

**State of Georgia
Department of Natural Resources
Environmental Protection Division**

Permit No. 2499-075-0028-E-01-1

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$$ER_{VOC} = \{ EF_{VOC/DR} * W_{DR} * [\%DT/100 + (1 - DRE/100) * (1 - \%DT/100)] + (EF_{VOC/BLR}) * (H_{BLR}) + EF_{VOC/S2} * W_{COOL} + EF_{VOC/SILO} * W_{SILO} \} / 2,000$$

$$\%DT = (T_{DT} / T_{DR}) * 100\%$$

Where:

- ER_{VOC} = Monthly VOC emission rate from the entire facility, in tons per month.
- $EF_{VOC/DR}$ = Uncontrolled VOC emission factor prior to RTO, in lbs VOC/ton wood, determined in the most recent performance tests per Condition 6.12d. Before the initial performance test is conducted, the Permittee is allowed to use the VOC emission factor in Table 7.20 below.
- W_{DR} = Monthly throughput of Dryers DRY5 and DRY6, combined, determined and recorded in accordance with Condition 7.16a.
- $\%DT$ = RTO percent down time, in percentage.
- T_{DT} = Total hours per month that (1) the three-hour rolling average RTO combustion zone temperature falls below the minimum combustion zone temperature set point, determined and recorded in accordance with Condition 7.17d.; and (2) exhausts from BUR5, BUR6, DRY5, or DRY6 bypasses RTO, determined in accordance with Condition 7.17e.; **combined**, in hours per month.
- T_{DR} = Total operating hours per month that either DRY5 or DRY6 is in operation (non-cumulative), determined in accordance with Condition 7.17f.
- DRE = RTO control efficiency, in percentage, determined in accordance with Condition 6.12e. Before the initial performance test is conducted, the Permittee is allowed to use the VOC DRE in Table 7.20 below.
- $EF_{VOC/BLR}$ = U.S. EPA AP-42 VOC emission factor for Boiler BLR, 5.5 lbs VOC/MMcf NG).
- H_{BLR} = Monthly natural gas consumption by Boiler BLR, in MMcf NG/mo, determined and recorded in accordance with Condition 7.16g.
- $EF_{VOC/S2}$ = VOC emission factor for Stack S2, in lbs VOC/ton wood, determined in the most recent performance tests per Condition 6.12f. Before the initial performance test is conducted, the Permittee is allowed to use the VOC emission factor in Table 7.20 below.
- W_{COOL} = Monthly throughput of COOL1 – COOL4, combined, determined and recorded in accordance with Condition 7.16b.
- $EF_{VOC/SILO}$ = VOC emission factor for Finished Pellet Silos SILO1 – SILO16, in lbs VOC/ton wood, determined in the most recent performance tests per Condition 6.12g. Before the initial performance test is conducted, the Permittee is allowed to use the VOC emission factor in Table 7.20 below.
- W_{SILO} = Monthly throughput of SILO1 – SILO16, determined and recorded in accordance with Condition 7.16c.
- 2,000 = Conversion Factor to Convert Pound into Ton.