



STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
JOHNSON CITY ENVIRONMENTAL FIELD OFFICE
2305 SILVERDALE DRIVE
JOHNSON CITY, TENNESSEE 37601-2162
(423) 854-5400 STATEWIDE 1-888-891-8332 FAX (423) 854-5401

CERTIFIED MAIL #7017 2680 0000 7028 4891
RETURN RECEIPT REQUESTED

May 29, 2018

Ms. Dawn Melton
Senior Project Manager
City of Kingsport
e-copy: DawnMelton@KingsportTN.gov
130 Shelby Street
Kingsport, TN 37660

RE: **Compliance Evaluation Inspection (CEI)**
EnviraGlass, LLC
NPDES Permit TN0081582
Sullivan County

Dear Ms. Melton:

On May 15, 2018, Mr. Bryan Carter and Mr. Jason Benton of the Tennessee Department of Environment and Conservation, Division of Water Resources traveled to the above referenced facility to perform a routine inspection evaluating compliance with individual NPDES permit TN0081582. Ms. Shauna Donovan of Appalachian Environmental Resources (AER) met Division personnel at the site, and the Division thanks her for her assistance. Mr. Norm Green of Eastman Chemical Company also assisted during the site inspection.

I. Permit

NPDES permit TN0081582 authorizes discharge of stormwater, filter backwash, glass washing, and glass edger wastewaters via internal monitoring point (IMP) 01A and non-contact cooling water and overflows from glass washing and glass edger wastewaters to the South Fork Holston River via outfall 001. The permit also authorizes discharges of stormwater from outfalls SW1 and SW2. The permit bases limitations for IMP 01A on the Effluent Limitation Guidelines for Best Practicable Control Technology (BPT) specified in Title 40 CFR Part 426, Subpart F (Automotive Glass Tempering Subcategory). Overall mass limits for IMP 01A are derived from the applicable BPT limitations and the average daily tempering production rate specified in the NPDES permit renewal application originally submitted by Glasway, LLC, in December 2013. The current permit was issued to Heritage Glass, LLC, but the Division received a request to transfer the permit to EnviraGlass, LLC in June 2016 and a later request to

limitations for IMP 01A on the Effluent Limitation Guidelines for Best Practicable Control Technology (BPT) specified in Title 40 CFR Part 426, Subpart F (Automotive Glass Tempering Subcategory). Overall mass limits for IMP 01A are derived from the applicable BPT limitations and the average daily tempering production rate specified in the NPDES permit renewal application originally submitted by Glasway, LLC, in December 2013. The current permit was issued to Heritage Glass, LLC, but the Division received a request to transfer the permit to EnviraGlass, LLC in June 2016 and a later request to update site information to Charis Holdings, LLC. Observation of the site and discussion with AER and Eastman personnel revealed that the facility was currently closed and timing of any future glassmaking operations was uncertain. Deficiencies in facility permitting are detailed below.

1. The current permit was issued to an entity that no longer owns or operates the site. AER has been performing monitoring and reporting as required by NPDES TN0081582 for the city of Kingsport. If the city of Kingsport and/or Kingsport Economic Development Board (KEDB) wish to keep the permit active, it must be transferred to a viable entity.
2. Review of the 2013 permit application revealed that it was unclear if the tempered glass production rate specified reflected material used for automotive purposes. Based on the most recent facility operation, it produced glass for solar panels, not automotive glass. This discrepancy in the type of glass produced at the facility may impact the discharge limitations specified in NPDES permit TN0081582.
3. During the inspection, steady flow was observed in the outfall 001 monitoring manhole at the facility. Because facility operations were shut down, the nature of this flow was unknown. Therefore, the Division requests clarification regarding what flows are still discharging via outfall 001.

II. Records/Reports

Because the facility was closed, limited records were available for review. Mr. Mike Fox of AER stated that older records were retained by Kingsport, but these were not available during the inspection. Monthly Discharge Monitoring Reports (DMRs) indicating No Discharge (or NODI=C) for internal monitoring point (IMP) 01A had been submitted in NetDMR as required by NPDES permit TN0081582. Outfall 001 DMRs stating No Discharge (or NODI=C) were submitted from June 2015 through January 2017. Facility operations were suspended in mid-2015, future operations were in limbo for an extended period, and access to the facility to complete required NPDES monitoring was limited. Routine analytical monitoring in accordance with permit requirements resumed in February 2017 and has continued since that time.

