

Certification Statement:

The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.

Facility Name:GLOBALFOUNDRIES U.S. 2 LLC - Vermont Facility
Facility Identifier:525493
Facility Reporting Year:2024
Facility Location:
Address: 1000 RIVER STREET - B966
City: ESSEX JUNCTION
State: VT
Postal Code: 05452

Facility Site Details:

CO2 equivalent emissions from facility subparts C-II, SS, and TT (metric tons):142,171.6
CO2 equivalent emissions from supplier subparts LL-QQ (metric tons):0
Biogenic CO2 emissions from facility subparts C-II, SS, and TT (metric tons):0
Cogeneration Unit Emissions Indicator:N
GHG Report Start Date:2024-01-01
GHG Report End Date:2024-12-31
Description of Changes to Calculation Methodology:
Plant Code Indicator:N
Primary NAICS Code:334413
Second Primary NAICS Code:

Parent Company Details:

Parent Company Name:GLOBALFOUNDRIES US INC
Address:2600 Great America Way, Santa Clara, CA 95054
Percent Ownership Interest:100

Subpart C: General Stationary Fuel Combustion

Gas Information Details

Gas Name	Carbon Dioxide
Gas Quantity	37,102.7 (Metric Tons)
Own Result?	

Gas Name	Biogenic Carbon dioxide
Gas Quantity	0 (Metric Tons)
Own Result?	

Gas Name	Methane
Gas Quantity	0.71 (Metric Tons)
Own Result?	

Gas Name	Nitrous Oxide
Gas Quantity	0.071 (Metric Tons)
Own Result?	

Unit Details:

Unit Name : GP-GLOBALFOUNDRIES U.S. 2 LLC - Vermont
Unit Description : Aggregation of Boiler Units (Essex, Williston, and outlying/standalone units combined)

Small Unit Aggregation Details:**Use Ivt Indicator:** N**Highest Maximum Rated Heat Input Capacity:** 94.4**Cumulative Maximum Rated Heat Input Capacity:** 661.4**Emission Details:****Annual CO₂ mass emissions from sorbent:** 0 (Metric Tons)**Annual Biogenic CO₂ Emissions:** 0 (metric tons)**Annual Fossil fuel based CO₂ Emissions:** 37141.1 (metric tons)**Tier Fuel Details:****Fuel :** Natural Gas (Weighted U.S. Average)**Tier Name :** Tier 2 (Equation C-2a)**Tier Methodology Start Date :** 2024-01-01**Tier Methodology End Date :** 2024-12-31**Frequency of HHV determinations :** Monthly**Tier 2 Monthly HHV Details :**

January	February	March	April	May	June	July	August	September	October	November	December
N	N	N	N	N	N	N	N	N	N	N	N

Fuel Emission Details :

Total CO ₂ emissions	Total CH ₄ emissions	Total N ₂ O emissions	Total CH ₄ emissions CO ₂ e	Total N ₂ O emissions CO ₂ e
36942.0 (Metric Tons)	0.70 (Metric Tons)	0.070 (Metric Tons)	19.5 (Metric Tons)	18.4 (Metric Tons)

Equation C2a/C9a Inputs :**Fuel Quantity :** 666387800 (scf/year)**Use Default High Heat Value :** false**Equation C2b Inputs :**

	Fuel Combusted	High Heat Value
January	93908900 (scf/month)	0.001047 (mmBtu/scf)
February	84907100 (scf/month)	0.001046 (mmBtu/scf)
March	72970800 (scf/month)	0.001042 (mmBtu/scf)
April	56393300 (scf/month)	0.001044 (mmBtu/scf)
May	33385400 (scf/month)	0.001044 (mmBtu/scf)
June	29532300 (scf/month)	0.001039 (mmBtu/scf)
July	29078600 (scf/month)	0.001040 (mmBtu/scf)
August	29783100 (scf/month)	0.001042 (mmBtu/scf)
September	29955700 (scf/month)	0.001039 (mmBtu/scf)
October	42659800 (scf/month)	0.001042 (mmBtu/scf)
November	69504500 (scf/month)	0.001047 (mmBtu/scf)
December	94308300 (scf/month)	0.001050 (mmBtu/scf)

