DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

FCE Summary Report

Facility : Arbor Hills Landfill, Inc.	SRN :	N2688
Location : 10690 W. SIX MILE RD	District :	Jackson
	County :	WASHTENAW
	ompliance tatus :	Compliance
Source Class : MAJOR	Staff : Diane ł	Kavanaugh Vetort
5 0, ., _0	FCE Completion Date :	9/21/2023
Comments : ROP Source FCE and several PCE		

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
09/21/2023	On-site Inspection	Compliance	Complete compliance inspection Major Source.
09/19/2023	MACT (Part 63)	Compliance	2023 1st Semi Annual ROP NESHAP (MACT AAAA) Report. Report HOVs for Well temp. compliance. Control device (no control) downtime reported. Collection system down 46 times. SEM Q1 10 exceedances; Q2 9 exceedances. All were cleared but one 30 day remonitor was early (deviation in ROP report). Wells under Enhanced Monitoring: 313, 287, TS01. Late CO monitoring reported deviation ROP report. Collection System shut downs = mostly STS start up/maintenance. Wellfield expansion: 9 Wells new or redrilled. 7 Wells decommissioned.
09/19/2023	Complaint Investigation	Compliance	Entered on behalf of Jeff Benya, AQD Detroit Office. Documents odor evaluation he conducted. Several odor complaints were received this morning. The first was received 6:30 AM and sent to the Detroit Office mistakenly.

Activity Date	Activity Type	Compliance Status	Comments
09/19/2023	ROP Semi 1 Cert	Compliance	2023 1st Semi-annual ROP Cert & Dev Report. Report 4 deviations: SEM 30-day remonitoring performed 21 days after initial exceedance (LF MACT). Did not sample CO within 7 days of an exceedance Well 313 temperature exceedance. Sampled @ 1wk late (LF MACT). Flares average temp was more than 28 deg C below avg temp during recent performance test. (36) three-hour periods temp was below compliance temp. Flares don't operate full 3 hrs = start up shut down malfunctions have to be included. Sufficient to report deviations. (ROP/MACT) Records flow/temp once every 15 min missing data on 7 occasions. Worst 4/16-19 61 hrs. Flare 392 flowmeter malfunction / replaced meter. (ROP/MACT) Compliant temps are: #391 =1520 deg F; #392 = 1396 deg F.
09/19/2023	CO/CJ	Compliance	2023 1st Semi annual CJ Report. Multimedia to MMD and AQD. AHLF GFL required by Consent Judgement No. 2020-0593-CE. AQD portions reviewed and acceptable. Required reporting under Section 6.3. Subparagraphs, 5.1(G), 5.3(D) (Requires create retain record 5.3 (C)), 5.4(A)(4), 5.5(F), 5.6(B), 5.7, 5.8(D), 5.9(E), 5.14(B). AQD specific areas include H2S Table of Well readings. Some are very high but doesn't appear to impact perimeter monitors during the period. Flare monthly start up operation check =OK; perimeter monitoring report - Q1 & 2; Corrective actions for Well monitoring 15 min rolling avg data. MMD part: Report no odorous wastes, Report Compost cklist. DKV note: Turn rows regularly. No record of checks of wind direction / weather on the form. My opinion it should be added.

Activity Date	Activity Type	Compliance Status	Comments
09/15/2023	Complaint Investigation		Document complaint response & odor observation conducted by Gary Schwerin, MMD. Several complaints received. Email correspondence copied to this report.
09/14/2023	Telephone Notes		ON BEHALF OF Mike Kovalchick: email notes from his conversation with AT and Dave Seegert.
09/14/2023	CO/CJ	Compliance	Email CJ Notice of Change from GFL Anthony Pelletier to Scott Miller. "The change takes affect at the end of the calendar year. Fernando Camargo started last week and I will be transitioning my daily duties to him over the next several months." fcamargo@gflenv.com Hard copy sent.
09/14/2023	Stack Test		Online AHE Air Quality Test Plan Submittal Form received. Required test PTI 68-23, MI ROP N2688-2011a. FGTURBINES, EUTURBINE4. TESTER: IMPACT AHE contact: Michael Langfelder, mlangfelder@opalfuels.com. Andrew Riley, AQD TPU assigned.
09/14/2023	CO/CJ	Compliance	AHE CD required Aug 2023 Monthly Report. Required by PTI 68-23, Condition FGPROJECT23 VII.2. Table with gas parameters and total flow data, AHE engine plant, GFL Flares, and RNG. Will be placed in file. Review: Shows end of month ran RNG & Flares only. Overall vacuum and methane fairly consistent throughout.
09/05/2023	Reg. Applicability Determination	Compliance	Document formal request from Emerald RNG of AHE to relocate waste gas flare within same site. Requested exemption review from AQD and submitted modeling. District submitted modeling to Permits for review. Determined acceptable. Rule 282(2)(a) exemption applicable. Scott Miller, DS sent an email to AHE consultant Jeff Pfost. "AQD agrees with the modeling analysis. AQD also agrees the flare can be relocated to the new proposed location under permit exemption 282(2)(a)."

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08/24/2023	On-site Inspection	Compliance	PCE On-site visit to test AQD's new LaserMethane Smart device at the AHE and the new RNG Plants. Also off-site observations and photos taken of GFL owned Arbor Hills Landfill. Email summary copied AQD District and to MMD District staff and AQD Enforcement.
08/14/2023	CO/CJ	Compliance	Rec'd Arbor Hills Monthly Report to EGLE July 2023. Pdf. attached. The monthly report required by PTI No. 68-23, Condition FGPROJECT23 VII.2. Email from Mike Langfelder, Director of Environmental Services. mlangfelder@opalfuels.com INCLUDES: July LFG Flow data by day, in Table format. Vacuum, Methane, Avg Heat Input, AHE plant heat content, AHE plant flow, GFL flares flow, EURNGPLANT flow. The RNG operated 3 days (25-27) based on this record. Vac is high, lot high 80's and low 90's. Methane good = @50% or higher. SCF/day @11,000 or more most days.
08/11/2023	Complaint Investigation		Documents large number of complaints received 8/9-10/2023. 28 odor complaints were rec'd by citizen group / one AQD online form over two days. Morning and evening times, more cite garbage odor. During this time it is noted the Perimeter Monitors were down showing no data on the public website since 9:00 PM on 8/8. Also MET station was not showing wind data. AQD checked the site on the 9th and 10th. MMD told AQD they would conduct an odor observation the morning of 8/11.

