



Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	03/12/2020	
Media Program:	Water	
Regulatory Program(s)	CWA – NPDES	
Company Name:	Doña Ana County Utilities	
Facility Name:	Doña Ana County South Central Wastewater Treatment Plant	
Facility Physical Location:	East Sloan Road and Montes Road	
(city, state, zip code)	La Mesa, NM 88044	
Mailing address:	845 North Motel Boulevard	
(city, state, zip code)	Las Cruces, NM 88007	
County/Parish:	Doña Ana	
Facility Phone Number	575-525-6194	
Facility Contact:	Chuck McMann	Assistant County Manager
	chuckm@donaanacounty.org	
FRS Number:	110017841549	
Identification/Permit Number:	NM0030490	
Media Identifier Number:		
NAICS:	221320	
SIC:	4952	
Personnel participating in inspection:		
Amy Andrews, P.E.	USEPA/6-ECDWM	Environmental Engineer
Rick Duffy	USEPA/OECA	Supervisory Environmental Specialist
Jessica Gray	ERG	Specialist
Mireya Carnero	Doña Ana County Utilities	Assistant Manager – Operations
Jesus “Chuy” Reyes	Doña Ana County Utilities	Wastewater Operator
Sonya Lazos	Doña Ana County Utilities	Wastewater Operator
EPA Lead Inspector Signature/Date		
	Amy Andrews	Date
Supervisor Signature/Date		
	Carol Peters	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

Environmental Protection Agency (EPA) Region 6 inspector, Amy Andrews, arrived at the Doña Ana County, South Central Wastewater Treatment Plant (WWTP) at 8:45 AM on March 12, 2020 for an unannounced inspection. Rick Duffy (EPA) and Jessica Gray (ERG) accompanied me for the purpose of testing software for a tablet-based inspection computer program. We met with Jesus “Chuy” Reyes and Mireya Carnero for the Opening Conference. I presented my credentials to Ms. Carnero and informed her that this was an EPA inspection to determine compliance with the facility’s National Pollutant Discharge Elimination System (NPDES) permit and the Clean Water Act (CWA). The inspection was conducted under the authority of the NPDES permit program, in accordance with the Federal CWA. This report is based on information supplied by Doña Ana County Utility representatives (the permittee), observations made by the EPA inspector, and records and reports maintained by the permittee and the EPA.

FACILITY DESCRIPTION

The South Central WWTP is classified as a major industrial discharger under the CWA, Section 402, of the NPDES permit program and is authorized to discharge up to 1.05 million gallons per day (MGD) based on design flow, with an actual average discharge around 0.4 MGD. Discharge is to receiving waters of the Rio Grande River in waterbody segment 20.6.4.101 (*NMAC, State of New Mexico Standards for Interstate and Intrastate Surface Waters*) of the Rio Grande Basin. This segment includes the designated uses of irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat and primary contact.

Raw domestic sewage, collected from 28 lift stations and 16-inch force main, enters the plant's lift station and is then pumped to the entrance head works. At the entrance works, raw sewage flows through a 5 horsepower JWC Environmental shredder and then through a JWC Auger Monster. Rags are separated and dropped down a chute and into a container. A manual bar screen is available for a by-pass during maintenance. Influent then flows through a US Filter Link-Belt C&9 Grit Collector. Flow is routed through a grit chamber and passes to an equalization basin.

