Facility Name _____

Initials _____ Permit Number (Dept. use only) _____

Iowa Department of Natural Resources
Air Quality Construction Permit For a Small Bulk Gasoline Plant

(Gasoline Throughput less than 20,000 Gallons per Month)

Permit Holder

Firm: _____

Contact:		**Responsible Party:**
_____	(name)	_____
_____	(title)	_____
_____	(telephone)	_____
_____	(email address)	_____
_____	(street)	_____
_____	(city, state, zip)	_____

Permitted Equipment (see attached list)

Facility Name: _____

Equipment Location: _____ (street)

_____ (city, state, zip)

_____ (county)

Does your company own or operate another facility adjacent or contiguous to this bulk plant? ☐ Yes ☐ No

If yes, identify the facility: _____

Permit No.	Project No.	Description	Date	Testing

Plant Number: _____

_____
Under the direction of the Director of the Department of Natural Resources

For Department Use Only

Type of Equipment Being Permitted

This permit is only applicable to equipment located at a bulk gasoline plant[1] that is located at an area source of Hazardous Air Pollutants (HAP)[2]. The owner or operator is allowed to add, remove, and modify emissions units, or change throughput or operations, at this source without modifying this permit as long as the source continues to meet the emission limits and the operating limits in condition 9 and condition 13 of this permit and maintains a list of all loading arms and storage tanks operated at the facility as specified in condition 14. If any proposed change at this source would cause an exceedance of any emission limit or operating limit in this permit, the owner or operator must first obtain the proper air quality construction permits.

1. A bulk gasoline plant is any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank and has a gasoline throughput of less than 20,000 gallons per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State, or local law and discoverable by the Administrator and any other person.
2. An area source of HAP is a stationary source that has the potential to emit of less than 10 tons per year of any individual HAP and less than 25 tons per year of total HAP.

Exclusions and Prohibited Locations

The following bulk gasoline plants and emissions units shall not be covered by this permit:

A. Any plant located in Polk or Linn County is not eligible to use this permit.
B. Any plant that is located at a major source of HAP or is not eligible to use this permit.
C. Any plant subject to rule 567--33.3(455B) (Special construction permit requirements for major stationary sources in areas designated attainment or unclassified (PSD)) or rule 31.1(455B) (Permit requirements relating to nonattainment areas) is not eligible for coverage under this permit.
D. Any equipment used for the storage and distribution of gasoline and fuel oils at a bulk gasoline plant already subject to an existing air quality construction permit unless those permits are revoked concurrently when this permit is signed and issued.
E. Emissions units not used for the storage and distribution of gasoline and fuel oils, including but not limited to boilers, heaters, and stationary internal combustion engines. The owner or operator of these emission units must use an applicable exemption from 567 IAC 22.1(2) or obtain a construction permit as specified in 567 IAC 22.1(1).

Permittee Certification

I certify that, based on information and belief formed after reasonable inquiry, the enclosed documents including the attachments are true, accurate, and complete and that legal entitlement to install and operate the equipment covered by the permit application and on the property identified in the permit application has been obtained.

I certify that this permit, as drafted, is for (and only for) equipment located at a “bulk gasoline plant” not otherwise “excluded” as noted above. I certify that there are no physical or chemical characteristics or pollutants in the air contaminants emitted for this facility which are atypical of this type of facility. I certify that this bulk gasoline plant does not emit any of the greenhouse gases listed in Section 16 of this permit.

I certify that I have read this permit and have initialed the top of each page.

I certify that the requirements of 40 CFR Part 63, Subpart BBBBBB – NESHAP for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities, will be met by the compliance date specified in Section 12 and will be met at all times thereafter. I certify that all other terms and conditions of this permit will be met beginning with the issuance date of the permit and at all times thereafter.

Responsible Party – Signature _____

Title _____ Date _____

Facility Name _____

Initials _____

Permit Number (Dept. use only)_____

Equipment List

If there are more than 6 loading arms or 12 storage tanks, make copies of this form and attach.

Table 1. Complete the following table for the loading rack.