Activity Date	Activity Type	Compliance Status	Comments
08/11/2023	Other	Compliance	AHL EGLE Extension Request Update. AT to SM pdf. related to previously reported CJ VGW liquid in well corrective action delays & request(s) for extension. Prior deadline was extended to July 14 and August 7. Notice states most completed by July/Aug dates, some delayed until 8/18, 8/31, and 9/26. Most need airlines hooked up. One Well didn't have date, not complete, sent email to AT. Reply rec'd said 8/7 the piping is complete.
08/10/2023	Complaint Investigation		Document receipt of @ 18 odor complaints 9th (PM) and 10th (AM). GFL perimeter monitoring public website has been down since 8/8 at 9:00PM. MET station also not showing wind data. Forwarding complaints to MMD Gary & Richelle. More have been stating "garbage" odor recently. DKV accuweather check WSW 4 mph @67 degrees F this morning. Barometric pressure 29.70 in
08/07/2023	Complaint Investigation		Document complaint response to series of odor complaints, and two staff perimeter road odor observations during period 7/17- 25. AQD staff observed MSW odor on Napier & 6 Mile on mornings of 17th and 25th. DKV contact AT /DS for response - delay due to vacations.

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08/01/2023	CO/CJ	Compliance	AHE/AHRNG Required Submittal: NTP RNG Construction DJ# 90-5- 2-1-12226. AHE Semi Annual Report per Consent Decree 7-28- 23 pdf. STS H2S inlet/outlet sampling during period: @350- 450 ppm inlet and all 0 outlet Draeger tube sampling. Schedule for start up of RNG: AHE and AHRNG's Affiliate Emerald RNG LLC ("Emerald"), are progressing on the construction of the RNG Facility. Based on the Project Schedule, dated July 19, 2023 as prepared by Stearns, Conrad and Schmidt Consulting Engineers, Inc. (d/b/a SCS Energy and SCS Engineers of Michigan (the "EPC Contractor"), the following milestone dates are anticipated: a. 8/14/23: The first start of the RNG Facility for testing and first production of renewable natural gas. b. 8/28/23: Reliability testing and exporting of gas. c. 10/20/23: Final completion.

Activity Date	Activity Type	Compliance Status	Comments
07/31/2023	CO/CJ	Compliance	2nd Quarter 2023 Report CJ No. 2020-0593-CE Section 6.3. GFL upload to EGLE OneDrive link GFL-AHLF Transfer Data Folder on July 28th 2023. A hard copy cover letter with compliance certification required in Section 6.4 of the Consent Judgment (Dave Seegert) original sign sent via overnight mail. REVIEW: required report. Several requirements covered: Section 5.3(A), 5.4(B)(3) 5.12(D), 5.13(D). This includes Well data, Drone SEM, LEL gas probes, Leachate Levels: AHW April 2.6 million; May 2.8 million; June 2.4 million. COMMENTS: (DKV) appears lot of watered in wells, yellow highlights; Drones April (19 hits; 10,000 highest one) and May (1) only. April many high ones in up the hill from cell 6. LEL's continue in the >1000 I have never seen this high before and many others higher. CH4 75%. (MK) comments:They continue to schedule/ replace the flooded wells with new ones and continuing to maintain pumps. Appears the methane exceedances beyond the border continue and what GFL is doing isn't working.
07/27/2023	CO/CJ	Compliance	2ND QUARTERLY PERIMETER MONITORING REPORT. PM Roo Cause Analysis Investigation Reporting (Consent Judgement No. 2020-0593-CE). Includes PM Alarm Log, PM Downtime log, PM Root Cause Analysis Report. AQD review: @19 dates and 8 of these have causes identified. Various GCCS well related, one compost incident along with GCCS offline/low vacuum. One inadequate cover. Other RNG transition related. Corrective actions taken. Most alarms state nothing found as identified with monitoring/back trajectory. AQD will be conducting on-site monitoring in near future.

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07/25/2023	Odor Evaluation		AQD Mike Kovalchick provided DKV and SM with an email update. This entry documents brief odor observation, and other compliance updates as observed while off site while in area conducting other AQD related inspection.
07/17/2023	Other	Unknown	STS MALFUNCTION NOTIFICATION DJ 90-5-2-1- 12226. Email from Suparna to AQD. Scott fwd to me 7/18. LATE Update to prior notification of downtime 7/10-7/12. AQD had not been told of restart. Now in 7/17 email: "We are notifying you that the Sulfur Treatment System was periodically offline during the following periods. Untreated gas was not combusted at the AHE plant or the GFL flares. Date Start of Downtime STS back online 7/10 10:45am 12:22pm 7/11 8:48am 10:43am 7/12 9:56am 2:32 p.m.
07/17/2023	Other	Compliance	AHL EGLE Extension Request Update. AT to SM pdf. related to previously reported CJ VGW liquid in well corrective action delays & request(s) for extension. Prior deadline was extended to July 14. Notice states delayed until end of month due to drill rig malfunction. (no reply will be sent).
07/17/2023	Odor Evaluation		Documents brief odor observation, conducted off site while in area by AQD Mike Kovalchick. Note: AQD received 55 complaints from 7/16- 7/24/2023.
07/14/2023	Complaint Investigation	Compliance	ODOR COMPLAINT EVENT 7/13. Document about 21 odor complaints received 7/13 PM and 1 on morning of 7/14. Email Anthony Testa & Dave Seegert GFL for investigation and response. Call with AT/DS in reply.

