

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Other

N065670713

FACILITY: Drug & Laboratory Disposal, Inc.		SRN / ID: N0656
LOCATION: 331 Broad Street, PLAINWELL		DISTRICT: Kalamazoo
CITY: PLAINWELL		COUNTY: ALLEGAN
CONTACT: Brent Walter ,		ACTIVITY DATE: 01/26/2024
STAFF: Cody Yazzie	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS:
SUBJECT: VN Response Review		
RESOLVED COMPLAINTS:		

On January 26, 2024 Drug & Laboratory Disposal (hereafter DLD) SRN (N0656) provided Air Quality Division (AQD) Staff (Cody Yazzie) with a violation response and supplemental information in response to a violation notice that was issued on December 20, 2023. In the response the facility provided some records that were previously not provided along with a compliance schedule/plan for the violations cited.

DLD was cited for not having an O&M Plan (OMP) FG-DLS-5-HOODS or FG-DLS-5-SHRED. The facility was also cited for not providing records associated/required by the OMP. DLD indicated that the facility has been documenting daily inspections checklist for the hoods and shredders that would be apart of the OMP but not been formally approved by the AQD. DLD indicated that the facility would submit the OMP's by February 2, 2024. Kalamazoo District Office received these OMP Plans on February 3, 2024 and sent an approval letter regarding them on February 22, 2024. These cited violations appear to be resolved.

DLD was cited for not providing records of the waste category and the amount of each waste category that was processed in FG-DLS-5-HOODS, FG-DLS-5-SHRED, and EU-DLS-2-MILL on a calendar month basis. The facility indicated that they do keep general records of each waste category, and amount received and processed. However, they do not have a readily available report. The facility stated they plan to have a report using the waste management data system that can be run monthly to be made available upon request by March 29, 2024. If the facility is able to make this report in a manner acceptable to the AQD this would appear to resolve this violation.

DLD was cited for failing to provide breakthrough testing results the FGTANKS associated PTI No. 759-83A. The facility appears to be conducting test appropriately and replacing carbon for breakthrough as stated in the permit. From these records this violation appears to be resolved.

Initially DLD was cited for not providing breakthrough testing results for FG-DLS-5-HOODS, FG-DLS-5-SHRED, or EU-DLS-2-MILL. The facility did provide breakthrough testing results for the 18 months requested on January 26, 2024 . The facility did appear to have been conducting and recording these results. Review of these records showed that DLD does not appear to be conducting these tests or replacing the carbon after breakthrough as stated in the permit. For both flexible groups the facility is required to conduct breakthrough testing for chloroform, benzene, chlorobenzene, isopropyl alcohol, methyl ethyl ketone, methylene chloride, ethyl benzene, toluene, trichloroethene, vinyl chloride, and xylenes. The facility only currently measure breakthrough for methylene chloride, toluene, and xylenes. The facility is able to request a change to testing frequency and/or list of compounds included in the breakthrough testing but must get written approval from the AQD District Supervisor. Staff could not find any written

approval in the facility files that would indicate a change in testing has been approved. The facility would appear to need to test for the breakthrough compounds listed in the permit. This appears to be a violation of Special Condition V.1. In a discussion with DLD the AQD Staff brought up the breakthrough testing issues stated. DLD appeared to have the information and data necessary to include missing analyte for breakthrough testing requirements. DLD and AQD Staff agreed that DLD would provide updated breakthrough testing data. This was provided on February 27, 2024. The issue with the facility not testing for all the necessary analyte required the permits appear to be resolved after the submission of the February 27, 2024 records.

For FG-DLS-5-HOODS breakthrough is defined as when the combined emission rate of the compounds tested for in the breakthrough evaluation is 0.28 pounds per hour or more after the carbon. If break through occurs the permittee shall not operate the associated fume hood until the carbon has been replaced. On January 26, 2024 DLD provided initial breakthrough records that did show carbon was not getting changed when these breakthrough limits were getting met. Since DLD was not calculating for all the required analytes as previously stated it was also likely that the facility be exceeding the breakthrough limit more often than the initial records showed. The initial records showed the following.

