

Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	02/24/2020	
Media Program:	Water	
Regulatory Program(s)	CWA	
Company Name:	City of Lovington	
Facility Name:	Lovington Wastewater Treatment Plant	
Facility Physical Location:	920 East Avenue K	
(city, state, zip code)	Lovington, New Mexico	
Mailing address:	Post Office Drawer 1269	
(city, state, zip code)	Lovington, New Mexico 88260	
County/Parish:	Lea	
Facility Phone Number	575-622-1449	
Facility Contact:	Miguel De la Cruz	Wastewater Superintendent
	mdelacruz@lovington.org	
FRS Number:	3601182958	
Identification/Permit Number:	NMU001998	
Media Identifier Number:	N/A	
NAICS:	221320	
SIC:	4952	
Personnel participating in inspection:		
Wyatt Duncan	City of Lovington	Public Works Director
Miguel De la Cruz	City of Lovington	Wastewater Superintendent
David Esparza	USEPA	Environmental Engineer
EPA Lead Inspector Signature/Date		
	David Esparza	Date
Supervisor Signature/Date		
	Carol Peters	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspectors David Esparza, PE, arrived at the City of Lovington Wastewater Treatment Plant (WWTP) (hereinafter referred to as WWTP) at approximately 11:30 AM on February 24, 2020 for an unannounced inspection. I met with Mr. Miguel De La Cruz, Wastewater Superintendent, presented my credentials and informed him that this was an EPA inspection to determine the WWTP's compliance under the Clean Water Act (CWA). We were later joined by Mr. Wyatt Duncan, Public Works Director. This compliance evaluation inspection (CEI) was conducted under the authority of the National Pollutant Discharge Elimination System (NPDES) permit program, in accordance with the CWA. The generation of this report is based on information supplied by Lovington representatives, observations made by the United States Environmental Protection Agency (US EPA) inspector, and records and reports maintained by Lovington, and the US EPA. Before leaving the facility, an exit briefing was held at approximately 4:00 PM with Mr. Duncan and Mr. De La Cruz to explain areas of concern noted at the time of the inspection and request representative photograph copies of the WWTPs records. It should be noted the WWTP is a non-discharging facility; thus, does not have a NPDES permit, but rather maintains a discharge permit (DP-87) issued by the New Mexico Environment Department (NMED), Groundwater Quality Bureau.

FACILITY DESCRIPTION

The WWTP is an SBR (Sequencing Batch Reactor) activated sludge plant. Phase 1 of the SBR came online in November 2006, while Phase 2 came online in February 2007. The existing WWTP has a design capacity of 2.5 MGD (Million Gallons per Day) and is currently treating approximately one-half of design capacity or 1.2 MGD. The facility is located at 920 East Avenue K, Lovington, Lea County, New Mexico (depicted in **Aerial Image #1** below). The WWTP facility serves a population of approximately 11,400 (2016 US Census) residents. The WWTP is operated by staff within the Public Works Department and consists of seven (7) full-time equivalent (FTE) positions, exclusive of administrative support during the hours of 6:00 AM to 5:00 PM seven (7) days during the regular work week. On-call staff is available on an as needed basis.



Aerial Image #1: Overall view of the City of Lovington’s Wastewater Treatment Plant and the two (2) disinfected effluent storage lagoons. Aerial from Google Earth maps.

A Supervisory Control and Data Acquisition (SCADA) system provides around the clock monitoring of WWTP operations. After entering the WWTP facility via a series of 23 lift stations (Identified in **Table 1** below and depicted in **Aerial Image #2** below) raw influent enters the headworks consisting of a mechanical bar screen and grit chamber (**Appendix 1 Photograph #1 & Photograph #2**). Thence two (2) SBR tanks receive the wastewater via four (4) influent pumps. After aeration, mixing, and settling within the SBR’s the wastewater is pumped to the aerobic digesters for further breakdown and thickening. Thence the supernatant traverses to the chlorine contact chamber for disinfection (**Appendix 1 Photograph #4**). The disinfected effluent is then used to water non-food crops on the farm just east of the plant, and it is also used to supplement the watering of Chaparral Park (Lift Station #9) during irrigation season. The WWTP maintains two (2) disinfected effluent storage lagoons measuring 52M gallons and 45M gallons, respectively (depicted in **Aerial Image #1** above and **Appendix 1 Photograph #3**).