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07/14/2023	Other Non ROP	Compliance	QUARTERLY WOI Status Report: last ext.May23 allow Quarterly. This is first report. GLF (Section 1 & 2) MAY-JUN 2023 (partial because April in last Bimonthly). Required to submit HOV approval letters starting 5/6/19. Most recent 1 yr approval issued 5/12/23. WOI Report is the 28TH Elevated Temperature Landfill Status Report (ETLF). AQD required by 15th of the month following quarter. Report Wells of Interest (WOI) will now include wells AHWW0313, AHWWTS01, AHWW0287 not in this report (CHANGE since last added 3 more to prior reduced #of 11 plus TS01 in this report). Reports are Filed. Covers: well gas data, pump data, downhole temperatures (last CHANGED to only above 165 at well head), construction, plant data. REPORT: 12 inches daily & interim cover. No new cracks, leachate, etc AHE/OPAL plant daily data shows ; same methane 51-52%, O2 1.5 -2%, vacuum , flow 9-10K. Liquid levels now REPORT Quarterly in CJ (last done Apr-May-Jun 23). Ryan Central completed work that started 12/1/22 southside. Included in approved Nov 25, 22 ext request to 3/26/23. 2023 Phase 1 GCCS construction start 5/15 by Landfill Drilling and Piping Services (LDPS). (3) WOI Redrills started 5/22/23 290-290R, 301- 301R, 302-302R. 2nd Quarterly lab canister data 5/25/23 state results consistent. Attachments 1: LFG and well pump data; 2 and 3: provide monthly carbon monoxide and hydrogen/nitrogen data for WOI - state consistent. Attachments 1: LFG and well pump data; 2 and 3: provide monthly carbon monoxide and hydrogen/nitrogen data for WOI - state consistent. Attachments 1: LFG and well pump data; 2 and 3: provide monthly carbon monoxide and hydrogen/nitrogen data for WOI - state consistent. 4: WOI Well MAP. 5: is Plant data = 3% or greater avg O2 in May. Better in June. Vacuum much higher now 80-90 inches. May LFG flow all over the place 1K to 11K better in June 7K-10K. 6: WOI 12-month data trend.

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07/10/2023	Other		AQD email Dave/Anthony: "Has waste placement started in Cell 6? If so when did it start, and if not, do you have a date?" Received email reply, "Yes, we received license and commenced fill on Friday July 7". It is also noted that AHE notified EGLE last week that STS will be down today through Weds (possibly).
07/06/2023	Other	Compliance	STS MALFUNCTION NOTIFICATION DJ 90-5-2-1- 12226. Email from Suparna to AQD. Scott fwd to me.
06/29/2023	Other		Scott Miller, AQD DS received an email from Gary Schwerin, MMD DS: "The operating license was issued today and the cell certification was approved today. Arbor Hills Landfill is allowed to begin placing waste in Cell 6A at any time."
06/29/2023	Other		AQD reminder email AHE to update ROP application now that 2 PTI issued. Need MM forms and more. Sent original email 6/13/23. Response from Suparna today.
06/29/2023	Other		Contact on site with Steven Cowart, Commissioning Manager for the new plant. He will be there until plant is fully operational. Follow up email / notice of visit was sent to primary contact Suparna.
06/15/2023	Stack Test	Compliance	STS H2S Sampling Plan Submittal rec'd: Email send to Jeremy Howe, TPU and Jackson DS: "The attached is being submitted as required per Air Permit Nos. 67-23 (Emerald RNG) and 68-23 (Arbor Hills Energy). This is also being sent hard copy to the Jackson Office for delivery tomorrow. Thank you." Mike Langfelder Director of Environmental Services 5087 Junction Road Lockport, NY 14094 Cell: (716) 463-7917 mlangfelder@opalfuels.com APPEARS ACCEPTABLE.

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06/14/2023	Other Non ROP	Compliance	PTI 68-23 for AHE was issued on May 31, 2024. Permit contains notification requirements: EUTURBINE4 Condition VII Reporting: within 30 days after begin using desulfurized LFG notify in writing. FGTURBINES Condition VII Reporting: within 30 daysetc EMAIL letter & hard copy. Email from Jeff Pfost, EPI consultant.
06/12/2023	Other	Compliance	STS MALFUNCTION NOTIFICATION DJ 90-5-2-1- 12226. Email from Suparna to AQD. Scott fwd to me.
06/02/2023	Other	Compliance	STS MALFUNCTION NOTIFICATION DJ 90-5-2-1- 12226 Update Email from Suparna to AQD. Scott fwd to me. "All; We are notifying you that the STS system was placed back online at 12:34 p.m. EST today (6/2)."
06/01/2023	CO/CJ	Compliance	RELATED SEP TREE BUFFER: Email from GFL attorney Philip Cornella to AQD AG, Elizabeth, Arbor Hills has located approx. 50 spruce at a nursey in another part of Michigan, and verbally locked those in this afternoon. These 50 trees are reported 9-11 ft in height. It has also found another 10 trees at a local nursey (2-3 miles from the landfill) that meet the 8-10 ft height requirement. It verbally locked those in as well this afternoon.
05/26/2023	Other	Compliance	Documents NOTICE FROM AHE: EMAIL 5/25 to Scott Miller, Subject: STS Malfunction Notification DJ 90-5-2-1-12226 Notice that STS will be shut down for repairs Tues 30th through Fri June 2nd. AQD replied 5/26 requested clarification vacuum maintained and treatment/control pathway. Notice to community suggested. Reply rec'd copied emails in report.

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05/26/2023	CO/CJ	Compliance	STS Malfunction Notification DJ 90-5-2-1-12226 Email from Suparna: We are writing to inform you that the EPC contractor, SCS, is planning to make modifications on the Vilter blower skid and associated STS system to address the vibration issues and some additional punch list items that will require taking the STS offline for 4-days. Attached is a letter from SCS notifying us of their need to perform this work for improved safety, operation, and overall reliability. The STS is expected to be offline from 7 a.m. on Tuesday, 5/30, and
			be back online by 6 p.m. on Friday, 6/2.
05/16/2023	Complaint Investigation		Documents large number of Odor Complaints received May 15-16. Follow up with GFL resulted in submittal of May 15 and 16, 2023 Root Cause Anaysis. pdf GFL reports odor caused by lack of vacuum on the well field due to transitioning of STS at new AHE RNG Plant. Also, Compost windrows moved 15th, believe caused odors in evening. Ceased 16th & applied odor neutralizer.
05/15/2023	CO/CJ	Compliance	Notice received (AQD contacted) that STS commenced operation on May 5th. The AHE CJ requires start treating LFG for sulfur on May 15. Anthony Falbo email: "The system came online Friday May 5th. When it is running, we have sampled the outlet gas at zero PPM H2S. We have had a few shakedown issues since the 5th related to ancillary equipment, such as the new plant's air compressor, some level switches, the portable power generation equipment suppling the STS with electricity and the new blowers and their vibrations. The system has run well for being in shakedown mode. If the system shuts down for any reason and we must direct untreated gas to flares and/or turbines, we are developing a notification system today so we can inform both EGLE and EPA of the event pursuant to Paragraph 53 of the Consent Judgement."