There are two trains of Sequencing Batch Reactor (SBR) basins at the facility. One SBR basin is operated for domestic waste and the second train is operated for septage. The facility will discontinue processing septage in the near future as the domestic flow will increase with new housing developments added to the collection system. Floating solids and scum are collected manually. The reactor basins are designed to operate in a diffused aeration, clarification, and clear liquid decant sequence. Six, four-hour cycles are run per day in the aeration unit used to treat wastewater. After a programmed time interval, the aeration is stopped to allow for settling of the microorganisms and other solids from the treated wastewater. The solids settle to the bottom of the reactor and are either retained within the reactor (RAS) or wasted (WAS) to a sludge holding tank (aerobic digester unit). The aerobic digester unit is

adjacent to the north of SBR #1 (north). One SBR activation basin was being used to treat septage brought to the facility by contract septage haulers. After treatment in this unit, the solids portion of the septage is sent to the digester in preparation for mixing with the digested activated sludge and sent on to the belt filter press. The decant liquids are mixed with the influent to the domestic side of the treatment basins. The treated domestic and mixed septage liquids are and sent through the UV disinfection and effluent flow meter before being discharged to the river. The unit has two independent banks of UV bulbs which are on at the same time unless they are cleaning them. Effluent flow is measured by an 18" Parshall flume and a Milltronics ultrasonic level transducer.

Sludge is wasted six times per day. Waste Activated Sludge (WAS) is pumped to the aerobic digester for dewatering and thickening. The digester is located in a long open channel just north of the two activation basins. Thickened sludge is pumped to a filter press where a polymer is added to the sludge to enhance processing. Flow from the plant wash down and decant from the belt press are returned to the plant lift station and recirculated. Processed sludge is hauled to the Corralitos Landfill in roll-off dumpsters.

Section II – OBSERVATIONS

There are plans to add around 270 new sewer connections from surrounding communities by July 2020, which will push the limits of capacity for the one SBR basin currently being used for domestic waste. This will require the facility to use both SBR basins for domestic waste and terminate acceptance of septage at the facility. The original plan was to terminate acceptance of septage on April 20, 2020, however that date was expected to be pushed back by two months to June 2020.

Facility personnel state that the South Central WWTP has received approximately \$3.1 million in funding from NMED for plant improvements to include a new headworks (grit removal system and automatic bar screen), two new sludge drying beds, a third (new) blower, and the engineering and whatever construction may be necessary to meet the DO limits that will go into effect August 1, 2022 (in accordance with the schedule of compliance in permit NM0030490).

The facility has had reoccurring issues with the UV disinfection system, which has resulted in exceedances of E. coli in multiple months. The UV bulb intensity panel is not functional, so bulbs are cleaned every Tuesday with Limeaway during periods that the SBR is not decanting. Because of the issues with the UV system, the facility has started chlorinating the decant at the splitter box in the SBR basin and dechlorinating the effluent after the UV system. Effluent samples are collected for total residual chlorine (TRC) after the dechlorination and before the effluent flow meter (Parshall Flume).

Section III – AREAS OF CONCERN**Requirement 1**NPDES Permit NM0030490, Part I: Section A.1. *Final Effluent Limits for Flow:*

POLLUTANT	30-DAY AVG	DAILY MAX	7-DAY AVG	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	Report MGD	Report MGD	Report MGD	Continuous	Totalizing Meter

Concern 1A

It is not clear how the flow values are being calculated, but the reported values do not correlate to the totalized values recorded for December 2019 (see Appendix 1):

Flow	30-DAY AVG	DAILY MAX	7-DAY AVG
Reported	0.361	0.400	0.368
Calculated from totalized values	0.375	0.438*	0.511

* Totalized flow rates are not always recorded on weekend days so it is impossible to positively determine the daily max.

Concern 1B

All loading values (BOD5, TSS, and E. coli) must be calculated from the actual totalized flow in MGD for the date of sample collection.

Requirement 2NPDES Permit NM0030490, Part I: Section A.1. *Final Effluent Limits – Biochemical Oxygen Demand, 5-day (BOD5) and Total Suspended Solids (TSS) – Sample Type, 6-hr composite*

NPDES Permit NM0030490, Part III: F.22.e. *6-hour composite sample consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 am) and composited according to flow.*

Concern 2

Facility personnel report that composite samples were not being composited according to flow and the first portion is collected around 8:00 AM.