Table 1- City of Lovington Lift Stations

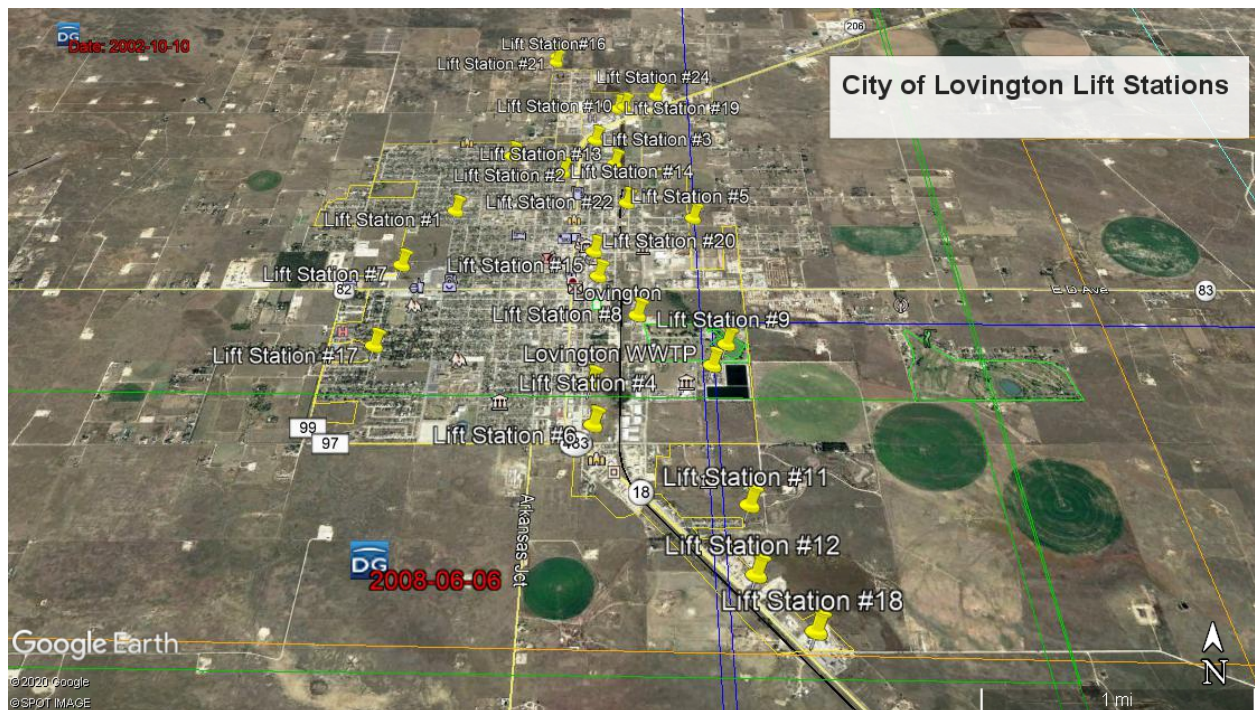
City of Lovington Lift Stations	
Lift Station Number	Lift Station Name
1	9 th & Jefferson
2	Polk & 6th
3	North Love

City of Lovington Lift Stations	
4	Marks
5	The Hill
6	Love & Avenue R (T-Bird's)
7	Lea County Electric COOP
8	Street Yard (Avenue H & Chaves)
9	Chaparral Park
10	Lea County Oil & Gas (Shamrock)
11	Simpson drive
12	Vet Clinic
13	Eddy
14	Harrison
15	Redman (Haarmeyer)
16	Reed Road #1 (3 rd)
17	West Avenue K
18	Cheese Plant
19	USDA Building
20	Police Department
21	Reed Road #2 (3 rd)
22	Madison & Chaves
23	Stone

Following the aerobic digesters, the sludge traverses to the screw press in preparation for composting. During this process the sludge is mixed with wood chips, cooked for approximately 2-weeks at temperatures at or in excess of 130° F (Fahrenheit), thence allowed to cure and/or cool for approximately four (4) months prior to being sold as screened or unscreened compost (**Appendix 1 Photograph #3**).

The WWTP maintains a backup diesel generator for power that is exercised weekly, typically every Monday.

Currently the only established Industrial User (IU) is the Holly Frontier (Navajo Refining Company, LLC-Lea Refinery) facility (**Appendix 1 Photograph #5**). The City of Lovington and the above identified entity entered into an individual wastewater discharge agreement for the disposal of an estimated average flow rate between 90 and 116 GPM (gallons per minute) and up to a maximum of 240 GPM on a 24 hour per day basis. The Navajo - Lea facility is used for “topping” (separating crude oil) in accordance with Petroleum Refining Effluent Guidelines and Standards ([40 CFR Part 419](#)). This process separates crude oil into hydrocarbon groups.



Aerial Image #2: Overall view of the City of Lovington’s Lift Stations. Aerial from Google Earth maps.

Section II – OBSERVATIONS

I observed the following and the following information was provided and/or stated:

- The drying beds are used for staging the composting sludge material (previously combined with wood chips) and have not been utilized as drying beds circa 2010.
- Visual observation of the two (2) disinfected effluent storage lagoons indicated approximate 3-feet of freeboard on each lagoon and the liner material good condition (Appendix 1 Photograph #3). The volume of disinfected effluent in these lagoons typically is less than observed, but irrigation has not commenced.
- The Cheese Plant (Lift Station #18) is no longer in operation, but the station name remains.

