Iowa Department of Natural Resources
AIR QUALITY BUREAU
ATTN: Application Log in
6200 Park Ave Ste 200
Des Moines IA 50321

GHG

FORM GHG: PROJECT GREENHOUSE GAS EMISSION INVENTORY

Please see instructions on reverse side.

Company Name: _____

☐ Check box if Greenhouse Gases are not emitted from any of the emission units this project. If checked no further information is needed on this form.

STACK/VENT EMISSIONS SUMMARY									
1. EP ID	**2. EU ID**	**3. Emission Unit Name**	**4. On-site Installation/ Modification Date**	**5. Potential or Permitted Emission Rate**					
				CO_2 (TPY)	CH_4 (TPY)	N_2O (TPY)	SF_6 (lb/yr)	HFCs (lb/yr)	PFCs (lb/yr)
6. Total Stack/Vent Emissions									
7. Source	FUGITVE EMISSIONS SUMMARY								
8. Total Fugitive Emissions									
9. Total Project Emissions									

Instructions for Form GHG: Greenhouse Gas Emissions Inventory

- As required by IAC 455B.134(3)"f", Form GHG is required for every construction permit application even if the potential GHG emissions are zero.
- If your application does not have any Greenhouse Gas emissions, please check the corresponding box on the front side. The rest of the form does not need to be completed.
- If GHG emissions are present:
    a. List ALL emission units in the project including exempt units and other non-permitted emission units (i.e. natural gas boilers rated less than 10 MMBTU/hr, chillers, small units, etc.). Mobile sources (i.e. trucks, forklifts, cars, etc.) are not required to be listed.
    b. Emission units may be grouped into categories (i.e. chillers, space heaters, etc.).
    c. If the project is a modification to an emission unit, the facility shall report the total GHG emissions for the unit.
    d. If multiple emission units use a common emission point, fill in the emission point ID in column (1). List all emission units involved in column (2) and (3) below that emission point (EP) ID.
    e. Show how potential GHG emissions were calculated on an attached sheet labeled "Form GHG-A".
    f. More information concerning GHG emissions, including emission factors, can be found on the Air Quality Bureau **Greenhouse Gas Emission page**.

Understanding GHG Form Information: Each number provides an explanation for the corresponding field on the form.

Company Name: This is useful if application pages become separated.

Stack/Vent Emissions Summary:

1. **Emission Point (EP) ID:** Called the emission point (EP) identification (ID). It can be any combination of letters or numbers up to 16 characters in length. The ID should match the ID for this equipment used on other construction permit applications and within this application. If also submitting an operating permit application, the ID used in this application should be consistent with those used in the operating permit application.

2. **Emission Unit (EU) ID:** Called the emissions unit (EU) identification (ID). Each source in the application must have its own identifier. It can be any combination of letters or numbers up to 16 characters in length. The ID should match the ID for this equipment used on other construction permit applications and within this application. If also submitting an operating permit application, the ID used in this application should be consistent with those used in the operating permit application.

3. **Emission Unit Name:** Provide the name of the emission unit, such as "Emergency Engine", "Boiler 1", etc.

4. **On-Site Installation or Modification Date:** Provide the date (both month and year) in which on-site installation or modification of the emission unit begins or will begin.
    - *For the purpose of this form: Modification* means any physical change or change in the method of operation of any existing equipment or control equipment.

5. **Potential or Permitted Emission Rate:** Fill in the rate of potential emission in the appropriate units (either tons per year or pounds per year) for each pollutant. The following are the GHG emissions that must be included:

CO_2:	Carbon dioxide
CH_4:	Methane
N_2O:	Nitrous oxide, also known as dinitrogen oxide or dinitrogen monoxide.
SF_6:	Sulfur hexafluoride
HFC:	Hydrofluorocarbons
PFC:	Perfluorocarbons

Attach to this form a copy of your calculations showing how the potential GHG emissions were calculated. Total HFCs and PFCs are to be listed in the corresponding cells, but the calculations should separate the individual HFCs and PFCs. If you have more stack/vent emission sources than can fit on this form, attach a separate sheet labeled "Form GHG-A".

For PSD applications only: CO2e emissions must also be calculated and attached on a separate sheet labeled "Form GHG-A" CO2e emissions are defined as the sum of the mass emissions of each individual GHG adjusted for each pollutant's global warming potential (GWP). Guidance on calculating CO2e is available on the **http://www.iowadnr.gov/Environmental-Protection/Air-Quality/Greenhouse-Gas-Emissions/GHG-Estimation-Tools**.

6. **Total Stack/Vent Emissions:** Fill in the sum of the emission rate for each pollutant for all emission points (stacks or vents).

Fugitive Emissions Summary:
Fugitive emissions are those emissions that cannot reasonably be made to pass through a stack or vent or equivalent opening. Examples include equipment leaks, portion of landfill gas emissions, portion of wastewater treatment plant emissions, transformers, etc. Fugitive emissions must be included on this form if they are part of the current project for which the application is being submitted.

7. **Source:** This section should be completed for each fugitive emissions source with the information as described in sections 1-5 above for stack/vent emissions. If you have more fugitive emission sources than can fit on this form, attach a separate sheet (labeled GHG-A) to this form.

8. **Total Fugitive Emissions:** Fill in the sum of the emission rates for all fugitive emissions for each pollutant.

9. **Total Project Emissions:** Fill in the sum of the total project emissions for each pollutant from Total Stack/Vent Emissions (#6) and Total Fugitive Emissions (#8). If the total for any pollutant column is zero, please fill in zero.