Requirement 3NPDES Permit NM0030490, Part I: Section A.1. *Final Effluent Limits for E. coli:*

POLLUTANT	30-DAY AVG	30-DAY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
E. Coli Bacteria	5.01 billion (*3)(*4)	126 (*1)	410 (*3)	Once/Week	Grab

*3 Colony forming units (cfu) per 100 ml or Most Probable Number (MPN) per 100 ml. The 30-day average for E. coli bacteria is the geometric mean of the values for all effluent samples collected during a calendar month

*4 Billion (1.0×10^9) cfu/day. The loading limit shall be calculated as follows: $[\text{Flow in MGD} \times \text{cfu}/100 \text{ mL in effluent} \times 3.79 \times 10^7] / 1.0 \times 10^9$

Concern 3

On December 5, 2019, an E. coli sample was collected and analyzed according to the m-Colibblue-24 method, and the results came back as Too Numerous to Count (TNTC). The following day facility personnel replaced some of the UV bulbs, cleaned the effluent channel, and resampled for E. coli. That sample result was reported to be 6.06 cfu/100 ml. The TNTC value was not reported on the DMRs for the month of December 2019; the daily max value reported was 32.79 cfu/100 ml. No excursions were reported for the month. Facility personnel stated that they didn't know how to report TNTC on the DMRs. See Appendix 2 for E. coli bench sheets.

Requirement 4

NPDES Permit NM0030490, Part III: C.2. Representative Sampling: *Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.*

Concern 4

UV bulbs are being cleaned, during periods when the SBR basins are not decanting, with Limeaway, and the runoff drains into the effluent channel just prior to the effluent Parshall Flume. This location is after the effluent sample point and sampling does not capture the runoff.

Requirement 5

NPDES Permit NM0030490, Part III: C.6. Flow Measurements: *Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.*

Concern 5

The Parshall Flume installation needs to be evaluated by a qualified engineer for excess turbulence.

Requirement 6

NPDES Permit NM0030490, Part III: C.5.a. *Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.*

Concern 6A

In accordance with the test method for E. coli that the facility has chosen (m-Colibblue-24), at least three different appropriate dilutions should be selected for analysis such that at least one filter has between 20 and 60 colonies present after incubation. All samples analyzed during the month of December 2019 had only two dilutions used. During the month of December 2019, none of the filters had more than 20 colonies present except the TNTC filters, and all samples were run with two dilutions, making these tests invalid. The fact that the number of colonies found on each filter was not an order of magnitude difference between the different dilutions also brings the test validities into question. During the month of January 2020, all analyses run by Doña Ana County Utilities were run with two dilutions, and the sample from January 8, 2020, did not have more than 20 colonies on either filter.

Concern 6B

In mid-January 2020, the facility began sending additional samples to Professional Water Testing LLC, in Las Cruces, NM to verify their own results. In accordance with the test method for E. coli that Professional Water Testing used (also m-Colibblue-24), Average coliform colonies in 100 mL = Sum of colonies in all samples ÷ sum of mL sample × 100. Professional Water Testing is not using the colonies from filters with less than 20 colonies on them in the calculations, which is under-reporting the results.

Requirement 7

NPDES Permit NM0030490, Part III: C.5.c. *An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.*

Concern 7

No evidence of having run positive and negative controls with the samples was provided on bench sheets.

Requirement 8

NPDES Permit NM0030490, Part III: D.5. *Additional Monitoring by the Permittee: 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.*

Concern 8

E. coli sample results cannot be thrown out due to TNTC values and cannot be averaged on a daily basis. All values obtained from analysis, including duplicates and samples collected the following day, must be included in the DMR reporting (daily max) and calculations (30-day average) as individual results.

Requirement 9

NPDES Permit NM0030490, Part III: D 9. *Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.*

Concern 9

The permittee must review at least the last two years of DMR reports for potential issues listed above and revise the DMRs as appropriate.

Section IV – FOLLOW UP

EPA Region 6 inspector, Amy Andrews, conducted a closing conference at the Doña Ana County South Central WWTP at 12:05 PM on March 12, 2020 for the inspection. During the closing conference, the Areas of Concern noted during the inspection (above) were discussed.

