EPA United States Environmental Protection Agency

EPA Region 6 Enforcement and Compliance Assurance Division

INSPECTION REPORT

Inspection Entry Date/Time	09/13/2022 10:00 AM (MT)	Announced: No
Inspection Exit Date/Time	09/14/2022 02:30 PM (MT)	Access: Granted
Weather		
Media	Water	
Statute(s)/Program(s)	Clean Water Act, NPDES, WWTP	
Type of Inspection	CEI - Compliance Evaluation Inspection	
Permittee Name	Los Alamos County	
Facility or Site Name	Los Alamos County Wastewater Treatment Plant	
Facility/Site Physical Address	3500 Pueblo Canyon Road	
City, State, Zip Code	Los Alamos, NM 87544	
County/Borough/Parish		
Facility GPS Coordinates	35.88747, -106.24622	
Mailing Address (If different)		
City, State, Zip Code		
FRS ID	110064604441	
Permit Number(s) (If Applicable)	NM0020141	
SIC and/or NAICS	4952	

Regulatory Representatives Participating in Inspection:

Title	Name	Organization

Lead Inspector:

Amy Andrews	[Signature] AMY ANDREWS Digitally signed by AMY ANDREWS DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=AMY ANDREWS, 0.9.2342.19200300.100.1.1=68001003655888 Date: 2022.11.14 13:45:19 -07'00'		11/14/2022
	EPA Region 6	andrews.amy@epa.gov	

Supervisor Review:

Roberto Bernier	[Signature] ROBERTO BERNIER Digitally signed by ROBERTO BERNIER Date: 2022.11.14 15:05:02 -06'00'		11/14/2022
	EPA Region 6	bernier.roberto@epa.gov	

SECTION I – INTRODUCTION

Site Entry and Inspection Objectives

EPA Region 6 Lead Inspector, Amy Andrews, arrived at the Los Alamos County Wastewater Treatment Plant (WWTP; the "Site" or "Facility"), located at 3500 Pueblo Canyon Road, Los Alamos, NM 87544, at 10:00 AM (MT) on 09/13/2022 for an unannounced inspection. EPA Region 6 Lead Inspector presented credentials to Joshua Silva and Kenneth Espinoza and informed them that this was an EPA Region 6 inspection to determine compliance as authorized by Clean Water Act (CWA) Section 308 and implementing regulations. This report is based on information supplied by Los Alamos County representatives, direct observations made by the EPA Region 6 inspector, records and reports maintained by the permittee and other information including: photographs taken by EPA Region 6 inspector(s), physical evidence collected by the EPA Region 6 inspector(s), measurements taken by EPA Region 6 inspector(s), verbal or written statements made by information supplied by facility representatives during or subsequent to the on-site Inspection, and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to the EPA Region 6 inspector(s) by facility representatives during or subsequent to the on-site Inspection. In addition, information gathered prior to or subsequent to the Inspection from a review of EPA, State, and/or public records may be included in this report.

Attendees

Organization	Attendee Name	Title	Present in Opening Conf.	Present in Closing Conf.
EPA Region 6	Amy Andrews	Lead Inspector	Yes	Yes
Los Alamos County	Joshua Silva	WWTP Supervisor	Yes	No
Los Alamos County	Kenneth Espinoza	WWTP Superintendent	Yes	No

Facility/Site Description

EPA Region 6 lead inspector confirmed the following facility information:

The Los Alamos WWTP is classified as a major municipal discharger under the CWA, Section 402, of the NPDES permit program and is authorized to discharge up to 1.4 million gallons per day (MGD) based on design flow. The permittee is authorized to discharge treated domestic wastewater from Outfall 001 to the Pueblo Canyon, an unclassified water 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 livestock watering, wildlife habitat, aquatic life and secondary contact.

Facility/Site Information

Responsible official	Philo Shelton, Utilities Manager
WWTP Design Capacity & Average Daily Flow	Design capacity is 1.4 MGD, actual average daily flow is 0.75 to 0.8 MGD
Contributing (or shared) Jurisdictions	none
Operation schedule (days of operation, # shifts/day, # operators/shift, coverage overnight, weekends & emergencies), and is staffing sufficient for proper operation?	Monday - Friday 7:30am-4pm with seven employees when fully staffed (currently three open positions); Saturday and Sunday 7:30am-4pm with one weekend employee

