



Clean Air Act Compliance Inspection Report

United States Environmental Protection Agency
Region 10 – Seattle, WA

Partial Compliance Evaluation

Kootenai Electric Cooperative – Fighting Creek **Coeur d’Alene, Idaho**

Inspection Dates: September 12-13, 2023

Report Author Signature

Date

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Date

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Table of Contents

1. Basic Facility and Inspection Information.....	3
2. Introduction	4
3. Inspection Elements and Field Observations – September 12, 2023	4
4. Inspection Elements and Field Observations – September 13, 2023	4
5. Closing Conference – September 18, 2023	6

Attachments

Attachment 1	Photo Log
Attachment 2	Facility Aerial Photos and Location Maps
Attachment 3	EPA Region 10 FLIR GF320 SOP
Attachment 4	Records Request
Attachment 5	Records and CBI Email Chain

1. Basic Facility and Inspection Information

Facility Location: Kootenai Electric Cooperative – Fighting Creek
22089 S. Hwy 95
Coeur d’Alene, ID 83814

Mailing Address: Kootenai Electric Cooperative
9014 W. Lancaster Road
Rathdrum, ID 83858

AFS Number: ID0000001605500091

Permit Number: Tier I Operating Permit #T1-2022.0021
Idaho Department of Environmental Quality

Facility Contact: Scott Davis, PE – V.P. of Engineering and Technical Services
208-292-3276, sdavis@kec.com

On-Site Contact: Gordon Campbell – Facility Operator
Energyneering Solutions, Inc.
541-610-3385, gcampbell@ENERGYneeringSolutions.com

Agency Inspectors: Zach Hedgpeth, PE – EPA Region 10
206-553-1217, hedgpeth.zach@epa.gov

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208-378-5748, skeens.alyson@epa.gov

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208-769-1422, almer.casile@deq.idaho.gov

Inspection: September 12-13, 2023

Inspection Report: April 24, 2024

Inspection Notice: Unannounced

Disclaimer

This report is a summary of observations and information gathered from the facility at the time of the inspection. The information provided does not constitute a final decision regarding compliance with the Clean Air Act (CAA) and applicable regulations or permits, nor is it meant to be a comprehensive report of all activities and processes conducted at the facility.

2. Introduction

- a) This was a Clean Air Act (CAA) compliance inspection by the Environmental Protection Agency (EPA). Almer Casile of the Idaho Department of Environmental Quality (IDEQ) attended portions of this inspection.
- b) The purpose of this inspection was to conduct a facility walk-through to gain basic familiarity with the facility equipment and processes, and to evaluate compliance with various applicable requirements of the CAA. The scope of the inspection included a site walk through, examination of industrial process equipment, review of various records, and discussions with facility staff, in addition to the observations of the inspectors.
- c) Advance notice of this inspection was not provided to the facility.

3. Inspection Elements and Field Observations – September 12, 2023

- a) The EPA inspectors arrived onsite between 11:30 – 12:00 by walking from the adjacent Kootenai County Landfill. Will Marks (Landfill Manager) and John “JP” Phillips (Kootenai County Solid Waste Director) accompanied the inspectors.
- b) Upon entering the Kootenai Electric Cooperative (KEC) facility, we met the operator, Mr. Gordon Campbell. After introducing myself and Inspector Skeens, I explained the purpose of our visit and we presented out inspector credentials. I explained that we were just stopping by to introduce ourselves, and that we intended to proceed with inspection of the facility the following day.
- c) We agreed to meet Mr. Campbell onsite the following day to conduct the inspection.

4. Inspection Elements and Field Observations – September 13, 2023

- a) Introductions and Opening Conference
 - 1. The EPA inspectors, accompanied by Inspector Casile of IDEQ, walked down to the KEC facility around 09:20 and met Mr. Campbell in the facility entrance area. Mr. Campbell suggested we contact Alan Herin, who is the Environmental Lead for Energyneering Solutions, Inc. (ESI), the company that operates the KEC facility on behalf of Kootenai Electric Cooperative. After some discussion, I decided to instead call the contact at KEC, Mr. Scott Davis, Vice President of Engineering and Technical Services at KEC.
 - 2. I called Scott Davis, introduced myself, and explained the purpose of EPA’s visit to the facility. A brief opening conference was conducted over the phone. I explained that EPA’s purpose for the visit was an unannounced inspection under the Clean Air Act. Mr. Davis stated his preference that the EPA communicate directly with him regarding the inspection, although he authorized Mr. Campbell to escort the inspectors around the facility and provide any onsite information necessary for purposes of the inspection. I explained that I would follow up with him following the field portion of the inspection in order to conduct a closing conference via phone.
 - 3. Following the call with Mr. Davis, the inspectors viewed the display screens in the room, which showed operational data and information regarding the facility.