Arm ID	Date of construction	Rated Pump Capacity Gallons per minute	Average monthly throughput (gallons)[1]	Materials Loaded (check all that apply)	Loading Method[2] (check one)
				☐ Gasoline[3] ☐ Fuel Oil[4] ☐ Other liquid:	☐ Top load, splash fill ☐ Submerged fill[5] (i.e. drop tube) to within 12" of bottom ☐ Submerged fill[5] to within 6" of bottom
				☐ Gasoline[3] ☐ Fuel Oil[4] ☐ Other liquid:	☐ Top load, splash fill ☐ Submerged fill[5] to within 12" of bottom ☐ Submerged fill[5] to within 6" of bottom
				☐ Gasoline[3] ☐ Fuel Oil[4] ☐ Other liquid	☐ Top load, splash fill ☐ Submerged fill[5] to within 12" of bottom ☐ Submerged fill[5] to within 6" of bottom
				☐ Gasoline[3] ☐ Fuel Oil[4] ☐ Other liquid:	☐ Top load, splash fill ☐ Submerged fill[5] to within 12" of bottom ☐ Submerged fill[5] to within 6" of bottom
				☐ Gasoline[3] ☐ Fuel Oil[4] ☐ Other liquid:	☐ Top load, splash fill ☐ Submerged fill[5] to within 12" of bottom ☐ Submerged fill[5] to within 6" of bottom
				☐ Gasoline[3] ☐ Fuel Oil[4] ☐ Other liquid:	☐ Top load, splash fill ☐ Submerged fill[5] to within 12" of bottom ☐ Submerged fill[5] to within 6" of bottom

[1] Required for gasoline only.
[2] **Bottom filling is considered to be a type of submerged filling.**
[3]Includes all blends of gasoline (e.g. E10, E85, gasohol).
[4]Includes fuel oil grades No. 1 through No.6, kerosene, and diesel fuels.
[5]For arms loading gasoline, submerged fill pipes installed before November 9, 2006 must be no more than 12 inches from the bottom of the tank. Submerged fill pipes installed after November 9, 2006 must be no more than 6 inches from the bottom of the tank.

Facility Name _____

Initials _____

Permit Number (Dept. use only)_____

Table 2. Complete the following table for each storage tank located at this facility.

Tanks with a capacity of less than 250 gallons do not have to be listed in Table 2.

Tank ID	Material Stored	Tank capacity, gallons	Date of installation	Loading Method[1]
	☐ **Gasoline[2]** ☐ **Fuel Oil[3]** ☐ **Other liquid:**			☐ **Top load, splash fill** ☐ **Submerged fill[4] (i.e. drop tube) to within 12" of bottom** ☐ **Submerged fill[4] to within 6" of bottom**
	☐ **Gasoline[2]** ☐ **Fuel Oil[3]** ☐ **Other liquid:**			☐ **Top load, splash fill** ☐ **Submerged fill[4] to within 12" of bottom** ☐ **Submerged fill[4] to within 6" of bottom**
	☐ **Gasoline[2]** ☐ **Fuel Oil[3]** ☐ **Other liquid:**			☐ **Top load, splash fill** ☐ **Submerged fill[4] to within 12" of bottom** ☐ **Submerged fill[4] to within 6" of bottom**
	☐ **Gasoline[2]** ☐ **Fuel Oil[3]** ☐ **Other liquid:**			☐ **Top load, splash fill** ☐ **Submerged fill[4] to within 12" of bottom** ☐ **Submerged fill[4]to within 6" of bottom**
	☐ **Gasoline[2]** ☐ **Fuel Oil[3]** ☐ **Other liquid:**			☐ **Top load, splash fill** ☐ **Submerged fill[4] to within 12" of bottom** ☐ **Submerged fill[4] to within 6" of bottom**
	☐ **Gasoline[2]** ☐ **Fuel Oil[3]** ☐ **Other liquid:**			☐ **Top load, splash fill** ☐ **Submerged fill[4] to within 12" of bottom** ☐ **Submerged fill[4] to within 6" of bottom**
	☐ **Gasoline[2]** ☐ **Fuel Oil[3]** ☐ **Other liquid:**			☐ **Top load, splash fill** ☐ **Submerged fill[4] (i.e. drop tube) to within 12" of bottom** ☐ **Submerged fill[4] to within 6" of bottom**
	☐ **Gasoline[2]** ☐ **Fuel Oil[3]** ☐ **Other liquid:**			☐ **Top load, splash fill** ☐ **Submerged fill[4] to within 12" of bottom** ☐ **Submerged fill[4] to within 6" of bottom**

[1] **Bottom filling is considered to be a type of submerged filling.**
[2] Includes all blends of gasoline (e.g. E10, E85, gasohol)
[3]Includes fuel oil grades No. 1 through No.6, kerosene, and diesel fuels.