Fuel : Propane**Tier Name :** Tier 1 (Equation C-1)**Tier Methodology Start Date :** 2024-01-01**Tier Methodology End Date :** 2024-12-31**Fuel Emission Details :**

Total CO ₂ emissions	Total CH ₄ emissions	Total N ₂ O emissions	Total CH ₄ emissions CO ₂ e	Total N ₂ O emissions CO ₂ e
2.2 (Metric Tons)	0.00 (Metric Tons)	0.000 (Metric Tons)	0 (Metric Tons)	0 (Metric Tons)

Equation C1/C8 Inputs :**Fuel Quantity :** 383.1 (gallons/year)**Fuel :** Distillate Fuel Oil No. 2**Tier Name :** Tier 1 (Equation C-1)

Tier Methodology Start Date : 2024-01-01
Tier Methodology End Date : 2024-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
158.5 (Metric Tons)	0.01 (Metric Tons)	0.001 (Metric Tons)	0.2 (Metric Tons)	0.3 (Metric Tons)

Equation C1/C8 Inputs :

Fuel Quantity : 15526.3 (gallons/year)

Subpart I: Electronics Manufacturing

Gas Information Details

Gas Name	Nitrous Oxide
Gas Quantity	26.369 (Metric Tons)
Own Result?	

Gas Name	PFC C-1418
Gas CAS Registry Number	559-40-0
Gas Linear Chemical Formula	c-C5F8
Gas Quantity	0.0117 (Metric Tons)
Own Result?	

Gas Name	PFC-116 (Perfluoroethane)
Gas CAS Registry Number	76-16-4
Gas Linear Chemical Formula	C2F6
Gas Quantity	1.6541 (Metric Tons)
Own Result?	

Gas Name	Sulfur hexafluoride
Gas CAS Registry Number	2551-62-4
Gas Linear Chemical Formula	SF6
Gas Quantity	0.7797 (Metric Tons)
Own Result?	

Gas Name	PFPME (HT-70)
Gas CAS Registry Number	69991-67-9 (b)
Gas Linear Chemical Formula	CF3OCF(CF3)CF2OCF2OCF3
Gas Quantity	0.056 (Metric Tons)
Own Result?	

Gas Name	Perfluorocyclobutane
Gas CAS Registry Number	115-25-3
Gas Linear Chemical Formula	c-C4F8
Gas Quantity	0.6449 (Metric Tons)
Own Result?	

Gas Name	FC-3283/FC-8270 (Perfluorotripropylamine)
Gas CAS Registry Number	338-83-0
Gas Linear Chemical Formula	N(CF2CF2CF3)3
Gas Quantity	0.4755 (Metric Tons)

Own Result?	
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Gas Name	HFE-569sf2, (HFE-7200) Isomer blend
Gas CAS Registry Number	163702-05-4, 163702-06-5
Gas Linear Chemical Formula	C4F9OC2H5, (CF3)2CFCF2OC2H5
Gas Quantity	0.0738 (Metric Tons)
Own Result?	

Gas Name	HFC-23
Gas CAS Registry Number	75-46-7
Gas Linear Chemical Formula	CHF3
Gas Quantity	0.6253 (Metric Tons)
Own Result?	

Gas Name	HFE-449sl, (HFE-7100) Isomer blend
Gas CAS Registry Number	163702-07-6, 163702-08-7
Gas Linear Chemical Formula	C4F9OCH3, (CF3)2CFCF2OCH3
Gas Quantity	0.2635 (Metric Tons)
Own Result?	

Gas Name	Other
Other Gas Name	HT-200
Other Gas CAS Registry Number	69991-67-9 (h)
Other Gas Linear Chemical Formula	CF3(OCFCF3CF2)n-(OCF2)m-OCF3
Other Gas GHG Group	Fully fluorinated GHGs
Gas Quantity	0.32 (Metric Tons)
Own Result?	