No additional information was received by EPA after exiting the Facility on March 12, 2020.

Section V – LIST OF APPENDICES

Appendix 1 – Flow totalizer log for December 2019

Appendix 2 – E. coli bench sheets for December 2019 and January 2020

Appendix 1

Flow totalizer log for December 2019

Totalizer December 19

South Central WWTP

Dec-19	Time	AVG gpd	TOTALIZER READING	SUBTRACTED	7 Day Avg MGD
29-Nov			9677792		
1					
2	8	361422	10762058	1084266	
3	7	380905	11200364	438306	
4	7	365034	11565398	365034	
5	8	386232	11967723	402325	
6	8	390296	12358019	390296	
7	10	313446	12697586	339567	
8		344888			0.36
9	8	344888	13358622	661036	
10	8	389411	13748033	389411	
11	8	397843	14145876	397843	
12	8	361062	14506938	361062	
13	8	337518	14844456	337518	
14		357071			
15		357071			0.36
16	8	357071	15915670	1071214	
17	8	392369	16308039	392369	
18	8	356048	16664087	356048	
19	8	370024	17034111	370024	
20	9	382947	17401102	366991	
21		360441			
22	9.5	360441	18129494	728392	0.37
23	8	325801	18434932	305438	
24	6	399898	18801505	366573	
25		316764			
26	7.5	316764	19454830	653325	
27	8	397931	19844471	389641	
28		350982			
29		350982			0.35
30	8	350982	20897418	1052947	
31	11.5	364909	21315543	418125	
	0.400	0.361	11637751	375411	0.37
	Hi for 30 day	30day avg MGD	Gal per Month	GPD AVG	7 Day avg (High)

Appendix 2

E. coli bench sheets for December 2019 and January 2020

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 1/2/20
 Time of Sampling: 08:23
 Sample Location: EFF
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: Jerm Reyes

Date of Arrival: 1/2/20
 Time of Arrival: 12:40
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 14:27
 Analyst: JRM

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA BB
Lot number	29510721	A-9051	148389656	A-9127	30217010
Date of Expiration	2021/10	Feb 05/20	2021/06	-----	-----

Incubator
Time In: <u>14:30</u>
Temp In: <u>35.0 °C</u>
Time Out: <u>14:10</u>
Temp Out: <u>35.0 °C</u>

Autoclave
Time In: <u>07:12</u>
Time Out: <u>10:05</u>
Temp: <u>121 °C</u>
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU
 After Blank: 0 CFU
 50 mLs of Sample: 28 CFU
 11 mLs of Sample: 9 CFU

E. Coli: 60.66 CFU/100mL

$$\frac{9}{11} + \frac{28}{50} = \frac{37}{61} = .6065$$

$$\times 100 = 60.66$$

REF 1250 Type 4 STEAM 121-134°C (250-273°F)
 Line turns as dark or darker than color match when processed

3M

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 1/8/20
 Time of Sampling: 08:21
 Sample Location: EFF
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: Jenna Byers

Date of Arrival: 1/8/20
 Time of Arrival: 08:27
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 14:25
 Analyst: JR

	Membrane Filters	M- Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA B13
Lot number	29510721	A-9051	148389656	A-9127	30217010
Date of Expiration	2021 /10	Feb 05/20	2021/06	-----	-----

Incubator
Time In: <u>14:30</u>
Temp In: <u>35.0 °C</u>
Time Out: <u>14:20</u>
Temp Out: <u>35.0 °C</u>

Autoclave
Time In: <u>07:30</u>
Time Out: <u>10:15</u>
Temp: <u>121 °C</u>
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU
 After Blank: 0 CFU
 50 mLs of Sample: 6 CFU
 11 mLs of Sample: 2 CFU