- The WWTP on-site laboratory maintains and updates its written SOP's as necessary, inclusive of appropriate annual equipment certifications and/or calibrations.
- The WWTP had secure perimeter fencing; thus, limiting access. The overall WWTP's operations and maintenance (O&M), and general facility housekeeping appeared to be in good order.
- The discharge agreement with the IU (Navajo Refining Company) is dated January 17, 1992 for an effective period of 20-years (**Appendix 2 Discharge Agreement**). Computations of the daily average flow rate and the daily maximum flow rate from Navajo Refining Company- Lea facility information equate to 177.7 gpm and 218 gpm, respectively. Note: this data was for the period December 2018 thru May 2019.

Section III – AREAS OF CONCERN

I observed no areas of concern at the time of the inspection.

Section IV – RECOMMENDATIONS

- The Discharge Agreement with the IU (Navajo Refining Company) should be updated (**Appendix 2 Discharge Agreement**) to minimally delineate a current agreement period, analytical parameters and reporting schedules from Navajo Refining to the City.
- Preparation of a written Sanitary Sewer Overflow (SSO) protocol in the event of an SSO.

Section IV – FOLLOW UP

The following information was received by EPA on March 2, 2020, after exiting the Facility on February 26, 2020:

- Electronic copy of the current City of Lovington Discharge Agreement with Holly Frontier (Navajo Refining Company) dated January 17, 1992.
- A Google Earth aerial depiction of the lift stations.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 5 photos taken 2/24/2020

Appendix 2 – Discharge Agreement

Appendix 3 – Navajo Refining-Lea & City of Lovington Spring 2019 Self-Monitoring Report

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: City of Lovington Wastewater Treatment Plant		
City: Lovington	County/Parish: Lea	State: New Mexico



Picture of the WWTP's headworks/bar screen combination used in the removal of rags and other various large debris items contained in the influent flow. February 24, 2020 3:30 PM (DSCN 1714). Photographed by D. Esparza.

