



**IOWA DEPARTMENT
OF
NATURAL RESOURCES**

AIR QUALITY BUREAU

**2023 IOWA POINT SOURCE
EMISSIONS SUMMARY**

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I. Summary

A. Purpose

The Iowa Department of Natural Resources (DNR) manages criteria¹ and hazardous air pollution information that is used to track progress towards meeting National Ambient Air Quality standards; perform predictive modeling analyses; develop control and maintenance strategies; identify emission sources and general emission levels; determine compliance with emissions regulations; and meet Environmental Protection Agency (EPA) requirements.

This report is a summary of point source emissions data collected from the largest emitting facilities under the federal Title V operating permit program and does not include mobile, biogenic, or nonpoint sources in Iowa. A definition of each source category of emissions is included below:

Point Sources - Discrete stationary source of emissions, such as smoke stacks from industrial facilities.

Mobile Sources - Both on-road sources, such as cars and trucks, and non-road sources, such as agricultural equipment, construction equipment, trains, etc.

Biogenic Sources - All non-anthropogenic sources, such as trees and vegetation, oil and gas seeps, and microbial activity.

Nonpoint Sources - Sources that are not classified as point, mobile, or biogenic, such as residential fuel use and commercial cooking.

Title V facilities are required to submit data to the DNR related to actual pollution emitted during the previous calendar year. As of 2023, there were 281 facilities subject to the Title V operating permit program located throughout the state as shown in Figure 1 below.

Error! Reference source not found. The DNR ensures this valuable data is as accurate as possible by conducting quality assurance checks. The State and Local Emissions Inventory System (SLEIS) was placed into production in 2015, making it simpler and faster for point sources to submit emissions information. DNR then submits the data to EPA's National Emissions Inventory (NEI).

The EPA and DNR use the emissions data for purposes listed above to conduct analyses at the national and state levels. Additionally, this data is used to respond to frequent public information requests for facility and stack level data. Facility level emissions data is included in Appendix A of this report.

B. Overall Trends

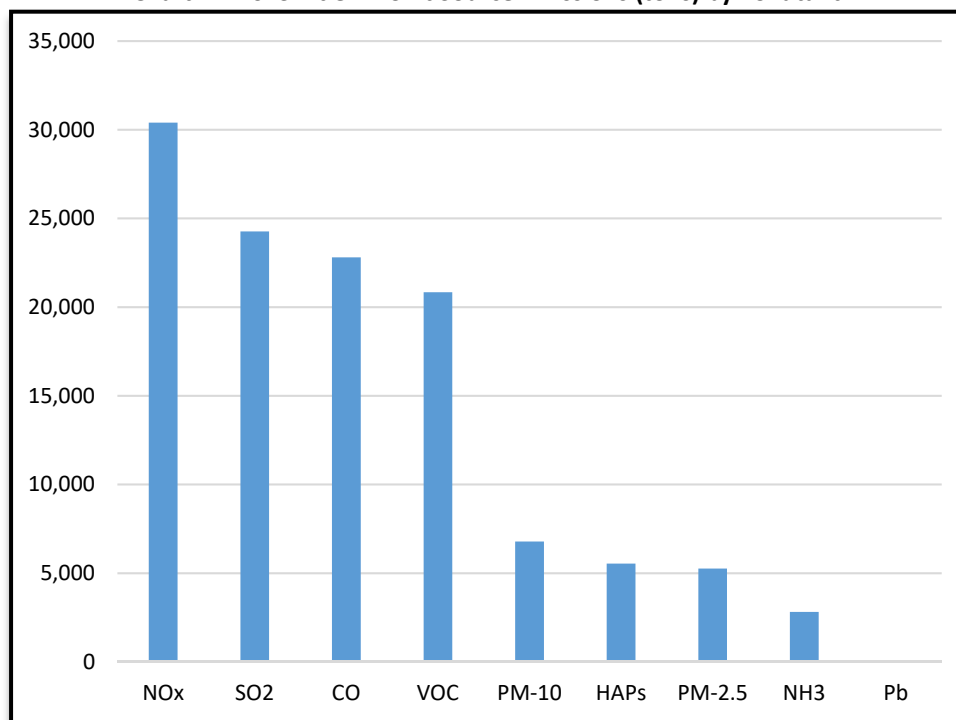
Overall, Title V point source emissions in Iowa decreased from 2022 to 2023 as shown below in Table 1. Together, SO₂ and NO_x made up 46% of the total emissions as shown in Chart 1. However, large decreases in emissions of SO₂ and NO_x accounted for 95.37% of the total decrease in tons of emissions. These decreases are primarily from the Electric Generation business type, and are discussed in more detail later in this report.

¹ Particulate Matter less than 2.5 microns in diameter, Particulate Matter less than 10 microns in diameter, Sulfur Dioxide, Nitrogen Oxides, Volatile Organic Compounds, Carbon Monoxide, Lead, Ozone

Table 1 – 2022 vs 2023 Title V Point Source Emissions

Pollutant	2022 (tons)	2023 (tons)	Difference (tons)	Difference (%)
PM _{2.5}	5,557	5,258	-299	-5.38%
PM ₁₀	7,128	6,779	-349	-4.90%
SO ₂	28,295	24,263	-4,032	-14.25%
NO _x	32,923	30,400	-2,523	-7.66%
VOC	20,995	20,832	-163	-0.78%
CO	22,791	22,807	+16	+0.07%
Pb	1.02	0.84	-0.18	-17.65%
NH ₃	2,655	2,810	+155	+5.84%
HAPs	5,212	5,534	+322	+6.18%
Total	125,557	118,684	-6,873	-5.47%

Chart 1 – 2023 Title V Point Source Emissions (tons) by Pollutant²

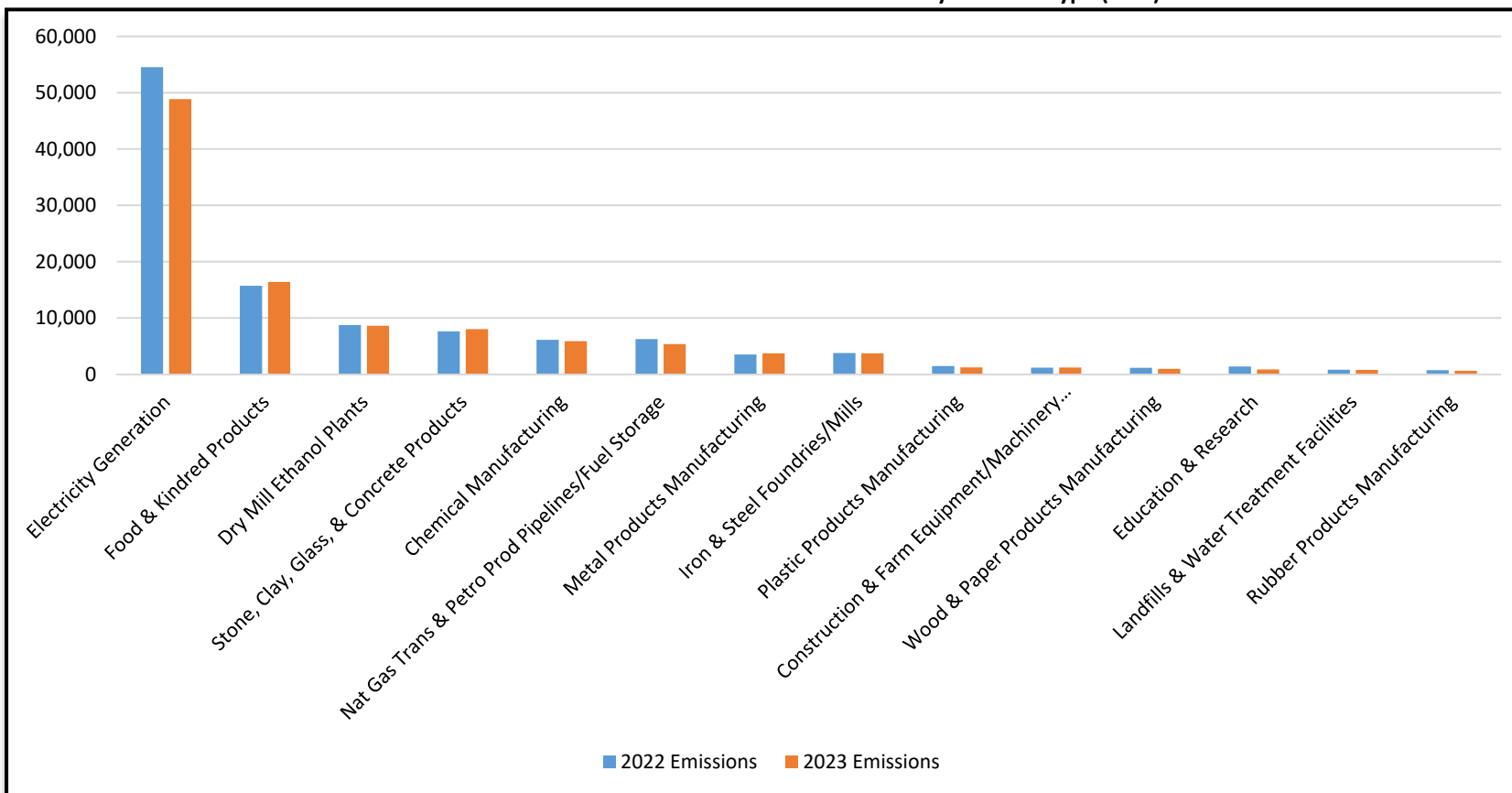


² The total emissions values includes both PM₁₀ and PM_{2.5}. PM_{2.5} is a subset of PM₁₀. Some HAPs may also be counted as VOCs, PM_{2.5}, and/or PM₁₀.

Emissions by Business Type

This report uses nineteen business types to classify sources of air pollution. The nineteen business types used in this summary as well as the types of facilities that are included in each business type are listed in Appendix B. The contribution of each business type to the overall emissions in Iowa is shown in Chart 2 below. Five of the categories – Paint, Ink, and Adhesive Manufacturing and Application; Motor Vehicles/Parts Manufacturing and Repair Shops; Fabricated Metal and Structural Metal Products Manufacturing; Miscellaneous; Public Safety, Health, and Security - each had annual emissions of about 500 tons or less, so they were not included in the chart for ease of reading. Emissions from the Electricity Generation and Food & Kindred Products business descriptions account for 60.46% of the total emissions.

Chart 2 – 2022 vs. 2023 Title V Point Source Emissions by Business Type (tons)



The largest contributor of point source emissions comes from the Electricity Generation business type as shown above in Chart 2 even though only forty-one of the 281 facilities included in the 2023 NEI are classified as electrical generating facilities. This business type also reported the greatest change in overall emissions from 2022 to 2023 as shown in Chart 2. These electrical generating facilities experienced a total emission decrease of 5,869 tons, while the total

emissions decrease from all 281 facilities was 6,873 tons as shown in Table 1 on page 2, accounting for 85.39% of the total decrease in emissions. The annual change in emissions, by pollutant, from the Electricity Generation business type from 2022 to 2023 were as follows.