Activity Date	Activity Type	Compliance Status	Comments
05/15/2023	Other Non ROP	Compliance	Bi Monthly WOI Status Report: GLF (Section 1 & 2) MAR/APR3 2023. Required to submit Bimonthly HOV approval letters starting 5/6/19. Most recent 1 yr approval issued 5/12/23.Changed report to Quarterly after this report. WOI Report is the 27TH Elevated Temperature Landfill Status Report (ETLF). AQD required by 15th of the month. Report Wells of Interest (WOI) includes wells (CHANGED now 11 and TS01R). Reports are Filed. Covers: well gas data, pump data, downhole temperatures (CHANGED to only above 165 at well head), construction, plant data. REPORT: 12 inches daily & interim cover. No new cracks, leachate, etc AHE/OPAL plant daily data shows OFFLINE 4/17- 28th; good methane 51-52%, O2 1.5 -2%, vacuum low 70's, flow 9- 10K. Liquid levels now REPORT Quarterly in CJ. Ryan Central completed work that started 12/1/22 southside. Included in approved Nov 25, 22 ext request to 3/26/23. 2023 Phase 1 GCCS construction to start 5/15 by Landfill Drilling and Piping Services. Quarterly lab canister data 2/28/23 in May 15, 2023 report. Attachments 1 LFG and well pump data; 2 and 3 provide monthly carbon monoxide and hydrogen/nitrogen data for WOI - state consistent. 4 = MAP. 5 is Plant data. 6 WOI 12-month data trend. 1st Q2023 vertical temperature profile for the WOI is included as Attachment 7.

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05/02/2023	CO/CJ	Compliance	1st Quarter 2023 Report CJ No. 2020-0593-CE Section 6.3. GFL uploaded to EGLE provided OneDrive link GFL-AHLF Transfer Data Folder on April 28th 2023 at approximately 2:15 PM. A hard copy of the cover letter with the compliance certification required in Section 6.4 of the Consent Judgment (Dave Seegert) original sign sent to you via overnight mail. REVIEW: CJ No. 2020-0593-CE required report. Several reporting requirements are covered: Section 5.3(A), 5.4(B)(3), 5.12(D), 5.13(D). This includes Well data, Drone SEM, LEL gas probes, Leachate Levels. COMMENTS: (DKV) A LOT of watered in wells, yellow highlights; LEACHATE increased from Jan to Feb to March. March really high seems: AHW 2,350,754 and AHE 833,749. Think they were at 1 MM in past and had hard time dealing with that. Drones for Jan and Feb only. Lots hits Jan, much less Feb. Many high ones in Jan up the hill from cell 6, multiple, one 15,000 ppm. Probes continue to be high LEL's in the >1000. (MK)The leachate tends to be the highest in the 1st quarter time frame especially since we had the melting season early this Winter. They continue to schedule/ replace the flooded wells with new ones and continuing to maintain pumps so that is probably the best that we are going to get from them. MMD really needs to review GFL's plan on the methane exceedances beyond the border as clearly what GFS is doing isn't working.

Activity Date	Activity Type	Compliance Status	Comments
05/02/2023	Other Non ROP	Compliance	WOI Extension Request GFL (Section 1 & 2) expires May 6, 2023. Required to submit annual renewal of HOV approval letters starting 5/6/19. Most recent revised letter issued 6/2/21. Elevated Temperature Landfill Status Report (ETLF) submit bimonthly. Report Wells of Interest (WOI) includes wells (now 22 and TS01R). Reports are Filed. Covers: well gas data, pump data, downhole temperatures, construction, plant data. 12 inches daily & interim cover. REVIEWED AND APPROVED UNTIL MAY 6, 2024. Significant Changes Requested: 1) Reducing the number of WOI to 12. 2) They are also requesting to remove downhole temp unless over 165 F. 3) They also want to switch to quarterly reporting instead of every other month. Since temperatures in the HOV wells appear to have either have cooled or stayed the same, it seems that the scaled down version they are proposing is probably reasonable.
04/25/2023	Other Non ROP	Compliance	AQD approved ext to March 2023 for some air FM work. Received Update on 4/25/23. Table of well action items, mostly pump related. Many wells pumps returned to normal. Some may require further action. Will be an update in Vertical Well Report due 4/30.
04/20/2023	Other		See also 4/17 and 4/19 Other entries. Update this morning from GFL on RNG Tie-in project. Email: Mr. Miller, We are happy to report that the RNG tie-in work was successfully completed yesterday (4/19/23) and the landfill GCCS system was back up and running by 5PM est. Thank you, Anthony

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04/19/2023	Other		See also 4/17 entry. Dave contacted Scott to inform him that the RNG pipeline tie-in project will take place today. Yesterday was cancelled due to landfill gas leaking past the valve shutoffs at the landfill. Weather today should be better; MK said SE winds. 5 complaints were received Tues 18th. GCCS was shut down for work that did not happen and so was returned to normal operation by end of day per GFL. AQD was concerned for off site gas/odors that evening. It appears weather and GCCS operation did not materialize in monitor exceedances or many complaints. GFL stated they are communicating with Northville Twp. They also updated narrative part of monitor website.
04/17/2023	Other	Compliance	RNG PLANT pipeline to AHE plant and GFL blower building related. AT notified AQD-JDO
04/07/2023	Malfunction Abatement Plan	Compliance	Arbor Hills Energy and Arbor Hills RNG, LLC (also Emerald RNG LLC) are currently Section 3. Sulfur TREATMENT System (STS) Operational Plan & Preventative Maintenance Plan. Plan includes new system for H2S control through 2 sets of canisters. Limit 20 ppmv. Rotate between canister sets. Various monitoring and media change out/handling/disposal are noted. AQD approved, however may require change following start up operation.
03/31/2023	MAERS	Compliance	AHE MAERS received in system and hard copy received 3/15/23. Review under S1 and S2 entry same date.
03/31/2023	ROP Annual Cert	Compliance	Annual Deviation & Certification AHE. Report 2 deviation for the year = same SO2 Violation ongoing but resolved through DOJ Consent Decree. Acceptable.
03/31/2023	ROP SEMI 2 CERT	Compliance	2nd Semi-annual Cert & Dev Report AHE. Report same SO2 emission limit exceedance ongoing but resolved through DOJ Consent Decree. Acceptable.