1. Available records for effluent analyses performed onsite (*i.e.*, pH, temperature, and total residual chlorine) did not clearly document the time of sample collection. Ms. Donovan stated that the collection time should be reflected on laboratory chains-of-custody for samples sent to ESC Lab Sciences for analysis, but this did not always appear to be correct. The chain-of-custody for outfall 001 effluent samples collected on April 5, 2018, for example, listed sample collection times after the analysis times recorded for onsite analyses. NPDES TN0081582 Part I B.4. requires the time of sampling be recorded.

2. Available records showing outfall 001 effluent flow calculations for 2018 appeared to be based on ¼" (0.02') flow depth through the sampling manhole. However, Ms. Donovan stated that the effluent flow depth was typically 1" (0.083'). The flow calculations were performed using Manning's equation for open-channel flow; therefore, the discrepancy in flow depth can have a significant impact on the computed flow. In accordance with NPDES TN0081582 Part II A.8., corrected DMRs must be submitted for any affected months.
3. Review of monitoring records for January 2018 revealed that an incorrect monthly average temperature was reported on the DMR for the month. Two samples were collected for the month, yielding results of 10.1°C and 8.0°C. However, the average temperature reported on the DMR was 8°C. In order to satisfy the requirements of NPDES TN0081582 Part II A.8., a corrected DMR must be submitted for the month.

III. Facility Site Review, Self-Compliance Program, and Operations & Maintenance

As noted above, the facility was closed at the time of inspection. No glassmaking operations had taken place at the site since mid-2015 when Heritage Glass operations were suspended. Planned operation of the facility by EnviraGlass and its successor, Charis Holding, LLC, never materialized, and the city of Kingsport has maintained ownership and control of the site. An equipment auction was held in early 2017 to dispose of some site equipment, but a substantial amount of equipment still remains at the facility. Facility appearance and condition during the inspection reflected that little cleanup or other activity had been performed since operations were suspended. According to Mr. Green, Eastman Chemical Company leased a portion of the facility for storage and some contractor offices and work areas under a 3-year agreement with Kingsport which began in early 2017 shortly after the equipment auction. Also according to Mr. Green, approximately 4000 tons of finished glass remains onsite with the majority belonging to Heritage Glass and some to AGC, who were both previous site owners and/or operators. This finished product is still periodically collected for shipment by the respective owner. Because the site is not operating as originally permitted, evaluation of production operations was not possible. Deficiencies noted with these program areas are discussed in other pertinent areas of this report.

IV. Effluent/Receiving Waters

Neither NPDES TN0081582 outfall 001 nor the receiving water was observed during the inspection because they are not accessible from the facility. Direct observation of outfalls SW1 and SW2 was performed, and a small, steady flow was noted from SW1. Observation of the receiving water for SW1 and SW2, AFG Stream, was not possible because of obscuring vegetation. Compliance deficiencies noted in this area are detailed below.

1. Discussion regarding sampling location for outfall SW1 revealed that the location in use was not correct. Some years ago, site stormwater drainage was rerouted to locate the outfall points for SW1 and SW2 to adjacent pipes at a common location discharging to an Unnamed Tributary (generally known as AFG Stream) to Madd Branch. The sampling location for SW2 appeared to be reasonably representative of the outfall as required by NPDES TN0081582 Part I B.1., but the sampling point for SW1 did not.

2. The outfall sign at the monitoring point for 001 was lying on the ground and did not satisfy the visibility requirements of NPDES TN0081582 Part III C. In addition, the outfall signs for SW1 and SW2 were not visible, possibly because of obscuring vegetation.

V. Flow Measurement

An H-type flow measurement flume was in place at IMP 01A, but no discharge had occurred from this point for some time. Flow measurements for outfall 001 consisted simply of depth of flow. This information was used to calculate effluent flow using Manning's equation. Outfall 001 flow measurement in the past utilized an area-velocity meter to measure flow depth, calculate cross-sectional flow area, and multiply by measured flow velocity to obtain flow volume. It was not clear when this practice ceased. Flow measurement for outfalls SW1 and SW2 was not evaluated. If IMP 01A flow resumes, calibration of the flume must be verified at least once per year as discussed in the United States Environmental Protection Agency *NPDES Compliance Inspection Manual* (EPA 305-K-17-001, Interim Revised Version, January 2017). As also discussed in the manual, flow measurements should be within $\pm 10\%$ of actual flow, which may be a deficiency for outfall 001 flow reporting.