Table 2 - 2022 vs 2023 Emissions from Electrical Generation

Pollutant	2022 (tons)	2023 (tons)	Difference (tons)	Difference (%)
PM _{2.5}	1,673	1,458	-215	-12.85%
PM ₁₀	2,253	1,965	-288	-12.78%
SO ₂	22,496	19,567	-2,929	-13.02%
NO _x	17,441	15,290	-2,151	-12.33%
VOC	223	194	-29	-13.00%
CO	11,964	11,731	-233	-1.95%
Pb	0.50	0.40	-0.10	-20.00%
NH ₃	136	97	-39	-28.68%
HAPs	250	266	+16	+6.40%
Total³	56,437	50,568	-5,869	-10.40%

The decreases are primarily due to reductions in the total amount of coal combusted in 2023. This is further discussed in the *II. Detailed Results* section of this report.

II. Detailed Results

PM_{2.5} & PM₁₀

Emissions of particulate matter with a diameter less than 2.5 microns (PM_{2.5}) decreased about 300 tons from 2022 to 2023. The business descriptions with the largest changes were:

- Electricity Generation: decrease of 215 tons
- Iron and Steel Foundries/Mills: decrease of 90 tons

The same business descriptions contributed the majority of the overall decrease in emissions of particulate matter with a diameter less than 10 microns (PM₁₀). The changes by business description were:

- Electricity Generation: decrease of 288 tons
- Iron and Steel Foundries/Mills: decrease of 91 tons

³ The total emissions value includes both PM₁₀ and PM_{2.5}, which is a subset of PM₁₀. Some HAPs may also be counted as VOCs, PM_{2.5}, and/or PM₁₀.

The main reason for the decrease in emissions from the Electricity Generation sector was explained by activities at two facilities. One facility ceased coal combustion from their boiler in 2022. This marked a decrease of more than 712,000 tons of coal. This same facility decreased the mass of their coal storage and coal handling by half from 2022 to 2023. The second Electricity Generation facility burned 15% less coal in 2022 compared to 2023. A 15% decrease in coal combustion has a significant effect because it occurred at the largest burning coal facility in Iowa.

The decrease in the Iron and Steel Foundries/Mills business description is attributed to one facility that initially over-reported PM_{2.5} and PM₁₀ from their mold, pour, and cool baghouse stack. The facility neglected to account for control efficiency in the process, leading to over-reporting. The facility re-submitted the emissions inventory in late 2023 after the 2022 National Emissions Inventory was submitted to EPA. After re-submitting, the PM_{2.5} and PM₁₀ emissions estimates have been reduced by about 70 tons, bringing the 2022 emissions estimate more in-line with the 2023 emissions estimate.

Chart 3 - 2023 Title V Point Source PM_{2.5} Emissions by Business Type (tons)

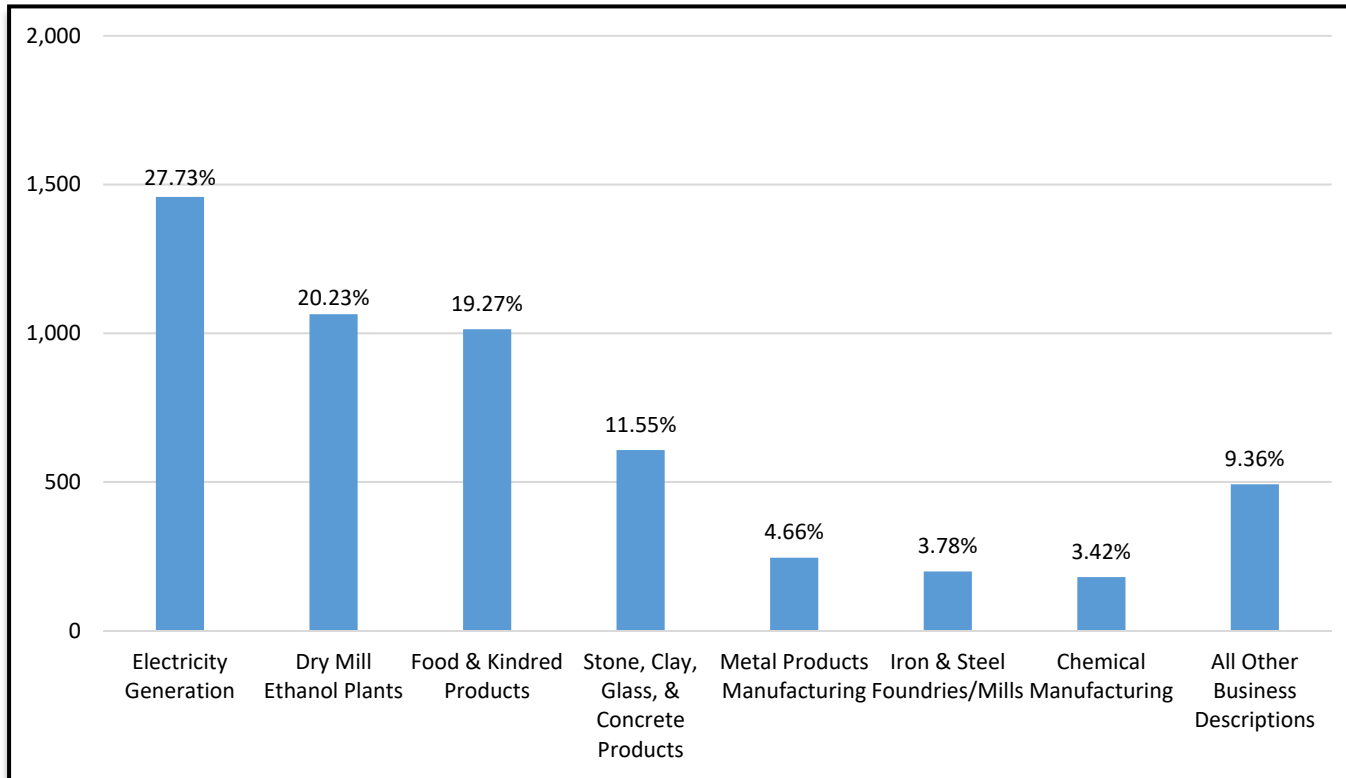
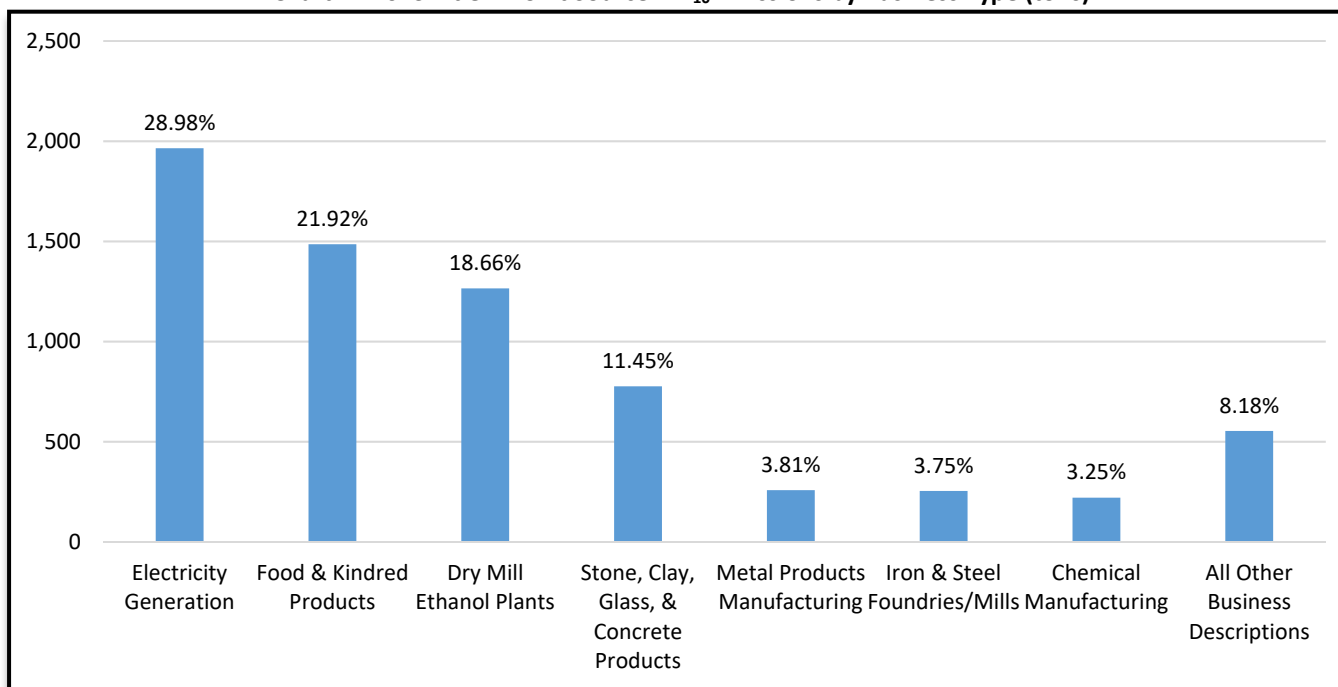


Chart 4 - 2023 Title V Point Source PM₁₀ Emissions by Business Type (tons)



SO₂

Statewide Sulfur Dioxide (SO₂) emissions decreased more than 4,000 tons from 2022 to 2023. The Electricity Generation business description experienced the most notable change in emissions with a decrease of 2,929 tons.

The SO₂ emissions decrease in the Electricity Generation business description was largely accounted for by six facilities. Four of these facilities combined to report a decrease of almost 4,800 tons of SO₂ emissions. The other two facilities reported a combined increase of about 2,300 tons. The change in SO₂ emissions was directly related to the increase or decrease in coal combustion for these six facilities. Collectively, the six facilities burned approximately 1.15 million fewer tons of coal in 2023 compared to 2022.

