Georgia-Pacific Toledo LLC
1400 SE Butler Bridge Road
Toledo, Oregon 97391

October 24, 2025

Ms. Heather Kuoppamaki
Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232

Re: Cleaner Air Oregon (CAO) Emission Inventory
Information Request Received March 24, 2025

Dear Ms. Kuoppamaki,

Georgia-Pacific Toledo LLC (GP Toledo) was called into the Cleaner Air Oregon (CAO) program on March 1, 2022, and submitted an Emissions Inventory (Inventory) on May 31, 2022. In accordance with Oregon Administrative Rule (OAR) 340-245-0030(2), DEQ issued a written request on February 6, 2024, requiring additional information and a revised Inventory to be submitted. GP Toledo submitted a revised Inventory and requested information on August 5, 2024. Additional requested information was also submitted on May 6, 2024, and August 22, 2024. DEQ provided additional questions on March 24, 2025 in two separate letters.

An extension request was submitted to ODEQ on June 5, 2025 and discussed with ODEQ on June 6, 2025. On June 24, 2025, GP submitted a response for items not included in the requested extension. This response includes both the original June 24, 2025 response and the items requested to be submitted by October 24, 2025. The June 24, 2025 responses are identical to the previous submittal; they are included for completeness only. Attachments for the June 24, 2025 are not resubmitted with this response, with the exception of AQ520 which has been updated. Original DEQ questions for the non-WWT items are shown in italics, followed by GP's responses in text. Additional supporting information is provided in the files to be transferred electronically.

1. *Additional source testing is required to determine emissions from the Advanced Materials Recycling System (AMRS), Toxic Emission Unit (TEU) EU144. Please perform source testing of the AMRS by July 24, 2025.*
    a. *EPA Method TO-15 must be used to screen for all reportable TACs listed in OAR 340- 247-8010 Table 1 that are detectable using this method. For those TACs detected, DEQ may require additional source testing to obtain site-specific emissions factors using EPA Method 18 or other stationary source test methods.*
    b. *EPA Method 23 must be used to sample for the following toxic air contaminants (TACs).*
        i. *Polycyclic aromatic hydrocarbons (PAHs); and*
        ii. *Chlorobenzene (CASRN 108-90-7) and chlorophenol (CASRN 95-57-8).*
    c. *EPA Method 26A must be used to sample for the following TACs:*
        i. *Bromine (CASRN 7726-95-6);*
        ii. *Chlorine (CASRN 7782-50-5);*
        iii. *Hydrogen bromide (CASRN 10035-10-6);*

iv. *Hydrogen chloride (CASRN 7647-01-0); and*
v. *Hydrogen fluoride (CASRN 7664-39-3).*

d. *Bay Area Air Quality Management District Source Test Procedure ST-1B, or similar method upon DEQ approval, must be used to sample for ammonia (CASRN 7664-41-7).*
e. *Consistent with Section 2.3 of DEQ's Source Sampling Manual[1], GP Toledo must provide the source test plan, through Your DEQ Online, at least 45 days before conducting the source test. Please review Sections 2.7 and 2.8 of the Source Sampling*

Manual when proposing a minimum sample volume for each test method. Please consult with DEQ prior to submittal of the test plan if you have any concerns regarding sample volumes and/or analytical detection limits.
f. *Work with DEQ to determine representative testing conditions; this may require multiple batch scenarios.*
g. *Source test results are due to DEQ, through Your DEQ Online, within 60 days of test completion and must include the information required in Appendix A of the Source Sampling Manual.*

As discussed in the enclosed letter, the Juno facility will be closed down at the Toledo Mill by June 30, 2026 and therefore, ODEQ is not requiring testing.

