIALLY FULL CYLINDER, CONTAINER OR DRUM IS TO BE PICKED UP.

HM	Package Type	Returns Descriptions & Classifications	Quantity Returned	Deposit Charge	Gross Weight
	55 Gal. Drum	Residue: Last Contained UN1791, Hypochlorite Solution, 8, III			
	150 lbs. Cyl.	Residue: Last Contained UN1017, Chlorine, 2.3(5.1, 8), Poison-Inhalation Hazard Zone B			
	150 lbs. Cyl.	Residue: Last Contained UN1005, Ammonia, Anhydrous, 2.2, Inhalation Hazard			
	150 lbs. Cyl.	Residue: Last Contained UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C			
	Ton Container	Residue: Last Contained UN1017, Chlorine, 2.3(5.1, 8), RQ, Poison-Inhalation Hazard Zone B, Marine Pollutant			
	Ton Container	Residue: Last Contained UN1017, Chlorine, 2.3(5.1, 8), RQ, Poison-Inhalation Hazard Zone B, Marine Pollutant, DOT-SP 5951			
	Ton Container	Residue: Last Contained UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C			
	150 lbs. Cyl.	Residue: Last Contained UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C, DOT-SP 5951			
	150 lbs. Cyl.	UN1017, Chlorine, 2.3(5.1, 8), RQ, Poison-Inhalation Hazard Zone B			
	150 lbs. Cyl.	UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C			
	Ton Container	UN1017, Chlorine, 2.3(5.1, 8), RQ, Poison-Inhalation Hazard Zone B, Marine Pollutant			
	Ton Container	UN1017, Chlorine, 2.3(5.1, 8), RQ, Poison-Inhalation Hazard Zone B, Marine Pollutant, DOT-SP 5951			
	Ton Container	UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C			
	Ton Container	UN1079, Sulfur Dioxide, 2.3(8), Poison-Inhalation Hazard Zone C, DOT-SP 5951			

No warranty express or implied, of merchantability, fitness for a particular purpose or otherwise, is made, except that the product conforms to COMPANY specifications. Buyer assumes all risk of use, storage and handling. The Company shall not be liable for any incident of consequential damages arising directly or indirectly in connection with the purchase, use, storage or handling of the product.

Customer

GRTT

No. 12100681

GRTT

GROENDYKE TRANSPORT, INC.

DELIVERY MEMO

FOR INTERNAL USE ONLY

P.O. BOX 632
ENID, OK 73702-0632

580 234-4663
800 843-2103

CUST. NO.	B/L NO.	ORDER NO.	TRUCK NO.	TRAILER NO.
BILDPC02	70741-IX-[illegible]	7000-18-000105	6939	DP990401

SHIPPER: DPC INDUSTRIES INC (DPCALB

ORIGIN: 3501 2nd St Sw ALBUQUERQUE NM/BE

CONSIGNEE: VILLAGE OF RED RIVER (VILRED

DESTINATION: Waste Water Treatment Plant RED RIVER NM/TA 88558

PARTIAL LOADING OR UNLOADING POINTS

CARRIER PUMP REQUIRED ☐ Consignee Initial Here

TYPE OF HOSE REQUIRED Rubber ☐ Other ☐ Number Feet

WAS TRAILER CLEANED AFTER UNLOADING? Yes ☐ No ☐

WERE YOU RELEASED OR DID YOU STAY WITH THE EQUIPMENT? RELEASED ☐ STAYED ☐

LOADING DEMURRAGE BILL TO: DPC INDUSTRIES INC BY(AGENT)

UNLOADING DEMURRAGE BILL TO. BY(AGENT)

ALBQ	LOADING DATE	LOADING TIME ARRIVE	LOADING TIME STARTED WORK	LOADING TIME DEPART	TIME ZONE	DELIVERY DATE	DELIVERY TIME ARRIVE	DELIVERY TIME STARTED WORK	DELIVERY TIME DEPART	TIME ZONE
SCHEDULED	1/5/2018	3:00			CT					CT
ACTUAL	[illegible]	2 15	2 20	2 27	MT ET PT	1/5/2018	12:00			MT ET PT
						[illegible]	6:28	7:15	[illegible]	

REASON FOR LATE/EARLY LOADING

REASON FOR LATE/EARLY DELIVERY

QTY ORDERED	QTY SHIPPED	DESCRIPTION
45,000.00 LBS		CAUSTIC SODA(SODIUM HYDROXIDE) CAU TRAILER# 207472

CPT #5	CPT #4	CPT #3	CPT #2	CPT #1	<--COMMODITIES

TANK # AND DESCRIPTION	TANK GAUGE BEFORE	TANK GAUGE AFTER

BEFORE UNLOADING:
FOR THE CONSIGNEE: I have checked the documents pertaining to this shipment, verified the product to be received, certify to sufficient storage space, furnished unloading instructions to the driver, and approved hook-up to designated unloading line.