Gas Name	Other
Other Gas Name	Opteon SF10(Sinera)
Other Gas CAS Registry Number	1708962-18-8, 1708962-18-9
Other Gas Linear Chemical Formula	C7F13(OCH3)
Other Gas GHG Group	Fluorinated aldehydes, fluorinated ketones, and non-cyclic forms of the following: unsaturated perfluorocarbons (PFCs), unsaturated HFCs, unsaturated CFCs, unsaturated HCFCs, unsaturated BFCs, unsaturated BCFCs, unsaturated HBFCs, unsaturated HBCFCs, unsaturated halogenated ethers and unsaturated halogenated esters
Gas Quantity	0.2839 (Metric Tons)
Own Result?	

Gas Name	HFC-41
Gas CAS Registry Number	593-53-3
Gas Linear Chemical Formula	CH3F
Gas Quantity	0.0065 (Metric Tons)
Own Result?	

Gas Name	Nitrogen trifluoride
Gas CAS Registry Number	7783-54-2
Gas Linear Chemical Formula	NF3
Gas Quantity	1.1488 (Metric Tons)
Own Result?	

Gas Name	PFC-14 (Perfluoromethane)
Gas CAS Registry Number	75-73-0
Gas Linear Chemical Formula	CF4
Gas Quantity	3.1764 (Metric Tons)
Own Result?	

Subpart I Fab Details (for GLOBALFOUNDRIES U.S. 2 LLC - Vermont Fac):

Unique Name/Identifier	GLOBALFOUNDRIES U.S. 2 LLC - Vermont Fac
Optional Description	
What does the fab manufacture? [§98.96]	Semiconductor
Method used to calculate f-GHG emissions for this fab from the plasma etch/wafer clean and chamber clean process types [§98.96(d)]	DefaultEmissionFactors
Does the fab have abatement systems (as defined in 98.98) through which F-GHG or N2O flow?	Yes
Is the fab claiming destruction or removal efficiency for those abatement systems (as defined in 98.98) at the fab? [§98.96(p)]	Yes
What Is the Diameter of the Wafers Manufactured at this Fab? (Greater than 300 mm) [§98.96(b)]	No
What Is the Diameter of the Wafers Manufactured at this Fab? (300 mm) [§98.96(b)]	No
What Is the Diameter of the Wafers Manufactured at this Fab? (200 mm) [§98.96(b)]	Yes
What Is the Diameter of the Wafers Manufactured at this Fab? (150 mm) [§98.96(b)]	No
What Is the Diameter of the Wafers Manufactured at this Fab? (Less than 150 mm) [§98.96(b)]	No
List the Specific Wafer Size(s) Less than 150mm Manufactured at this Fab [§98.96(b)]	
Annual Manufacturing Capacity at this Fab used in Equation I-5 (square meters) [§98.96(a)]	10376
Annual production for this fab in terms of substrate surface area (e.g., silicon, PV-cell, glass) (square meters) [§98.96(e)]	
Do the emissions for this fab include emissions from research and development activities, as defined in 98.6?	Yes
What is the approximate percentage of total GHG emissions, on a metric ton CO2e basis, that are attributable to research and development activities? [§98.96(x)]	less than 5 percent
What is the effective fab-wide destruction or removal efficiency value calculated using Equations I-26, I-27 and I-28, as appropriate? (decimal fraction) [§98.96(r)]	0.0434
What method was used for this fab to develop the apportioning factors for fluorinated GHG and N2O consumption? [§98.96(m)(1)]	Quantifiable metric
Optional description of your system and method(s) used in the fab-specific apportioning model	
Description of quantifiable metric used in engineering model to apportion gas consumption [§98.96(m)(1)]	Wafer passes
Start date selected under 98.94(c)(2)(i). [§98.96(m)(2)]	2024-01-01
End date selected under 98.94(c)(2)(i). [§98.96(m)(2)]	2024-12-31
Certification that the gas(es) selected under 98.94(c)(2)(ii) for this fab corresponds to the largest quantity(ies) consumed, on a mass basis, of fluorinated GHG used at the fab in the reporting year which the facility is required to apportion. Note that if you compare the actual gas consumed to the modeled gas consumed for two fluorinated GHGs, you must certify that one of the	Certified

fluorinated GHGs selected for comparison corresponds to the largest quantity consumed, on a mass basis, of fluorinated GHGs used at the fab that requires apportionment during the reporting year. [§98.96(m)(3)]	
Reason for "not certified" selection (optional)	
Result of calculation comparing actual and modeled gas consumption under §98.94(c)(2)(v) (the percent difference between actual and modeled gas consumption, relative to actual gas consumption). [§98.96(m)(4)]	1
If you are required to apportion f-GHG consumption between fabs, as required by 98.94(c)(2)(v), certification that the gas(es) you selected under §98.94(c)(2)(ii) correspond(s) to the largest quantities consumed on a mass basis, of f-GHG used at your facility during the reporting year for which you are required to apportion. [§98.96(m)(5)]	NotCertified
Reason for "not certified" selection (optional)	The GlobalFoundries U.S. 2 LLC - Vermont Facility has only one fab.