[4]For tanks storing gasoline, submerged fill pipes installed before November 9, 2006 must be no more than 12 inches from the bottom of the tank. Submerged fill pipes installed after November 9, 2006 must be no more than 6 inches from the bottom of the tank.

PERMIT CONDITIONS

The permit holder, owner and operator of the facility shall assure that the installation, operation, and maintenance of this equipment is in compliance with all of the conditions of this permit and all other applicable requirements. This permit and its provisions are subject to the appeal rights set forth in Iowa Administrative Code (IAC), rule 561—7.5. A facility not meeting the requirements set forth in this permit shall apply for a permit to construct as outlined in IAC 22.1(3).

1. Departmental Review

This permit is valid only after signature by the Iowa Department of Natural Resources staff.

This permit is issued based on the permittee's certification of the information submitted and certification that the terms and conditions in this permit will be met at all times. Any misinformation, false statements or misrepresentations by the applicant shall cause this permit to be void. In addition, the applicant may be subject to criminal penalties according to Iowa Code Section 455B.146A.

This permit is issued under the authority of 567 Iowa Administrative Code (IAC) 22.3. The proposed equipment has been evaluated for conformance with Iowa Code Chapter 455B; 567 IAC Chapters 20 – 34; and 40 CFR Parts 51, 52, 60, 61, and 63 and has the potential to comply.

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. The Department assumes no liability, directly or indirectly, for any loss due to damage to persons or property caused by, resulting from, or arising out of the design, installation, maintenance or operation of the proposed equipment.

2. Transferability

This permit is for the construction and operation of the emissions unit(s) and control equipment as specified in this permit and located at this facility. As limited by 567 IAC 22.3(3)"f", this permit is not transferable from one location to another or from one piece of equipment to another.

The permit is for the construction and operation of specific emission unit(s), control equipment, and emission point as described in this permit and in the application for this permit. Any owner or operator of the specified emission unit(s), control equipment, or emission point, including any person who becomes an owner or operator subsequent to the date on which this permit is issued, is responsible for compliance with the provisions of this permit. No person shall construct, install, reconstruct or alter this emissions unit, control equipment or emission point without the required revisions to this permit.

3. Construction

It is the owner's responsibility to ensure that construction conforms to the final plans and specifications as submitted, and that adequate operation and maintenance is provided to ensure that no condition of air pollution is created.

This permit shall become void if any one of the following conditions occur:

(1) the construction or modification of the proposed project, as it affects the emission point(s) permitted herein, is not initiated within eighteen (18) months after the permit issuance date; or
(2) the construction or modification of the proposed project, as it affects the emission point(s) permitted herein, is not completed within thirty-six (36) months after the permit issuance date; or
(3) the construction or modification of the proposed project, as it affects the emission point(s) permitted herein, is not completed within a time period specified elsewhere in this permit.

3.a. Original Permits

The owner or operator shall obtain a new permit if any changes are made to the final plans and specifications submitted for the proposed project.

3.b. Modified or Supplemental Permits

This permit supersedes any and all previous permits issued for the emission point(s) or emission unit(s) permitted herein. However, the permittee may continue to act under the provisions of the previous permit for the emission point(s) or emission unit(s) until one of the following conditions occurs:

(1) The proposed project authorized by this permit is completed as it affects the emission point(s) permitted herein; or
(2) The permit becomes void.

The owner or operator shall obtain a new permit if:
(1) Any changes are made to the final plans and specifications submitted for the proposed project; or
(2) This permit becomes void.

4. Credible Evidence

As stated in 567 IAC 21.5 and also in 40 CFR Part 60.11(g), where applicable, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions specified in this permit or any provisions of 567 IAC Chapters 20 through 34.

5. Owner Responsibility

Issuance of this permit shall not relieve the owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation Plan (SIP), and any other requirements of local, state, and federal law.

The owner or operator of any emission unit or control equipment shall maintain and operate the equipment and control equipment at all times in a manner consistent with good practice for minimizing emissions, as required by paragraph 567 IAC 24.2(1) *"Maintenance and Repair"*.

6. Excess Emissions

Excess emissions during a period of startup, shutdown, or cleaning of control equipment are not a violation of the emission standard if it is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions except when another regulation applicable to the unit or process provides otherwise. Cleaning of control equipment, which does not require the shutdown of process equipment, shall be limited to one six-minute period per one-hour period. An incident of excess emissions other than the above is a violation and may be subject to criminal penalties according to Iowa Code 455B.146A. If excess emissions are occurring, either the control equipment causing the excess shall be repaired in an expeditious manner, or the process generating the emissions shall be shutdown within a reasonable period of time, as specified in 567 IAC 24.1.