Several display screens were photographed later in the inspection, and are shown in photos 163-168 in Attachment 1.

4. The inspectors discussed operations of the electricity generating facility with Mr. Campbell, including discussion of the ideal vacuum setting target for landfill gas collection, considered to be 32 inches of water column (in. w.c.) vacuum. Blowers at the KEC facility create this vacuum in the upstream piping which conveys landfill gas from the landfill. There is a section of piping on the outlet, positive pressure side of the blowers. I indicated our intention to conduct leak detection on the positive pressure piping sections using a FLIR infrared gas imaging camera¹.

b) Field Observations

1. We turned on the FLIR camera around 10:30 and exited the building in order to inspect the positive pressure sections of piping conveying landfill gas from the blowers into the building. The inlet duct, knockout drum, blowers, and ducting into the building were observed and inspected for leaks using the FLIR camera. These items are shown in photo 158 in Attachment 1. No leaks were identified using the FLIR camera.
2. The group next entered the building to observe the positive pressure ducting which conveys the landfill gas into the engines. The facility operates two Caterpillar model G3520C internal combustion engines, each equipped with Caterpillar generators: S/N 9WZ00988 (see photos 159-160) and S/N 9WZ00987 (see photos 161-162). No leaks were identified using the FLIR camera.
3. While observing the engines, Mr. Campbell informed the inspectors that siloxane builds up gradually inside the engines, and that he replaces the engine heads annually due to this buildup.

c) Office Discussions

1. The group returned to the entrance area inside the building around 11:15.
2. I asked Mr. Campbell about any operational issues the facility has experienced. Mr. Campbell described two fires that had occurred at the facility. The first fire occurred around 2017-2018. In this case, a coolant line on one of the engines had failed and had caught fire. The second fire occurred around 2019. In this case, a turbo on one of the engines had failed which allowed oil inside the engine, which caught fire.
3. Next, we discussed facility records. Mr. Campbell stated that while he does take hand written notes regarding actions such as oil changes and spark plug usage, all events, including all maintenance and repair actions, are entered into the facility computerized Supervisory Control and Data Acquisition System (SCADA). The SCADA “event table” is shown in photo 163. We also observed screens displaying other facility info, including a facility overview, the blower skid, and each of the two engines. These screens are shown in photos 164-168 in Attachment 1.

¹ FLIR GF320 infrared gas imaging camera. The specific camera used during this inspection was S/N 44401715. Use of the camera during this inspection followed U.S. EPA Region 10 Office of Environmental Assessment Standard Operating Procedure OEAFIELDSOP-111 entitled “Optical Gas Imaging with a FLIR GF320 Infrared Camera”, which is included as Attachment 3.

4. At the wrap up of the inspection I attempted to call Scott Davis back to conduct the closing conference, but was unable to reach him.
- d) The inspectors completed the field inspection around 11:45 and departed the facility.

5. Closing Conference – September 18, 2023

- a) The closing conference was held via phone call, and began around 14:00. I called Scott Davis of KEC, we were the only two attendees.
- b) I gave Mr. Davis an overview of the inspection and the Region 10 compliance process related to inspections and reports. I stated that no potential compliance concerns were identified during the inspection, but that compliance concerns could still be identified post-inspection.
- c) Confidential business information (CBI), photos, and records were also discussed. I explained that I would send Mr. Davis an email² containing EPA's forms regarding CBI, a link that would allow him to review the photos taken by EPA during the inspection for any potential CBI, as well as a list of facility records requested by EPA as part of the inspection.

² Post-inspection email correspondence is included as Attachments 4 and 5.