



**U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION III WATER BRANCH, ENFORCEMENT
AND COMPLIANCE ASSURANCE DIVISION
CLEAN WATER ACT
COMPLIANCE INSPECTION REPORT**

for

Name of Facility: Red Bridge Recreation Area
Facility Address: Forest Roads 667 & 122, Kane, PA 16365
Mailing Address: 29 Forest Service Dr. Bradford, PA 16701

Report Prepared on: 7/25/2023 By: Mike Beck ,ERG
Date Signature

Report Final as of: _____ By: _____, EPA
Date Signature

General Information

Type of Inspection:	Wastewater Treatment Facility CEI
Owner:	USDA Forest Service
Operator:	Allegheny Site Management
Permittee:	USDA Forest Service
NPDES Permit No:	PA0239577
NPDES Permit Effective Date:	7/1/2016
NPDES Permit Expiration Date:	6/30/2021
Receiving Water and/or MS4:	Kinzua Creek
Latitude and Longitude:	41.777621, -78.883266

On-Site Facility Inspection Overview

On June 6, 2023, the U.S. Environmental Protection Agency (EPA) Region 3 and contract inspectors from Eastern Research Group, Inc. (ERG) inspected the Red Bridge Recreation Area Sewage Treatment Plant (STP) in Kane, PA. Red Bridge Recreation Area is identified as the permittee and owns the STP. Allegheny Site Management is the contracted company that operates the plant.

Approximate Entry Time: 9:00 AM (EDT) **Approximate Exit Time:** 2:00 PM (EDT)

Unique Project Identifier (UPI): 3E23WN104A

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Appendix A: Photograph Log

Appendix B: Exhibit Log

- Exhibit 1 – EPA ECHO eDMR Data (January 2020 through March 2023)
- Exhibit 2 – EPA ECHO Detailed Facility Report
- Exhibit 3 – Sludge Inventory and Dumping Reports 2020-2023
- Exhibit 4 – Inspection Sign-In Sheet
- Exhibit 5 – Treatment Plant Process Flow Diagram
- Exhibit 6 – Collection System Process Flow Diagram
- Exhibit 7 – Red Bridge Recreation Area Campground Map

Appendix C: NPDES Permit No. PA0239577

I. INTRODUCTION

At 9:00 a.m. on June 6, 2023, the U.S. Environmental Protection Agency (EPA) Region 3 and EPA contractors, Eastern Research Group, Inc. (ERG), (henceforth, the inspection team) conducted a NPDES compliance inspection of the Red Bridge Recreation Area Sewage Treatment Plant (STP) (henceforth, the facility) located at Forest Roads 667 & 122, Kane, PA 16365.

The primary purpose of the inspection was to review the onsite facility operations, to review the accuracy and reliability of the permittee's self-monitoring and reporting program, and to obtain information that will assist EPA in assessing the permittee's compliance with the requirements of the permit.

The facility holds an NPDES permit (PA0239577; [Appendix C](#)) for its wastewater discharge through Outfall 001 shown in Table 1. The permit was first issued on July 1, 2016, and was set to expire on June 30, 2021, but has been administratively extended indefinitely by the Pennsylvania Department of Environmental Protection (PADEP).

Table 1. Plant Outfall

Permit	Outfall	Description	Receiving Water/Point of Discharge
PA0239577	001	Treated domestic sewage from a seasonal recreational campground.	Kinzua Creek

According to the permit PA0239577, the facility has effluent limitations at Outfall 001 for pH, total residual chlorine (TRC), carbonaceous biochemical oxygen demand (CBOD5), total suspended solids (TSS), and fecal coliform. These limits were determined using an effluent discharge rate of 0.0075 MGD. Additionally, the facility is required to report flow rate, total nitrogen, ammonia-nitrogen, and total phosphorus at Outfall 001 on its DMR.

The facility's treatment process consists of a recirculating sand filter followed by chlorination. Wastewater is collected from various points in the campground (i.e., showers/restrooms, dumping station, and full-hookup campsites) and is first stored in a total of 16 septic tanks of various sizes. The effluent from the septic tanks is then pumped to the treatment area via two lift stations located in the campground.

Allegheny Site Management, Inc. (henceforth the "contract operator") is onsite daily at the treatment plant between 7:00 a.m. to 4:00 p.m. The contract operator provides sample collection and performs basic operations and maintenance (O&M) to the treatment plant, collection system and lift stations in addition to emergency response off-hours.