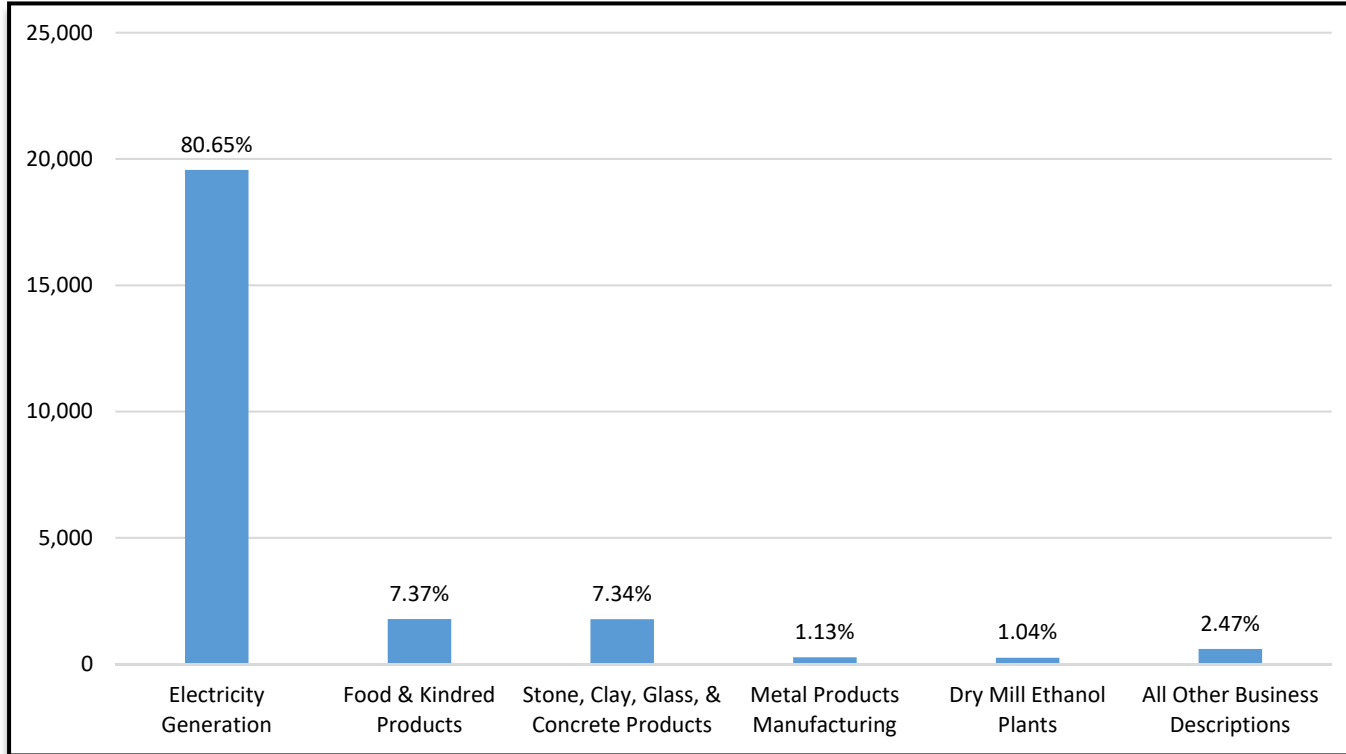
- Four facilities burning less coal in 2023: 1,775,000 fewer tons of coal; 4,773 ton decrease in SO₂ emissions
- Two facilities burning more coal in 2023: 625,000 more tons of coal; 2,281 ton increase in SO₂ emissions

Three of the remaining sixteen business descriptions combined for a net decrease of just over 1,160 tons of SO₂ emissions from 2022 to 2023. Those three business descriptions were:

- Education & Research (455 ton decrease)

- Stone, Clay, Glass, & Concrete Products (385 ton decrease)
- Food & Kindred Products (323 ton decrease)

Chart 5 - 2023 Title V Point Source SO₂ Emissions by Business Type (tons)



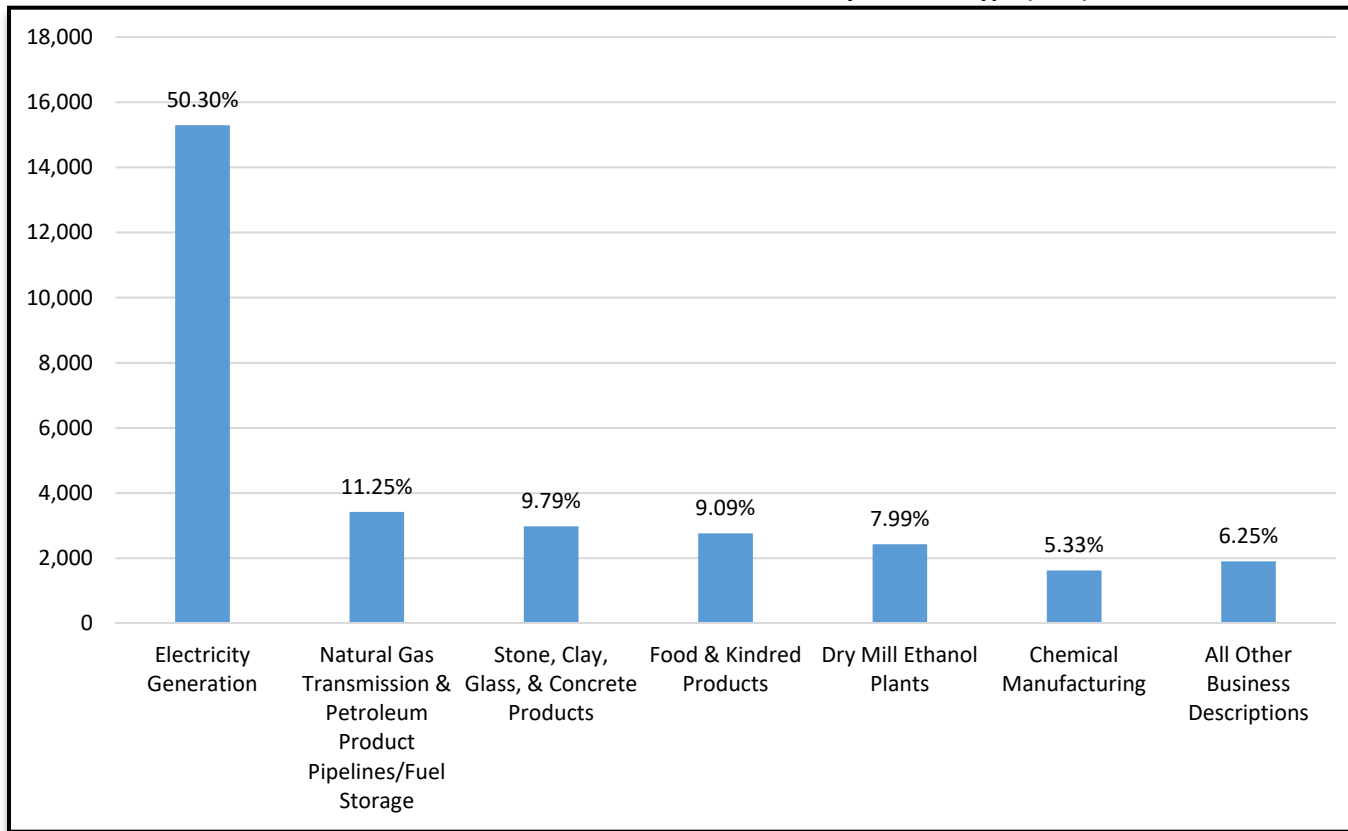
NO_x

Point source Nitrogen Oxides (NO_x) emissions decreased approximately 2,500 tons from 2022 to 2023. This was mainly accounted for by a large decrease in the Electricity Generation business description. Five facilities in the Electricity Generation business description had a combined decrease of more than 2,000 tons from 2022 to 2023. Similar to the SO₂ discussion above, two of the facilities burned more coal, while three facilities burned less coal in 2023 compared to 2022. Overall, coal usage from all facilities combined in the Electricity Generation business description decreased by about 639,000 tons (5.7%) from 2022 to 2023, leading to the decrease in NO_x emissions.

Another business description, Natural Gas Transmission & Petroleum Product Pipelines/Fuel Storage, accounted for a decrease of about 600 tons of NO_x from 2022 to 2023. This decrease was mainly accounted for by four facilities. Three of the facilities had a combined decrease of 746 tons of NO_x while one facility's NO_x emissions increased 208 tons. For the three facilities that experienced a large decrease in NO_x emissions the natural gas usage in their internal combustion engines decreased. The explanation for the increase of 208 tons of NO_x emissions in the fourth facility was due to a 77% increase in natural gas usage.

All remaining business descriptions combined for a net increase of 219 tons of NO_x emissions in 2023 compared to 2022.

Chart 6 - 2023 Title V Point Source NO_x Emissions by Business Type (tons)



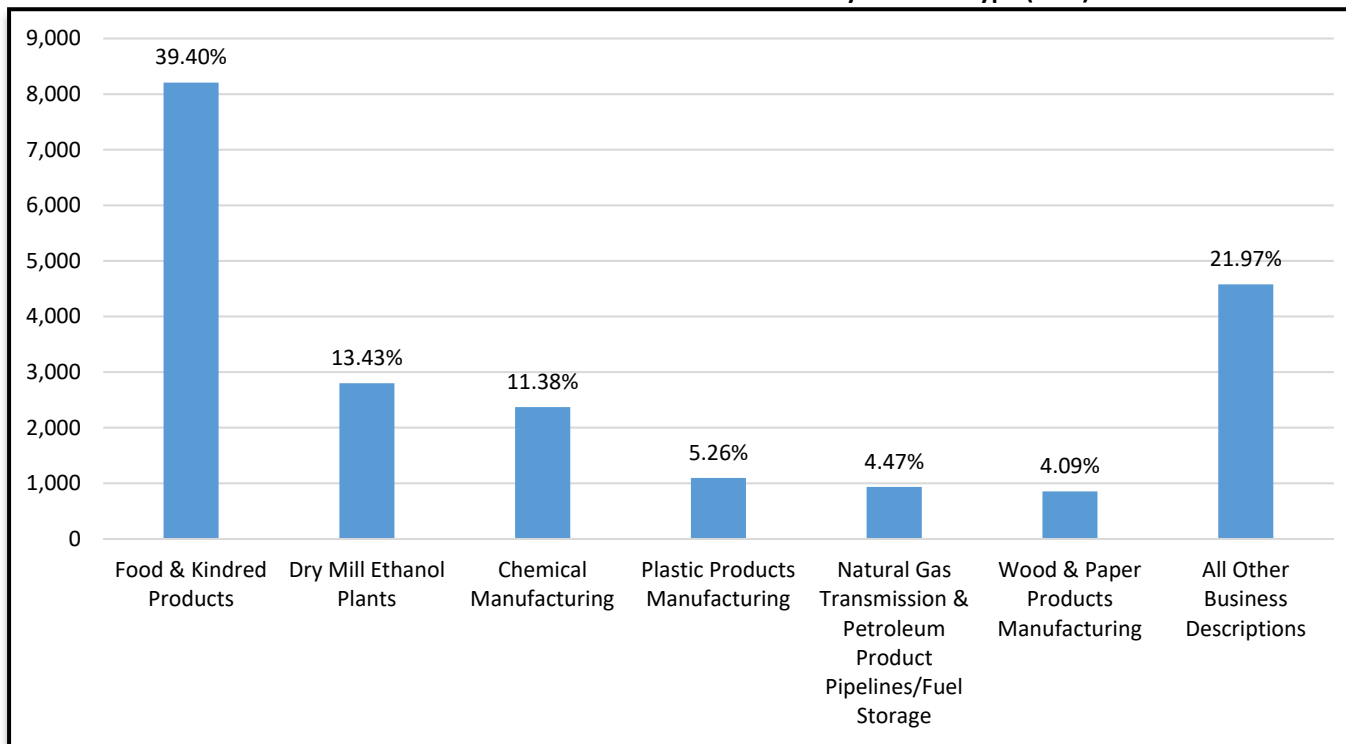
VOC

Overall, statewide Volatile Organic Compound (VOC) emissions decreased about 160 tons from 2022 to 2023. This was summarized by a comparatively large increase in the Food & Kindred Products business description (about 840 tons) and smaller but cumulative decreases from the following business descriptions from 2022 to 2023:

- Natural Gas Transmission & Petroleum Product Pipelines/Fuel Storage (199 tons)
- Plastic Products Manufacturing (191 tons)
- Paint, Ink, & Adhesive Manufacturing & Application (144 tons)
- Wood & Paper Products Manufacturing (125 tons)
- Chemical Manufacturing (102 tons)
- Dry Mill Ethanol Plants (93 tons)

Combined with a lot of smaller off-setting increases and decreases in emissions, four facilities from the Food & Kindred business description accounted for the majority of the net emissions increase in VOC from 2022 to 2023. Three facilities were soybean oil mills, and the fourth facility was a wet corn mill. Among the three soybean oil mills, one facility experienced a 17% increase, and a second facility experienced a 35% increase in hexane usage in the extraction process. The third soybean oil mill started operation in early 2023, so they didn't have any emissions in 2022. The wet corn mill experienced more than a 100 ton increase in VOC emissions. This was due to increased operation in their wet mill process among a group of emission units.