2. *Additional source testing is required to determine emissions from the No. 1 and No. 2 Recovery Boiler (BLS), TEUs EU14-B and EU16-B. Please perform source testing of the TEUs EU14-B, EU16-B by July 24, 2025.*
    a. *EPA Method 23 must be used to sample for the following TACs:*
        i. *Polychlorinated dibenzo-ρ-dioxins and polychlorinated dibenzofurans Table 23- 1; and*
        ii. *Polycyclic aromatic hydrocarbons Table 23-2.*
    b. *EPA Method 29 must be used to sample for all reportable metal TACs listed in OAR 340-247-8010 Table 1.*
    c. *EPA SW-846 Method 0061, or similar method upon DEQ approval, must be used to sample for hexavalent chromium (CASRN 18540-29-9), or the permittee may assume all chromium measured from Method 29 testing is hexavalent chromium.*
    d. *EPA Method SW-846 Method 0031, or similar method upon DEQ approval, must be used to sample for all reportable TACs listed in OAR 340-247-8010 Table 1.*
    e. *NCASI Method 105.01, or similar method upon DEQ approval, must be used to sample for:*
        i. *Acrolein (CASRN 107-02-8);*
        ii. *Acetaldehyde (CASRN 75-07-0);*
        iii. *Formaldehyde (CASRN 50-0-0);*
        iv. *Propionaldehyde (CASRN 123-38-6);*
        v. *Methanol (CASRN 67-56-1); and*

[1] https://www.oregon.gov/deq/FilterDocs/SSMI.pdf

vi. *Phenol (CASRN 108-95-2).*

f. *EPA Method 26A must be used to sample for the following TACs:*
   i. *Bromine (CASRN 7726-95-6);*
   ii. *Chlorine (CASRN 7782-50-5);*
   iii. *Hydrogen bromide (CASRN 10035-10-6);*
   iv. *Hydrogen chloride (CASRN 7647-01-0); and*
   v. *Hydrogen fluoride (CASRN 7664-39-3).*

The source test plan was submitted under separate cover on September 26, 2025. An updated version was submitted on October 13, 2025 to address comments received from ODEQ.

3. *Additional source testing is required to determine emissions from the No. 1, No. 2, and No. 3 Lime Kilns, EU1, EU2, and EU3. Please perform source testing of the TEUs EU1, EU2, and EU3 by July 24, 2025.*
   a. *EPA Method 23 must be used to sample for the full list of PAHs in Table 23-2*
   b. *EPA Method 29 must be used to sample for all reportable metals TACs listed in OAR 340-247-8010 Table 1.*
   c. *EPA SW-846 Method 0061, or similar method upon DEQ approval, must be used to sample for hexavalent chromium (CASRN 18540-29-9), or the permittee may assume all chromium measured from Method 29 testing is hexavalent chromium.*
   d. *NCASI Method 105.01, or similar method upon DEQ approval, must be used to sample for:*
      i. *Acrolein (CASRN 107-02-8);*
      ii. *Acetaldehyde (CASRN 75-07-0);*
      iii. *Formaldehyde (CASRN 50-0-0);*
      iv. *Propionaldehyde (CASRN 123-38-6);*
      v. *Methanol (CASRN 67-56-1); and*
      vi. *Phenol (CASRN 108-95-2).*

The source test plan was submitted under separate cover on September 26, 2025. An updated version was submitted on October 13, 2025 to address comments received from ODEQ.

4. *Consistent with section 2.3 of the DEQ Source Sampling Manual, GP Toledo must provide the source test plans at least 30 days before conducting the source tests. Please review sections 2.7 and 2.8 of the sampling manual when proposing a minimum sample volume for each test method. Please consult with DEQ prior to submittal of the test plan if you have any concerns regarding sample volumes and/or analytical detection limits.*

The source test plan was submitted under separate cover on September 26, 2025. An updated version was submitted on October 13, 2025 to address comments received from ODEQ.

5. *Source test results are due to DEQ within 60 days after the test is completed and must include the information required in Appendix A of the Source Sampling Manual.*

GP Toledo will provide the source test results within 60 days after the test is completed, as required.