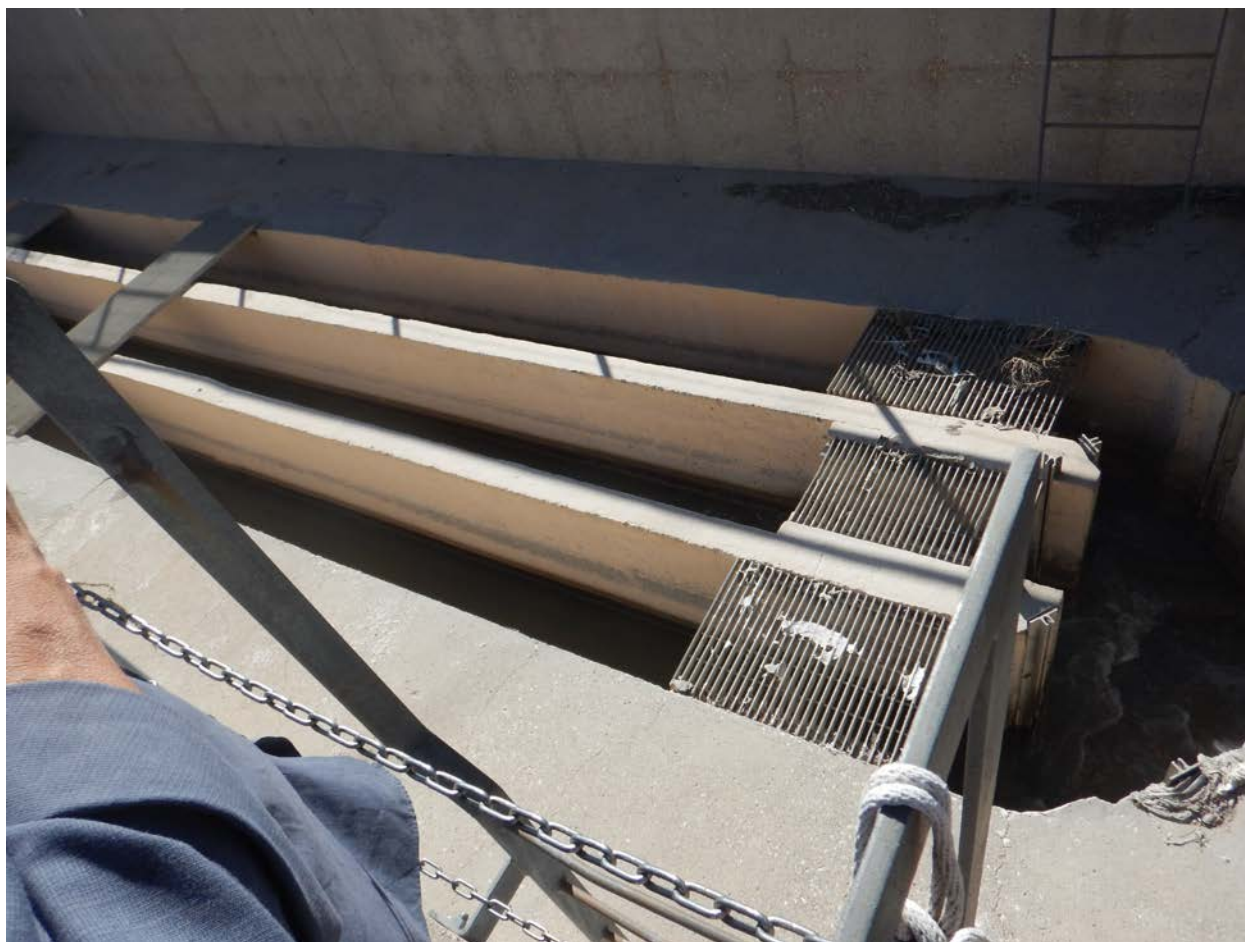


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: City of Lovington Wastewater Treatment Plant		
City: Lovington	County/Parish: Lea	State: New Mexico



Picture of the WWTP's grit chamber adjacent to the headworks/bar screen. February 24, 2020 3:31 PM (DSCN 1715). Photographed by D. Esparza.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: City of Lovington Wastewater Treatment Plant		
City: Lovington	County/Parish: Lea	State: New Mexico



Picture of the staged composted sludge along the east side of the WWTP. Note: the 2 disinfected effluent storage lagoons in the background. The lagoon pictured on the upper left is the 45M gallon lagoon and the lagoon pictured at the upper right is the 52M gallon lagoon. Additionally, it should be noted the standing water in the composted sludge is from a recent rain event. February 24, 2020 3:51 PM (DSCN 1719). Photographed by D. Esparza.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: City of Lovington Wastewater Treatment Plant		
City: Lovington	County/Parish: Lea	State: New Mexico



Picture of the chlorine chamber and the WWTP's automatic sampler. February 24, 2020 3:53 PM (DSCN 1721). Photographed by D. Esparza.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: City of Lovington Wastewater Treatment Plant		
City: Lovington	County/Parish: Lea	State: New Mexico



Picture of the signage of the WWTP's Industrial User. February 24, 2020 4:57 PM (DSCN 1723). Photographed by D. Esparza.

Appendix 2

City of Lovington Discharge Agreement

DISCHARGE AGREEMENT

THIS DISCHARGE AGREEMENT (the "Agreement"), dated January 17, 1992, between Navajo Refining Company, a Delaware corporation ("Navajo"), and the City of Lovington, a New Mexico municipality ("Lovington"), is entered into with reference to the following:

A. Lea Refining Company, a Delaware corporation, is a second-tier subsidiary of Navajo, and owns a refinery and related facilities (the "refinery"), near the City of Lovington, located at Hwy 18, Lovington, New Mexico 88260.

B. Lea has entered into a Lease Agreement with Navajo whereby Navajo will lease from Lea its refinery.

C. As an essential aspect of the operation of the refinery, the parties agree that it is necessary and desirable that Navajo discharge its wastewater into Lovington's sewage system and Publicly Owned Works (collectively, "POTW") at an estimated average flow rate of between 90 and 116 gallons per minute.

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, Navajo and Lovington hereby agree as follows:

1. Lovington, at its own expense, shall take all necessary steps, including but not limited to installation of increased pumping capacity, to accept maximum of 240 gallons per minute so as to ensure that Navajo may discharge

into the POTW 24 hours per day at an average flow rate of between 90 and 116 gallons per minute, for the period of 20 years.

2. Lovington shall be compensated in the amount of One Hundred and Fifty Dollars (\$150.00) for each 24-hour period of the Agreement, based upon the estimate that Navajo will discharge an average of between 3000 and 3500 barrels of wastewater a day. In the event this estimate proves insufficient for Navajo's needs, the parties agree that Navajo will pay Lovington \$0.025 per barrel for each barrel in excess of 3500 barrels per day, as calculated on a daily average for each three month period, and that Lovington shall use its best efforts to address Navajo's requirements and needs. Payment shall be made within fifteen (15) days of Navajo's receipt of the above calculation for each three month period.

3. While Lovington shall use its best efforts to ensure uninterrupted service at the maximum flow rate envisioned, in the event of any disruption, or if Navajo deems it necessary for any other reason, Navajo may transport wastewater by any and all alternative means available. Lovington will cooperate in good faith to facilitate and alternative transportation and deposit of the wastewater to and into the POTW.

4. The quality of all waste water delivered and all deliveries of wastewater made shall be in accordance with the City rules and regulations and shall be consistent and

in conformance with E.I.D, E.P.A., and all state, federal, and local laws, rules, and regulations concerning treatment, use, and disposal of such wastewater.

5. The City has the right to refuse to take any wastewater supplied under this contract that does not meet said laws, rules and regulations.