N2O Emissions Details

Method of reporting N2O emissions from chemical vapor deposition as calculated in Equation I-10 [§98.96(d)]	Used default utilization factor from Table I-8
Total annual N2O emissions from chemical vapor deposition as calculated in Equation I-10 [§98.96(c)(3)]	22.3486
Method of reporting N2O emissions from electronic manufacturing processes as calculated in Equation I-11 [§98.96(d)]	Used default utilization factor from Table I-8
Total annual N2O emissions from electronic manufacturing processes as calculated in Equation I-11 [§98.96(c)(3)]	4.0205

Substrate Types Details

Substrate Type	silicon
"Other" Substrate Type	
The Annual production in terms of substrate surface area for each fab (square meters) [§98.96(e)]	10376

F-GHG Emissions Details

Unique Name/Identifier	HFC-23
Chemical Formula [98.96(c)(1)]	CHF3
Cas Number [98.96(c)(1)]	75-46-7
Gas Category [98.96(c)(1)]	
Gas Name	HFC-23
Gas Description	
Cas Number	75-46-7
Process Type	Plasma etching / Wafer cleaning
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	0.6253
Unique Name/Identifier	HFC-41
Chemical Formula [98.96(c)(1)]	CH3F
Cas Number [98.96(c)(1)]	593-53-3
Gas Category [98.96(c)(1)]	
Gas Name	HFC-41
Gas Description	
Cas Number	593-53-3
Process Type	Plasma etching / Wafer cleaning
Calculation Method	Used default factors

Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	0.0065
Unique Name/Identifier	Nitrogen trifluoride
Chemical Formula [98.96(c)(1)]	NF3
Cas Number [98.96(c)(1)]	7783-54-2
Gas Category [98.96(c)(1)]	
Gas Name	Nitrogen trifluoride
Gas Description	
Cas Number	7783-54-2
Process Type	Plasma etching / Wafer cleaning
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	0.0689
Gas Name	Nitrogen trifluoride
Gas Description	
Cas Number	7783-54-2
Process Type	Chamber cleaning - in situ plasma
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	1.0121
Gas Name	Nitrogen trifluoride
Gas Description	
Cas Number	7783-54-2
Process Type	Chamber cleaning - remote plasma
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	0.0678
Unique Name/Identifier	Perfluorocyclobutane
Chemical Formula [98.96(c)(1)]	c-C4F8
Cas Number [98.96(c)(1)]	115-25-3
Gas Category [98.96(c)(1)]	
Gas Name	Perfluorocyclobutane
Gas Description	
Cas Number	115-25-3
Process Type	Plasma etching / Wafer cleaning
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	0.1410
Gas Name	Perfluorocyclobutane
Gas Description	
Cas Number	115-25-3
Process Type	Chamber cleaning - in situ plasma
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	0.5039
Unique Name/Identifier	PFC C-1418
Chemical Formula [98.96(c)(1)]	c-C5F8
Cas Number [98.96(c)(1)]	559-40-0
Gas Category [98.96(c)(1)]	
Gas Name	PFC C-1418
Gas Description	
Cas Number	559-40-0
Process Type	Plasma etching / Wafer cleaning
Calculation Method	Used default factors

Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	0.0117
Unique Name/Identifier	PFC-116 (Perfluoroethane)
Chemical Formula [98.96(c)(1)]	C2F6
Cas Number [98.96(c)(1)]	76-16-4
Gas Category [98.96(c)(1)]	
Gas Name	PFC-116 (Perfluoroethane)
Gas Description	
Cas Number	76-16-4
Process Type	Plasma etching / Wafer cleaning
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	0.6106
Gas Name	PFC-116 (Perfluoroethane)
Gas Description	
Cas Number	76-16-4
Process Type	Chamber cleaning - in situ plasma
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	1.0435
Unique Name/Identifier	PFC-14 (Perfluoromethane)
Chemical Formula [98.96(c)(1)]	CF4
Cas Number [98.96(c)(1)]	75-73-0
Gas Category [98.96(c)(1)]	
Gas Name	PFC-14 (Perfluoromethane)
Gas Description	
Cas Number	75-73-0
Process Type	Plasma etching / Wafer cleaning
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	1.8554
Gas Name	PFC-14 (Perfluoromethane)
Gas Description	
Cas Number	75-73-0
Process Type	Chamber cleaning - in situ plasma
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	1.2430
Gas Name	PFC-14 (Perfluoromethane)
Gas Description	
Cas Number	75-73-0
Process Type	Chamber cleaning - remote plasma
Calculation Method	Used default factors
Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [98.96(c)(1)]	0.0780
Unique Name/Identifier	Sulfur hexafluoride
Chemical Formula [98.96(c)(1)]	SF6
Cas Number [98.96(c)(1)]	2551-62-4
Gas Category [98.96(c)(1)]	
Gas Name	Sulfur hexafluoride
Gas Description	
Cas Number	2551-62-4
Process Type	Plasma etching / Wafer cleaning
Calculation Method	Used default factors

Annual emissions for this F-GHG - Process Type - Calculation Method (metric tons) [§98.96(c)(1)]	0.7797
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F-HTF Emissions Details

F-HTF [§98.96(c)(4)]	FC-3283/FC-8270 (Perfluorotripropylamine)
Chemical Formula [§98.96(c)(4)]	N(CF ₂ CF ₂ CF ₃) ₃
Cas Number [§98.96(c)(4)]	338-83-0
F-HTF Category [§98.96(c)(4)]	
Total Annual Emissions (metric tons) [§98.96(c)(4)]	0.47546411
Were missing data procedures used to estimate inputs into the fluorinated heat transfer fluid mass balance equation under §98.95(b)? [§98.96(s)]	No
How many times were missing data procedures followed in this reporting year? [§98.96(s)]	0
What method was used to estimate the missing data? [§98.96(s)]	
F-HTF [§98.96(c)(4)]	HFE-449sl, (HFE-7100) Isomer blend
Chemical Formula [§98.96(c)(4)]	C ₄ F ₉ OCH ₃ , (CF ₃) ₂ CF ₂ CF ₂ OCH ₃
Cas Number [§98.96(c)(4)]	163702-07-6, 163702-08-7
F-HTF Category [§98.96(c)(4)]	
Total Annual Emissions (metric tons) [§98.96(c)(4)]	0.26349951
Were missing data procedures used to estimate inputs into the fluorinated heat transfer fluid mass balance equation under §98.95(b)? [§98.96(s)]	No
How many times were missing data procedures followed in this reporting year? [§98.96(s)]	0
What method was used to estimate the missing data? [§98.96(s)]	
F-HTF [§98.96(c)(4)]	HFE-569sf ₂ , (HFE-7200) Isomer blend
Chemical Formula [§98.96(c)(4)]	C ₄ F ₉ OC ₂ H ₅ , (CF ₃) ₂ CF ₂ CF ₂ OC ₂ H ₅
Cas Number [§98.96(c)(4)]	163702-05-4, 163702-06-5
F-HTF Category [§98.96(c)(4)]	
Total Annual Emissions (metric tons) [§98.96(c)(4)]	0.07384442
Were missing data procedures used to estimate inputs into the fluorinated heat transfer fluid mass balance equation under §98.95(b)? [§98.96(s)]	No
How many times were missing data procedures followed in this reporting year? [§98.96(s)]	0
What method was used to estimate the missing data? [§98.96(s)]	
F-HTF [§98.96(c)(4)]	HT-200
Chemical Formula [§98.96(c)(4)]	CF ₃ (OCF ₂ CF ₂ CF ₂) _n -(OCF ₂) _m -OCF ₃
Cas Number [§98.96(c)(4)]	69991-67-9 (h)
F-HTF Category [§98.96(c)(4)]	Fully fluorinated GHGs
Total Annual Emissions (metric tons) [§98.96(c)(4)]	0.31999504
Were missing data procedures used to estimate inputs into the fluorinated heat transfer fluid mass balance equation under §98.95(b)? [§98.96(s)]	No
How many times were missing data procedures followed in this reporting year? [§98.96(s)]	0
What method was used to estimate the missing data? [§98.96(s)]	
F-HTF [§98.96(c)(4)]	Opteon SF10(Sinera)
Chemical Formula [§98.96(c)(4)]	C ₇ F ₁₃ (OCH ₃)
Cas Number [§98.96(c)(4)]	1708962-18-8, 1708962-18-9