6. *EPA Method 1633A, or similar method upon DEQ approval, must be used to sample AMRS wastewater discharge for PFAS compounds. Results of this analysis may direct further testing of PFAS in air emissions from the AMRS. Submit to DEQ sampling plan(s) for the liquid sampling of the AMRS wastewater discharge by May 26, 2025. The sampling plan(s) must be developed in accordance with current DEQ guidelines and in accordance with 40 CFR 136.*

Please submit the information specified below, through Your DEQ Online, by June 24, 2025.

As discussed in the enclosed letter, the Juno facility will be closed down at the Toledo Mill by June 30, 2026 and therefore, ODEQ is not requiring testing.

7. *Review and correct activity information entered in Columns H through M of Worksheet 2 of the AQ520 form as it appears to be inputted incorrectly. Annual activity information should be provided in Column H for 2021 actual and Column I for Requested PTE (RPTE). Maximum daily activity information should be provided in Column K for 2021 actual and Column L for requested PTE. Since GP Toledo has indicated they want to be permitted on RPTE, Columns J and M for Capacity can be left blank. Examples of apparently mis-entered activity information include:*
    a. *For TEUs with hourly units, 24 hours is entered for the actual activity for both annual (Column H) and maximum daily (Column K) reporting.*
    b. *Similarly, "requested PTE" for both annual and maximum daily activity information is listed as 8,760 hours for TEUs with hourly units.*

Form AQ520 has been updated such that information is shown in the correct columns.

8. *Stack or Fugitive ID in Column E of Worksheet 2 of the Inventory should identify where the TEU exhausts. If multiple TEUs exhaust to a common stack, use the same stack ID in Column E for each of these TEUs. Additionally, if a single TEU exhausts to multiple emission points, all the stacks should be listed in Column E along with the percentage of emissions directed to each stack.*
    a. *For example, the following TEUs are listed as emitting to the "main stack" on the Block Flow Diagram and should have a common stack ID listed in Column E of Worksheet 2:*
        i. *EU1;*
        ii. *EU2;*
        iii. *EU3;*
        iv. *EU5_1;*
        v. *EU8;*
        vi. *EU14; and,*
        vii. *EU16.*
    b. *The following TEUs are shown with multiple stack emission points on the Block Flow Diagram. All stack IDs should be included in Column E, along with the percentage of emissions going to each stack:*
        i. *EU11: stacks EU11_E and EU11_W shown on Figure 2;*
        ii. *EU80: stacks EU80_1 and EU80_2 shown on Figure 1;*
        iii. *EU81: stacks EU81_1 and EU81_2 shown on Figure 1;*
        iv. *EU103-A: stacks EU103_A1 through EU103_A6 shown on Figure 1;*
        v. *EU103-B: stacks EU103_B2 and EU103_B3 shown on Figure 1;*

vi. *vi. EU105/106: stacks EU105A, EU105B, EU105C, EU106B, EU106C, EU106D, EU106E, EU106F, EU106G, EU106H shown on Figure 1;*
vii. *EU107/108: stacks EU107A, EU107B, EU107C, EU107D, EU108A, EU108B, EU108C, EU108D, EU108E shown on Figure 1; and*
vii. *EU109/110: stacks EU109A, EU109B, EU109C, EU109D, EU109E, EU110A, EU110B, EU110C, EU110D, EU110E shown on Figure 1.*

Form AQ520 has been updated with the requested items.

9. *Make the following updates to the Block Flow Diagram (Process Flow Diagram):*
    a. *Add the following TEUs: EU102-B2, EU102-B3, EU102-C1, EU102-C2, and EU102- C3.*
    b. *Modify the Lime Silos (EU102-D) to indicate there are only two lime silos (102-D2 and 102-D3) as indicated in the Inventory. If there are three lime silos as currently shown on the Block Flow Diagram, update the Inventory to reflect this.*
    c. *Update the TEU label for the "Kraft Digesters Nos. 1-11" to match the TEU ID used in the Inventory (EU126-A). Currently this is identified as EU126.*
    d. *Relabel "HD4 Pulp Storage (EU113 or EU117)" to "HD4 Pulp Storage (EU113-1)".*
    e. *Relabel "HD5 Kraft Pulp Storage (EU113)" to "HD5 Kraft Pulp Storage (EU113-2)".*

Refer to the attached updated Block Flow Diagram.