6. Navajo shall assume all risks and liability to the extent it is responsible for the supply of wastewater not meeting requirements of laws, rules, and regulations.

7. City shall not be responsible for any damages resulting from cessation, curtailment, interruption, or apportionment of such service by repairs or maintenance on the City's system or plant, unless through fault of City.

8. As part of the consideration herefor, the City grants, assigns, and sets over to ^{Lea Refining Co} ~~Navajo~~ an easement upon City land and upon the lands which City has an easement. Said easement is an integral part of this contract and is limited to the terms and conditions of this contract.

9. In the event the refinery should cease operations for a period of five years this Contract shall automatically terminate. With said termination, the pipeline easements shall be cancelled and ownership of the pipeline shall be assigned to the City of Lovington.

11. Each party, at its own expense, agrees to maintain its facilities as necessary for the continuing fulfillment of the objectives envisioned by this Agreement.

12. While Lovington shall use its best efforts to ensure uninterrupted availability of POTW flow as envisioned by this Agreement, in the event Lovington anticipates that it will be unable to fulfill its obligations under this Agreement for any period of time, it shall endeavor to give Navajo a minimum of ninety (90) days written notice of such a possibility, and shall use its best efforts to assist Navajo in addressing the situation that has developed.

13. In the event Navajo, through economic necessity or otherwise, no longer needs to discharge as envisioned by this Agreement, it may terminate the Agreement upon ninety (90) days written notice to Lovington.

14. In the event that Navajo is in violation of any of the terms of this contract, or in the event that the City is in violation of any E.I.D., E.P.A., or state, federal, or local laws, rules and regulations concerning treatment, use and disposal of such wastewater by virtue of Navajo's actions or inactions, and said violation cannot be corrected within thirty (30) days, this Contract shall terminate. Both parties agree to use their best efforts to correct any such problem as soon as possible.

15. Each party shall take all action necessary to approve the transaction contemplated by this Agreement, including obtaining all consents, permits and other approvals as is necessary.

16. This Agreement shall be governed and construed in accordance with the laws of the State of New Mexico, and

each party consents to the jurisdiction of the Courts of the State of New Mexico for the resolution of any and all controversies or disputes arising out of this Agreement.

17. This Agreement may be executed in one or more counterparts, each of which shall be considered an original instrument, but all of which shall be considered one in the same agreement, and shall become binding when one or more counterparts have been signed by each of the parties and delivered to each of Navajo and Lovington.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be Executed the day and year First above written.

THE CITY OF LOVINGTON, a New Mexico municipality

By: Troy Harris

TROY J. HARRIS

Title: MAYOR

NAVAJO REFINING COMPANY, a Delaware corporation

By: Virgil R. Langford

Virgil R. Langford

Title: V.P. Refining

Appendix 3

Navajo Refining-Lea & City of Lovington Spring 2019 Self-Monitoring Report



June 28, 2019

Mr. James Williams
City Manager, City of Lovington
PO Box 1268
Lovington, NM 88260-1268

Certified Mail/Return Receipt
7018 1130 0000 9712 6466

**RE: Spring 2019 Report – Lovington –
HollyFrontier Navajo Refining LLC
Effluent Pre-Treatment Standards (40 CFR 419.10-419.17)**

Dear Mr. Williams:

Enclosed are the semi-annual wastewater analytical results and discharge flow rates of the discharge effluent stream from Navajo's Wastewater Plant to the City of Lovington's Publicly Owned Treatment Works (POTW). The reporting is required by the federal pre-treatment regulations (40 CFR Part 403).

The following table provides the results of oil and grease, ammonia (as N) and total chromium. The analyses were performed by Cardinal Laboratories of Hobbs, New Mexico. The report is attached (H901514 NAVAJO).

The facility is in compliance with 40 CFR 419.15 as demonstrated by comparison to the applicable standards in Table 1 (below). Note that we are also providing discharge data for chromium, although this is not required by 40 CFR 419.15. The Refinery discharges treated wastewater to the POTW at the rates presented in Table 2.

Table 1. Discharge Water Quality

Pollutant	Standard (mg/L)	Result (mg/L)
Oil and Grease	100	39.6
Ammonia (as N)	100	7.40
Chromium	1.0	<0.0200

Table 2. Discharge Flow

Period	Daily Average Flow (gpm)	Daily Maximum Flow (gpm)
December	181	217
January	188	233
February	179	213
March	180	214
April	166	221
May	172	210



If you have any questions, please contact me by e-mail at scott.denton@hollyfrontier.com or by phone at 575-746-5487.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott M. Denton", with a blue highlight effect.