II. INSPECTION PROCESS

Inspection Opening Conference

Table 2 lists the primary Red Bridge Recreation Area contacts and the EPA inspection team members. Mike Beck and Allison Gieda presented their EPA CWA inspector credentials to Edward Prince and Jerry Dixon on June 6, 2023. [Appendix B Exhibit 4](#) contains the sign-in sheet documenting participants for the opening meeting.

Table 2. Inspection Attendee List

Name	Affiliation	Telephone	Email
EPA Region III Contract Inspector			
Mike Beck, Inspector	ERG	(331) 643-9987	Mike.beck@erg.com

Name	Affiliation	Telephone	Email
James Phillips, Support	ERG	(850) 830-1281	James.phillips@erg.com
EPA Region 3 Representative			
Allison Gieda, Environmental Engineer	EPA Region 3	(304) 234-0232	Gieda.allison@epa.gov
Site/Facility Representatives			
Edward Prince, Contract Operator/Manager	Allegheny Site Management, Inc.	(814) 362-2171	ecpalleghenysite@gmail.com
Jerry Dixon, Supervisor	U.S. Forest Service	(814) 363-6025	Jerry.dixon@usda.gov

During the opening conference, the inspection team discussed the facility's wastewater collection and treatment processes as well as other operations of the facility with the facility representatives.

The Red Bridge Recreation Area is a campground located within the boundaries of Allegheny National Forest in Pennsylvania; the campground and its associated collection system and treatment plant are shown in Figure 1. See [Appendix B Exhibit 7](#) for a more detailed map of the facility's campsites and other services. The campground is under the direct authority of the U.S. Forest Service (USFS), but the day-to-day operations and campground management are contracted out by the USFS to Allegheny Site Management located in Bradford, PA. The contract operator is responsible for the daily operations and maintenance of the campground and wastewater management and treatment at the facility's sewage treatment plant including compliance sample collection and on-site analysis. The facility has a total of 67 campsites and is open seasonally from April to October.



Figure 1. Satellite Imagery of the Red Bridge Recreation Area.

Wastewater at the facility is generated from two restrooms/showers each equipped with an 8,000 gallon septic tank, 13 full hook-up campsites each equipped with a 500 gallon septic tank, and one dump station

equipped with a 4,000 gallon septic tank. Solids are removed once per year from the septic tanks at the restrooms/showers. Solids remain in the septic tanks, including at the dump station, at the campsites and are pumped out once every three years. The wastewater effluent from each septic tank is pumped to the sewage treatment plant via the north and south lift stations located within the campground. Once the wastewater is transferred to the treatment plant (located about ¼ mile east of the campground) it enters an influent equalization/holding tank with a float system where two transfer pumps send the wastewater to a recirculating sand filter. The sand filter unit is divided into three separate cells. At the time of the inspection, the facility was operating the second cell with the first and third cells on standby. The contract operator described that this practice was put into place because when all cells are in operation there is a lack of adequate flow and pressure between the different cells to keep the diffusers from clogging. The contract operator said that the sand filter cells were rehabilitated in 2021 and that the cells are currently alternated every month per advice from the facility's engineering consultant. A portion of the effluent from the sand filter is recycled back to the influent holding tank. The remaining flow is sent to a chlorine contact basin through the operation of a bull run valve and control unit. From the chlorine contact basin, the effluent flows by gravity to Outfall 001 at Kinzua Creek; this outfall is underwater and therefore inaccessible. The outfall condition has not been assessed in the last few years according to the contract operator.

Chlorination is achieved by mixing dry calcium hypochlorite with water onsite in a large chemical drum then pumping the solution via a chemical pump to the chlorine contact basin. The contract operator manually adjusts the chlorination dosing each day by testing for residual chlorine at the end of the chlorine contact basin and determining the appropriate chlorine dose for the given residual. Additionally, pH, temperature, and dissolved oxygen (DO) are used as process controls according to the contract operator.

There is no remote data acquisition or other remote process controls at the facility. Additionally, there are no digital alarms or other digital alerts; alarms will physically sound if there are issues with the lift stations, pumps, or other units in the treatment/collection process.

The facility is required to keep track of its sewage sludge inventory per PADEP. The facility's sludge management inventory is submitted on its discharge monitoring reports (DMRs) via electronic DMR (eDMR) and is displayed in [Appendix B Exhibit 1](#).

When asked by the inspection team, the contract operator said that there have not been any sanitary overflows at the septic tanks or lift stations in recent years, however, there have been instances of shutting down the recreation area's wastewater services (i.e., closing the showers/bathrooms and dumping station) to avoid sanitary overflows due to power outages. The facility does not currently have any backup generators or alternative sources of power.