10. *Exempt TEUs:*
    a. *As requested, GP Toledo listed exempt TEUs in the Inventory. Please provide justification that the following TEUs do not materially contribute to risk and therefore meet the requirements to be considered exempt per OAR 340-245-0060(3)(a) using methods specified in the Cleaner Air Oregon Exempt TEU Reporting[2] documentation:*
        i. *EU101-D: Weak Wash Tank;*
        ii. *EU103-C: No. 3 White Liquor Clarifier; and*
        iii. *EU103-D: No. 4 White Liquor Clarifier.*

As discussed in responses to item Nos. 2 and 14 of the previous information request, the Toledo Mill uses fresh water, so no organic air toxic emissions in the causticizing area are expected. However, since purged scrubbing solution from the Lime Kilns' scrubbers may be introduced to the system, small quantities of combustion-related organics could be present. In the August 2024 submittal, recausticizing source emission factors from NCASI were reviewed and any compounds that were found in combustion sources AND in the recausticing sources were added to Form AQ520 emissions. For the three sources listed above, the corresponding source in NCASI is white liquor storage tanks. The only combustion related pollutants listed in the NCASI database for this source are acetaldehyde and acrolein. All test data for these compounds are non-detect. Therefore, there are no expected toxic emissions from these sources.

    b. *Maintenance Chemical Usage:*
        i. *Based on usage rates and chemical composition information provided, the maintenance chemical usage exceeds thresholds provided in the*

Cleaner Air Oregon Exempt TEU Reporting[2] document and must be added to the Inventory. Alternatively, a subset of the maintenance chemicals may be approved as an exempt TEU by DEQ if GP Toledo provides supporting documentation showing that usage rates of this subset of chemicals does not materially contribute to risk. DEQ has identified the following products which contain contaminants that exceed exempt thresholds for TACs at the requested PTE usage rates listed in the information provided by GP Toledo:

1. *640 Reducer #54;*
2. *SILVER-BRITE® Aluminum Paint;*
3. *Industrial Enamel VOC Pure White;*
4. *Industrial Enamel VOC Safety Orange;*
5. *Interior Flat Latex Wall Paint Extra White;*
6. *KEM KROMIK® Metal Primer White;*
7. *SILVER-BRITE® Aluminum Paint HiHeat Resisting;*
8. *PHENICON® HS Flake Filled High Solids Epoxy Reddish Gray; and*
9. *MACROPOXY® 646 Fast Cure Epoxy (Part A) Ultradeep Base.*

GP Toledo has conducted an inventory of maintenance chemicals used in calendar years 2023 and 2024 to provide ODEQ with information that represents current operations. Many of the chemicals listed above have not been used in the recent past, and the site has no current plans to use them again. Thus, the updated inventory may not include all chemicals above.

The updated usage, chemical composition information (e.g., SDS), and emissions for maintenance chemical usage at GP Toledo are provided electronically. The information provided summarizes the use of maintenance chemicals that contain and have the potential to emit toxics air contaminants.

ii. *Traction N More (Part A and Part B): The safety data sheet (SDS) provides both percent by weight and percent by volume. Use percent by weight in the Inventory.*

Traction N More has not been used at GP Toledo in calendar years 2023 and 2024. Therefore, no additional information has been provided for this product, since it is not expected to be used in the future.

iii. *Provide the Environmental Data Sheet (EDS) for the following materials. Section 15 of the Safety Data Sheet (SDS) for these materials refers to the EDS for SARA 313 reporting requirements.*

1. *POLANE® Reducer-94;*
2. *Great Finishes® Wood Stain Oil-Based Golden Oak;*
3. *Sherline Stripeing paint;*
4. *PROMAR Alkyd Zone Marking Paint;*
5. *DUPLI-COLOR Engine Enamel with Ceramic;*
6. *SUPERPAINT Interior Flat Latex Wall Paint;*
7. *SILVER-BRITE Aluminum Paint;*