Is there currently any portion of the treatment train that is non-operational?	The "South Train" aeration basins and clarifier are offline for yearly maintenance, which includes checking blowers and diffusers and removing grit from the basins.
Are there any plans for renovation or additional equipment to allow for increased wastewater flow?	No
Type(s) of primary flow measuring device(s)?	influent and effluent flow meters are both 9-inch Parshall Flumes with radar secondary measurement
Backup electrical power source, and does it turn on automatically?	diesel generator starts up automatically
What portion of the plant does the backup power operate?	UV, admin building, PLCs - not power blowers or mixers
What sort of failure alarm does the plant have?	SCADA system tracks "whole plant" including meters. One person is on-call every night and SCADA system will call on-call person.
What % of annual flow at the plant can be attributed to inflow/infiltration?	very little

Location(s)

Location/Area/Sub-area	Description
1. Collection System	The Los Alamos County WWTP serves the City of Los Alamos through approximately 110 miles of sewer lines. The collection system includes 27 lift stations.
2. Treatment System	Influent then passes through a mechanical screw pump, grinder-screener or manual bar screen and an aerated grit removal system. Screenings and grit are disposed of at the county landfill. Following screening and grit removal, water flow can then be split into parallel treatment trains as the sewage is sent to the anoxic zone of the treatment basin. The water then flows to the rectangular aeration basins with fine bubble diffused air distributed by two blowers. Each aeration basin has six mixers. Following aeration, the flow is sent to parallel secondary clarifiers.
3. Flow meters & Outfall	The final lift stations send water through an 18inch line to the influent Parshall Flume fitted with a pressure sensor – transducer flow meter and a staff gauge, then to the treatment system. Decant from the clarifiers is sent through a final fine screen to Ultraviolet (UV) Disinfection, the Parshall Flume fitted with a pressure sensor, transducer flow meter and a staff gauge. The flow is sent either to Outfall 001 at Pueblo Canyon, or to a holding tank for reuse. During the summer months, up to 85 percent of plant discharge goes to reuse at the golf course and the North Mesa ball fields.
4. Biosolids/Sludge	Biosolids are wasted from the secondary clarifies and dewatered with a belt press using polymer addition. These are then trucked to the Solids processing and composting site. The solids processing site is approximately a half mile away. Sludge is composted to Class 1A and given out to the public.

5. Laboratory	The in-house laboratory analyses NPDES compliance samples for pH, BOD, TSS, E. coli bacteria, TRC, and DO (in addition to various process samples). Compliance samples for metals, gross alpha, and PCBs are sent to Hall Environmental Laboratory in Albuquerque, NM. Whole effluent toxicity (WET) testing samples are sent to Bio-Aquatic Testing, Inc. in Carrollton, TX.

SECTION II – OBSERVATIONS

Location: 2. Treatment System

Observation #: AA2-OB-001 **Date:** 11/03/2022 **Weather:**

A blower boot blew off of the pipe overnight last night, but did not trip the alarm because the blower was still on. Operators found the issue this morning. Operators stated that the effluent at the plant "doesn't usually look this bad." Operator stated that they noticed the DO values on the graph plummeted this morning, but there is no alarm on the DO meter.

A transducer for the plant drain lift station and two DO meters were hit by a lightning surge a few weeks ago. Have one more DO meter in the plant that is still functional. The SCADA system is constantly alarming for a "Drain sump low level alarm" because of this transducer - operators have learned to ignore the alarm.

Operator stated that the plant cannot waste when the digester is full. Approximately once a month they need to dewater the aerobic digester for three days, and they are unable to waste during this time. Ideally they would waste daily.

The algae brush on the clarifier isn't contacting the weirs fully. Operators are required to do weekly manual cleanings on Fridays to compensate. Too much algae buildup is preventing even flow over the weirs.

Photo(s)

1. DSCN1446.JPG
2. DSCN1457.JPG
3. DSCN1462.JPG
4. DSCN1500.JPG

Location: 3. Flow meters & Outfall

Observation #: AA2-OB-002 **Date:** 11/03/2022 **Weather:**

Both influent and effluent flow meters are 9-inch Parshall Flumes. The influent flow meter has a radar secondary measurement meter located over the stilling well. The effluent meter has a radar secondary measurement meter located over the throat of the Flume. The flow in the effluent flow meter is not laminar. The secondary effluent flow meter took a lightning surge a few weeks ago and the values are now wandering. Operators are manually reading the staff gauge every 12 hours or so on the daily walk-through sheet. On the day of the inspection, the effluent staff gauge read 0.45 feet.