E. Coli: 13.12 CFU/100mL

$$\frac{2}{11} + \frac{6}{50} = \frac{8}{61} = .13$$

$$\times 100 = 13.12$$

REF 1250 Type 4 STEAM 121-134°C (250-273°F)
 Line turns as dark or darker than color match when processed

3M

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 1/16/20
 Time of Sampling: 08:18
 Sample Location: EFF
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: Jesus Lopez

Date of Arrival: 1/16/20
 Time of Arrival: 08:28
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 14:32
 Analyst: JK

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA BB
Lot number	29510721	A-9051	164252614	A-9127	30217010
Date of Expiration	2021/10	Feb 05/20	2022/03	-----	-----

Incubator
Time In: <u>14:40</u>
Temp In: <u>35.0°C</u>
Time Out: <u>14.30</u>
Temp Out: <u>35.0°C</u>

Autoclave
Time In: <u>07:20</u>
Time Out: <u>10:00</u>
Temp: <u>121</u> °C
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU

After Blank: 0 CFU

50 mLs of Sample: 20 CFU

11 mLs of Sample: 7 CFU

$$\frac{7}{11} + \frac{20}{50} = \frac{27}{61} = .442 \times 10 = 44.26$$

E. Coli: 44.26 CFU/100mL

REF 1250 Type 4 STEAM 121-134°C (250-273°F)
 Line turns as dark or darker than color match when processed

3M

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 1/23/20
 Time of Sampling: 08:18
 Sample Location: EFF
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: Jean Bro

Date of Arrival: 1/23/20
 Time of Arrival: 08:22
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 14:35
 Analyst: Jr

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA BB
Lot number	29510721	A-9051	164252614	A-9127	30217010
Date of Expiration	2022/10	Feb 05/20	2022/03	-----	-----

Incubator
Time In: <u>14:40</u>
Temp In: <u>35.0 °C</u>
Time Out: <u>13:51</u>
Temp Out: <u>35.0 °C</u>

Autoclave
Time In: <u>07:15</u>
Time Out: <u>10:00</u>
Temp: <u>121 °C</u>
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method: Duplicate

Pre-Blank:	<u>0</u>	<u>0</u>	CFU
After Blank:	<u>0</u>	<u>0</u>	CFU
50 mLs of Sample:	<u>22</u>	<u>16</u>	CFU
11 mLs of Sample:	<u>1</u>	<u>1</u>	CFU
E. Coli:	<u>38.0</u>	<u>28.0</u>	CFU/100mL

$$\frac{22}{50} + \frac{1}{11} = \frac{23}{61} = 0.38$$

$$0.38 \times 100 = 38.0$$

$$\text{Duplicate } \frac{16}{50} + \frac{1}{11} = \frac{17}{61} = 0.28$$

$$0.28 \times 100 = 28$$

REF 1250 Type 4 STEAM 121-134 °C (250-273 °F)

3M

Line turns as dark or darker than color match when processed

Professional Water Testing
E.Coli Bench Sheet

Name of Facility: Santa Canal
 Date of Sampling: 1/27/20
 Time of Sampling: 0826
 Sample preservation: ice ☐ refrig ☒
 Signature of Sampler: _____

Date of Arrival: 1/24/20
 Time of Arrival: 1200
 Method Used: HACH m-colibblue24 10029
 Time of Analysis: 1325
 Analyst: Celia Oude

	Membrane Filter	m-Colibblue 24	Absorbent Pads & Petri Dish
Date of Purchase	6/7/19	7/10/19	10/30/19
Lot number	F9AA55964E	A9183	167377010
Date of Expiration	6/7/20	6/13/20	5/2022
pH	-----	7.0	

Dry Air Incubator	Waterbath
Time In: <u>1340</u>	Time In:
Temp In: <u>34.9</u> °C	Temp In: °C
Time Out: <u>1418</u>	Time Out:
Temp Out: <u>35.1</u> °C	Temp Out: °C