Scott M. Denton
Environmental Manager

Attachment: Cardinal Laboratories Analysis H901514 NAVAJO

Cc: USEPA: Mike Tillman, Rudy Molina, Nancy Williams

Env. File: Effluent Pre-Treatment Standards.Lovington.2019.Spring Report

Certification Statement Per 40 CFR 403.12(l) & 403.6(a)(2)(ii):

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Parrish R. Miller
Vice President and Refinery Manager

May 09, 2019

ROBERT COMBS

HOLLYFRONTIER NAVAJO REFINING

501 EAST MAIN STREET

ARTESIA, NM 88210

RE: LOVINGTON EFFLUENT MONITORING

Enclosed are the results of analyses for samples received by the laboratory on 04/29/19 12:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:HOLLYFRONTIER NAVAJO REFINING
501 EAST MAIN STREET
ARTESIA NM, 88210Project: LOVINGTON EFFLUENT MONITORI
Project Number: 231649
Project Manager: ROBERT COMBS
Fax To: NONEReported:
09-May-19 13:19

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LOVINGTON EFF. MONITORING TO	H901514-01	Wastewater	29-Apr-19 11:22	29-Apr-19 12:00
TRIP BLANK	H901514-02	Water	29-Apr-19 00:00	29-Apr-19 12:00

Cardinal Laboratories

*=Accredited Analyte

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Caley D. Keene, Lab Director/Quality Manager

Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING
501 EAST MAIN STREET
ARTESIA NM, 88210

Project: LOVINGTON EFFLUENT MONITORI
Project Number: 231649
Project Manager: ROBERT COMBS
Fax To: NONE

Reported:
09-May-19 13:19

LOVINGTON EFF. MONITORING TO POTW H901514-01 (Wastewater)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Ammonia	7.40		0.250	mg/L	5	9040507	AC	03-May-19	350.1	
Nitrite as N	0.08		0.05	mg/L	1	9043008	AC	30-Apr-19	354.1	
TDS	2960		10.0	mg/L	1	9043002	AC	02-May-19	2540C	
Sulfide, total	1.86		0.0100	mg/L	1	9050102	AC	01-May-19	376.2	

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.001		0.001	mg/L	1	9042905	ms	01-May-19	8021B	
Toluene*	<0.001		0.001	mg/L	1	9042905	ms	01-May-19	8021B	
Ethylbenzene*	0.002		0.001	mg/L	1	9042905	ms	01-May-19	8021B	
Total Xylenes*	0.006		0.003	mg/L	1	9042905	ms	01-May-19	8021B	
Total BTEX	0.008		0.006	mg/L	1	9042905	ms	01-May-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 92.7 % 81.3-128 9042905 ms 01-May-19 8021B

Green Analytical Laboratories

General Chemistry

Nitrate/Nitrite as N*	<0.200		0.200	mg/L	10	B905014	LLG	02-May-19	EPA353.2	
Total Kjeldahl Nitrogen*	11.8		0.700	mg/L	1	B905039	LLG	07-May-19	EPA351.2	
Oil & Grease (HEM)	39.6		5.00	mg/L	1	B905046	VJL	06-May-19	EPA1664 A	

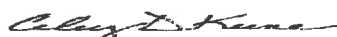
Total Recoverable Metals by ICPMS (E200.8)

Chromium*	<0.0200		0.0200	mg/L	10	B905026	AES	03-May-19	EPA200.8	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:HOLLYFRONTIER NAVAJO REFINING
501 EAST MAIN STREET
ARTESIA NM, 88210Project: LOVINGTON EFFLUENT MONITORI
Project Number: 231649
Project Manager: ROBERT COMBS
Fax To: NONEReported:
09-May-19 13:19**TRIP BLANK**
H901514-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.001		0.001	mg/L	1	9042905	ms	30-Apr-19	8021B	
Toluene*	<0.001		0.001	mg/L	1	9042905	ms	30-Apr-19	8021B	
Ethylbenzene*	<0.001		0.001	mg/L	1	9042905	ms	30-Apr-19	8021B	
Total Xylenes*	<0.003		0.003	mg/L	1	9042905	ms	30-Apr-19	8021B	
Total BTEX	<0.006		0.006	mg/L	1	9042905	ms	30-Apr-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			99.6 %	81.3-128		9042905	ms	30-Apr-19	8021B	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING
501 EAST MAIN STREET
ARTESIA NM, 88210

Project: LOVINGTON EFFLUENT MONITORI
Project Number: 231649
Project Manager: ROBERT COMBS
Fax To: NONE

Reported:
09-May-19 13:19

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9040507 - General Prep - Wet Chem

Blank (9040507-BLK1)

Prepared & Analyzed: 05-Apr-19

Ammonia	ND	0.0500	mg/L
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LCS (9040507-BS1)

Prepared & Analyzed: 05-Apr-19

Ammonia	1.72	0.0500	mg/L	2.00	86.0	80-120
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Duplicate (9040507-DUP1)

Source: H901229-03

Prepared & Analyzed: 05-Apr-19

Ammonia	218	0.0500	mg/L	211	2.92	20
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Matrix Spike (9040507-MS1)