[2] https://www.oregon.gov/deq/aq/cao/Documents/ExemptTEUReporting-Appendices.pdf

8. *Acrylic Enamel;*
9. *A-100 Exterior Flat Latex Paint;*
10. *Reducer #54;*
11. *SILVER-BRITE Aluminum Paint;*
12. *Industrial Enamel VOC;*
13. *Industrial Enamel pure white;*
14. *Industrial enamel safety orange;*
15. *Industrial enamel tower gray;*
16. *DUPLI-COLOR Acrylic Lacquer Aerosol Paint;*
17. *KEM KROMIK Metal Primer; and*
18. *KRYLON Fusion Gloss.*

EDS for the above are attached. As specified above, GP Toledo conducted an inventory of maintenance chemicals used in calendar years 2023 and 2024 and is providing updated information based on that more representative information.

c. *Provide the following information regarding the welding operations to confirm if this can be designated an exempt TEU:*
   i. *Provide a cross-walk to identify which products (and SDSs) are used for which welding activity.*
   ii. *Calculate welding emissions using the San Diego Air Pollution Control District (SDAPCD) welding calculation method.[3] For those TACs which are listed on a product SDS but not included in AP-42 Table 12.19-2, estimate emissions using the method outlined in Section 1.1.2 of the SDAPCD Welding Operations guidance.*
   iii. *Use the hexavalent chromium (CASRN 18540-29-9) conversion rate of 55% for all SMAW.*

The requested information is provided electronically.

d. *Include emissions of TACs from products used in the Industrial Cooling Towers to the Inventory or provide justification for classifying the cooling towers as exempt TEUs. The following products used in the cooling towers contain TACs per the provided SDSs:*
   i. *2D TRASAR*
      1. *Phosphoric acid (CASRN 7664-38-2); and*
      2. *Sulfuric acid (CASRN 7664-93-9).*
   ii. *Stabrex ST70:*
      1. *Sodium hydroxide (CASRN 1310-73-2)*

As stated in the August 2024 submittal Item 2(d), the water treatment chemicals contain trace amounts of phosphoric acid and sulfuric acid. No TAC emissions are expected to be released from the treatment chemicals because the acids dissociate when added to the cooling tower water and are fully consumed in the treatment process. Therefore, we believe that these activities should be considered exempt TEUs.

[3] https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/welding/APCD-Welding- Operations.pdf

e. *As previously requested, (DEQ item 2.c.i.2, dated February 6, 2024) provide throughput information for the diesel, lubricants, and oil tanks at the facility to confirm if these tanks are exempt TEUs per OAR 340-245-0060(3)(a) using methods specified in the Cleaner Air Oregon Exempt TEU Reporting2 documentation.*

A summary of capacity, contents, and throughput of diesel, lubricant, and oil tanks at the facility is being submitted electronically. The throughputs of tanks with lubricants and oils are not individually tracked, but a total throughput for this category of tanks is included in the summary. All diesel storage tanks are aboveground and store diesel at ambient temperature and pressure. The lubricants and oils are also stored in above ground tanks at ambient temperature and pressure. Therefore, all diesel, lubricant, and oil tanks at the facility should remain categorically insignificant activities that are exempt under the CAO program.

11. *Add landfill emissions and emissions from materials deposited on the unpaved roads at the landfill to the Inventory. Use emission factors from AP-42 Section 2.4 for landfill gas emissions. Alternatively, GP Toledo may propose site or waste material specific emission factors with supporting justification.*

Toxics emissions from the mill's landfill were calculated based on the methodology in 40 CFR Part 98, Subpart TT for Industrial Waste Landfills. The methodology in the subpart, specifically Equation TT-1, yields methane generated. Methane emissions were then converted to landfill gas generated based on the assumption that 50% of landfill gas is methane, consistent with the default specified in 40 CFR 98.463(a)(1). NCASI Technical Bulletin No. 970 provides concentrations of air toxics measured in pulp and paper landfills. The concentrations were combined with the landfill gas generation rates to yield emissions of toxics air pollutants resulting from the landfill. GP believes this approach is more appropriate and representative of the Toledo Mill's landfill than using AP-42, Section 2.4, which applies to municipal solid waste landfills. The supporting emission rate calculations are provided.