For the facility break through calculations the facility takes the fume hood concentration readings after the carbon and subtracts a concentration of ambient air. This appears to be in accurate as the facility should only be using the reading of the fume hood concentration after the carbon. The facility then takes the concentration calculates a pound per hour emission rate and pounds per month emission rate based on stack flow and hours of operation. It was noted that there were several months where the facility recorded a breakthrough but operated the hoods without changing the carbon. Hood 1 had breakthrough evaluations that had VOC emissions at 0.4614 lbs/hr on August 2023. The sample and analysis date occurred on 8/1/2023. Records showed that the facility operated 41.1 hours during the month. The date of last replacement isn't noted until the October monthly inspection sheet where it is indicated the carbon was replaced on 9/14/2023. This would have the facility operating the hood unit with a breakthrough result for the entire month of August. Hood 2 had breakthrough evaluations that exceeded the 0.28 lbs/hr in the months of August 2023 and September 2023. These evaluations were calculated to be 0.5195 lbs/hr and 0.3124 lbs/hr respectively. The facility recorded 126 hours operated in August 2023 and 156 hours operated in September 2023. According to the monthly inspection sheet records these filters did not get changed until 9/12/2023. The facility appears to have operated about 1.5 months without changing the carbon with after an exceeded breakthrough result occurred. Hood 4 appeared to have a breakthrough result recorded in May 2023. The facility recorded a breakthrough evaluation that calculated VOC breakthrough to be 1.0596 lbs/hr. This month it was recorded that the facility only operated the unit 0.9 hours during that month. It is possible that the facility never operated the hood after the breakthrough result was exceeded. Records showed that filter was not changed until 9/18/2023. The months in between May to September the facility did not record another breakthrough evaluation above the 0.28 lbs/hr even though it was recorded that the carbon was not changed. Hoods 1 and 2 appear to clearly violate the breakthrough replacement conditions. It is possible that Hood 4 did as well however it is not certain. These appear to be a violation of Special Conditions V.1. AQD Staff discussed with DLD about the violation concerns and both agreed that DLD would submit updated records. These records were submitted on February 27, 2024.

In the updated records DLD provided breakthrough testing results of all required analytes required in the permits and indication of which month carbon was replaced. Records were provided for the time period of January 2022 through February 2024. These records showed that the facility exceeded the breakthrough limit without replacing carbon as required for Hood1 (April 2022, May 2022, June, 2022, July 2022, August 2022, September 2022, November 2022, December 2022, January 2023, February 2023, March 2023, April 2023, May 2023, June, 2023, July 2023, August 2023, September 2023, December 2023, and January 2024), Hood2 (January 2022, April 2022, May 2022, June, 2022, July 2022, August 2022, September 2022, November 2022, December 2022, January 2023, February 2023, March 2023, April 2023, May 2023, June, 2023, July 2023, August 2023, October 2023, November 2023, December 2023, and January 2024), Hood4 (May 2022, July 2022, August 2022, September 2022, October 2022, November 2022, December 2022, January 2023, February 2023, March 2023, April 2023, May 2023, July 2023, August 2023, October 2023, November 2023, December 2023, and January 2024), Hood5 (May 2022, June 2022, July 2022, August 2022, September 2022, November 2022, December 2022, January 2023, February 2023, March 2023, April 2023, May 2023, June 2023, July 2023, August 2023, October 2023, November 2023, December 2023, and January 2024). These updated records indicate that the facility has not been changing the carbon filters as required by the permit. These are violations Special condition V.I. Staff indicated to DLD that a violation notice would be sent for these violations.

For FG-DLS-5-SHRED and EU-DLS-2-MILL breakthrough is defined as when a reading at the point between the first and second trays that is 20% or more of the influent concentration into the first tray. If break through occurs the permittee shall not operate the associated shredder or hammermill until the carbon has been replaced. On January 26, 2024 AQD Staff was initially provided with breakthrough testing did not appear to be conducted in accordance with DLD's permits. The facility appears to be taking a measurement at a point in between the first and second tray however, there does not appear to be a measurement of the influent concentration. From this the facility appears to not be conducting breakthrough evaluations correctly. Because the facility is not conducting the breakthrough evaluations correctly compliance on the appropriate replacement of the carbon filters cannot be evaluated. This is a violation of Special Conditions V.1. Staff did discuss these concerns with DLD and both agreed that the facility would be measuring the influent concentrations and provide updated records for February 2024. These records were provided February 27, 2024.