Source: H901229-03

Prepared & Analyzed: 05-Apr-19

Ammonia	1090	25.0	mg/L	1000	211	87.9	70-130
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Batch 9043002 - Filtration

Blank (9043002-BLK1)

Prepared: 30-Apr-19 Analyzed: 02-May-19

TDS	ND	10.0	mg/L
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LCS (9043002-BS1)

Prepared: 30-Apr-19 Analyzed: 02-May-19

TDS	562		mg/L	527	107	80-120
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Duplicate (9043002-DUP1)

Source: H901493-01

Prepared: 30-Apr-19 Analyzed: 02-May-19

TDS	658	10.0	mg/L	562	15.7	20
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Batch 9043008 - General Prep - Wet Chem

Blank (9043008-BLK1)

Prepared & Analyzed: 30-Apr-19

Nitrite as N	ND	0.05	mg/L
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING
501 EAST MAIN STREET
ARTESIA NM, 88210

Project: LOVINGTON EFFLUENT MONITORI
Project Number: 231649
Project Manager: ROBERT COMBS
Fax To: NONE

Reported:
09-May-19 13:19

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9043008 - General Prep - Wet Chem
LCS (9043008-BS1)

Prepared & Analyzed: 30-Apr-19

Nitrite as N 0.18 0.05 mg/L 0.200 92.0 80-120

Duplicate (9043008-DUP1)

Source: H901523-01

Prepared & Analyzed: 30-Apr-19

Nitrite as N 0.04 0.05 mg/L 0.04 0.00 20

Matrix Spike (9043008-MS1)

Source: H901523-01

Prepared & Analyzed: 30-Apr-19

Nitrite as N 0.04 0.05 mg/L 0.200 0.04 NR 80-120 QM-07

Batch 9050102 - General Prep - Wet Chem
Blank (9050102-BLK1)

Prepared & Analyzed: 01-May-19

Sulfide, total ND 0.0100 mg/L

Duplicate (9050102-DUP1)

Source: H901513-01

Prepared & Analyzed: 01-May-19

Sulfide, total 0.782 0.0100 mg/L 0.761 2.70 20

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING
501 EAST MAIN STREET
ARTESIA NM, 88210

Project: LOVINGTON EFFLUENT MONITORI
Project Number: 231649
Project Manager: ROBERT COMBS
Fax To: NONE

Reported:
09-May-19 13:19

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9042905 - Volatiles

Blank (9042905-BLK1)

Prepared & Analyzed: 29-Apr-19

Benzene	ND	0.001	mg/L							
Toluene	ND	0.001	mg/L							
Ethylbenzene	ND	0.001	mg/L							
Total Xylenes	ND	0.003	mg/L							
Total BTEX	ND	0.006	mg/L							
Surrogate: 4-Bromofluorobenzene (PID)	0.0987		mg/L	0.100		98.7	81.3-128			

LCS (9042905-BS1)

Prepared & Analyzed: 29-Apr-19

Benzene	0.021	0.001	mg/L	0.0200		104	86.6-118			
Toluene	0.021	0.001	mg/L	0.0200		107	84.5-122			
Ethylbenzene	0.020	0.001	mg/L	0.0200		102	83.9-122			
Total Xylenes	0.063	0.003	mg/L	0.0600		105	81.8-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.0983		mg/L	0.100		98.3	81.3-128			

LCS Dup (9042905-BS1)

Prepared & Analyzed: 29-Apr-19

Benzene	0.021	0.001	mg/L	0.0200		103	86.6-118	1.10	7.71	
Toluene	0.022	0.001	mg/L	0.0200		108	84.5-122	1.27	8.86	
Ethylbenzene	0.020	0.001	mg/L	0.0200		102	83.9-122	0.668	11.8	
Total Xylenes	0.062	0.003	mg/L	0.0600		103	81.8-124	1.81	11.9	
Surrogate: 4-Bromofluorobenzene (PID)	0.0994		mg/L	0.100		99.4	81.3-128			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING
501 EAST MAIN STREET
ARTESIA NM, 88210

Project: LOVINGTON EFFLUENT MONITORI
Project Number: 231649
Project Manager: ROBERT COMBS
Fax To: NONE

Reported:
09-May-19 13:19

General Chemistry - Quality Control

Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B905014 - General Prep - Wet Chem

Blank (B905014-BLK1)

Prepared: 01-May-19 Analyzed: 02-May-19

Nitrate/Nitrite as N ND 0.020 mg/L

LCS (B905014-BS1)

Prepared: 01-May-19 Analyzed: 02-May-19

Nitrate/Nitrite as N 1.05 0.020 mg/L 1.00 105 90-110

LCS Dup (B905014-BSD1)

Prepared: 01-May-19 Analyzed: 02-May-19

Nitrate/Nitrite as N 1.06 0.020 mg/L 1.00 106 90-110 1.25 20

Batch B905039 - General Prep - Wet Chem

Blank (B905039-BLK1)