Chart 7 - 2023 Title V Point Source VOC Emissions by Business Type (tons)



CO

Carbon monoxide (CO) emissions remained constant from 2022 to 2023, as state-wide emissions increased 15 tons. Only three business descriptions experienced a change of more than 75 tons since the previous year. Those business descriptions were:

- Stone, Clay, Glass, & Concrete Products (462 ton increase)
- Electricity Generation (232 ton decrease)
- Natural Gas Transmission & Petroleum Product Pipelines/Fuel Storage (148 ton decrease)

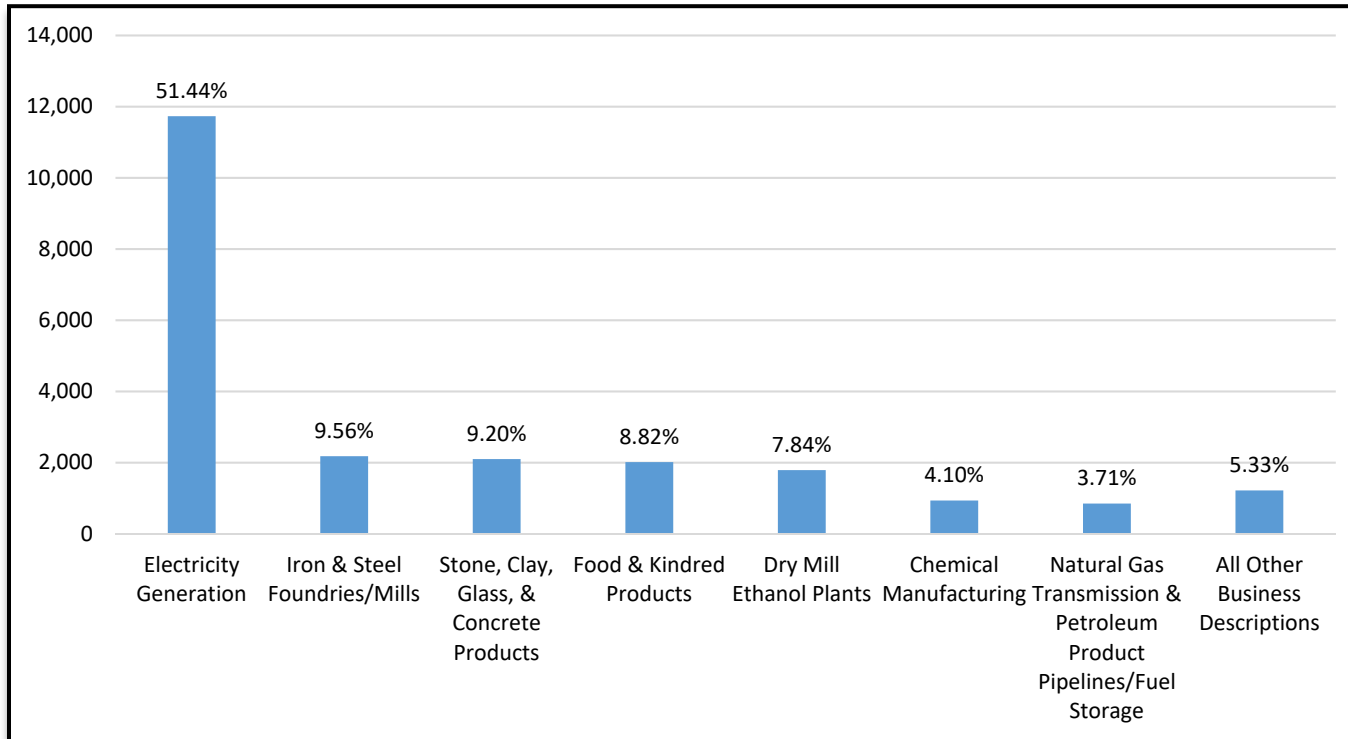
The business description that had the largest increase in CO emissions was the Stone, Clay, Glass, & Concrete Products business description. One cement manufacturing facility reported a 300 ton increase in emissions from their kiln. The facility reported a 5% increase in production but also indicated CO emissions

increased because of an increase in their alternative fuel consumption (increase of 71%) from 2022 to 2023. The second facility with a significant contribution to the increase in CO emissions was not considered a Title V facility for 2022 but did operate as such in 2023.

Five facilities in the Electricity Generation business description had large changes but combined for only a net increase of 15 tons of CO emissions. Coal usage from the Electricity Generation business description decreased by approximately 639,000 tons (6%) from 2022 to 2023, resulting in a small decrease in CO emissions. Three of the five facilities experienced CO emissions changes proportionate to their increase or decrease in coal combustion. The other two facilities experienced much higher CO emissions increases relative to their change in coal throughput from 2022 to 2023. This is because CO emissions are not always a direct correlation of throughput but rather how the coal-fired boilers are operated. The emission rates of CO are more of a function of the load at which they are operating. For example, coal-fired boilers that operate at maximum load tend to do so at a higher temperature therefore reducing the amount of CO that is being emitted. Conversely, some boilers may not be operated at maximum (or close to maximum) capacity or may have large fluctuations in their operating load during the year (which would lead to an increased CO emission rate). Two facilities with disproportionate increases in CO emissions relative to their coal combustion operated with more start-up and shut-downs in 2023 than they did in 2022.

The Natural Gas Transmission & Petroleum Product Pipelines/Fuel Storage business description accounted for a decrease of approximately 150 tons of CO from 2022 to 2023. This decrease was mainly accounted for by three facilities with a combined decrease of 135 tons of CO. One facility had a decrease of natural gas throughput by 61%, a second facility decreased natural gas throughput by 43%, and the third facility decommissioned ten of their engines halfway through 2022 so their natural gas consumption was much less in 2023.

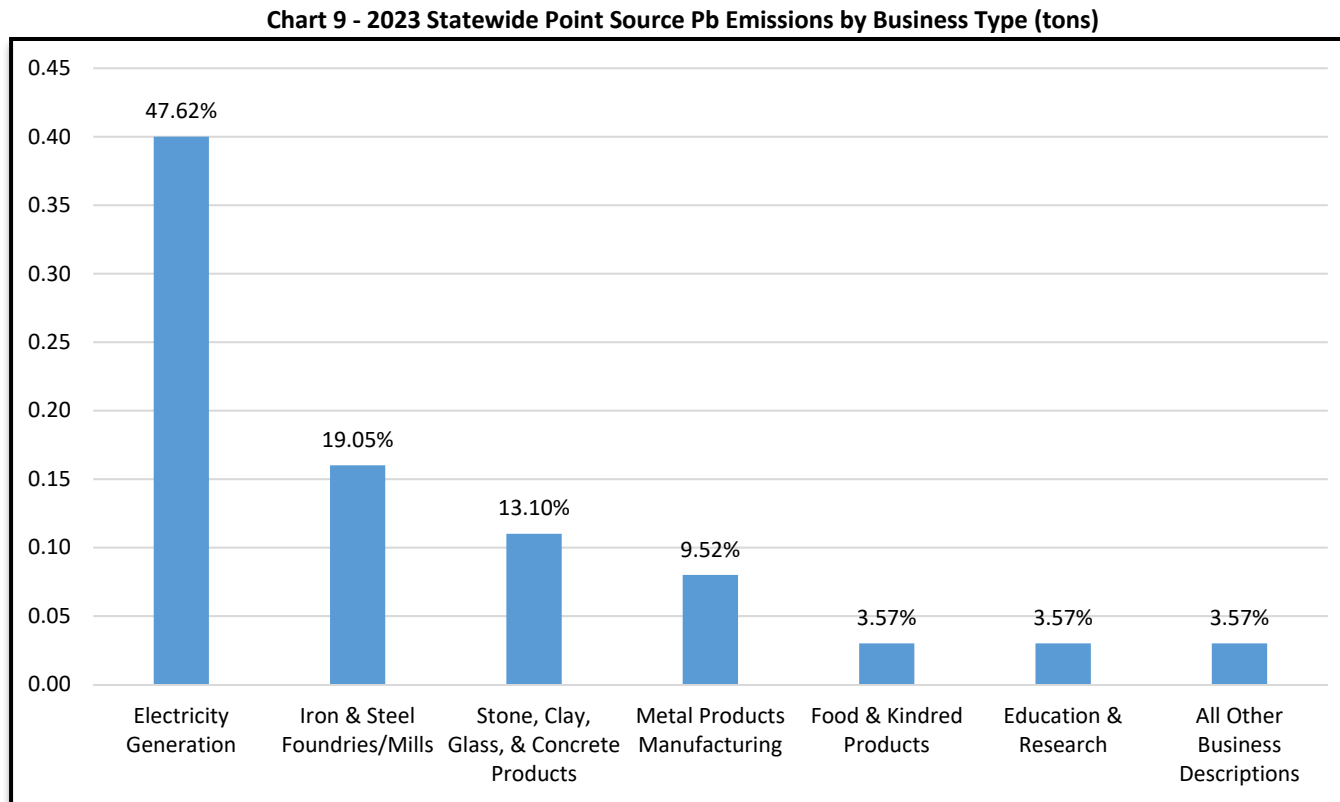
Chart 8 - 2023 Title V Point Source CO Emissions by Business Type (tons)



Pb

Lead (Pb) emissions in Iowa decreased 0.15 tons (15%) from 2022 to 2023. The business description with the largest decrease in Pb emissions from 2022 to 2023 was Electricity Generation. The decrease in Pb emissions from the Electricity Generation business description was a direct result of two facilities that each saw their coal combustion decrease in 2023. One of these facilities ceased operations which led to a decrease of more than 712,000 tons of coal combustion. The second facility decreased coal combustion by about 562,000 tons.

All other business descriptions reported less than or equal to a 0.02 ton change in emissions from 2022 to 2023. It should be noted that the revised Air Emissions Reporting Requirements (AERR) (February 19, 2015) only requires facilities to be reported to the NEI if they have actual emissions greater than the thresholds listed in Table 1 to [Appendix A of 40 CFR Part 51.2](#).