An incident of excess emissions shall be orally reported to the appropriate DNR field office within eight (8) hours of, or at the start of, the first working day following the onset of the incident (See section 7.C.1). A written report of an incident of excess emissions shall be submitted as a follow-up to all required oral reports within seven (7) days of the onset of the upset condition.

7. Notification, Reporting, and Recordkeeping

A. For each new bulk plant constructed after January 10, 2011, the owner shall furnish the Department the following written notifications:
   1. The date construction, installation, or alteration is initiated postmarked within thirty (30) days following initiation of construction, installation, or alteration; and
   2. The actual date of startup, postmarked within fifteen (15) days following the start of operation.

B. For any bulk plant, the owner shall furnish the Department a written notification on the transfer of equipment ownership within 30 days of occurrence.

C. The owner shall furnish the Department with the following reports:
   1. Oral excess emissions reports, in accordance with 567 IAC 24.1;
   2. Operation of this emission unit(s) or control equipment outside of those limits specified in Permit Conditions 9 and 13 and according to the schedule set forth in 567 IAC 24.1.
   3. Reports required by Section 14 of this permit.

D. The owner shall send correspondence regarding this permit to the following address:

Construction Permit Supervisor
Air Quality Bureau
Iowa Department of Natural Resources
502 E 9th St
Des Moines IA 50319
Telephone: (515) 725-9549
Fax: (515) 725-9501

E. The owner shall send reports and notifications to:

Compliance Unit Supervisor
Air Quality Bureau
Iowa Department of Natural Resources
502 E 9th St
Des Moines IA 50319
Telephone: (515) 725-9550
Fax: (515) 725-9501

F. With the exception of the records required to be kept by Section 14 C. of this permit, all data, records, reports, documentation, construction plans, and calculations required under this permit shall be available at the plant during normal business hours for inspection and copying by federal, state, or local air pollution regulatory agencies and their authorized representatives, for a minimum of two (2) years from the date of recording. Records may be maintained off-site provided that the records are available within 24 hours or one business day of a request by an authorized representative of a federal, state, or local air pollution regulatory agency.

Records required by Section 14 C. shall be retained for a minimum of five (5) years from the date of the recording, with the most recent two (2) years to be maintained on site.

8. Permit Violations

Knowingly committing a violation of this permit may carry a criminal penalty of up to $10,000 per day fine and 2 years in jail according to Iowa Code Section 455B.146A.

9. Emission Limits

Pollutant	lb/hr[1]	tons/yr[2]	Additional Limits	Reference (567 IAC)
Particulate Matter (PM)	NA	NA	NA	NA
PM_{10}	NA	NA	NA	NA
Opacity	NA	NA	NA	NA
Sulfur Dioxide (SO_2)	NA	NA	NA	NA
Nitrogen Oxides (NO_X)	NA	NA	NA	NA
Volatile Organic Compounds	NA	7.0[3]	NA	NA
Carbon Monoxide (CO)	NA	NA	NA	NA
Lead (Pb)	NA	NA	NA	NA
(Single HAP)	NA	See note 4	NA	NA
(Total HAP)	NA	See note 4	NA	NA

[1]Standard is expressed as the average of three (3) runs.
[2]Standard is a 12-month rolling total.
[3]Limit for all loading racks and storage tanks. Limit established to limit facility's PTE.
[4]Based on the EPA document, Gasoline Distribution Industry (Stage I) – Background Information for Proposed Standards (January, 1994), total HAP concentration of gasoline vapor is 11.0% by weight and the highest concentration of a single HAP is hexane at 4.4% by weight.

10. Emission Point Characteristics

There are no specific stack characteristic requirements for the bulk gasoline plant subject to this permit.

11. Compliance Demonstration(s) and Performance Testing

There are no performance tests required by this permit.

12. NSPS and NESHAP Applicability

There are no New Source Performance Standards (NSPS) for this source type at this time. Storage tanks at bulk gasoline plants are exempt from 40 CFR Part 60, Subpart Kb, (Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction or Modification Commenced after July 23, 1984) in accordance with §

60.110b(d)(5).