Outfall 001 does not feed directly into the river, it generally soaks into the ground before meeting other waters. There are no known fish or frogs living at the outfall.

Photo(s)

1. DSCN1484.JPG

Location: 5. Laboratory

Observation #: AA2-OB-003 **Date:** 11/03/2022 **Weather:**

Samples are collected on Wednesdays.

BOD and TSS are collected in the autosampler from 10am-3pm; 6-hr composite; in the ISCO 4700 (refrigerated by power).

E coli. is manually collected in the sample bottle with sodium thiosulfate at the splitter weir as water is falling over the weir.

BOD and TSS samples go into the lab refrigerator overnight and are composited on Thursday. Log book in lab shows composite calculations.

DO is collected every week even though permit requirements are for once every 2 weeks. pH and DO are collected together.

Thallium is collected in 500 ml plastic with HNO3 preservative, stored in the lab fridge and delivered to Hall Environmental once a month.

The thermometer verification expires on 10/6/22 (less than a month away). The certified thermometer was ordered in March 2022 but still hasn't arrived.

Laboratory reagents were not properly labeled with expiration dates. There was a date written on the bottles, but it was not clear if this was a opened-on date or a received-on date. The permittee is using pH buffers manufactured by Hach. Operator stated that Hach reagents and probes are backordered. According to Hach "Shelf life of a bottle once opened is impossible to determine due to environmental variations specific to the customer location and storage standard operating procedures. (Elevation/pressure for example.) We recommend that the date the bottle is opened is written on the bottle and that the standards be used within six months for pH 4 and 7 buffers, or three months for pH 10 buffer."

Photo(s)

1. DSCN1516.JPG

Location: 2. Treatment System

Observation #: AA2-OB-004 **Date:** 11/04/2022 **Weather:**

Inspector returned the following day to observe clarity of effluent after blower boot had been fixed and aeration treatment had been returned to normal. Effluent quality had visually improved however there was still significant algae buildup in secondary clarifier.

SECTION III – RECORDS REVIEW

Records may not be in sequential order.

Record: DMR Reports **AOC:** No

Ref #: AA2-RR-003 **Reviewed By:** Amy Andrews **Reviewed Date:** 11/03/2022

DMRs were reviewed from January 2022, June 2022, July 2022, and WET testing was reviewed from March 2022.

Document(s)

1. January 2022.pdf
2. June 2022.pdf
3. July 2022.pdf

Record: Calibration Records **AOC:** No

Ref #: AA2-RR-002	**Reviewed By:** Amy Andrews	**Reviewed Date:** 10/27/2022

Secondary effluent flow meter was out of calibration on the date of the inspection.

Laboratory thermometers were nearing the one-year date of previous calibration to reference NIST thermometer.

Document(s)

1. Inf, Eff, UV Flow Meters Jan, Jun, July 2022.pdf
2. Jan, Jun, July 2022 Scale Calibration Log.pdf
3. Thermometer Cal.pdf

Photo(s)

1. DSCN1501.JPG

Record: Permit Renewal Application **AOC:** No

Ref #: AA2-RR-001	**Reviewed By:** Amy Andrews	**Reviewed Date:** 10/20/2022

Document(s)

1. 2-Los Alamos permit application 2A (1).pdf
2. 3-Application Form 2A Tables A-E.pdf

SECTION IV – SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

No sampling was conducted.

SECTION V - AREAS OF CONCERN

Areas of Concern may not be in sequential order. The presentation of areas of concern does not constitute a formal compliance determination or violation.

AOC Reference #: AA2-OB-001	**Location: 2. Treatment System**

Regulation and/or Permit Requirement

- 40 CFR 122.41(e)
- 122.41(e) - (e) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and contr...

AOC:

A blower boot blew off of the pipe overnight last night but did not trip the alarm because the blower was still on. Operators found the issue this morning. Operators stated that the effluent at the plant "doesn't usually look this bad." Operator stated that they noticed the DO values on the graph plummeted this morning, but there is no alarm on the DO meter.

A transducer for the plant drain lift station and two DO meters were hit by a lightning surge a few weeks ago. Have one more DO meter in the plant that is still functional. The SCADA system is constantly alarming for a "Drain sump low level alarm" because of this transducer - operators have learned to ignore the alarm.

Operator stated that the plant cannot waste when the digester is full. Approximately once a month they need to dewater the aerobic digester for three days, and they are unable to waste during this time. Ideally they would waste daily.

The algae brush on the clarifier isn't contacting the weirs fully. Operators are required to do weekly manual cleanings on Fridays to compensate. Too much algae buildup is preventing even flow over the weirs.