F-HTF Category [§98.96(c)(4)]	Fluorinated aldehydes, fluorinated ketones, and non-cyclic forms of the following: unsaturated perfluorocarbons (PFCs), unsaturated HFCs, unsaturated CFCs, unsaturated HCFCs, unsaturated BFCs, unsaturated BCFCs, unsaturated HBFCs, unsaturated HBCFCs, unsaturated halogenated ethers and unsaturated halogenated esters
Total Annual Emissions (metric tons) [§98.96(c)(4)]	0.28394701
Were missing data procedures used to estimate inputs into the fluorinated heat transfer fluid mass balance equation under §98.95(b)? [§98.96(s)]	No
How many times were missing data procedures followed in this reporting year? [§98.96(s)]	0
What method was used to estimate the missing data? [§98.96(s)]	
F-HTF [§98.96(c)(4)]	PFPME (HT-70)
Chemical Formula [§98.96(c)(4)]	CF3OCF(CF3)CF2OCF2OCF3
Cas Number [§98.96(c)(4)]	69991-67-9 (b)
F-HTF Category [§98.96(c)(4)]	
Total Annual Emissions (metric tons) [§98.96(c)(4)]	0.05599954
Were missing data procedures used to estimate inputs into the fluorinated heat transfer fluid mass balance equation under §98.95(b)? [§98.96(s)]	No
How many times were missing data procedures followed in this reporting year? [§98.96(s)]	0
What method was used to estimate the missing data? [§98.96(s)]	

Abatement Systems Details

Abatement System Name/Identifier	GST Dragon and Gaia Series
Certification that the site maintenance plan for abatement systems for which emissions are being reported contains manufacturer's recommendations and specifications for installation, operation, and maintenance for each abatement system. [§98.96(q)]	Certified
Certification that the abatement systems for which emissions are being reported and for which default DRE are being used were specifically designed for fluorinated GHG and N2O abatement, as applicable. [§98.96(q)]	Certified
Certification in accordance with plan	Certified

DRE Information By Gas And Process Type

DRE Claimed Gas Name	HFC-23
DRE Claimed Gas CAS Number	75-46-7

Process Type/Sub-Type	Plasma etching / Wafer cleaning
Is DRE Claimed	true
Basis of DRE [§98.96(q)(2)]	Default DRE
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	Design Certification (40 CFR Part 98.94)- GST Abatement Units at GF Fab9 Burlington VT 2024.pdf
Number of Abatement System Controlling Emissions	5

DRE Information By Gas And Process Type

DRE Claimed Gas Name	HFC-41
DRE Claimed Gas CAS Number	593-53-3

Process Type/Sub-Type	Plasma etching / Wafer cleaning
Is DRE Claimed	false
Basis of DRE [98.96(q)(2)]	
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	
Number of Abatement System Controlling Emissions	0

DRE Information By Gas And Process Type

DRE Claimed Gas Name	Nitrogen trifluoride
DRE Claimed Gas CAS Number	7783-54-2

Process Type/Sub-Type	Plasma etching / Wafer cleaning
Is DRE Claimed	false
Basis of DRE [98.96(q)(2)]	
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	
Number of Abatement System Controlling Emissions	0

Process Type/Sub-Type	Chamber cleaning - in situ plasma
Is DRE Claimed	true
Basis of DRE [98.96(q)(2)]	Default DRE
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	Design Certification (40 CFR Part 98 94)- GST Abatement Units at GF Fab9 Burlington VT 2024.pdf
Number of Abatement System Controlling Emissions	3