Facility Site Walk

At 10:43 a.m. on June 6, 2023, the inspection team began the walkthrough of the facility, starting with the dumping station and its 4,000-gallon septic tank (see [Appendix A Photographs 1, 2](#)). Surrounding the dumping station was an intact berm to prevent stormwater flows from entering the septic tank. The septic tank lid was raised above ground level to prevent stormwater flows from entering the tank. There was minor surface rust within the lid of the septic tank (see [Appendix A Photograph 2](#)). The inspection team did not observe an overwhelming sulfur odor, which could indicate poor operation and maintenance.

The inspection team observed the north restrooms and showers with its 8,000-gallon septic tank (see [Appendix A Photographs 3, 4](#)). The lid/manhole for this septic tank was also raised above ground level and there was no perceptible sulfur odor.

The inspection team then observed a 500-gallon septic tank and hookup from a campsite representative of the facility's 13 campsites with septic/wastewater hookups (see [Appendix A Photographs 5, 6](#)). The

lid/manhole for this septic tank was also raised above ground level and there was no perceptible sulfur odor.

The inspection team then observed the north lift station (see [Appendix A Photographs 7, 8](#)). Upon opening the control panel for the north lift station, the inspection team observed an abundance of ants and larvae at the bottom of the panel. The contract operator removed the ants and larvae at the time of inspection.

The inspection team then observed the south lift station (see [Appendix A Photographs 9, 10](#)). The inspection team observed ant repellent and insecticide placed within the south lift station's control panel.

Following the south lift station, the inspection team observed the south restrooms and showers and its 8,000-gallon septic tank (see [Appendix A Photographs 11, 12](#)). The lid for this septic tank was raised above ground level and there was no perceptible sulfur odor.

The inspection team then observed the facility's wastewater treatment plant, located about ¼ mile east of the campground and collection system. The area surrounding the treatment plant was in good condition with secure fencing and barbed wire. The facility gradually sloped downhill to the west, towards Outfall 001. Due to the grading, stormwater would not collect within the treatment plant and would instead flow towards Kinzua Creek. The treatment plant also had a stormwater grate installed at a low point within the facility to divert stormwater flows toward Kinzua Creek (see [Appendix A Photograph 13](#)). Inside the operations/control room, the inspection team observed documents for the treatment plant's standard operating procedures (SOPs), operations and maintenance (O&M) manuals, compliance sampling schedule, operator certifications, and material safety data sheets. The inspection team also observed a map of the facility's collection system, including the locations of each campsite septic tank, lift station, dumping station, and shower septic tanks. The inspection team did not observe any SOPs for the collection system and upon discussing with the facility representatives, it was confirmed that there are no SOPs for the collection system.

Within the operations room was the chlorine dosing system (see [Appendix A Photograph 14](#)), consisting of a 30-gallon chlorine (in the form of liquid calcium hypochlorite) storage tank, chemical metering pump, and dry calcium hypochlorite to be mixed with water in the chlorine storage tank when needed. The inspection team did not observe any hazard or NFPA labels/signage on the chlorine storage tank. Also within the operations room were reagents for the calibration of the pH meter. The inspection team observed two expired bottles of reagent (see [Appendix A Photographs 15, 16](#)) as well as one expired fire extinguisher within the control room (see [Appendix A Photograph 17](#)).

The inspection team observed the treatment plant's recirculating sand filters. Each of the three sand filter cells were clear of debris and vegetation (see [Appendix A Photograph 18](#)). The valves for two of the cells were closed, confirming that only one cell was currently in operation. The inspection team observed a layer of gravel surrounding the entire sand filter unit (see [Appendix A Photograph 18](#)). Upon discussion with the facility representatives, the gravel was placed on top of a French drain, so that any overflows from the sand filter would not contaminate the surrounding area or be included in any stormwater runoff contributions.

The inspection team observed the bull run valve and its respective control unit as well as the equalization/holding tank (see [Appendix A Photographs 19, 20](#)). The inspection team did not observe any confined space entry signs or other warning signs within or around the underground tanks.

The inspection team observed the chlorine contact basin (see [Appendix A Photographs 21, 22](#)). Upon discussion with the contract operator, it was revealed that they take their compliance samples within the chlorine contact basin before the treated wastewater flows through the weir and to Outfall 001 (see [Appendix A Photograph 23](#)).