1. It was unclear whether the current flow calculations for outfall 001 are within $\pm 10\%$ of actual flow because information regarding the outfall pipe size, material, and slope was not available during the inspection. The Division requests facility information (e.g., engineering plans, etc.) sufficient to demonstrate that the parameters used in the flow calculations are correct.

VI. Laboratory

Part I B.3. of NPDES permit TN0081582 requires pollutant analyses be performed in accordance with methods specified in Title 40 CFR Part 136, and permit Part II A.4. requires adequate laboratory controls and appropriate quality assurance procedures. Revisions to Part 136, effective June 18, 2012, explicitly detail required laboratory quality assurance and quality control (QA/QC) components. Current Division guidance documents regarding appropriate QA/QC for a number of common wastewater analyses is available online at <https://www.tn.gov/environment/program-areas/wr-water-resources/fleming-training-center/course-books-and-reference-material/waste-water-information.html>. Available laboratory equipment and records were reviewed during this inspection. In order to ensure NPDES permit compliance, site-specific standard operating procedures (SOPs) detailing sample collection and handling, laboratory analysis, and laboratory QA/QC procedures, must be developed and implemented as necessary. Deficiencies noted in this program area included the following items.

1. Discussion during the inspection revealed that outfall 001 samples are collected with a dipper and poured into other containers as needed. This dipper contained visible residue and did not appear to be subjected to any regular cleaning regimen. Failure to collect samples using properly cleaned equipment may bias the resultant analysis results and not provide a representative sample as required by NPDES TN0081582 Part I B.1.
2. Review of available records for analyses performed onsite revealed that few of the laboratory QA/QC components required by Title 40 CFR Part 136.7 and approved analysis methods were performed. For example, no analyst Demonstrations of Capability (DOCs) were available. In addition, initial or continuing calibration verifications (ICVs/CCVs), method blanks (MBs),

laboratory fortified blanks (LFBs), and duplicate analyses were not performed as required. NPDES TN0081582 Part I B.3.b. requires that pollutant parameters be determined using methods prescribed in Title 40 Part 136. As discussed in Part 136 and approved analytical methods specified therein, the items listed are essential components of proper laboratory QA/QC that must be detailed in written standard operating procedures (SOPs). No SOPs were available for review during the inspection.

VII. Sludge Handling/Disposal

Because the facility was not in operation, procedures for any necessary sludge handling and disposal could not be evaluated. As a reminder, NPDES permit TN0081582 Part I A. contains requirements for disposal of sludge or other material removed by any treatment works.

VIII. Pollution Prevention and Storm Water

NPDES permit TN0081582 Part IV contains requirements for a stormwater pollution prevention plan (SWPPP) and associated measures and procedures based on the requirements of Tennessee Storm Water Multi-Sector General Permit for Industrial Activities (TMSGP) Sector E, which applies to discharges associated with industrial activity from glass, clay, cement, concrete, and gypsum product manufacturing facilities. Review of the most recent SWPPP, revised November 1, 2017, and site conditions revealed deficiencies as detailed below.

1. Observation of the facility revealed the presence of multiple large cullet and scrap material piles along the western, northwestern, and southern areas of the site. Another large pile of scrap material was present on the north side of the site near Lincoln Street. Some, but not all, of these piles were partially contained by concrete barrier blocks. However, the containment was not entirely effective as evidenced by migration of materials outside the barriers. These materials have been present at the site for a number of years with little apparent attempt to maintain containment or to remove and properly dispose the materials. NPDES permit TN0081582 Part IV requires, in part, that the SWPPP include an inventory of materials at the site exposed to stormwater, risk identification and summary of potential pollutant sources, a description of stormwater management controls appropriate for the facility based on potential sources of pollutants, and good housekeeping measures. The permit also requires implementation of stormwater management controls and good housekeeping measures appropriate for the facility in order to eliminate or minimize discharge of pollutants in stormwater runoff. If these materials are to remain onsite, additional measures must be implemented to contain them and prevent mobilization of contaminants in stormwater runoff.
2. In many respects, the facility SWPPP was still written as though the facility were still in operation. As noted above, this is not the case, nor has it been for some years. A number of actions referenced in the SWPPP, including disposal of batch material in a local landfill, pH adjustment of stormwater runoff, use of the site settling ponds for solids removal as sediment control measure, daily monitoring of batch house dust collectors, and good housekeeping by the city of Kingsport did not appear to reflect current facility activities. The SWPPP must accurately reflect site condition and operation in order to ensure compliance with NPDES TN0081582 Part IV.