NH₃

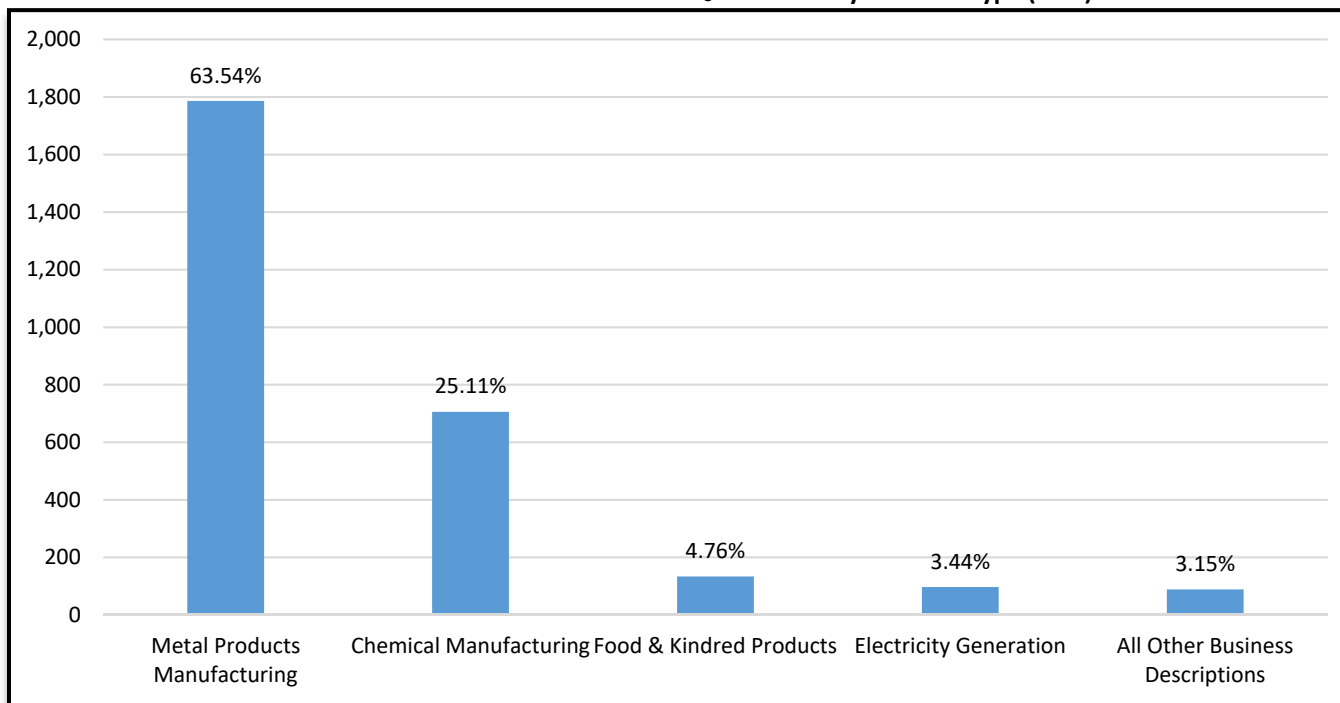
The overall increase in Ammonia (NH₃) emissions in Iowa from 2022 to 2023 was approximately 155 tons. A larger increase in emissions from the Metal Products Manufacturing business description was slightly offset by moderate decreases from the Chemical Manufacturing and Electricity Generation business descriptions. All other business descriptions had negligible increases or decreases.

The increase in emissions from the Metal Products Manufacturing business description occurred at a facility that refines molybdenum sulfide to produce a variety of molybdenum products and sulfuric acid. The NH₃ emissions increase at this facility was due to excess anhydrous ammonia being added into one of the processes. This increase in emissions was minimized by an overall decrease in NH₃ emissions from the Chemical Manufacturing and Electricity Generation business descriptions.

One facility in the Chemical Manufacturing business description contributed to the net NH₃ emissions decrease from this business description. The facility that experienced the largest decrease in NH₃ emissions from 2022 to 2023 was a nitrogenous fertilizer company. This facility had fewer start-ups and shut-downs in 2023 and also made repairs to equipment in July 2022. Additionally, an update in the calculations for their primary reformer and auxiliary boiler calculations contributed to a portion of the emissions decrease in 2023.

The Electricity Generation facility that had a large decrease in NH₃ emissions was a facility that ceased operations in 2023. The facility burned over 700,000 tons of coal in 2022, but did not burn any in 2023.

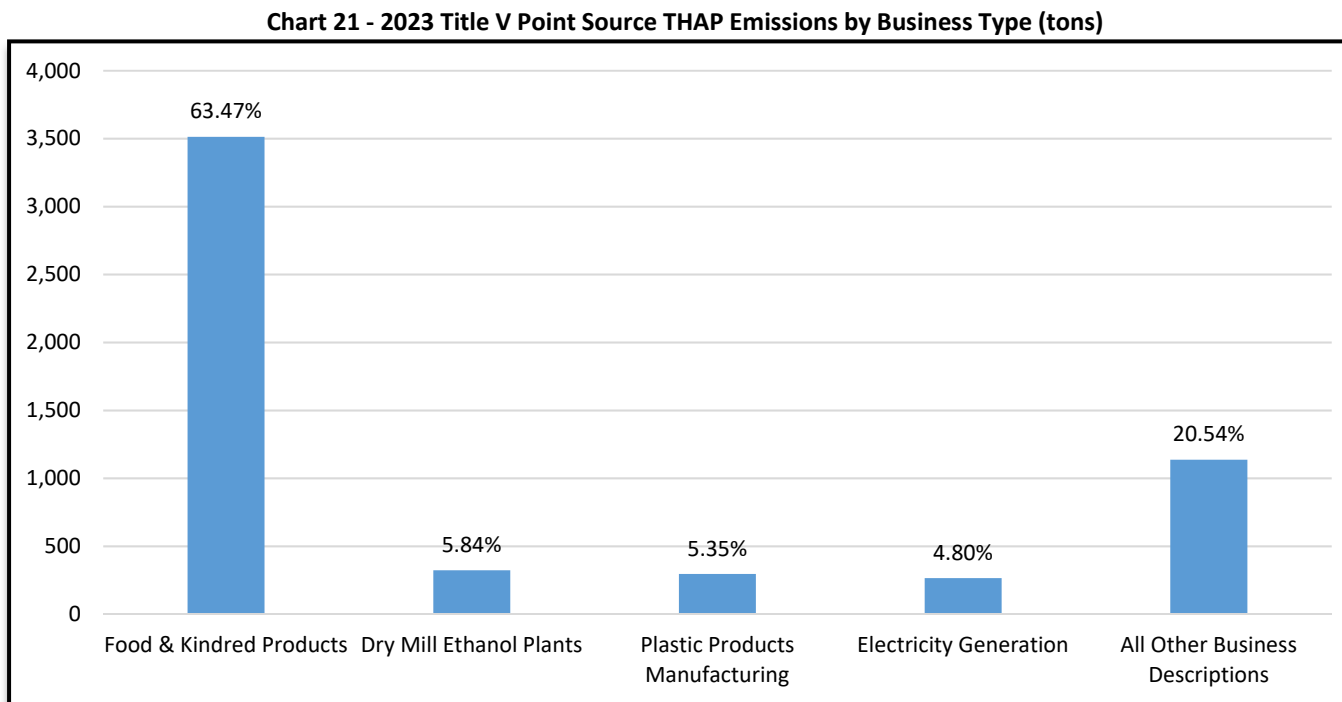
Chart 10 - 2023 Title V Point Source NH₃ Emissions by Business Type (tons)



THAP

Total HAP emissions increased by more than 320 tons from 2022 to 2023 and were mainly emitted from the Food and Kindred Products business description. The specific sectors within the Food and Kindred Products business description that contributed the most total hazardous air pollutant emissions were the Soybean Oil Mills and the Wet Corn Milling sectors. The Soybean Oil Mills sector contributed 49.59% of state-wide point source total HAPs emissions in 2023. The most-emitted HAP from this sector was Hexane. The Wet Corn Milling sector contributed 9.44% of state-wide point source total HAPs emissions in 2023.

The highest emitted HAP from this sector was Acetaldehyde. The Food and Kindred business description had the largest emissions increase, with an increase of 431 tons (14% increase) from 2022 to 2023 as a result of an increase in Hexane usage at Soybean Oil Mills. The larger HAP increase from Food and Kindred offset smaller decreases in HAPs from Plastic Products Manufacturing, Chemical Manufacturing, and the Natural Gas Transmission & Petroleum Product Pipelines/Fuel Storage business descriptions.



III. Data Collection Methodology

Title V facilities are required to submit emissions inventory reports to DNR annually. All Title V facilities are required to report their emissions inventory using the State and Local Emissions Inventory System (SLEIS). Emissions inventory data then goes through numerous quality assurance checks as DNR staff conduct emissions inventory fee audits and comprehensive emissions inventory reviews. The SLEIS database also requires a high level of quality control through its business rules and validation checks prior to allowing facility users and DNR staff to submit emissions data to EPA.

IV. Data Improvements

The following is a list of improvements made to the NEI submittal since the 2014 emissions reporting cycle. Improvements below are related to the implementation of SLEIS, which DNR put into production on December 18, 2015:

- A. SLEIS is an emissions inventory database that meets the CERS schema and business rules for EPA’s Emissions Inventory System (EIS). The transition to SLEIS has allowed DNR to improve the accuracy of facility equipment and emissions data for the annual NEI submittal. The DNR has implemented nine enhancements to the SLEIS database that have, and will continue to result in:

- a) Improved quality of required data elements
 - b) Reduced data entry time for stakeholders
 - c) Facilitation of easier searching of air pollutants and emissions data
 - d) Improved readability of emission reports
- B. The following data (required by the AERR and cited in Appendix C) that had not previously been included in NEI submittals prior to the 2015 reporting year:
- a) Unit Design Capacity and Unit Design Capacity Unit of Measure Code
 - b) Control Measure Code and Pollutant Code
 - c) Percent Control Measure Reduction Efficiency

The data above that are related to control are important to emissions estimates and assist in EPA modeling activities.

- C. By continuing to offer industry training, DNR was able to inform facilities of ways to prevent emission processes, emission units, and release points from being omitted from the electronic emissions inventory submittals. Three virtual training sessions were held to facilitate accurate 2023 reporting. Additionally, on-line tutorials enable facilities to learn how to use SLEIS when they cannot attend virtual training.
- D. In the 2015 NEI submittal, the release point, emission unit, and unit process identifiers were updated in EIS to reflect the identifiers that are used when facilities report their emissions inventories to DNR. Instead of using the record identifier (RID) as has been custom, DNR changed the identifier to the numbering scheme used by the facility (EP-1, EU-1, etc.) to reduce confusion and save time when extracting data out of EIS. This update helped streamline the 2016 NEI submittal process and DNR will continue to gain efficiencies during future work related to the National Air Toxics Assessment (NATA) since DNR staff will not have to crosswalk emissions between the RID and the identifier used by facilities when reporting emissions.
- E. Beginning with the 2018 emissions reporting year, the DNR required Title V facilities to report their emissions electronically using SLEIS. Submitting emissions reports electronically benefits industry and their consultants, DNR staff, and EPA by allowing for:
- a) Improved quality of required data elements;
 - b) A reduction in data entry time;
 - c) Facilitation of easier searching of air pollutants and emissions data; and
 - d) Enhancement of readability of emissions reports.