Prepared: 03-May-19 Analyzed: 07-May-19

Total Kjeldahl Nitrogen ND 0.500 mg/L B3

LCS (B905039-BS1)

Prepared: 03-May-19 Analyzed: 07-May-19

Total Kjeldahl Nitrogen 9.93 0.500 mg/L 10.0 99.3 90-110

LCS Dup (B905039-BSD1)

Prepared: 03-May-19 Analyzed: 07-May-19

Total Kjeldahl Nitrogen 9.62 0.500 mg/L 10.0 96.2 90-110 3.20 20

Batch B905046 - General Prep - Wet Chem

Blank (B905046-BLK1)

Prepared & Analyzed: 06-May-19

Oil & Grease (HEM) ND 5.00 mg/L

LCS (B905046-BS1)

Prepared: 06-May-19 Analyzed: 08-May-19

Oil & Grease (HEM) 41.7 5.00 mg/L 40.0 104 85-115

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:HOLLYFRONTIER NAVAJO REFINING
501 EAST MAIN STREET
ARTESIA NM, 88210Project: LOVINGTON EFFLUENT MONITORI
Project Number: 231649
Project Manager: ROBERT COMBS
Fax To: NONEReported:
09-May-19 13:19**General Chemistry - Quality Control****Green Analytical Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B905046 - General Prep - Wet Chem**LCS Dup (B905046-BSD1)**

Prepared & Analyzed: 06-May-19

Oil & Grease (HEM)	34.8	5.00	mg/L	40.0		87.0	85-115	18.0	20	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING
501 EAST MAIN STREET
ARTESIA NM, 88210

Project: LOVINGTON EFFLUENT MONITORI
Project Number: 231649
Project Manager: ROBERT COMBS
Fax To: NONE

Reported:
09-May-19 13:19

Total Recoverable Metals by ICPMS (E200.8) - Quality Control

Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B905026 - Total Rec. 200.7/200.8/200.2										
Blank (B905026-BLK1)					Prepared: 02-May-19 Analyzed: 03-May-19					
Chromium	0.0010	0.0010	mg/L							B3
LCS (B905026-BS1)					Prepared: 02-May-19 Analyzed: 03-May-19					
Chromium	0.0520	0.0010	mg/L	0.0500		104	85-115			
LCS Dup (B905026-BSD1)					Prepared: 02-May-19 Analyzed: 03-May-19					
Chromium	0.0507	0.0010	mg/L	0.0500		101	85-115	2.40	20	

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Celest D. Keene, Lab Director/Quality Manager

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Navajo Refining Company LLC.		P.O. #: 231649		ANALYSIS REQUEST																																											
Project Manager: Scott Denton, Robert Combs		Company: Navajo Refining																																													
Address: P.O. BOX 159		Attn: Susie Aguilar																																													
City: Artesia		Address: P.O. BOX 159,501 E Main																																													
Phone #: (575)748-3311		City: Artesia																																													
Fax #: (575)748-3311		State: NM Zip: 88211																																													
Project #:		State: NM Zip: 88211																																													
Project Name: Lovington Effluent Monitoring		Phone #: (575)746-5311																																													
Project Location: Lovington		Fax #:																																													
Sampler Name: Andres Sandoval																																															
FOR LAB USE ONLY																																															
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		BTX EPA 8021		Total Metals (Chromium) EPA 200.8		Anions (300) Nitrate,Nitrite EPA 353.2		TDS 25406		Ammonia EPA 350.1		TKN EPA 351.2		Hydrogen Sulfide 376.2		Oil & Grease EPA 1664		N02 354.1	
1		Lovington Effluent Monitoring to POTW		G		2		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X			
		Lovington Effluent Monitoring to POTW		G		1		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					
		Lovington Effluent Monitoring to POTW		G		1		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					
		Lovington Effluent Monitoring to POTW		G		1		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					
		Lovington Effluent Monitoring to POTW		G		1		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					
		Lovington Effluent Monitoring to POTW		G		1		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					
		Lovington Effluent Monitoring to POTW		G		1		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					
		Lovington Effluent Monitoring to POTW		G		1		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					
		Lovington Effluent Monitoring to POTW		G		1		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					
		Trip Blank		G		2		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					

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Relinquished By: Andres Sandoval Date: 4/29/19 Received By: Susie Aguilar Time: 12:00

Relinquished By: [Signature] Received By: [Signature] Date: [Blank] Time: [Blank]

Delivered By: (Circle One) Sample - UPS - Bus - Other: 14.4# 14.4# 14.4#

Sample Condition: Cool Intact Yes No Checked By: (Initials) 14.4#

REMARKS: Collection Parameters pH:N/A Weather Conditions:Clear/Sunny Sample Temp:N/A Please email results to:Scott Denton, Robert Combs, Randy Dade

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476