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03/31/2023	ROP SEMI 2 CERT	Compliance	2nd 2022 Semi-annual Cert & Deviation report Arbor Hills LF (AHL has both Sections 1 & 2). 1) Failed to remonitor 3rd Q SEM hits (4 locations) within one month after initial exceedance. Said areas unsafe. Req'd some alternative remedy/timeline. 2) Report Enclosed Flares failed to meet required average minimum temperature established during compliance testing 12 times. 3 hr averages and state Flares did not operate full 3 hr periods (Start up / shutdowns). 3) Report failure to record flow/temp once every 15 minutes. 5 events (longest 6 hrs). Most loss of power, one malfunction flow meter, one maintenance.
03/31/2023	ROP Annual Cert	Compliance	2022 Annual Cert & Deviation Report AHL. AHL is section 1 & 2. Report 3 2nd semi and 1 1st semi. Acceptable.
03/31/2023	MACT (Part 63)	Compliance	2nd 2022 Semi-annual NESHAP Report AHLF. Landfill has Section 1 & 2. Covers Federal Plan 40 CFR 62 Subpart OOO. Noted: SEM 3Q 26 exceedances; 4Q 70 exceedances. 3rd Q failed to remonitor in one month for 4 locations (deviations reported Semi). Wellhead pressure monitoring states 198 exceedances corrected within 5 days. Report flare deviations (same as Semi).
03/31/2023	MAERS	Compliance	MAERS Submission Certification received 3/15/23. Reviewed. Support docs attached and emailed. Use mass balance, LF model, stack tests. 4869.2 MMCF Facility wide LFG. Flares 2584.32 and Plant 2284.88. CO 190 TONS; NMOC 62 TONS; NOX 96 TONS; PM10F 135 TONS; 10P 17 TONS; 2.5 10 TONS; SO2 121 TONS; VOC 3 TONS. Solid waste 1,086,305.5 tons. All turbines down and flares up in usage/thruput. Ductburner report did not operate. Acceptable.

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03/31/2023	MACT (Part 63)	Compliance	2nd 2022 Semi-annual Treatment System report. MACT AAAA for TS at AHE. Daily record of monitoring parameters (pressures / temperatures) and times when devices offline. Compressors associated with each Turbine. Downtime log w/comments & corrective actions. Report 693 hours plant downtime during 6 month period. LONGEST 612 hrs 11/27-12/23 DTE forced outage.

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03/16/2023	Other Non ROP	Compliance	Bi Monthly WOI Status Report: GLF (Section 1 & 2) JAN/FEB 2023. Required to submit Bimonthly HOV approval letters starting 5/6/19. Most recent 1 yr approval issued 5/15/22. WOI Report is the 26TH Elevated Temperature Landfill Status Report (ETLF). AQD required by 15th of the following month. Report Wells of Interest (WOI) includes wells (now 22 and TS01R). Reports are Filed. Covers: well gas data, pump data, downhole temperatures, construction, plant data. REPORT: 12 inches daily & interim cover. No new cracks, leachate, etc AHE/OPAL plant: plant shutdown 2/23-26 very low flow before/after Total offline 24th. Data shows good methane 53%, O2 1.3%, vacuum, flow 9-10K. Q42022 liquid done =REPORT NOW IN CJ Quarterly. Ryan Central cont'd install air/FM that started 12/1/22 southside. Included in approved Nov 25, 22 ext request to 3/26/23. 2 locations WOI wells. MAR/APR23 planned construction: complete Air/FM; commenced Phase 1 2023 GCCS upgrade. Tetra Tech design phase / plan REDRILL 20-30 wells, upgrade several header/lateral pipe. Quarterly lab canister data 2/28/23 will be in May 15, 2023 report. Hottest is still W312R at 160.5. Wells 15 wet /7 dry. MK review = looks overall good DKV notes: 312R pump install not done; W259 missed being listed in ext request for March 2023 work. Attachments 1 LFG and well pump data; 2 and 3 provide monthly carbon monoxide and hydrogen/nitrogen data for WOI - state consistent. 4 = MAP. 5 is Plant data. 6 WOI 12-month data trend.

Activity Date	Activity Type	Compliance Status	Comments
03/16/2023	CO/CJ	Compliance	2022 Second Semi-annual CJ required report. Multimedia to MMD and AQD. Contains required reporting under CJ No. 2020-0593 -CE Section 6.3. Subparagraphs, 5.1(G), 5.3(D) (Requires create retain record 5.3(C)), 5.4(A)(4), 5.5(F), 5.6(B), 5.7, 5.8(D), 5.9(E), 5.14(B). AQD specific areas include Flare monthly start up operation check; perimeter monitoring report; Corrective actions for Well monitoring. Attachments 1-9 included. Attmt. 4 is perimeter monitoring Q3/Q4 15 min rolling avg data. [2 VN issued for perimeter monitor issues. Under negotiation currently]. Report no odorous wastes, report Compost cklist. DKV note: Shows turn several rows weekly. No record of check wind direction / weather on the form. My opinion it should be added.
03/06/2023	Complaint Investigation		On 3/5 AQD received 5 odor complaint (online citizen email report system) between 7:20 PM - 8 PM. AQD reviewed GFL's monitor website. There was exceedance on Monitor 2 last night from 7 to 8 pm. Also, H2S was measured at 8 to 10 ppb. Note that Monitor 4 has been offline since Feb 28th. AQD Mike K. sent email requesting explanation to Anthony later in the day. Response rec'd 3/7 email copied to this report.
03/01/2023	Complaint Investigation		Documents large number of odor complaints (@ 39) received 2/28/23 in PM, majority 7-9 PM, through Conservancy Initiative online/email system. Also, letter rec'd from Dave Drinin, of CI w/comments & concerns regarding incident and GFL's monitoring database public website. 3/1 AQD Mike K. email GFL and rec'd response. Scott Miller replied to Dave. Complaints are placed in file.