SIGNATURE DATE

AFTER UNLOADING:
FOR THE CONSIGNEE: Above described commodities received in good condition and accepted and unloaded as directed. (Except as noted).

BY SIGNATURE DATE

THANK YOU! WE APPRECIATE YOUR BUSINESS

TERMINAL APPROVAL DATE

DRIVER #1 DAVID SMITH 7927

DRIVER #2

Refer to Shipper's Bill of Lading for 24 hour Emergency Response Number and Required Information.

RECEIVER COPY

GRTT

No. 12100681

GRTT

DELIVERY MEMO

FOR INTERNAL USE ONLY

GROENDYKE TRANSPORT, INC.

P.O. BOX 632
ENID, OK 73702-0632

580 234-4683
800 843-2103

CUST. NO.	B/L NO.	ORDER NO.	TRUCK NO.	TRAILER NO.
BILDPC02	70741-1X-000110-1	7000-18-000105	6939	DP990401

SHIPPER: DPC INDUSTRIES INC (DPCALB

ORIGIN: 3501 2nd St Sw, ALBUQUERQUE, NM/HL

CONSIGNEE: VILLAGE OF RED RIVER (VILRPD

DESTINATION: Waste Water Treatment Plant, RED RIVER, NM/TA 87558

PARTIAL LOADING OR UNLOADING POINTS

CARRIER PUMP REQUIRED ☐
TYPE OF HOSE REQUIRED
Consignee Initial Here
Rubber ☐ Other ☐ Number Feet
WAS TRAILER CLEANED AFTER UNLOADING? Yes ☐ No ☐
WERE YOU RELEASED OR DID YOU STAY WITH THE EQUIPMENT? RELEASED ☐ STAYED ☐

LOADING DEMURRAGE BILL TO: DPC INDUSTRIES INC BY(AGENT)

UNLOADING DEMURRAGE BILL TO: BY(AGENT)

ALBQ	LOADING DATE	LOADING TIME ARRIVE	LOADING TIME STARTED WORK	LOADING TIME DEPART	TIME ZONE	DELIVERY DATE	DELIVERY TIME ARRIVE	DELIVERY TIME STARTED WORK	DELIVERY TIME DEPART	TIME ZONE
SCHEDULED	1/5/2018	3:00			CT					CT
ACTUAL	1-5-18	2:15	2:20	2:27	MT ET PT	1/5/2018 1-5-18	12:00 6:28	7:15	2:10	MT ET PT

REASON FOR LATE/EARLY LOADING

REASON FOR LATE/EARLY DELIVERY

QTY ORDERED	QTY SHIPPED	DESCRIPTION
45,000.00 LBS		CAUSTIC SODA(SODIUM HYDROXIDE) CAU TRAILER# 207472

CPT #5	CPT #4	CPT #3	CPT #2	CPT #1	<---COMMODITIES

TANK # AND DESCRIPTION	TANK GAUGE BEFORE	TANK GAUGE AFTER

BEFORE UNLOADING:
FOR THE CONSIGNEE: I have checked the documents pertaining to this shipment, verified the product to be received, certify to sufficient storage space, furnished unloading instructions to the driver, and approved hook-up to designated unloading line.

SIGNATURE DATE 1-5-18

AFTER UNLOADING:
FOR THE CONSIGNEE: Above described commodities received in good condition and accepted and unloaded as directed. (Except as noted).

BY SIGNATURE DATE 1-5-18

THANK YOU! WE APPRECIATE YOUR BUSINESS

DRIVER #1 DAVIDSMITH 7927

DRIVER #2

TERMINAL APPROVAL DATE

Refer to Shipper's Bill of Lading for 24 hour Emergency Response Number and Required Information.