Records Review

The inspection team conducted a records review to evaluate the permittee's compliance with the permit. Most of the records and reports required by the permit were available for review prior to and after the inspection. The treatment plant's SOP, compliance sampling schedule, and equipment O&M manual were

reviewed onsite. The facility's eDMRs, sludge management inventory, and dumping station logs were obtained electronically and reviewed offsite after the inspection. The inspection team reviewed the following documents:

- Treatment plant SOP
- Compliance sampling schedule
- O&M manual
- eDMR data during the period from January 1, 2020, through April 30, 2023
- Sludge management inventory from 2020 through 2023
- Dumping station logs from 2020 through 2023

Summary of Observations

The following section summarizes the inspection team's observations relative to the permit requirements, including the status of certain treatment units, operation and maintenance practices, and the permittee's monitoring and reporting documentation.

Effluent Exceedances and DMR Submittals

Part A.I of the permit defines the effluent limitations for Outfall 001 discharges.

As part of the data review, the inspection team reviewed the facility's DMRs in EPA's Enforcement and Compliance History Online (ECHO) database to compare reported values against effluent limitations defined in the Permit (refer to [Appendix C](#)) in order to evaluate compliance.

Observation 1. According to the facility's eDMR data, the Plant experienced 18 effluent limit exceedances from Outfall 001 between January 1, 2020, and April 30, 2023 (refer to [Appendix B Exhibit 1](#) and Table 3 below). The highest number of exceedances occurred for fecal coliform (8 exceedances), followed by CBOD5 (5 exceedances) and TRC (5 exceedances). The facility has been in significant noncompliance (SNC) for 4 of the past 12 quarters due to effluent limit exceedances and failure to report DMRs (refer to [Appendix B Exhibit 2](#)). According to ECHO, as of 03/31/2023, the facility is no longer in SNC.

Table 3. Outfall 001 Final Effluent Exceedances (January 2020 – April 2023)

Month	Parameter Name	DMR Value	NPDES Permit Limit	Units	Statistical Base Code
May-20	Coliform, fecal general	12,098	1,000	CFU/100mL	INST MAX
May-20	Coliform, fecal general	10,820	200	CFU/100mL	GEO MEAN
May-20	BOD, carbonaceous [5-day, 20 C]	39	25	mg/L	MO AVG
Jun-20	Coliform, fecal general	2,419.6	1,000	CFU/100 mL	INST MAX
Jul-20	BOD, carbonaceous [5-day, 20 C]	41	25	mg/L	MO AVG
Sep-20	Coliform, fecal general	2,420	1,000	CFU/100 mL	INST MAX
Sep-20	Coliform, fecal general	2,420	200	CFU/100 mL	GEO MEAN
May-21	Coliform, fecal general	2,420	1,000	CFU/100 mL	INST MAX
Jun-21	BOD, carbonaceous [5-day, 20 C]	54	25	mg/L	MO AVG
Jul-21	Coliform, fecal general	2,420	1,000	CFU/100 mL	INST MAX
Sep-21	Coliform, fecal general	2,420	1,000	CFU/100 mL	INST MAX
Sep-21	BOD, carbonaceous [5-day, 20 C]	37	25	mg/L	MO AVG
Oct-21	BOD, carbonaceous [5-day, 20 C]	27	25	mg/L	MO AVG
Apr-22	Chlorine, total residual	0.53	0.5	mg/L	MO AVG
May-22	Chlorine, total residual	0.52	0.5	mg/L	MO AVG

Month	Parameter Name	DMR Value	NPDES Permit Limit	Units	Statistical Base Code
Jun-22	Chlorine, total residual	0.59	0.5	mg/L	MO AVG
Jul-22	Chlorine, total residual	0.51	0.5	mg/L	MO AVG
Aug-22	Chlorine, total residual	0.67	0.5	mg/L	MO AVG

INST MAX – Instantaneous maximum

MO AVG – Monthly average

GEO MEAN – Geometric mean

In discussions, the contract operator indicated that the exceedances for fecal coliform and CBOD5 in 2020 align with the timing of the control unit for the bull run valve breaking and exceedances for fecal coliform and CBOD5 in 2021 align with one of the pumps in the holding tank malfunctioning. According to the contract operator, exceedances for TRC in 2022 were due to operational challenges and “fine-tuning” of the system after the sand filter cells were rehabilitated.

When asked about the pattern of DMR values for fecal coliform in 2020 and 2021 of 2,420 CFU/100 mL, the contract operator stated that the facility changed analytical laboratories around that time and the DMR value submitted was likely the laboratory’s maximum reporting limit.

Part A.III of the permit defines the monitoring requirements for Outfall 001 discharges.

Observation 2. Based on a review of PADEP’s eDMR database, there are five counts of late or overdue DMR submissions between January 1, 2020, and April 30, 2023 (refer to [Appendix B Exhibit 1](#) and Table 4 below).