Filter Funnel Sterilized: cm Work area disinfected: cm

Membrane Filter Method

Pre-Blank	<u>21</u>	Undiluted Sample	<u>TNTC</u> cfu	Sample 1:10,000 (0.01 ml)	cfu
Positive Control		Sample 1:10 (10ml)	<u>27</u> cfu	Sample 1:100,000 (0.001 ml)	cfu
Negative Control		Sample 1:100 (1ml)	<u>4</u> cfu	Sample 1:1,000,000 (0.0001 ml)	cfu
After Blank	<u>21</u>	Sample 1:1000 (0.1 ml)	cfu	Sample 1:10,000,000 (0.00001 ml)	cfu

Coli

270 cfu/100 ml

$$\frac{27}{10} \times 100 = 270 \text{ cfu/100ml}$$

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 1/29/20
 Time of Sampling: 08:20
 Sample Location: EFF
 Sample Preservation: ☐ ice ☒ refriger
 Name of Sampler: Jesus Rios

Date of Arrival: 1/29/20
 Time of Arrival: 08:27
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 14:17
 Analyst: JR

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA B13
Lot number	29510721	A-9051	164252614	A-9127	30217010
Date of Expiration	2021/10	Feb-05/20	2022/03	-----	-----

Incubator
Time In: <u>14:20</u>
Temp In: <u>35.0 °C</u>
Time Out: <u>14.00</u>
Temp Out: <u>35.0 °C</u>

Autoclave
Time In: <u>07:10</u>
Time Out: <u>10:00</u>
Temp: <u>121 °C</u>
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU

After Blank: 0 CFU

50 mLs of Sample: TNTC CFU

11 mLs of Sample: 57 CFU

$$\frac{57}{11} \times 100 = 518.19$$

E. Coli: 518.19 CFU/100mL

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 1/30/20
 Time of Sampling: 11:57
 Sample Location: EFF
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: Jesus Rys

Date of Arrival: 1/30/20
 Time of Arrival: 12:02
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 14:10
 Analyst: JR

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA B13
Lot number	29510721	A-9051	164252614	A-9127	3021701
Date of Expiration	2021/10	Feb 05/20	2022/03	-----	-----

Incubator
Time In: <u>14:14</u>
Temp In: <u>35.0</u> °C
Time Out: <u>14:14</u>
Temp Out: <u>35.0</u> °C

Autoclave
Time In: <u>07:00</u>
Time Out: <u>10:00</u>
Temp: <u>121</u> °C
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU

After Blank: 0 CFU

50 mLs of Sample: 50 CFU

1.0 mLs of Sample: 2 CFU

$$\frac{2}{1} + \frac{50}{50} = 1.019 \times 100 = 101.96$$

E. Coli: 101.96 CFU/100mL

Professional Water Testing
E.Coli Bench Sheet

Name of Facility: Satin Dental
 Date of Sampling: 1/30/20
 Time of Sampling: 1157
 Sample preservation: ice ☐ refrig ☒
 Signature of Sampler _____

Date of Arrival: 1/20/20
 Time of Arrival: 1427
 Method Used: HACH m-colibblue24 10029
 Time of Analysis: 1430
 Analyst: Celia Cude

	Membrane Filter	m-Colibblue 24	Absorbent Pads & Petri Dish
Date of Purchase	6/7/19	7/10/19	10/30/19
Lot number	F9AA55964E	A9183	167377010
Date of Expiration	6/7/20	6/13/20	5/2022
pH	-----	7.0	

Dry Air Incubator	Waterbath
Time In: <u>1443</u>	Time In:
Temp In: <u>35.0</u> °C	Temp In: °C
Time Out: <u>1319</u>	Time Out:
Temp Out: <u>35.2</u> °C	Temp Out: °C