V. Appendices

- A. Emissions Summary by Facility (Tons)
- B. Business Types
- C. Required Air Emissions Reporting Requirements & Emissions Inventory System Data Elements

Appendix A - Emissions Summary by Facility (tons)

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
02-05-001	PINNACLE ETHANOL, LLC DBA POET BIOREFINING CORNING	34.44	36.14	1.58	76.64	66.63	49.31	0.00	3.14	7.51
03-02-001	NORPLEX – MICARTA	50.31	50.31	0.05	7.24	514.86	6.03	0.00	0.23	148.19
03-02-007	Industrial Energy Applications, Inc.	0.02	0.02	0.00	1.36	0.03	0.01	0.00	0.00	0.00
03-03-001	IPL - LANSING GENERATING STATION	58.49	59.67	0.01	1.07	0.01	0.27	0.00	0.04	0.02
04-01-002	Arcor Flexibles North America Inc.	0.13	0.13	0.01	1.70	15.28	1.43	0.00	0.05	0.00
05-04-002	WESTERN MINNESOTA MUNICIPAL POWER AGENCY	8.01	8.01	4.40	103.62	2.51	36.67	0.00	0.00	0.00
07-01-010	JOHN DEERE FOUNDRY WATERLOO	56.44	68.27	2.59	2.71	255.41	662.86	0.01	0.03	66.15
07-01-038	MIDAMERICAN ENERGY CO - ELECTRIFARM TURBINES	0.53	0.53	4.03	26.81	0.16	6.40	0.00	0.00	0.08
07-01-057	NORTHERN NATURAL GAS CO - WATERLOO COMPRESSOR	3.07	3.07	0.04	189.53	7.23	25.55	0.00	0.00	4.79
07-01-061	MASTERBRAND CABINETS, INC.	5.89	5.89	0.02	2.90	119.69	2.44	0.00	0.09	26.75
07-01-063	BERTCH CABINET, LLC. - WATERLOO	4.23	4.59	0.08	1.61	97.73	1.97	0.00	0.00	1.04
07-01-077	JOHN DEERE WATERLOO WORKS - DRIVE TRAIN OPERATIONS	0.89	0.89	0.12	15.86	2.39	14.97	0.00	0.34	0.36
07-01-085	JOHN DEERE WATERLOO WORKS - TCAO - DONALD ST	1.01	1.01	0.06	8.02	54.41	6.59	0.00	0.25	3.66
07-01-086	BERTCH CABINET, LLC. - OASIS FACILITY	0.96	0.96	0.00	0.00	17.78	0.00	0.00	0.00	12.66
07-01-087	JOHN DEERE PRODUCT ENGINEERING CENTER	2.49	2.49	0.07	95.09	3.29	20.49	0.00	0.08	0.13
07-01-091	JOHN DEERE ENGINE WORKS	1.56	1.76	0.05	20.88	28.24	6.85	0.00	0.10	0.37
07-01-107	CONAGRA FOODS PACKAGED FOODS - WATERLOO	5.96	7.21	0.08	12.66	82.11	10.63	0.00	0.41	0.23
07-01-111	JOHN DEERE COATING SERVICE CENTER	0.63	0.63	0.02	3.07	13.18	2.58	0.00	0.10	1.38
07-01-121	BLACK HAWK COUNTY SANITARY LANDFILL	0.00	0.00	0.00	0.00	18.14	0.00	0.00	0.00	12.00
07-02-005-01	CEDAR FALLS MUNICIPAL ELECTRIC UTILITY	0.38	0.51	11.67	25.18	0.38	5.86	0.00	0.22	0.22
07-02-005-01	CEDAR FALLS MUNICIPAL ELECTRIC UTILITY	0.38	0.51	11.67	25.18	0.38	5.86	0.00	0.22	0.22
07-02-005-02	CEDAR FALLS MUNICIPAL ELECTRIC UTILITY - CTS	0.04	0.04	0.02	1.91	0.02	0.37	0.00	0.00	0.00
07-02-005-03	CITY OF CEDAR FALLS - MUNICIPAL WATER UTILITY	0.00	0.00	0.00	0.05	0.00	0.01	0.00	0.00	0.00

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
07-02-006-01	UNIVERSITY OF NORTHERN IOWA - MAIN CAMPUS	0.05	0.05	0.06	0.74	1.07	0.31	0.00	0.00	0.01
07-02-006-02	UNIVERSITY OF NORTHERN IOWA - POWER PLANT	7.56	7.95	68.64	79.10	2.68	41.96	0.00	1.30	1.59
07-02-023	METOKOTE CORPORATION - PLANT 15 - CEDAR FALLS	1.53	1.53	0.01	1.73	51.23	1.45	0.00	0.00	0.44
08-03-004	NORTHERN NATURAL GAS CO - OGDEN COMPRESSOR	11.15	11.15	1.36	558.80	32.02	113.25	0.00	0.04	14.69
09-01-013	WAVERLY LIGHT & POWER - NORTH & SOUTH PLANTS	0.10	0.15	0.00	5.01	0.55	0.45	0.00	0.00	0.00
10-02-008	BERTCH CABINET, LLC. - LEGACY DIVISION - JESUP	3.37	3.41	0.09	1.93	73.80	2.29	0.00	0.00	1.20
10-04-007	POET Biorefining FAIRBANK, LLC	26.15	36.72	10.40	103.22	113.85	28.53	0.00	5.95	11.80
11-05-004	VALERO RENEWABLE FUELS CO, LLC - ALBERT CITY	36.69	41.35	1.02	92.53	86.19	41.08	0.00	0.00	9.96
12-04-005	UNVERFERTH MANUFACTURING CO, INC	2.53	2.53	0.12	1.67	52.50	0.23	0.00	0.00	7.11
12-04-007	POET Biorefining SHELL ROCK, LLC	29.88	39.44	0.89	98.72	326.79	56.00	0.00	4.71	20.28
12-04-012	Shell Rock Soy Processing	1.56	3.97	0.23	24.60	304.59	0.70	0.00	0.00	196.24
14-02-003	AG PROCESSING, INC - MANNING	4.41	14.59	0.13	16.12	234.17	14.11	0.00	0.00	151.66
14-07-002	Templeton Rye Spirits, LLC	0.11	0.12	0.01	1.04	166.80	1.20	0.00	0.00	0.06
15-01-042	Elite Octane, LLC	44.48	45.26	23.42	59.54	117.36	98.06	0.00	0.00	13.04
16-01-004	XERXES CORPORATION	0.10	0.10	0.00	0.00	86.16	0.00	0.00	0.00	74.02
17-01-005	Heidelberg Materials US Cement LLC	102.98	141.89	76.93	454.84	92.68	324.20	0.01	3.21	24.27
17-01-027	AG PROCESSING, INC - MASON CITY	6.45	22.82	0.19	22.52	80.94	18.86	0.00	0.00	52.21
17-01-066	IPL - LIME CREEK COMBUSTION TURBINES STATION	0.04	0.04	0.01	0.88	0.01	0.27	0.00	0.00	0.00
17-01-066	IPL - LIME CREEK COMBUSTION TURBINES STATION	0.04	0.04	0.01	0.88	0.01	0.27	0.00	0.00	0.00
17-01-068	WOODHARBOR CUSTOM CABINETRY	0.61	0.61	0.00	0.00	62.85	0.04	0.00	0.00	10.46
17-01-087-02	CURRIES DIVISION OF AADG, INC - 12TH ST NW	4.10	5.19	0.01	0.83	57.74	0.83	0.00	0.00	42.60
17-01-100	GOLDEN GRAIN ENERGY, LLC - MASON CITY	45.54	50.11	14.98	98.95	68.57	16.62	0.00	4.98	12.88
17-02-002	MAGELLAN PIPELINE CO, LLC - MASON CITY	0.00	0.00	0.00	4.07	49.58	10.17	0.00	0.00	2.16
17-02-016	IPL - EMERY GENERATING STATION	56.77	56.77	6.73	92.15	0.17	31.01	0.00	17.06	0.04
17-02-024	LANDFILL OF NORTH IOWA	0.00	0.00	0.00	0.00	9.09	2.24	0.00	0.00	6.00

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
18-02-006	LITTLE SIOUX CORN PROCESSORS, LLC	56.40	60.10	7.17	138.04	77.29	96.68	0.00	0.00	8.77
18-06-002	NORTHERN NATURAL GAS CO - PAULLINA COMPRESSOR	0.25	0.25	0.01	28.61	0.38	48.15	0.00	0.00	0.38
19-04-002	HOMELAND ENERGY SOLUTIONS, LLC	27.59	27.82	43.75	90.46	122.37	114.34	0.00	0.00	10.60
20-01-018	ALTEC OSCEOLA BODY PLANT	0.00	0.00	0.00	0.00	32.16	0.00	0.00	0.00	22.90
21-01-003	CORN BELT POWER - WISDOM GENERATING STATION	1.15	1.15	0.05	3.82	0.27	0.80	0.00	0.10	0.07
23-01-004	EQUISTAR CHEMICALS, LP	4.15	28.72	1.98	698.85	1,922.37	396.03	0.00	21.54	29.81
23-01-006-01	ADM CLINTON CORN PROCESSING	50.45	56.75	50.26	52.43	615.46	42.41	0.00	3.76	136.20
23-01-006-02	ADM CORN PROCESSING / COGEN PLANT - CLINTON	47.83	75.29	445.31	1,380.02	4.03	41.12	0.01	4.11	19.06
23-01-006-03	ADM CLINTON BIOPROCESSING	0.61	0.68	0.07	1.19	7.94	0.27	0.00	0.00	0.00
23-02-013	GUARDIAN INDUSTRIES CORPORATION	21.56	21.56	103.40	289.12	38.73	9.71	0.00	0.32	0.00
23-02-028	LATHAM POOL PRODUCTS, INC.	0.00	0.12	0.00	0.00	48.73	0.00	0.00	0.00	46.28
24-01-001	SMITHFIELD FARMLAND CORP. - DENISON	13.09	13.32	0.15	25.60	9.84	65.60	0.00	5.15	0.48
24-01-007	THE ANDERSONS DENISON ETHANOL, LLC	14.37	18.05	0.48	37.99	41.17	34.71	0.00	2.38	5.44
24-01-035	Continental Carbonic Products, Inc	0.31	0.31	0.00	0.00	3.70	0.36	0.00	0.00	3.67
25-02-001	GLEN-GERY CORPORATION	13.01	19.52	63.68	58.05	3.14	86.66	0.01	0.00	8.54
25-05-002	NORTHERN NATURAL GAS CO - REDFIELD COMPRESSOR	5.18	5.18	3.21	70.33	31.18	48.11	0.00	0.09	6.58
28-01-026	ALLIANCE PIPELINE L.P. - MANCHESTER	5.11	5.11	2.63	72.00	8.27	67.85	0.00	0.00	3.16
28-12-001	BIG RIVER UNITED ENERGY, LLC - DYERSVILLE	18.26	21.06	5.25	78.41	53.56	57.04	0.00	0.00	10.72
29-01-004	IOWA ARMY AMMUNITION PLANT	6.11	6.37	141.54	48.67	6.91	31.32	0.01	0.64	5.43
29-01-006	CNH INDUSTRIAL AMERICA, LLC.	1.84	2.03	0.03	4.66	14.45	3.82	0.00	0.00	1.09
29-01-013	IPL - BURLINGTON GENERATING STATION	0.53	0.53	0.04	14.18	0.87	8.00	0.00	0.54	0.29
29-01-079	RILEY INDUSTRIAL PAINTING	1.42	1.42	0.00	0.01	1.24	0.00	0.00	0.00	0.16
29-01-098	SILGAN CONTAINERS MFG CORP - BURLINGTON	0.77	0.77	0.06	10.14	34.23	8.52	0.00	0.00	0.91
29-02-010	DES MOINES COUNTY REGIONAL SANITARY LANDFILL	0.00	0.00	0.00	0.00	5.39	1.33	0.00	0.00	3.59
29-02-012	BIG RIVER RESOURCES WEST BURLINGTON, LLC	39.48	45.63	63.24	111.01	82.66	86.66	0.00	0.00	10.58
29-06-001	UNITED STATES GYPSUM CO - SPERRY	45.78	45.78	0.69	84.24	32.99	71.09	0.00	2.92	7.15