DLD was cited for not providing emission calculations for FG-DLS-5-HOODS, FG-DLS-5-SHRED, or EU-DLS-2-MILL. The facility stated that they were previously not being kept but used the breakthrough evaluations to provide emissions calculations for 18 months. These emissions calculations were provided on January 26, 2024 and included methylene chloride, xylenes, and toluene. As stated previously these are not all the compounds that DLD is required to breakthrough test for as apart of the VOCs or in their emission limit in their permit. It appears the facility is not calculating these emissions appropriately as they appear to have not received approval for change in breakthrough testing compounds. This is a violation of Special Condition VI.6 of FG-DLS-5-HOODS, Special Condition VI.5 of FG-DLS-5-SHRED, and Special Condition VI.7 of EU-DLS-2-MILL. AQD Staff discussed with DLD the violation concerns and both agreed that the facility would update emission calculations to include all required VOCs and acetone required by the permits. These updated records were provided on February 27, 2024.

The updated records provided emission calculations for the time period of January 2022 through February 2024. In these records DLD provided emission calculations for required VOC analyte (methylene chloride, xylenes, toluene, vinyl chloride, chloroform, benzene, trichloroethylene, chlorobenzene, ethylbenzene, isopropyl alcohol, methyl ethyl ketone, acetone, and tetrachloride). These emission calculations included the sampling concentrations that is converted to lbs/hour then calculated into monthly emissions based on hours of operation of the emission unit. DLD also provided 12-month rolling emission calculations so that compliance with the permit limit could be evaluated. These records showed the following.

The facility calculated emission records for each hood, shredder, and the hammermill. The updated emissions calculations including all required VOC analytes, acetone, and tetrachloroethylene appear to be calculated correctly based on concentration collected, hours of operation, and exhaust flowrate. Each shredder in FG-DLS-5 SHRED and EU-DLS-2-MILL has its own 500 lbs per year combined VOC, acetone, methylene chloride, and tetrachloroethylene emission limit. All the shredders in FG-DLS-5 SHRED and EU-DLS-2-MILL appear to be meeting the 12-month rolling emission limit based on the provided updated records.

Each hood in FG-DLS-5-HOODS is limited to 600 lbs of combined VOC analytes, acetone, and tetrachloroethylene emissions based on a 12-month rolling period. The updated records showed that Hood 1 exceeded the 12-month rolling limit in the following months of the reviewed time period: January 2022, February 2022, March 2022, April 2022, May 2022, June 2022, July 2022, December 2022, January 2023, September 2023, October 2023, November 2023, December 2023, January 2024, and February 2024. The 12-month rolling emissions ranged from 603.6 lbs per year to 1,178.3 lbs per year, with April 2022 having the largest exceedance.

Hood 2 exceeded the 12-month rolling limit in the following months of the reviewed time period: January 2022, February 2022, March 2022, April 2022, May 2022, June 2022, July 2022, August 2022, September 2022, October 2022, November 2022, December 2022, January 2023, February 2023, March 2023, April 2023, May 2023, June 2023, July 2023, August 2023, September 2023, October 2023, November 2023, December 2023, January 2024, and February 2024. The 12-month rolling emissions ranged from 1,562.2 lbs per year to 245,825.7 lbs per year, with February 2024 having the largest exceedance.

Hood 4 did not appear to exceed the 600 lbs per year VOC, acetone, and tetrachloroethylene emission limit based on updated records.

Hood 5 exceeded the 12-month rolling limit in the following months of the reviewed time period: May 2022, June 2022, July 2022, August 2022, September 2022, October 2022, November 2022, December 2022, January 2023, February 2023, March 2023, April 2023, May 2023, June 2023, July 2023, August 2023, September 2023, October 2023, and February 2024. The 12-month rolling emissions ranged from 607.4 lbs per year to 35,882.0 lbs per year, with February 2024 having the largest exceedance.

EU-DLS-2-MILL was cited for not providing records related to the particulate control filter replacements. The facility stated that they have been replacing the hammermill particulate control filter "as needed". However, it has not maintained the necessary documentation. DLD stated in their response that they will start documenting each time the particulate filter is

replaced. If the facility starts documenting these replacements the violation would appear to be resolved.

As a part of the record review process and previous inspection process the facility indicated that there was a fire at the facility in 2015 to relocate and install new equipment for the Hoods and Shredders. This is a violation of Rule 201 as the facility should have applied for a PTI modification to operate the newly installed an relocated Hoods and Shredders.

AQD Staff plans to send a violation notice for the above violations that were noted during the records review.

NAME Cody Yegor

DATE 2/29/24

SUPERVISOR Monick