This bulk gasoline plant is subject to the requirements of 40 CFR Part 63, Subpart BBBBBB, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (567 IAC 23.1(4)"eb"). The emission sources to which the subpart applies are the gasoline storage tanks, gasoline loading racks, vapor collection-equipped gasoline cargo tanks and equipment components in vapor or liquid gasoline service. If this plant started up on or before November 9, 2006, it is considered an existing affected source and it must comply with the requirements of this subpart by no later than January 10, 2011. If this plant started up between November 9, 2006 and January 10, 2008, it is considered a new affected source and it must comply with the requirements of this subpart by no later than January 10, 2008. New facilities that start up after January 10, 2008 must comply with the requirements of this subpart upon startup.

13. Operating Limits

Operating limits for this emission unit shall be:

A. The gasoline throughput at this facility shall not exceed 19,999 gallons per calendar month. This shall be the amount of all gasoline and gasoline blends loaded into cargo tanks.

B. By the compliance date specified in Section 12 of this permit and §63.11083, the owner or operator must comply with the following requirement: each gasoline storage tank with a capacity of 250 gallons or greater and each gasoline cargo tank[1] shall be loaded by means of submerged filling[2]. Submerged fill pipes installed on or before November 9, 2006 must be no more than 12 inches from the bottom of the tank. Submerged fill pipes installed after November 9, 2006 must be no more than 6 inches from the bottom of the tank. Any new gasoline storage tank or loading rack installed after the issuance date of this permit shall also comply with this requirement. Bottom filling of storage tanks and gasoline cargo tanks is included in the definition of submerged filling.

C. By the compliance date specified in Section 12 of this permit and §63.11083, the owner or operator shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

   i. Minimize gasoline spills;
   ii. Clean up spills as expeditiously as practicable;
   iii. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; and
   iv. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

[1]gasoline cargo tank means a delivery tank truck or railcar which is loading gasoline or which has loaded gasoline on the immediately previous load.
[2]This requirement does not preclude the owner or operator from having to comply with other local, state or federal regulations concerning the storage and distribution of gasoline.

14. Operating Condition Monitoring

With the exception of the records required to be kept by Section 14 C. of this permit, all records as required by this permit shall be kept on-site for a minimum of two (2) years and shall be available for inspection by the Department. Records required to be kept by Section 14 C. shall be maintained for a minimum of five (5) years with the most recent two (2) years kept on site. Records shall be legible and maintained in an orderly manner. The permittee may maintain records off-site provided that the records are available within 24 hours or one business day of a request by an authorized representative of a federal, state, or local air pollution regulatory agency. These records shall show the following:

A. At a minimum, the owner or operator shall maintain a record of the quantity of all gasoline and gasoline blends loaded into cargo tanks each calendar month.

B. The owner or operator shall maintain an up to date list of the loading arms and storage tanks located at this facility. This information shall include the identification and description, the capacity, the installation date, and associated control equipment. For gasoline storage tanks and loading arms for gasoline, information must be maintain on the type of loading method (i.e. submerged fill within 12 inches of the tank bottom or submerged fill within 6 inches of the tank bottom).

C. Beginning with the compliance date specified in Section 12 of this permit and §63.11083, the owner or operator must perform a monthly leak inspection of all equipment in gasoline service[1]. Equipment in gasoline service includes, but is not limited to, pumps, valves, open-ended lines, and connectors. For this inspection, detection methods incorporating sight, sound and smell are acceptable. The following information must be retained:

   i. The types, identification numbers and locations of all equipment in gasoline service. For facilities electing to implement an instrument program for leak monitoring, the record shall contain a full description of the program.

   ii. A log book shall be used and shall be signed by the owner or operator at the completion of each inspection. A section of the log book shall contain a list, summary description, or diagram(s) showing the location of all equipment in gasoline service at the facility.

   iii. Each detection of a liquid or vapor leak shall be recorded in the log book. When a leak is detected, an initial attempt to repair shall be made as soon as practicable, but not later than 5 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 15 calendar days after detection of each leak. Delay of repair of leaking equipment will be allowed if the repair is not feasible after 15 days. The owner or operator shall provide in its semiannual report the reason(s) why the repair was not feasible and the date each repair was completed.

   iv. For each leak that is detected, the following information:
      a. The equipment type and identification number;
      b. The nature of the leak (i.e. vapor or liquid) and the method of detection;
      c. The date the leak was detected and the date of each attempt to repair the leak;
      d. The repair methods applied in each attempt to repair the leak;
      e. If the leak is not repaired within 15 calendar days of detection, the reason for the delay;
      f. The expected date of successful repair of the leak if the leak is not repaired within 15 days; and
      g. The date of the successful repair of the leak.