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
30-01-012	POLARIS INDUSTRIES, INC - SPIRIT LAKE	7.73	7.73	0.02	4.06	73.27	3.41	0.00	0.00	1.88
30-02-004	MAGELLAN PIPELINE CO, LLC - MILFORD	0.00	0.00	0.00	0.00	133.75	0.00	0.00	0.00	4.89
30-02-010	NUSTAR PIPELINE OP PARTNERSHIP LP - MILFORD	0.00	0.00	0.00	0.00	115.50	0.00	0.00	0.00	0.52
30-08-002	GREEN PLAINS ETHANOL STORAGE, LLC (GP SUPERIOR)	18.92	22.32	1.85	65.17	56.90	23.98	0.00	3.70	9.21
31-01-009	JOHN DEERE DUBUQUE WORKS	13.22	13.23	0.20	24.35	121.09	17.29	0.00	0.00	2.40
31-01-034	MAGELLAN PIPELINE CO, LLC - DUBUQUE	0.00	0.00	0.00	0.00	48.55	0.00	0.00	0.00	2.16
31-01-061	EAGLE WINDOW & DOOR, INC	1.71	2.13	0.00	1.03	151.50	0.85	0.00	0.03	12.83
31-01-151	DUBUQUE METROPOLITAN SANITARY LANDFILL	0.00	0.00	0.00	0.00	6.39	1.58	0.00	0.00	3.81
32-01-016	Moveero - Estherville	1.95	1.95	0.01	1.68	28.96	1.41	0.00	0.05	0.72
32-02-004	Moveero - ARMSTRONG	3.25	3.25	0.01	1.29	25.41	1.08	0.00	0.04	0.64
33-01-003	ASHLEY INDUSTRIAL MOLDING, INC	0.45	0.47	0.01	2.23	73.55	1.87	0.00	0.07	21.95
33-01-016	TRANSCO RAILWAY PRODUCTS, INC. - OELWEIN	0.70	0.94	0.02	4.00	29.93	3.36	0.00	0.00	5.85
33-01-020	BERTCH CABINET, LLC. - OELWEIN	1.03	1.04	0.00	0.30	47.45	0.25	0.00	0.00	0.83
34-01-015	CAMBREX CHARLES CITY, INC	0.00	0.42	0.07	0.00	2.23	0.16	0.00	0.01	0.81
34-01-023	MIDAMERICAN ENERGY CO - MERL PARR TURBINES	0.04	0.04	0.00	1.99	0.01	0.51	0.00	0.00	0.00
34-01-027	WINNEBAGO INDUSTRIES, INC - CHARLES CITY	0.14	0.22	0.00	0.02	12.04	0.02	0.00	0.00	0.92
34-01-035	CDI, LLC - CHARLES CITY	0.03	0.03	0.00	0.00	11.68	0.00	0.00	0.00	2.78
34-01-040	VALERO RENEWABLE FUELS CO, LLC dba Valero CHARLES CITY	24.68	29.65	1.12	86.85	93.89	24.18	0.00	0.00	15.62
36-10-001-01	GREEN PLAINS ETHANOL STORAGE, LLC (GP SHENANDOAH)	28.13	32.29	7.65	56.08	107.31	25.54	0.00	2.99	15.24
39-06-002	POET Biorefining MENLO, LLC	21.66	30.44	3.59	79.55	88.32	52.80	0.00	5.49	8.98
39-11-001	POET BIOREFINING - COON RAPIDS	45.27	49.70	0.74	67.83	125.04	26.69	0.00	0.84	13.18
40-01-003	WEBSTER CITY COMBUSTION TURBINE	0.88	0.88	0.47	10.09	0.01	0.69	0.00	0.00	0.00
40-01-011	VAN DIEST SUPPLY COMPANY	1.00	7.70	0.04	5.49	63.89	4.47	0.00	1.57	5.40
40-02-002	POET BIOREFINING - JEWELL	44.48	55.03	1.10	82.55	72.96	96.75	0.00	0.00	8.39
41-02-005-02	NORTHERN NATURAL GAS CO - VENTURA COMPRESSOR	0.73	0.73	0.18	40.84	1.06	7.08	0.00	0.02	0.64
41-02-010	ZINPRO CORPORATION	32.92	33.21	0.04	6.54	10.88	5.49	0.00	0.00	4.92

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
41-02-011	STELLAR INDUSTRIES, INC	0.89	0.89	0.00	0.52	34.63	0.44	0.00	0.02	1.54
42-01-003	CARGILL, INC - IOWA FALLS	16.39	17.38	0.14	21.08	316.06	19.19	0.00	0.00	155.27
42-01-019	POET Biorefining IOWA FALLS, LLC	22.19	29.80	2.25	99.90	78.01	46.55	0.00	7.24	6.12
42-08-001	PLCP, L.P.	35.56	39.02	0.69	99.32	127.18	79.72	0.00	0.00	15.05
42-08-003	NATURALLY RECYCLED PROTEINS of IOWA	5.70	5.70	0.02	5.63	0.11	3.38	0.00	0.13	0.08
45-01-003	DONALDSON COMPANY, INC - CRESCO	0.05	0.05	0.00	0.66	94.84	0.58	0.00	0.02	7.49
45-01-007	IEA-SBD-9206-DONALDSON	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00
46-01-034	PRECISION TANK & EQUIPMENT CO	2.46	2.46	0.00	0.00	5.58	0.00	0.00	0.00	5.41
47-04-001	POET Biorefining ARTHUR, LLC	25.66	40.40	2.39	84.42	69.70	66.53	0.00	4.61	7.48
49-01-013-01	MAQUOKETA MUNICIPAL ELEC UTILITY	0.28	0.32	0.00	11.32	3.14	1.58	0.00	0.00	0.06
50-01-049	Arcosa Wind Towers, Inc. - Newton	1.35	1.35	0.00	0.37	55.87	0.31	0.00	0.00	14.26
51-01-005	FAIRCAST, INC.	10.35	13.82	0.38	0.43	6.95	6.16	0.01	0.00	1.80
51-03-001	ANR PIPELINE CO - BIRMINGHAM COMPRESSOR	1.28	1.28	0.14	21.76	2.50	22.04	0.00	0.00	0.15
52-01-005-01	UNIVERSITY OF IOWA	3.95	4.09	0.26	22.97	15.34	11.49	0.00	0.01	0.39
52-01-005-02	UNIVERSITY OF IOWA MAIN POWER PLANT	12.94	13.98	55.70	149.42	21.70	114.21	0.01	0.28	11.45
52-01-032	ENTERPRISE PROD. OPERATING LLC - IOWA CITY NGL FAC	2.33	2.33	0.36	10.35	8.55	8.85	0.00	0.00	0.02
52-01-037	LOPAREX, INC	2.12	2.12	0.05	8.30	61.17	6.97	0.00	0.30	14.87
52-01-053	IOWA CITY SANITARY LANDFILL	1.90	14.69	0.02	1.53	3.91	5.47	0.00	0.04	2.18
52-02-001	MIDAMERICAN ENERGY CO - CORALVILLE TURBINES	0.09	0.09	0.01	4.20	0.03	1.08	0.00	0.00	0.01
52-02-006	MAGELLAN PIPELINE CO, LLC - IOWA CITY	0.00	0.00	0.00	6.29	76.08	15.70	0.00	0.00	3.35
53-02-008	ROBERTSON CECO II DBA STAR BUILDING SYSTEMS	0.47	6.28	0.00	1.03	30.36	0.74	0.00	0.01	1.67
54-10-001	NATURAL GAS PIPELINE CO OF AMERICA - STATION 109	14.64	14.64	0.20	846.23	42.92	125.90	0.00	0.00	23.73
55-01-032	AG PROCESSING, INC - ALGONA	1.40	6.27	0.07	11.23	5.88	9.43	0.00	0.00	5.26
55-03-004	BRAND FX BODY COMPANY - SWEA CITY	1.90	1.90	0.00	0.00	28.43	0.00	0.00	0.00	16.40
55-09-003	Valero Renewable Fuels Company, LLC dba Valero Lakota Plant	15.82	21.97	2.52	64.53	45.06	16.75	0.00	1.99	3.51
56-01-008	HENNIGES AUTOMOTIVE IOWA, INC	77.23	77.89	1.90	4.11	38.36	5.26	0.00	2.02	11.21
56-01-009	ROQUETTE AMERICA, INC	57.34	107.23	264.73	224.51	162.64	95.65	0.00	5.27	5.97
56-01-023	AMSTED RAIL COMPANY, INC	33.78	39.77	4.22	42.77	23.75	459.37	0.07	5.93	7.19