TERMINAL COPY

Attachment F – Additional Permittee Monitoring Results

Trujillo, Erin S, NMENV

From: Russell Church <rchurch@redriver.org>
Sent: Friday, January 12, 2018 2:31 PM
To: Trujillo, Erin S, NMENV; Michael Tillman
Subject: Followup E Coli test
Attachments: E.coli NMED.pdf

Erin & Michael,

This is the results of another E Coli test taken on January 11, 2018. When I receive the result of the BOD test next week I will forward them to you.

--
Russell Church

Russell Church
Grant Administrator
Environmental Compliance Director
Town of Red River
rchurch@redriver.org
575-754-2277 office
575-770-7137 mobile

Town of Red River
P.O. Box 1020
Red River, NM 87558

Phone #: 575-754-6671
Fax#: 575-754-2968
E-mail: awwtplant@gmail.com

AWWT Lab

PROJECT NAME RED RIVER (per NMED)

E. Coli Worksheet Wastewater Effluent

Sampler:
Date of Sampling: 1-11-18
Time of Sampling: 1220

Type of Sample ~~.447~~ GRAB
Flow .447 MGD

Sampling Location: TTSA

Method: S.M. 22nd Edition 9223 Colilert QT

Analysis
Placed in Incubator: Time: 1127 Date: 1-11-18 Temp In: 35.0°C
Lab area disinfected Yes / No

Analysts:

Required Temp 35 0 +/- 0.5 degrees C
Incubate for 24 hrs
Count positive wells that are Yellow and Florescent
Use IDEXX QT 2000 MPN Tables

Quanti-Tray 2000

Sample Number	# 1		# 2		#	
Sample Type	Effluent		Effluent		Influent	
Volume	100 ml		100 ml			
Count # of Yellow and Florescent Wells	large wells	Small wells	large wells	Small wells	large wells	Small wells
	14	2	16	3		
IDEXX Quanti-tray 2000 MPN Table results	18.5		22.6			

Remove from incubator: Time: 1130 Date: 1-12-18 Temp Out: 34.5°C

Calculation Area:

18.5 + 22.6 = 20.5
41.1 ÷ 2 =

Read By:

Results: 20.5 MPN

LOG=: 1.3

Lot # CN3288

Exp Date: 5-6-18

Trujillo, Erin S, NMENV

From: Russell Church <rchurch@redriver.org>
Sent: Tuesday, January 16, 2018 3:01 PM
To: Trujillo, Erin S, NMENV; Michael Tillman; AWWT Plant
Subject: BOD
Attachments: BOD for NMED (1).pdf

Erin,

Jimmy sent me the results just before noon today. I just finished reviewing the BOD. It looks the lab tech didn't do enough dilutions to get a good result for the for the effluent sample. The final results are uniform but not above at least 1.00 remaining in bottle. They are collecting a composite sample today so they can run another test tomorrow.

--

Russell Church

Russell Church
Grant Administrator
Environmental Compliance Director
Town of Red River
rchurch@redriver.org
575-754-2277 office
575-770-7137 mobile

Initial Barometer: 555.0

BOD Worksheet

Final Barometer: 563.5

Sampler: Q

Sampling Date: 1.9.18

Sampling Time: 1000 - 1600

Sample Type: 6 Hr comp

Sample Location: TT SA - EFF

G & G prepared: Commercial EXP ~~1-9-18~~ 10-5-18

Sample pH (6.0 to 8.0) 7.25 pH adjusted to _____ (6.5 to 7.5) use H2SO4 or NAOH which ever needed

Seed Source: Poly Seed prepared: made fresh Date: ~~1/8/18~~ 1/9/18

Method Used: Standard Methods 22nd ed. 5210 B.

Date of Analysis: 1-10-18

Time of Analysis: 0920

Analyst for Initial Readings: Q

Temp Storage _____ C

Mass Flow (24hrs) .459 (8am to 8am)

(UV Disinfection)

UNSEEDED DILUTION WATER BLANK

Bottle #	3A	15B
D.O. Initial	6.28	6.25
D.O. Final	6.15	6.06
Difference	.13	.19

Note: should be <0.2 mg/l after 5 days of Incubation @ 20C

DI Only

49	
5.74	
5.60	
.14	

SEED CORRECTION LA LA

Bottle #	4	19A	57
ml seed used	8	10	12
D.O. Initial	6.28	6.27	6.26
D.O. Final	3.51	2.75	2.33
Difference	2.77	3.52	3.93
seed/mls seed used	3/8	3/10	3/12
seed correction	1.03	1.05	.98
Seed Correction Value used =		.98	