Process Type/Sub-Type	Chamber cleaning - remote plasma
Is DRE Claimed	true
Basis of DRE [98.96(q)(2)]	Default DRE
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	Design Certification (40 CFR Part 98 94)- GST Abatement Units at GF Fab9 Burlington VT 2024.pdf
Number of Abatement System Controlling Emissions	15

DRE Information By Gas And Process Type

DRE Claimed Gas Name	Perfluorocyclobutane
DRE Claimed Gas CAS Number	115-25-3

Process Type/Sub-Type	Plasma etching / Wafer cleaning
Is DRE Claimed	false
Basis of DRE [98.96(q)(2)]	
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	
Number of Abatement System Controlling Emissions	0

Process Type/Sub-Type	Chamber cleaning - in situ plasma
Is DRE Claimed	true
Basis of DRE [98.96(q)(2)]	Default DRE
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	Design Certification (40 CFR Part 98 94)- GST Abatement Units at GF Fab9 Burlington VT 2024.pdf
Number of Abatement System Controlling Emissions	3

DRE Information By Gas And Process Type

DRE Claimed Gas Name	PFC C-1418
DRE Claimed Gas CAS Number	559-40-0

Process Type/Sub-Type	Plasma etching / Wafer cleaning
Is DRE Claimed	false
Basis of DRE [98.96(q)(2)]	
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	
Number of Abatement System Controlling Emissions	0

DRE Information By Gas And Process Type

DRE Claimed Gas Name	PFC-116 (Perfluoroethane)
DRE Claimed Gas CAS Number	76-16-4

Process Type/Sub-Type	Plasma etching / Wafer cleaning
Is DRE Claimed	false
Basis of DRE [98.96(q)(2)]	
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	
Number of Abatement System Controlling Emissions	0

Process Type/Sub-Type	Chamber cleaning - in situ plasma
Is DRE Claimed	false
Basis of DRE [98.96(q)(2)]	
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	
Number of Abatement System Controlling Emissions	0

DRE Information By Gas And Process Type

DRE Claimed Gas Name	PFC-14 (Perfluoromethane)
DRE Claimed Gas CAS Number	75-73-0

Process Type/Sub-Type	Plasma etching / Wafer cleaning
Is DRE Claimed	true
Basis of DRE [98.96(q)(2)]	Default DRE
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	Design Certification (40 CFR Part 98 94)- GST Abatement Units at GF Fab9 Burlington VT 2024.pdf
Number of Abatement System Controlling Emissions	6

Process Type/Sub-Type	Chamber cleaning - in situ plasma
Is DRE Claimed	false
Basis of DRE [98.96(q)(2)]	
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	
Number of Abatement System Controlling Emissions	0

Process Type/Sub-Type	Chamber cleaning - remote plasma
Is DRE Claimed	false
Basis of DRE [98.96(q)(2)]	
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	
Number of Abatement System Controlling Emissions	0

DRE Information By Gas And Process Type

DRE Claimed Gas Name	Sulfur hexafluoride
DRE Claimed Gas CAS Number	2551-62-4

Process Type/Sub-Type	Plasma etching / Wafer cleaning
Is DRE Claimed	true
Basis of DRE [98.96(q)(2)]	Default DRE
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	Design Certification (40 CFR Part 98 94)- GST Abatement Units at GF Fab9 Burlington VT 2024.pdf
Number of Abatement System Controlling Emissions	2

DRE Information By Gas And Process Type

DRE Claimed Gas Name	N2O
DRE Claimed Gas CAS Number	10024-97-2

Process Type/Sub-Type	Chemical Vapor Deposition
Is DRE Claimed	true
Basis of DRE [98.96(q)(2)]	Default DRE
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	Design Certification (40 CFR Part 98 94)- GST Abatement Units at GF Fab9 Burlington VT 2024.pdf
Number of Abatement System Controlling Emissions	8

Process Type/Sub-Type	Other Electronics Manufacturing Processes
Is DRE Claimed	false
Basis of DRE [98.96(q)(2)]	
Supplier documentation that indicates that the system is designed to abate F-GHG or N2O, if using the applicable default DRE for this gas and process combination	
Number of Abatement System Controlling Emissions	0