Activity Date	Activity Type	Compliance Status	Comments
02/21/2023	Other	Compliance	Review of 2/17/2023 Alt Rem Req for 8 4th Q 2022 SEM hits. Proposed remedy locations reviewed on 4th Q site map. (1) new well near WW417R, 416R and 420R = North slope center of the "4" Cells; and WW428R North slope higher level before top & near top of erosion/drainage trench to Cell 6 area. (1) new well near W249R2= So. end near top/ south of haul road between it and final cover area. (1) new well near W274R2 Center top west side facing. One other area plan to install 10' liner skirt & improve cover integrity. Only have coordinates so not sure location. APPROVAL letter sent 2/22/2023.
02/17/2023	CO/CJ	Compliance	Received the SEP Annual Report for GFL's CJ. Report was due February 1st. This is the first report. Covers status of three required Supplemental Environmental Projects, including costs, invoices. Perimeter Monitoring; Hazardous Waste Facility; Vegetative Buffer. Placed in plant files.
02/08/2023	Meeting Notes	Compliance	Documents AQD participation in meeting at the AHLF -GFL site (and on the Teams call) to discuss EGLE's Proposed CJ Implementation Framework outline (GFL's description). AQD in person: Scott Miller, Mike Kovalchick & Jenine Camilleri, AQD in person; TEAMS: DKV, Jeff Rathbun AQD & Tim Unseld, MMD, GFL in person: Anthony Testa, Dave Seegert, and Anthony Pelletier.
01/31/2023	CO/CJ		2022 4th Quarter CJ No. 2020- 0593-CE required report. Several reporting requirements are covered: Section 5.3(A), 5.4(B)(3), 5.12(D), 5.13(D). This includes Well data, Drone SEM, LEL gas probes, Leachate Levels.

Activity Date	Activity Type	Compliance Status	Comments
01/31/2023	CO/CJ	Compliance	2022 Q4 Leachate Minimization Report. GFL required to submit under Consent Judgment No 2020 -0593-CE. Action plan to minimize liquid infiltration and leachate generation. 3rd part evaluation by Weaver Consultants Group on 12/20/22. Several recommendations from prior Qs completed. A couple new recommendations will be done in Q1 2023. Overall better cover/no significant issues. Said implemented good erosion controls overall. NOTE: Cell 4F/6A scheduled to be constructed 2023 stated in report.
01/31/2023	Other		Documents email received from Mark Abbo, Northville Township Supervisor with attached letter. Letter is Township's response to an earlier letter sent by The Conservancy Initiative to EGLE dated 1/16/2023 regarding AHLF's Perimeter Monitoring System. Correspondence placed in Plant files.

Activity Date	Activity Type	Compliance Status	Comments
01/27/2023	CO/CJ	Compliance	Arbor Hills Energy (AHE) and Arbor Hills RNG (AHRNG)'s semi- annual report required by Consent Decree Civil No. 5:21-cv-12098- SDD-EAS entered on 12/15/21 and 1st amendment filed on 8/22/22. Report filed. Most significant = Status of construction or compliance measures: i. AHE and AHRNG's Affiliate Emerald RNG LLC ("Emerald"), are progressing on the construction of the RNG Facility. Based on the Project Schedule, dated January 12, 2023 as prepared by Stearns, Conrad and Schmidt Consulting Engineers, Inc. (d/b/a SCS Energy) and SCS Engineers of Michigan (the "EPC Contractor"), the following milestone dates are anticipated: a. 3/1/23: The LFG desulphurization system is expected to be ready for use. b. 3/17/23: Electrical power back feed expected to be supplied by DTE Energy. c. 4/5/23: Commissioning of the RNG Facility systems begins. d. 4/26/23: The first start of the RNG Facility for testing and first production of renewable natural gas. e. 5/25/23: Reliability testing and exporting of gas. f. 7/21/23: Final completion of the RNG Facility. PERMITS IN-HOUSE PENDING.

Activity Date	Activity Type	Compliance Status	Comments
01/20/2023	Stack Test	Compliance	Test report for ANNUAL verification of SO2 and NOx emissions from one LFG fueled turbine identified as EUTURBINE4 -S3 in MI-ROP-N2688-2011a. Impact Compliance and Testing, Inc. Passed one of two SO2 permit limits. Results: PASS 0.11 Ib/MMBtu (0.15) and FAILED 1.55 Ib/MWhr (0.9). NOx passed 3 limits. Results: 5.75 lb/hr (9.02); 25.2 tpy (39.5); 1.35 lb/MWhr (5.5). 2/16 TPU Review memos = acceptable. Placed in plant files. NOTE: high H2S/TRS if discard then discard lb/MMBtu and calc. That would mean discard this passing limit demonstration (other limit failed). AQD will hold w/ current result.
01/16/2023	Other		Documents letter EGLE received from The Conservancy Initiative. Citizen group located in Northville, Wayne County representing area residents near the Arbor Hills Landfill. Letter is in response to Perimeter monitoring exceedances at the LF, subsequent VNs issued by EGLE and replies from GFL. Perimeter Monitoring is a Supplemental Environmental Project and requirements are contained in the Consent Judgement issued in 2022. Placed in plant files.

Activity Date	Activity Type	Compliance Status	Comments
01/13/2023	Other Non ROP	Compliance	Bi Monthly WOI Status Report: GLF (Section 1 & 2) NOV/DEC 2022. Required to submit Bimonthly HOV approval letters starting 5/6/19. Most recent 1 yr approval issued 5/15/22. WOI Report is the 25TH Elevated Temperature Landfill Status Report (ETLF). AQD required by 15th of the following month. Report Wells of Interest (WOI) includes wells (now 22 and TS01R). Reports are Filed. Covers: well gas data, pump data, downhole temperatures, construction, plant data. REPORT 12 inches daily & interim cover. No new cracks, leachate, etc AHE/OPAL plant: plant DTE forced shutdown Nov 27-Dec 29. Data shows good methane 50%, O2 2%, vacuum, flow 9-10K. Q42022 liquid done 2022. Completed waste relocation on the south side of the landfill. Submitted HOV new WOI replacement AQD approved ext to March 2023 for some air FM work Quarterly lab canister data Nov/Dec in this report looks good. 4thQ temperature profile WOI is Attachment 7. Hottest is still W312R at 160.5. Wells 15 wet /7 dry. MK review looks overall good less hot wells and lot less water probably due to area drought. DKV notes: 312R pump install not done; W259 missed being listed ir ext request for March 2023 work. Attachments 1 LFG data and well pump data; 2 and 3 provide monthly carbon monoxide and hydrogen/nitrogen data for WOI - state consistent. Plant data.
12/14/2022	Odor Evaluation		An Odor evaluation and check of current projects in/around landfill.
12/08/2022	Other		Mike Kovalchick review of GFL Perimeter Monitor public website. MONITORS OFF @ 20 hours.