      Acceptable methods of documenting the location of leak(s) include, but are not limited to: tagging the leak, written descriptions, photographs, written work orders, diagrams or a combination of these methods.

D. The owner or operator shall submit a report to the Iowa DNR, Air Quality Bureau for any month in which the gasoline throughput exceeded the monthly limit of 19,999 gallons. This report shall be submitted no later than 30 days after the exceedance and shall include the following information: facility identification, the month of the exceedance and the actual gasoline throughput (gallons) for the month. If more than one exceedance occurs in any 12 month period, the permittee shall be required to apply for a construction permit that will allow for the gasoline throughput to be increased above 19,999 gallons per month.

E. The owner or operator shall submit a semiannual excess emissions report to the Iowa DNR, Air Quality Bureau which includes the following information:

   i. For equipment leak detections, the number of equipment leaks not repaired within 15 days after detection; and

   ii. For each occurrence of an equipment leak for which no repair attempt was made within 5 days or for which repair was not completed with 15 days after detection:
      a. The date on which the leak was detected;
      b. The date of each attempt to repair the leak;
      c. The reasons for the delay of repair; and
      d. The date of successful repair.

   These reports shall cover the period from January 1 to June 30 and from July 1 to December 31 of each calendar year. The reports shall be submitted by no later than 30 days from the end of the 6-month period. If no excess emission events occurred during the 6-month period, no report is required to be submitted.

[1]In gasoline service means that a piece of equipment is used in a system that transfers gasoline or gasoline vapor.

15. Continuous Emission Monitoring

Continuous emission monitoring is not required by this permit at this time.

16. List of Greenhouse Gases

In accordance with the certification statement included in this permit, the Responsible Party has certified that the bulk gasoline plant covered by this permit does not emit any of the greenhouse gases as defined in 567 IAC 20.2.

Greenhouse Gas	Chemical Formula
Carbon dioxide	CO_2
Methane	CH_4
Nitrous Oxide	N_2O
Sulfur hexafluoride	SF_6
Hydrofluorocarbons:	
HFC-23	CHF_3
HFC-32	CH_2F_2
HFC-41	CH_3F
HFC-125	CHF_2CF_3
HFC-134	CHF_2CHF_2
HFC-134a	CH_2FCF_3
HFC-143	CHF_2CH_2F
HFC-143a	CH_3CF_3
HFC-152	CH_2FCH_2F
HFC-152a	CH_3CHF_2
HFC-161	CH_3CH_2F
HFC-227ea	CF_3CHFCF_3
HFC-236cb	$CH_2FCF_2CF_3$
HFC-236ea	CHF_2CHFCF_3
HFC-236fa	$CF_3CH_2CF_3$
HFC-245ca	$CH_2FCF_2CHF_2$
HFC-245fa	$CHF_2CH_2CF_3$
HFC-265mfc	$CF_3CH_2CF_2CH_3$
HFC-365mfc	$CH_3CF_2CH_2CF_3$
HFC-43-10mee	$CF_3CHFCHFCF_2CF_3$
Perfluorocarbons:	
Perfluoromethane (PFC-14)	CF_4
Perfluoroethane (PFC-116)	C_2F_6
Perfluoropropane (PFC-218)	C_3F_8
Perfluorobutane (PFC-3-1-10)	C_4F_{10}
Perfluorocyclobutane (PFC-318)	c-C_4F_8
Perfluoropentane (PFC-4-1-12)	C_5F_{12}
Nitrogen Trifluoride	NF_3
Perfluorohexane (PFC-5-1-14)	C_6F_{14}
(PFC-9-1-18)	$C_{10}F_{18}$
Trifluoromethyl Sulphur Pentafluoride	SF_5CF_3

17. Description of Terms and Acronyms

acfm	Actual cubic feet per minute
Applicant	The owner, company official or authorized agent
CFR	Code of Federal Regulations
Department	Iowa Department of Natural Resources
DNR	Iowa Department of Natural Resources
gr/dscf	Grains per dry standard cubic foot
HAP	Hazardous Air Pollutant(s)
IAC	Iowa Administrative Code
MMBtu	One million British thermal units
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NO_X	Nitrogen Oxides
Owner	The owner or authorized representative
Permit	This document including permit conditions and all submitted application materials
PM_{10}	Particulate Matter equal to or less than 10 microns in aerodynamic diameter
scfm	Standard cubic feet per minute
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
VOC	Volatile Organic Compound

END OF PERMIT CONDITIONS