3. The SWPPP did not identify pollution prevention team members as required by NPDES TN0081582 Part IV and TMSP part 11.E.3.2.1.
4. The SWPPP did not appear to include the required evaluation and certification regarding non-stormwater discharges. This certification is required by NPDES TN0081852 Part IV and TMSP part 11.E.3.2.3.7.
5. A number of documents, including the facility SWPPP, were not signed and certified in accordance with NPDES TN0081582 Part IV requirements. This portion explicitly requires the SWPPP be signed by a responsible official and that the SWPPP be developed in accordance with the requirements of Tennessee Stormwater Multi-Sector General Permit for Industrial Activities Sector E (part 11.E.), which also contains signatory requirements for other documents such as annual comprehensive site evaluation reports and quarterly visual examinations of stormwater quality. No one with the city of Kingsport had signed any examined documents associated with the requirements of NPDES TN0081582 Part IV. Some records examined during the inspection were only signed by Ms. Donovan.
6. Numerous monthly site inspection reports and some annual comprehensive site evaluation reports documented instances of deteriorating chemical drums stored outside and cullet and other materials stored outside with little containment. In addition, a number of chemical containers in varying condition, including some that were noted as not properly sealed, were still stored inside site buildings. However, no apparent corrective actions to address these issues were noted in the available documentation. In accordance with NPDES TN0081582 Part IV and TMSP part 11.E.3.2.3.4, tracking or follow-up procedures must be used to ensure that appropriate actions are taken in response to inspections.

IX. Additional Comments and Recommendations


Miscellaneous additional comments and recommendations noted during the inspection are discussed below.

1. As a reminder, NPDES TN0081582 Part I B.5. requires records shall be retained for a minimum of three (3) years, or longer, if requested by the Division of Water Resources.
2. According to Ms. Donovan, IMP 01A was never actually checked for discharge, but was assumed to have no flow. Even though the facility is not in operation, this lack of discharge should be verified for monthly reporting purposes.
3. Because of the high potential for mobilization of cullet and other scrap material to contaminate stormwater runoff from the site, the Division strongly recommends that the city of Kingsport remove and properly dispose the cullet, scrap, and refuse piles from the facility.
4. Quarterly visual examination of stormwater quality reports did not contain details regarding the rain event (duration, nature of discharge, amount of precipitation, etc.) and did not include sufficient information to demonstrate sample collection within 30 minutes (not to exceed 60

X. Conclusion

Compliance with NPDES permit requirements helps ensure discharges that are protective of downstream fish and aquatic life and water quality. The Division requests that you provide, by June 29, 2018, a detailed update on facility status and proposed operations. Additionally, develop and submit, also by June 29, 2018, a detailed action plan and proposed implementation schedule addressing the numbered points discussed in sections I. and VIII. above. Thank you for your efforts to ensure permit compliance and to protect state water quality. If I may be of assistance in matters concerning this report, please contact me via telephone at (423) 854-5456 or via email at Bryan.Carter@tn.gov.

Sincerely,



Bryan B. Carter
Environmental Protection Specialist
Division of Water Resources
Johnson City Environmental Field Office

BC/210118150

cc: Mr. Michael Fox, Appalachian Environmental Resources (via email)
Ms. Maybelle Sparks, DWR Water-Based Systems, Nashville (via email)
Mr. Chris Rhodes, DWR Manager, Johnson City EFO (via email)
Mr. Josh Boggan, DWR Program Coordinator, Johnson City EFO (via email)
Mr. Jason Benton, DWR, Johnson City EFO (via email)
Ms. Angela Hall, DWR Compliance and Enforcement Unit, Nashville (via email)
File Copy, DWR, Johnson City EFO
WaterLog Database