Additional Notes: Significant operational issues were caused by not having an alarm to catch drastic changes in process flow conditions. Having an alarm constantly going off makes it less likely that operators will notice and properly react to a new alarm.

AOC Reference #: AA2-OB-003	**Location: 5. Laboratory**
Regulation and/or Permit Requirement	
• NM0020141 III.C.5.b.	
• III.C.5.b. - MONITORING AND RECORDS; MONITORING PROCEDURES The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instru...	
AOC:	
Laboratory reagents were not properly labeled with expiration dates. There was a date written on the bottles, but it was not clear if this was a opened-on date or a received-on date.	
Additional Notes: Expired reagents make it impossible to confirm proper calibration, and therefore the validity of the sample results.	

AOC Reference #: AA2-OB-002	**Location: 3. Flow meters & Outfall**
Regulation and/or Permit Requirement	
• 40 CFR 122.41(e)	
• 122.41(e) - (e) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and contr...	
AOC:	
The flow in the effluent flow meter is not laminar. The secondary effluent flow meter took a lightning surge a few weeks ago and the values are now wandering.	
Additional Notes:	

SECTION VI – CLOSING CONFERENCE AND FOLLOW UP

Closing Conference

The EPA Region 6 Lead Inspector held a closing conference with Facility personnel at 12:42 PM (MT) on 09/13/2022 for the inspection. During the closing conference, EPA Region 6 Lead Inspector discussed the observations and Areas of Concern identified during the inspection. Observations and Areas of Concern have not yet been evaluated for a formal compliance determination.

Follow Up

The following items were requested by the inspector at the time of the inspection.

Location:	**Area:**	**Sub-area:**
AA2-CC-NT		
Will follow up with Jennifer Baca to get copies of requested paperwork.		

Communication Log

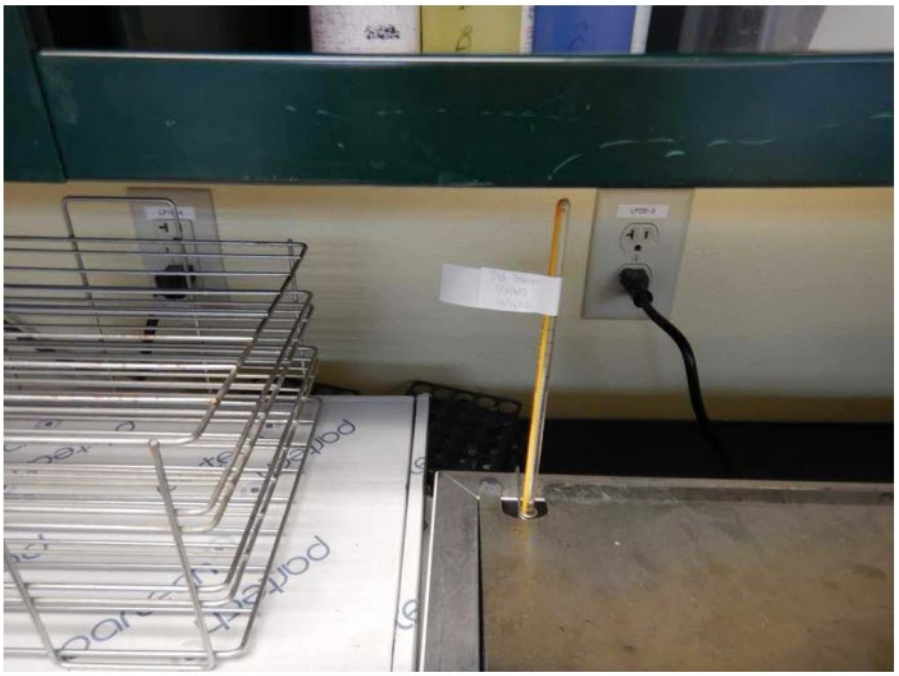
The following information was received by EPA Region 6 on/after exiting the Facility on 09/14/2022.