Seed Correction range: 0.60 to 1.00

(initial - final) = difference X seed / ml of seed = seed correction

TRC Result: .02 mg/l

G & G ACID STANDARD

Bottle #	2A	13	21A
ml STD	6	6	6
ml seed	3	3	3
D.O. Initial	6.34	6.33	6.34
D.O. Final	1.00	.94	.93
Difference	5.34	5.39	5.41
Seed Correction	.98	98	.98
Corrected Diff.	4.36	4.41	4.43
BOD mg/l	218.0	220.5	221.5

Average G&G = 220

Note: GG should be between 167.5 and 228.5 mg/l

INFLUENT SAMPLE DATA

Bottle #	64	70
ml sample	10	15
D.O. Initial	6.23	6.15
D.O. Final	.10	.09
Difference	6.13	6.06
Infl BOD mg/l	183.9	121.2
Average BOD =	152.5	

Efficiency = In-Out/In*100

$\frac{152.5 - 15.57}{152.5} \times 100 = 89.79$

EFFLUENT SAMPLE DATA

Bottle #	7	10	18	23A	59
ml of Sample	150	100	100	90	70
ml of Seed	3	3	3	3	3
D.O. Initial	6.09	6.15	6.16	6.14	6.22
D.O. Final	.11	.09	.09	.10	.46
Difference	5.98	6.06	6.07	6.04	5.76
Seed Correction	.98	.98	.98	.98	.98
Corrected Diff.	5.00	5.08	5.09	5.06	4.78
Eff BOD mg/l	10.00	15.24	15.27	16.86	20.48
Average BOD =	15.57				

15.57 x .459 x 8.34 = 59.60

= 7785/5

Analyst for Final Reading: Q

Date and Time of Final Reading: 1-15-18 @ 1045

Initial DO - Final DO = Difference - seed correction = corrected diff.

corrected diff X 300 ml / ml sample added to BOD bottle = mg/l

Revised 7/6/16 bjs per rc

Loading 59.60 lbs/day

Trujillo, Erin S, NMENV

From: Russell Church <rchurch@redriver.org>
Sent: Wednesday, January 17, 2018 1:32 PM
To: Trujillo, Erin S, NMENV; Michael Tillman
Subject: E Coli 2
Attachments: Ecoli NMED #2.pdf

Erin,

Here is another E Coli test that was collected on January 16, 2018.

--
Russell Church

Russell Church
Grant Administrator
Environmental Compliance Director
Town of Red River
rchurch@redriver.org
575-754-2277 office
575-770-7137 mobile

Town of Red River
P.O. Box 1020
Red River, NM 87558

Phone #: 575-754-6671
Fax#: 575-754-2968
E-mail: awwtplant@gmail.com

AWWT Lab

PROJECT NAME RED RIVER

E. Coli Worksheet Wastewater Effluent

Sampler: [signature]
Date of Sampling: 1-16-18
Time of Sampling: 1045

Type of Sample GRAB
Flow .418 MGD

Sampling Location: TTSA

Method: S.M. 22nd Edition 9223 Colilert QT

Analysis
Placed in Incubator : Time: 1129 Date: 1-16-18 Temp In: 34.5 °C
Lab area disinfected? Yes / No

Analysts: [signature]

Required Temp 35.0 +/- 0.5 degrees C
Incubate for 24 hrs
Count positive wells that are Yellow and Florescent
Use IDEXX QT 2000 MPN Tables

Quanti-Tray 2000

Sample Number	# 1		# 2		#	
Sample Type	Effluent		Effluent		Influent	
Volume	100 ml		100 ml			
Count # of Yellow and Florescent Wells	large wells: 3	Small wells: 9	large wells: 2	Small wells: 2	large wells:	Small wells:
IDEXX Quanti-tray 2000 MPN Table results	3.1		4.1			

Remove from incubator: Time: 1135 Date: 1-17-18 Temp Out: 34.5 °C

Calculation Area: 3.1 + 4.1/2 = 7.2

Read By: [signature]

Results: 7.2 . **MPN**

LOG=: .85

Lot #: CN328B

Exp Date: 5-6-18

revised 5/26/17 BJS