Table 4. Late DMR Submissions

Monitoring Period End Date	DMR Received Date	Days Late
1/31/2021	7/8/2021	129
2/28/2021	7/8/2021	102
3/31/2021	7/8/2021	71
4/30/2021	7/8/2021	41
12/31/2021	4/5/2022	66

According to the facility representatives, these late DMR submissions were due to issues with internal USFS procedures regarding the signing and submitting of the DMRs. The facility representatives said that these issues were resolved, and the procedure has been simplified to allow for the timely submittal of DMRs. Since the December 2021 DMR that was submitted April 5, 2022, the facility has not submitted their DMRs late.

Health and Safety

Observation 3. During the inspection, the inspection team observed a lack of confined entry signage at the treatment plant’s holding tanks (refer to [Appendix A Photographs 19, 21](#)). According to an email sent by the contract operator on June 9, 2023, this issue has been resolved and new confined space entry signage has been posted on the hatches for the facility’s lift stations and holding tanks (refer to [Appendix B Exhibit 3](#)).

Observation 4. During the inspection, the inspection team observed an expired fire extinguisher was still in use in the treatment plant’s operations room (refer to [Appendix A Photograph 17](#)).

Observation 5. During the inspection, the inspection team observed a chlorine storage tank was not labeled with proper hazardous material labels (refer to Appendix A Photograph 14). According to an email sent by the contract operator on June 9, 2023, this issue has been resolved and new hazardous material labels have been affixed to the chlorine storage tank (refer to Appendix B Exhibit 3).

Proper Operations and Maintenance (O&M)

Part B.I of the permit states that “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 the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance include, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit. (40 CFR 122.41(e))”.

Observation 6. According to the facility representatives, there is no backup generator or auxiliary power supply at the facility. During power outages, the contract operator closes all bathrooms, showers, and dump stations at the facility to avoid sanitary overflows at the septic tanks and lift stations.

Observation 7. The facility does not have a preventative maintenance plan. The bull run valve and one of the equalization/holding tank pumps broke in 2020 and 2021, respectively, resulting in operational challenges and effluent limit exceedances due to a lack of auxiliary equipment.

Observation 8. There are no SOPs for the collection system, nor is there a startup/shutdown SOP for the treatment plant during seasonal closures.

Observation 9. During the inspection, the contractor operator stated that there was a French drain surrounding the sand filter units so that any overflows from the sand filter would not contaminate the surrounding area or be included in any stormwater runoff contributions; however, the inspection team was not able to verify this claim as the facility did not provide schematics for the French drain after the inspection.

Observation 10. The chlorine for disinfection is adjusted only once per day and the dosing rate is determined based on the wastewater flow at the time of dosing. Due to this dosing routine, temporal variations in wastewater flow could affect the overall concentration of chlorine within the contact basin and final plant effluent.

Compliance Sampling

Part A.I of the permit states that “Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at Outfall 001 (after disinfection)”

Part A.III of the permit states that “Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (40 CFR 122.41(j)(1)). Representative sampling includes the collection of samples, where possible, during periods of adverse weather, changes in treatment plant performance and changes in treatment plant loading. If possible, effluent samples must be collected where the effluent is well mixed near the center of the discharge conveyance and at the approximate mid-depth point, where the turbulence is at a maximum and the settlement of solids is minimized. (40 CFR 122.48, 25 Pa. Code § 92a.61)”.

- Observation 11.** During the inspection walkthrough, the inspection team observed the location where the facility conducts its compliance sampling (refer to [Appendix A Photograph 22](#)). Compliance samples are taken at the end of the chlorine contact basin, before the outfall weir, using a sample dipper. This sampling point is located within the disinfection process area of the chlorine contact basin. It was discussed with the facility representatives that a more appropriate sampling location would be after the chlorine contact basin as the wastewater effluent falls from the weir to Outfall 001.
- Observation 12.** During the inspection, the inspection team observed that two bottles of reagent used for pH calibration were expired (refer to [Appendix A Photographs 15, 16](#)). According to an email sent by the contract operator on June 9, 2023, this issue has been resolved and the expired buffer solutions have been removed (refer to [Appendix B Exhibit 3](#)).

Closing Conference

After the inspection walkthrough, the inspection team met with the facility representatives for a closing conference and shared their preliminary observations. The inspection team reiterated to the facility representatives that all preliminary observations discussed were not compliance determinations and that any and all preliminary observations shared were subject to further investigation by the inspection team upon the additional review of records and documentation. Additional observations may be contained in this inspection report that were not identified at the time of the closing conference, after the additional review of materials following the inspection.

The inspection concluded at approximately 2:00 p.m.