Type	Point of Contact	Description	Contains PII	Date
Email	Jennifer Baca, Engineering Associate	requested documents were received	No	09/26/2022 02:13 PM (MT)
Email	Jennifer Baca, Engineering Associate	requested documents were received	No	11/09/2022 07:08 AM (MT)

SECTION VII – LIST OF APPENDICES

1. Photo Log
2. Document Log

APPENDIX 1: PHOTO LOG

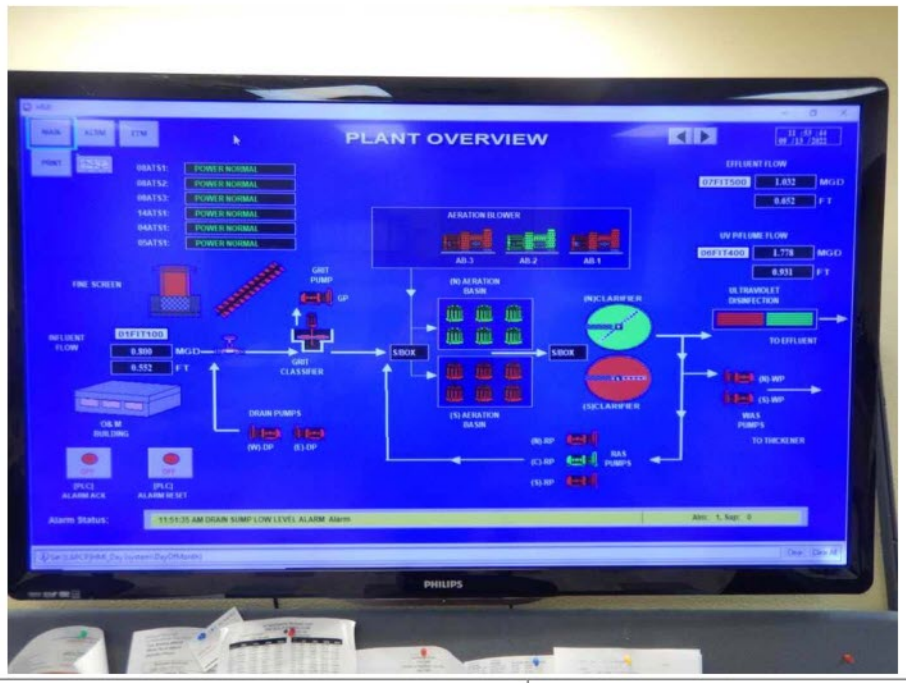


[Title]	DSCN1501.JPG	
09/13/2022 12:20 PM	Photographer: Amy Andrews	
Laboratory	No CBI	No PII
Thermometer reference calibration dated 10/6/21		

[Title]	DSCN1446.JPG	
09/13/2022 10:58 AM	Photographer: Amy Andrews	
2. Treatment System	No CBI	No PII
Plant blower room, with the blower boot that had slipped off in the lower right corner of the photo.		

[Title]	DSCN1457.JPG	
09/13/2022 11:05 AM	Photographer: Amy Andrews	
2. Treatment System	No CBI	No PII
Aeration basin		

[Title]	DSCN1462.JPG	
09/13/2022 11:11 AM	Photographer: Amy Andrews	
2. Treatment System	No CBI	No PII
Clarifier		



[Title]	DSCN1500.JPG	
09/13/2022 11:56 AM	Photographer: Amy Andrews	
2. Treatment System	No CBI	No PII
SCADA system screen showing "drain sump low level alarm."		

[Title]	DSCN1484.JPG	
09/13/2022 11:35 AM	Photographer: Amy Andrews	
3. Flow meters & Outfall	No CBI	No PII
Effluent flow meter showing non-laminar flow below the secondary flow meter.		

[Title]	DSCN1516.JPG	
09/13/2022 12:37 PM	Photographer: Amy Andrews	
5. Laboratory	No CBI	No PII
pH buffers		

APPENDIX 2: DOCUMENT LOG

Document Type	Document Name	Contains CBI	Contains PII	Uploaded By	Date Received
Permit Renewal Application	2-Los Alamos permit application 2A (1).pdf	No	No	Amy Andrews	11/07/2022
Permit Renewal Application	3-Application Form 2A Tables A-E.pdf	No	No	Amy Andrews	11/07/2022
Calibration Records	Inf, Eff, UV Flow Meters Jan, Jun, July 2022.pdf	No	No	Amy Andrews	11/07/2022
Calibration Records	Jan, Jun, July 2022 Scale Calibration Log.pdf	No	No	Amy Andrews	11/07/2022
Calibration Records	Thermometer Cal.pdf	No	No	Amy Andrews	11/07/2022
DMR Reports	January 2022.pdf	No	No	Amy Andrews	11/10/2022
DMR Reports	June 2022.pdf	No	No	Amy Andrews	11/10/2022
DMR Reports	July 2022.pdf	No	No	Amy Andrews	11/10/2022