Activity Date	Activity Type	Compliance Status	Comments
11/29/2022	CO/CJ	Compliance	Green for Life Environmental (GFL) – Arbor Hills Landfill, Inc., Request for Extension – Corrective Actions at Vertical Gas Collection Wells. Scott Miller;approval letter sent 11/29. Requested nine VGW ext of 120 days to March 26. 2023 to complete corrective actions from 2nd Q req'd report. Original 120 days due 11/23 and 12/31 will not make due to construction schedule & Cell 6 reclamation process longer than anticipated. CJ requires update/report each Quarterly until complete.
11/23/2022	Complaint Investigation		Documents follow up with GFL regarding @ 34 Citizen group email odor complaints received 11/22 PM and one 11/23 AM. AQD requested investigation & information. Received email response. Copied to report.
11/16/2022	Stack Test Observation	Compliance	PCE ARBOR HILLS ENERGY - ROP SECTION 2 (formerly Section 3). Conducted on site observation during scheduled annual required performance testing of EUTURBINE4 (Solar). Regina Angellotti, TPU assigned & observed. Impact Consultant & Tester.

Activity Date	Activity Type	Compliance Status	Comments
11/15/2022	Other Non ROP	Compliance	Bi Monthly WOI Status Report: GLF (Section 1 & 2) SEPT/OCT 2022. Required to submit Bimonthly HOV approval letters starting 5/6/19. Most recent 1 yr approval issued 5/15/22. WOI Report is the 24TH Elevated Temperature Landfill Status Report (ETLF). AQD required by 15th of the following month. Report Wells of Interest (WOI) includes wells (now 22 and TS01R). Reports are Filed. Covers: well gas data, pump data, downhole temperatures, construction, plant data. REPORT: 12 inches daily & interim cover. No new cracks, leachate, etc AHE/OPAL plant: State reduced production continues as planned w/DTE prep RNG. Data shows consistent plant operation sometimes same throughputs 9- 10K. Shows lower CH4 mid 40s and low 70's vac. State during months of construction CH4% down and Oxygen increased (3- 4%). 3rd Q 22 liquid done in July, Aug, Sept. 2022 GCCS upgrade construction completed 9/16. Replacement WOI Well HOVs rec'd/approved 9/30. Completed waste relocation on the south side of the landfill. Submitted HOV new WOI replacement. Planned Quarterly lab canister on 11/15 will be in Jan 2023 report. 3rd Q temperature profile WOI is Attachment 7. Hottest is W312R at 164.5. About 7 wells Dry. Many seem like high liquid, ex. 207R2 liq level 63 ft and well is 150 ft deep. Attachments 1 Sept/OCT LFG data and well pump data; 2 and 3 provide monthly carbon monoxide and hydrogen/nitrogen data for WOI -state consistent.
11/10/2022	ROP Tech Review Notes		Contact also Dana Olensiak, EIL consultant. ROP AI letter, GFL requested extension and I granted until 12/2/22. Question about adding CJ applicable requirements to ROP conditions - sent info.

Activity Date	Activity Type	Compliance Status	Comments
11/04/2022	Telephone Notes		ROP RENEWAL AI LETTER - Suparna call requested extension to reply with some of the requested renewal application additional information until the new permit(s) are issued. Pending in house w/significant change to operations. Agreed, submit what can by November 20 and request extension in letter for the remaining information.
11/03/2022	On-site Inspection	Unknown	PCE OF FCE FY23 Targeted SEM survey in investigate the source of methane that is triggering the perimeter monitor.
11/01/2022	CO/CJ	Compliance	Consent Judgment NO 2020-0593 - CE Section 6.2, 3rd Quarter reports pursuant to subparagraphs 5.3(A), 5.4(B)(3), 5/12(D) and 5.13 (D). AQD review highlights.
10/28/2022	CO/CJ	Compliance	2022 Q3 Leachate Minimization Action Plan. In accordance with Section 5.2 of the Consent Judgment No 2020-0593-CE (CJ), Arbor Hills Landfill (AHL) has developed the attached action plan based on third-party evaluation to minimize liquid infiltration and leachate generation. NOTE: MMD lead. Review indicates recommendations, improvements/corrective actions taken since Q2.
10/17/2022	ROP Tech Review Notes		Start Renewal technical review.
10/15/2022	Odor Evaluation		Document, AQD staff Mike Kovalchick, drive by of facility and odor observation. On Napier near railroad tracks at around 10:30 on Saturday. Winds appeared to be light out of the W or WNW at the time. MSW odor with perhaps some gas. I (MK) call it moderate. DKV NOTE: AQD received only one complaint over the weekend. On 10/15 at 4:15 pm from north Napier Rd complainant.