Regarding unpaved road emissions, GP Toledo reviewed the SDS for the chemical dust suppressant the Toledo Mill uses. The SDS is provided as an attachment and does not specify that any air toxics are included in the product. Therefore, no toxics air emissions were estimated from unpaved roads at the landfill.

12. *AMRS (EU144):*
    a. *GP Toledo must account for fugitive emissions from AMRS. This must include fugitive emissions at the end of the autoclave process cycle and during material routing via conveyor through the additional, post-autoclave process. Visible emissions from both these processes were observed by DEQ during a site walk on September 21, 2023.*
    b. *Provide a process flow diagram for AMRS including all expected points of fugitive and non-fugitive emissions, air pollution control devices, and points of wastewater sampling.*
    c. *Provide information on the source of water for the AMRS including if the source is fresh water or process water. If process water is used, provide any available analytical data on the process water. Emissions from process water, if used, must be accounted for in the* Inventory.

As discussed in the enclosed letter, the Juno facility will be closed down at the Toledo Mill by June 30, 2026 and therefore, ODEQ is no longer considering Juno in the CAO analyses.

13. *Lime Mud Handling System (EU102): According to the 2023 Annual Hazardous Substance Report provided by GP Toledo, lime mud contains quartz. Include TAC emissions from quartz as respirable crystalline silica (CASRN 7782-49-2) from lime mud handling.*

The 2023 Annual Hazardous Substance Report reflected quartz in purchased lime. Emissions of crystalline silica from the handling of purchased lime are included in the updated emissions summary.

14. *Include fugitive emissions from the following TEUs or activities:*
    a. *OCC Pulping Plants (EU80 and EU81);*

All OCC pulping activities are fugitive and have been accounted for in the emissions.

    b. *Paper Machines 1, 2, and 3 (EUs 105/106, 107/108, 109/110);*

Paper Machine emissions are fugitive in nature and have been accounted for in the emissions already.

    c. *Open storage tanks and chests;*

A facility walk through was conducted to identify any open storage tanks and/or chests. The following were identified:

- Mix Tank – receives clarifier underflow from wastewater clarifier across the street, as well as sand separator underflow from the OCC plant. Emissions are expected to be negligible and/or already included in wastewater treatment emissions.
- Floc Tank - Receives the flow from the mix tank and sends it to the RST (rotary screen thickeners). Some polymer is added here to promote precipitation and clumping of material. Emissions are expected to be negligible and/or already included in wastewater treatment emissions.
- Head Tank - Stores thickener filtrate water from the OCC process. There are no published factors and emissions are assumed to be negligible.
- No. 7 High Density (HD) storage tank – this stores OCC stock. There are no published factors and emissions are assumed to be negligible.
- No. 4 HD storage tank – this HD tank is included in the emissions estimates as EU113-1.
- Nos. 2 and 3 Paper Machine Broke tanks – these store the trim or off-spec product after going through the paper machine and prior to re-introducing to the process. As the material has already been processed and is mixed only with water, no emissions are expected from this source.
- Central White Water Tank – White water is the used water from the paper machines which is recycled into the process. Although there may be some residual organic compounds in the white water, it is very dilute and emissions are negligible. Recent methanol sampling shows a maximum of 16 ppm in the whitewater.

    d. *Leaks in the LVHC lines; and*

The facility conducts monthly LDAR visible inspections for Subpart S and an annual Method 21. Leaks are repaired within 5 days and fixed within 15 days. Any leaks would be negligible.

e. Batch digester.

Batch Digester fill emissions are included in EU125. Any other fugitive emissions are captured with NCG venting, EU126-A.