Filter Funnel Sterilized: cm Work area disinfected: cm

Membrane Filter Method

Pre-Blank	<1	Undiluted Sample	<u>40</u> cfu	Sample 1:10,000 (0.01 ml)	cfu
Positive Control		Sample 1:10 (10ml)	<u>5</u> cfu	Sample 1:100,000 (0.001 ml)	cfu
Negative Control		Sample 1:100 (1ml)	<u>2</u> cfu	Sample 1:1,000,000 (0.0001 ml)	cfu
After Blank	<1	Sample 1:1000 (0.1 ml)	cfu	Sample 1:10,000,000 (0.00001 ml)	cfu

Coli

40 cfu/100 ml

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 12/5/19
 Time of Sampling: 08:17
 Sample Location: EF1
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: John Ryan

Date of Arrival: 12/5/19
 Time of Arrival: 08:21
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 14:35
 Analyst: JR

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA BB
Lot number	29510721	A-9051	148389656	A-9127	30217010
Date of Expiration	2021/10	Feb/05/20	2021/06	-----	-----

Incubator
Time In: <u>14:40</u>
Temp In: <u>35.0</u> °C
Time Out: <u>13:40</u>
Temp Out: <u>35.0</u> °C

Autoclave
Time In: <u>07:10</u>
Time Out: <u>10:00</u>
Temp: <u>121</u> °C
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU

After Blank: 0 CFU

50 mLs of Sample: TNTC CFU

11 mLs of Sample: TNTC CFU

E. Coli: TNTC CFU/100mL

Line turns as dark or darker than color match when processed

REF 1250

Type 4

STEAM

121-134°C (250-273°F)

3M

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central #1
 Date of Sampling: 12/6/19
 Time of Sampling: 12:18
 Sample Location: EFF
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: James Reyes

Date of Arrival: 12/6/19
 Time of Arrival: 12:23
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 13:50
 Analyst: JA

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA BB
Lot number	29510721	A-9051	14 8389656	A-9127	30217010
Date of Expiration	2021/10	Feb 05/20	2021/06	-----	-----

Incubator
Time In: <u>13:55</u>
Temp In: <u>35.0 °C</u>
Time Out: <u>1355</u>
Temp Out: <u>35.1 °C</u>

Autoclave
Time In: <u>07:20</u>
Time Out: <u>10:15</u>
Temp: <u>121 °C</u>
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU
 After Blank: 0 CFU
 50 mLs of Sample: 2 CFU
 11 mLs of Sample: 2 CFU

$$\frac{2}{11} + \frac{2}{50} \times 100 = 6.1 \text{ CFU}$$

E. Coli: 6.06 CFU/100mL

Resample

- Replace some lamps
- Clean Effluent Channel
- Decrease Decanter VFD Speed

3M

REF 1250 Type 4 STEAM 121-134°C (250-273°F)

Line turns as dark or darker than color match when processed

Dona Ana County Utilities
E. Coli WorksheetName of Facility: South Central #2Date of Sampling: 12/6/19Time of Sampling: 12:18Sample Location: EEFSample Preservation: ☐ ice ☒ refrigName of Sampler: James RyeDate of Arrival: 12/6/19Time of Arrival: 12:23

Method Used: Hach 10029 m-coliblu

Time of Analysis: 13:52Analyst: JR

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA BB
Lot number	29510721	A-9051	148389656	A-9127	30217010
Date of Expiration	2021/10	Feb 05/20	2021/06	-----	-----

Incubator
Time In: <u>13:55</u>
Temp In: <u>35.0 °C</u>
Time Out: <u>1355</u>
Temp Out: <u>35.1 °C</u>

Autoclave
Time In: <u>07:20</u>
Time Out: <u>10:15</u>
Temp: <u>121 °C</u>
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFUAfter Blank: 0 CFU50 mLs of Sample: 6 CFU11 mLs of Sample: 3 CFU

$$\frac{3}{11} + \frac{6}{50} \times 100 = 13.64 \text{ CFU/100mL}$$

E. Coli: 13.64 CFU/100mL

REF 1250 Type 4 STEAM 121-134°C (250-273°F)