Activity Date	Activity Type	Compliance Status	Comments
10/05/2022	CO/CJ	Compliance	1st Semi-annual report required by CJ. Covers period from CJ issuance through end of 1st semi annual period. This first report was allowed to be due 9/30 (remaining semis will be 9/15 and 3/15). Covers: 5.1(G); 5.3(D); 5.4 (A)(4); 5.5(F); 5.6 (B); 5.7; 5.8(D); 5.9(E); 5.14(B). High H2S in wells multiple readings over 1000 ppm including a 13,498 ppm AHWW0266. (8) 3x 2nd Q SEM hits. Resolved or req'd alt timelines by 9/30. Perimeter monitors: MS1, 6 started 4/16/22; MS2,3,4,5 started 3/15/22. Root causes of multiple exceedances incl. CH4 & H2S Root cause C: insufficient vac due to 3/20-21 #393 Flare failed. Correction: Implemented backup alarms. Other Perimeter exceedances: 8 days March, 2 days April, 10 days May, 6 days June. Monthly Flare reports done = all started no issues. MMD reports: State followed Cell6/4F plan; rejected 2 odorous waste streams. Compost highest thruputs May. Soil analysis done & keeping minimal logs. N/A on 5.3(D) and 5.8 (D) at this time.
10/05/2022	CO/CJ	Unknown	AQD requested Perimeter monitoring exceedance log (alarm log) for September up to the date of onsite targeted SEM and meeting on this topic, i.e. recent frequent or repeated monitor exceedances. This supplements already rec'd June -Aug report. Sept log indicates exceedances continued after last GFL Root Cause & Corrective action taken at the end of August. A CH4 leak area was identified by AQD during the 9/20 onsite SEM, located next to the MS-4 and MS-5 monitor experiencing the exceedances.
10/04/2022	MACT (Part 63)	Compliance	ROP 2022 1st Semi annual treatment system monitoring plan report req'd OOO/AAAA. Report no deviations. Report times each Turbines' TS compressor was down during the period. They did not all operate all the time.

Activity Date	Activity Type	Compliance Status	Comments
09/26/2022	Telephone Notes	Compliance	Follow up call to discuss 1st Semi- annual report missing info/typos. Deviation forms were missing Dana said will resubmit with one deviation of Flare Temp 3hr block average reported. NESHAP report typo removed.
09/23/2022	ROP Semi 1 Cert	Unknown	ARBOR HILLS ENERGY ROP 2022 1st Semi-annual Cert & Dev Report. Deviations include ongoing SO2 exceedances of permit limits for three EGT Turbines and three Ductburners. Have also exceeded for Turbine 4. Entered into a Consent Decree w/EPA and EGLE. Permit applications submitted for new RNG and reduced operation of Turbine Plant. During this period: GT2, GT3, DB1, DB2, and DB3 all exceeded limits. DID NOT Report for TS that they own/operate.
09/23/2022	ROP Semi 1 Cert	Compliance	ARBOR HILLS LF S1 & S2 (GFL) ROP 2022 1st Semi Cert & Dev Report. REVISED rec'd 9/30. AQD comment typos/missing info. Report: one 3 hr period outside required minimum temperature for EUENLOSEDFLARES during startup shutdown event.
09/23/2022	MACT (Part 63)	Compliance	ROP 2022 1st Semi NESHAP report. Report deviations: Outside Flare Temperature (1); No times when all control offline; SEM: 1st Q 25 exceedances; 2nd Q 35 exceedances; corrected all well exceedances 0-60 days/ if >15 days root cause on file; AHWW16R6 was subject to wkly enhanced monitoring; 1 horizontal added AHWWHW40; No decommissions. Acceptable.
09/20/2022	Meeting Notes	Compliance	With AQD Scott Miller and Mike Kovalchick. Meeting with Dave Seegert, Anthony, GFL including new Regional Mgr. Tony Pelletier, immediately following today's AQD on-site observation and targeted SEMs pursuant to OOO/AAAA of a specific area near Perimeter Monitors and Cell 6 construction (See MK's separate report entry).

Activity Date	Activity Type	Compliance Status	Comments
09/20/2022	On-site Inspection	Compliance	Targeted SEM to investigate area around Perimeter Monitor 4 & 5 due to recent methane action level exceedances at those monitors. The likely source of methane that is causing the exceedances was found.
09/20/2022	CO/CJ	Compliance	10.1 Notice of Consent Judgment (No 2020-0593-CE) AHLF submits notice of a change to distribution list Clarke Lundell is being replaced by Tony Pelletier.

Activity Date	Activity Type	Compliance Status	Comments
09/16/2022	Other Non ROP	Compliance	Bi Monthly WOI Status Report: GLF (Section 1 & 2) JUL/AUG 2022. Required to submit Bimonthly HOV approval letters starting 5/6/19. Most recent 1 yr approval issued 5/15/22. WOI Report is the 23RD Elevated Temperature Landfill Status Report (ETLF). AQD required by 15th of the following month. Report every 2 months as of Jan 15, 2020. Report Wells of Interes: (WOI) includes wells (now 22 and TS01R). Reports are Filed. Covers: well gas data, pump data downhole temperatures, construction, plant data. REPOR 12 inches daily & interim cover. N new cracks, leachate, etc Continue monitor Well 312R no significant changes. Update WW285R increase CO over past few months. Well head temp decrease (will monitor / chemical reaction). REDRILLED AHW285R2. Drill log attached. Summa Canister 8/23/22 results non-detect for CO. AHE/OPAL plant: Reduced production as planned w/DTE prep RNG. Oxygen 2-3%, CH4 45-47% avg. 2nd Q 22 liquid done in April, May June. 2022 GCCS Landfill Drilling & Pipe Services. Plan to complete 2022 by Oct 30th. Pump install in WOI complete by 9/30. 9 replacement wells 177R**, 264R3*, 265R3**, 272R4**, 273R3**, 285R2*, 289R**, 297R* 503R*. STATE Completed waste relocation on the south side of the landfill. State will be submitting WOI for new wells identical to prior. Attachments 2 and 3 provide monthly carbon monoxide and hydrogen/nitrogen data for WOI - state consistent. W312R CO decreased to 37 ppm. W285R abandoned / replaced by W285R; = non detect. Continue to monitor 3rd Q 2022 vertical temp profile ir process/Sept 30th submit in November.

Activity Date	Activity Type	Compliance Status	Comments
09/13/2022	CO/CJ	Unknown	AQD requested AHL's perimeter monitoring data records for July & August pursuant to the CJ. Numerous exceedances had been observed on website. Need to verify documentation, format, exceedances & corrective actions.
09/08/2022	Other		AQD review AHL's Perimeter Monitoring Website: Higher methane (CH4) readings today over exceedance level of 40 ppm. MS4, 5, and 6 all had CH4 exceedances over night into this morning. MS-4 had 51 at 5 AM MS -5 had 45 at 7 AM, and 40 at 6 AM MS-6 starting at midnight exceeded through 3 AM and again at 6 AM: 45, 56, 44, 42, and 71. AQD received two complaints this morning one at 5 AM and one @ 7:20 AM

Name: Diane Kavanaugh Vetort Date:

Date: 9/21/2023

Supervisor:

331

Page 33 of 33