15. *Thank you for the additional information provided regarding the venting from the LVHC Combined Header, Blow Heat Accumulator, Foul Condensate, Blow Heat Evaporator, and Turpentine System (EU126-A, EU126-B, EU126-C, EU126-D, and EU126-E). Please provide additional explanation regarding how the apportioned venting amounts are correlated to activity levels in the Inventory (tons ADTUBP for EU126-A, EU126-B, EU126-C, and EU126-D; and hours for EU126-E).*

As a worst-case assumption, a full 1% of venting was used. 1% of the maximum pulp throughput is equal to 5,475 ADT/year. 1% of operating hours is 87.6 hours. The condensate tank factor is in lb/hr. All other factors are lb/ADT. The total 1% venting was attributed to each source as described previously using the 1% * % by source * 5,475 ADT *or* 1% * % by source * 87.6 hours, depending on the emission factor units. In addition, at the request of DEQ, the daily venting hours was updated to 210 minutes based on the worst-case day over the past three years. A summary of the calculations is shown below.

Pulp Throughput Data for Calculations

PTE Throughput, Annual	547,500 ADTUBP/year
PTE Throughput, Daily	2,250 ADTUBP/day
Total tons PTE, annual based on 1%	5,475 ADTUBP/year
Total tons, PTE, daily	328 ADTUBP/day
Total Hours annual, based on 1%	87.6 hours/year
Total hours daily	3.5 hours/day

1. 1% venting allowance based on NESHAP Subpart S.
2. Daily venting based on May 20, 2025 email from ODEQ (H. Kuoppamaki) requesting that the max daily venting from the last 3 years (210 minutes) be used.

Venting Apportionment by Source

			Percent Venting by Source						
Source ID	**Source Name**	**NCASI Reference**	**2018**	**2019**	**2020**	**Average**	**PTE Value**	**Annual PTE**	**Daily PTE**
EU126 - A	NCG LVHC Combinec	Uncontr. NCGs - HVLC Combined	19%	30%	54%	34%	54%	2,939 ADTUBP/yr	176 ADTUBP/day
EU126 - B	NCG Blowheat Accur	Uncontr. NCGs - Digester Blow	20%	32%	12%	21%	14.9%	817 ADTUBP/yr	49 ADTUBP/day
EU126 - C	NCG Blowheat Evapc	Uncontr. NCGs - Evaporator	35%	17%	11%	21%	14.6%	801 ADTUBP/yr	48 ADTUBP/day
EU126 - D	NCG Turpentine Ven	Uncontr. NCGs - Turpentine	1%	0%	0%	0.5%	0.3%	18 ADTUBP/yr	1 ADTUBP/day
EU126-E	Foul Condensate	Condensate Storage Tank	26%	21%	23%	23%	16.5%	14 hr/yr	0.6 hr/day
			Total			**100%**	**100%**	**5,475 ADTUBP/yr**	**328 ADTUBP/day**

1. PTE percentages are based on using the maximum % of the combined header and then reallocated others based on average. Combined header has highest factor.
2. 2020 Foul condensate is actually 71.3% of totals, but this was a specific issue that was resolved. Set equal to 2018-2019 average
3. All factors are lb/ADTUBP except for Foul Condensate which is a lb/hr factor.

16. *Provide all data (such as facility production data or source test reports) and calculations used in development of the hydrogen sulfide (CASRN 7783-06-4) emission factors for the following TEUs:*
    a. *EU1: No. 1 Lime Kiln;*
    b. *EU2: No. 2 Lime Kiln;*
    c. *EU3: No. 3 Lime Kiln;*

d. EU14-B: No. 1 Recovery Boiler (BLS);
e. EU15: No. 1 Smelt Dissolving Tank;
f. EU16-B: No. 2 Recovery Boiler (BLS); and
g. EU17: No. 2 Smelt Dissolving Tank.