Line turns as dark or darker than color match when processed

ME

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 12/11/19
 Time of Sampling: 08:17
 Sample Location: EFF
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: James Ryan

Date of Arrival: 12/11/19
 Time of Arrival: 08:32
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 14:27
 Analyst: JA

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA BB
Lot number	29510721	A9051	148389656	A-9127	30217010
Date of Expiration	2021/10	Feb 05/20	2021/06	-----	-----

Incubator
Time In: <u>14:30</u>
Temp In: <u>35.0°C</u>
Time Out: <u>14:20</u>
Temp Out: <u>35.0°C</u>

Autoclave
Time In: <u>07:10</u>
Time Out: <u>10:00</u>
Temp: <u>121</u> °C
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU
 After Blank: 0 CFU
 50 mLs of Sample: 16 CFU
 11 mLs of Sample: 4 CFU

$$\frac{4}{11} + \frac{16}{50} = \frac{20}{61} =$$

E. Coli: 32.79 CFU/100mL

Witness by
Jordan

3M

REF 1250 Type 4 STEAM 121-134°C (250-273°F)
 Line turns as dark or darker than color match when processed

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 12/18/19
 Time of Sampling: 08:20
 Sample Location: EFF
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: Jim Rios

Date of Arrival: 12/18/19
 Time of Arrival: 08:27
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 14:15
 Analyst: JR

	Membrane Filters	M-Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA BB
Lot number	29510721	A-9051	148389656	A-9127	30217010
Date of Expiration	2021/10	05/20	2021/06	-----	-----

Incubator
Time In: <u>14:20</u>
Temp In: <u>35.0 °C</u>
Time Out: <u>14:10</u>
Temp Out: <u>35.0 °C</u>

Autoclave
Time In: <u>07:15</u>
Time Out: <u>10:10</u>
Temp: <u>121 °C</u>
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU
 After Blank: 0 CFU
 50 mLs of Sample: 10 CFU
 11 mLs of Sample: 3 CFU

E. Coli: 21-31 CFU/100mL

$$\frac{3}{11} + \frac{10}{50} = \frac{13}{61} = 0.213 \times 100 = 21.31$$

REF 1250 Type 4 STEAM 121-134°C (250-273°F)

3M

Line turns as dark or darker than color match when processed

Dona Ana County Utilities
E. Coli Worksheet

Name of Facility: South Central
 Date of Sampling: 12/26/19
 Time of Sampling: 08:23
 Sample Location: EPF
 Sample Preservation: ☐ ice ☒ refrig
 Name of Sampler: Jesus Rios

Date of Arrival: 12/26/19
 Time of Arrival: 08:30
 Method Used: Hach 10029 m-coliblu
 Time of Analysis: 13:51
 Analyst: GR

	Membrane Filters	M- Coliblu Broth	Dish W/Pads	Phosphate dilution Rinse water pillows	Sterile sample bottles
Brand	Pall Corp	HACH	Pall Corp	Hach	USA BB
Lot number	29510721	A-9051	148389656	A-9127	30217010
Date of Expiration	2021/10	Feb 05/20	2021/06	-----	-----

Incubator
Time In: <u>13:55</u>
Temp In: <u>35.0</u> °C
Time Out: <u>13:40</u>
Temp Out: <u>35</u> °C

Autoclave
Time In: <u>07:10</u>
Time Out: <u>10:00</u>
Temp: <u>121</u> °C
PSI: <u>21</u>

Work Area Disinfected: yes

Membrane Filter Method:

Pre-Blank: 0 CFU
 After Blank: 0 CFU
 50 mLs of Sample: 13 CFU
 11 mLs of Sample: 2 CFU

$$\frac{2}{11} + \frac{13}{50} = \frac{15}{61} = 0.245$$

E. Coli: 24,60 CFU/100mL

3M

REF 1250 Type 4 STEAM
 121-134°C (250-273°F)
 Line turns as dark or darker than color match when processed