TRS is monitored continuously for the Lime Kilns (combined exhaust) and each recovery furnace. H_2S is a TRS compound. Thus, TRS will be higher than H_2S but provides a worst-case estimate of H_2S emissions. As part of the PSEL development, ODEQ requested that GP uses the weighted annual average maximum emission factor from 2010-2019. A copy of the CEMS data submitted to DEQ for the Title V renewal is included electronically.

As part of the PSEL development for the Smelt Dissolving Tanks, ODEQ requested the use of the average of tests from 2010 to 2020. As with the CEMS data for the other emission units, TRS was conservatively used to estimate H_2S. The stack test spreadsheet used for PSEL development is included electronically.

17. NG Boilers (EU11, EUl3, EU14G, EU16G, EUl8, and EU22):
a. Provide the emission testing results from the natural gas fired boiler conducted at the Florida Mill, referenced in GP-Toledo's response to item 19.d in DEQ's letter dated February 6, 2024, for hydrochloric acid (CASRN 7647-01-0) and hydrogen fluoride (CASRN 7664-39-3) emissions estimates.

After tracking down the original stack test, it was determined that there was one HCl detect. This has been added to the emissions. The stack test is provided as an electronic attachment, and Form AQ520 has been updated to reflect the stack test data.

18. Turpentine Decanter (EU126-D): As requested by DEQ in our February 6, 2024 letter, provide supporting documentation for the methanol (CASRN 67-56-1) emission factor.

As detailed under item 10.i in the August 5, 2024 response, the methanol factor for the turpentine decanter is provided in the NCASI spreadsheet. Refer to row 2127, column P. There is only a single detect value and that is the value that is used.

19. Engine TEUs (EU134 - EU143 and EU145): Update the units of the activity information provided in Worksheet 2 and/or the emission factors in Worksheet 3 to be on the same basis. Currently, activity units in Worksheet 2 are in hours while the emission factor is in pounds per thousand gallons (lb/Mgal). The units of the activity should match the denominator of the emission factor.

Units of activity have been converted on Form AQ520 to thousand gallons (Mgal) of fuel, which are calculated based on hours of operation. The general equation used for this conversion is:

Mgal = hours x engine horsepower [hp] x 7,000 Btu/hp-hr / 10^6 Btu/MMBtu / fuel heat content [MMBtu/Mgal]

The average brake-specific fuel consumption of 7,000 Btu/hp-hr is from AP-42 Chapter 3.3, Table 3.3-1 footnote a. For both diesel fuel and gasoline, the heat contents of 138 MMBtu/Mgal and 125 MMBtu/Mgal, respectively, are from CFR Part 98 Table C-1.

20. Add concentrator hot wells, concentrator seal tanks, and concentrator surface condensers to the Inventory using emission factors from Appendix D of NCASI TB1050.

As stated in August 2024 response, these units do not exist at the Toledo Mill.

21. *Update the Inventory to be consistent with Notice of Constructions (NCs), including AQ104B Toxics Reporting Forms, submitted to the Western Region. This includes an NC to utilize 10% white liquor at the Semi Chem Mill.*

Form AQ520 was updated with the information on the Form AQ104B submitted as part of the Type 2 NOA proposing to add low volumes of white liquor to the semi-chemical digester process on-site.

In addition to the items specifically requested in the letter, the following items requested in subsequent communications were provided in the previously attached files:

- Number, make, model, and specifications of our H_2S perimeter air monitors on site and our QA/QC plan.
    - There are nine "Acrulog Parts Per Billion" monitors on site. Refer to attached QA/QC plan for additional details.
- Copy of current LDAR plan.
- Indication of CAO overlap with required Subpart MM ICR testing.

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We look forward to continued collaboration with DEQ throughout the CAO process. Please contact me at (503) 240-1627 or logan.vaughan@gapac.com if you have any questions regarding the information provided.

Sincerely,

/s/

Mark E. Carden
Vice President– Georgia-Pacific Toledo LLC

CC: Michael Eisele, DEQ (via email)
J.R. Giska, DEQ (via email)
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