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
56-01-025	Keokuk Mills, LLC dba KEOKUK STEEL CASTING, INC	8.38	8.38	0.03	5.32	106.14	4.47	0.00	0.17	7.37
56-02-021	CLIMAX MOLYBDENUM COMPANY	20.08	21.34	270.74	28.20	1.65	22.00	0.00	1,771.36	0.42
56-02-030	SILGAN CONTAINERS MFG. CORP. - FORT MADISON	0.25	0.25	0.00	0.59	200.95	0.49	0.00	0.02	0.05
56-02-053	SIEMENS GAMESA RENEWABLE ENERGY INC.	0.17	0.34	0.00	0.00	26.10	0.00	0.00	0.00	2.89
56-10-001	IOWA FERTILIZER COMPANY	11.34	14.79	2.32	107.97	89.78	41.12	0.00	108.84	8.33
57-01-002	CARGILL, INC - DOMESTIC SOYBEAN PROCESSING	17.46	25.59	0.07	12.74	134.87	9.91	0.00	0.00	86.11
57-01-003	CARGILL, INC - CEDAR RAPIDS - SOYBEAN EAST PLANT	11.98	15.87	0.19	31.63	291.86	26.57	0.00	0.00	152.13
57-01-004	CARGILL, INC - CEDAR RAPIDS	16.13	42.34	16.20	53.79	173.32	100.09	0.00	2.44	52.02
57-01-012	GM Cereal Properties, Inc.	43.27	43.27	0.42	40.62	44.56	33.46	0.00	1.26	0.00
57-01-025	INGREDION INCORPORATED	33.78	74.34	32.55	20.93	119.86	8.66	0.00	1.61	10.18
57-01-027	QUAKER MANUFACTURING, LLC	62.99	63.27	0.14	22.75	5.79	19.06	0.00	0.72	0.86
57-01-042	IPL - PRAIRIE CREEK GENERATING STATION	113.54	113.54	1,492.51	892.34	11.74	339.70	0.03	1.83	13.52
57-01-077	CEDAR RAPIDS WPCF	3.11	3.12	1.65	31.64	9.60	17.07	0.00	0.26	10.03
57-01-080	ADM CORN PROCESSING - CEDAR RAPIDS	104.94	249.46	894.69	826.29	701.08	333.90	0.02	81.24	118.55
57-01-095	PMX INDUSTRIES, INC	32.40	33.00	0.06	13.46	26.90	9.11	0.00	0.34	0.36
57-01-130-02	CEDAR RAPIDS LINN CTY SLD WST AGCY SANI LND FLL #2	1.09	1.09	9.02	4.87	7.21	26.25	0.00	0.00	7.88
57-01-153	INTERNATIONAL PAPER CEDAR RIVER MILL	29.32	33.44	0.02	1.69	121.77	1.32	0.00	0.00	68.82
57-01-226-01	RED STAR YEAST COMPANY, LLC	4.46	5.30	0.00	0.34	183.09	1.77	0.00	0.00	38.44
57-01-226-02	BIO SPRINGER NORTH AMERICA CORP	3.85	6.79	0.00	0.37	0.37	0.32	0.00	0.00	0.00
57-01-246	Vantage Corn Processors, LLC	5.46	25.88	11.69	51.94	44.23	43.74	0.00	3.52	11.03
58-02-007	NATURAL GAS PIPELINE CO OF AMERICA - STATION 204	3.60	3.60	0.09	50.11	8.63	11.41	0.00	0.00	7.06
58-04-002	NATURAL GAS PIPELINE CO OF AMERICA - STATION 199	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.00
58-07-001	MIDAMERICAN ENERGY CO - LOUISA STATION	162.30	309.00	6,002.33	3,408.33	4.12	4,043.53	0.05	1.16	13.59
60-01-012	NUSTAR PIPELINE OP PARTNERSHIP LP - ROCK RAPIDS	0.00	0.00	0.00	0.00	22.83	0.00	0.00	0.00	0.16
60-06-006	Gevo NW Iowa RNG, LLC (RNG Facility)	0.09	0.09	77.90	0.63	2.50	1.48	0.00	0.00	0.03

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
62-01-001-01	CLOW VALVE COMPANY - FOUNDRY	0.92	1.39	0.13	0.04	11.35	22.89	0.00	0.00	3.33
62-01-001-02	CLOW VALVE COMPANY - MACHINE SHOP	1.66	1.69	0.02	4.08	1.53	3.40	0.00	0.00	0.62
63-01-001	3M (MINNESOTA MINING & MFG CO) - KNOXVILLE	0.76	0.93	0.06	10.39	106.23	8.63	0.00	0.33	26.73
63-01-013	NATURAL GAS PIPELINE CO OF AMERICA - STATION 198	0.05	0.05	0.03	2.53	0.02	1.12	0.00	0.00	0.01
63-01-017	MIDAMERICAN ENERGY CO - KNOXVILLE POWER STATION	0.02	0.02	0.00	0.67	0.02	0.08	0.00	0.00	0.00
63-02-003	PELLA CORPORATION - PELLA DIVISION	9.32	9.32	0.04	5.41	152.40	4.55	0.00	0.09	11.19
63-02-004	VERMEER CORPORATION	12.72	18.37	0.14	14.24	178.45	11.73	0.00	0.00	9.09
63-02-023	PELLA WEST SUBSTATION	0.13	0.14	0.09	2.65	0.18	0.07	0.00	0.00	0.00
64-01-012	IPL - MARSHALLTOWN GENERATING STATION	39.29	39.29	8.25	307.25	4.12	147.63	0.00	24.35	9.68
64-01-015	JBS USA LLC	3.70	9.51	20.83	48.75	8.80	40.95	0.00	0.00	0.86
64-01-045	INDUSTRIAL ENERGY APPLICATIONS, INC. - JBS USA	0.01	0.02	0.00	0.84	0.02	0.01	0.00	0.00	0.00
64-01-094	MTBT- Marshalltown	0.23	0.23	0.04	7.16	0.13	13.02	0.00	0.00	1.66
64-02-005	Marshall Ridge Renewable Energy LLC	0.45	0.45	6.05	2.54	0.32	6.67	0.00	0.00	0.00
65-02-005	LOESS HILLS SANITARY LANDFILL	0.00	0.00	1.82	4.53	7.14	88.03	0.00	0.00	8.95
65-04-001	NATURAL GAS PIPELINE CO OF AMERICA - STATION 107	20.28	20.28	0.26	1,133.70	31.26	266.05	0.00	0.00	34.00
66-10-001	ABSOLUTE ENERGY, LLC	37.74	39.72	36.06	81.12	70.45	97.69	0.00	0.00	9.87
68-09-001	CARGILL, INC - EDDYVILLE	228.40	234.27	318.38	259.90	519.98	312.08	0.00	10.77	145.70
68-09-002	Ajinomoto Health and Nutrition North America, Inc.	27.25	27.85	0.68	91.24	13.02	101.12	0.00	3.59	2.51
68-09-003	AJINOMOTO HEALTH AND NUTRITION NORTH AMERICA, INC	4.09	4.11	0.05	0.76	1.54	7.95	0.00	0.00	0.18
68-09-005	CARGILL - VITAMIN E - EDDYVILLE	0.89	0.89	0.01	1.58	4.22	1.55	0.00	0.00	4.04
68-09-006	WACKER CHEMICAL CORPORATION	1.30	1.51	0.10	7.55	12.07	16.79	0.00	0.00	5.76
68-09-008	EDDYVILLE CHLOR-ALKALI, LLC	0.61	0.61	0.05	8.39	0.45	6.64	0.00	0.25	0.14
69-01-020	FRES-CO SYSTEM USA, INC	0.04	0.17	0.01	2.15	40.65	1.78	0.00	0.04	0.00
70-01-004	GRAIN PROCESSING CORPORATION	69.32	100.20	38.77	431.33	592.24	252.51	0.00	11.72	30.83
70-01-005	KRAFT HEINZ - MUSCATINE	0.10	0.12	0.06	1.70	10.83	0.10	0.00	0.00	0.31
70-01-006	HNI CORPORATION - CENTRAL CAMPUS	1.79	1.79	0.06	4.29	14.08	3.24	0.00	0.03	1.06

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
70-01-008-01	Bayer CropScience LP 3670	4.39	4.39	0.04	7.40	23.89	10.48	0.00	0.20	10.41
70-01-008-02	Bayer CropScience LP 6908	0.97	0.97	0.00	0.00	5.05	0.00	0.00	1.51	2.32
70-01-008-03	Bayer CropScience LP 6909	6.86	6.86	0.36	64.44	35.54	50.97	0.00	2.83	8.48
70-01-011	MUSCATINE POWER & WATER	27.93	63.69	196.98	844.75	13.44	76.22	0.02	0.00	3.19
70-01-048	UNION TANK CAR CO - MUSCATINE	1.67	3.63	0.02	2.94	31.50	3.65	0.00	0.09	12.58
70-01-050	HNI CORPORATION - NORTH CAMPUS	4.31	4.31	0.06	6.22	7.99	4.95	0.00	0.05	2.83
70-01-054	HARSCO METALS	3.96	3.96	0.31	0.91	0.14	0.21	0.00	0.00	0.00
70-03-003	GERDAU	12.33	22.66	34.25	37.88	87.47	128.32	0.00	0.00	4.43
70-08-002	SSAB IOWA, INC - MUSCATINE	58.53	75.73	111.09	450.81	28.49	865.32	0.01	0.00	0.20
71-01-001	AG PROCESSING, INC - SHELDON	7.37	34.18	0.16	25.55	290.37	21.43	0.00	0.00	188.66
71-02-010	VALERO RENEWABLE FUELS CO, LLC - HARTLEY	55.25	61.17	1.32	87.48	101.07	34.92	0.00	0.00	15.11
72-03-002	POET BIOREFINING - ASHTON	42.93	56.82	0.21	54.32	57.47	30.81	0.00	1.43	5.75
73-01-018	MIDAMERICAN ENERGY CO - SHENANDOAH POWER STATION	0.02	0.02	0.00	0.74	0.02	0.08	0.00	0.00	0.00
73-01-026	CITY OF SHENANDOAH - SHENANDOAH SANITATION, INC	0.00	0.06	0.02	0.77	0.37	2.69	0.00	0.00	0.00
73-02-010	NSK CORPORATION	0.16	0.16	0.01	2.12	85.72	1.78	0.00	0.00	1.03
74-01-012	AG PROCESSING, INC - EMMETSBURG	5.04	13.04	0.14	20.14	96.30	16.91	0.00	0.00	61.32
74-01-022	Poet Biorefining - Emmetsburg	23.21	23.71	1.39	25.33	40.20	19.61	0.00	1.71	4.85
75-01-018	NUSTAR PIPELINE OP PARTNERSHIP LP - LE MARS	0.00	0.00	0.00	0.00	29.28	0.00	0.00	0.00	0.17
76-01-014	BRAND FX BODY COMPANY - POCAHONTAS	1.82	1.82	0.00	0.01	19.69	0.00	0.00	0.00	15.11
77-01-003	TITAN TIRE CORPORATION	1.21	3.07	0.10	17.18	76.84	13.50	0.00	0.51	2.74
77-01-022	BRIDGESTONE AMERICAS TIRE OPERATIONS, LLC	20.97	39.09	0.26	35.52	259.48	29.49	0.00	1.12	7.58
77-01-035	JOHN DEERE DES MOINES WORKS	12.08	12.11	0.11	18.39	82.85	15.39	0.00	0.56	4.15
77-01-045	ADM - DES MOINES SOYBEAN	33.61	40.07	100.70	159.73	740.22	65.75	0.01	0.00	467.13
77-01-054	MIDAMERICAN ENERGY CO - RIVER HILLS TURBINES	0.13	0.13	0.01	6.39	0.04	1.64	0.00	0.00	0.00
77-01-109	CONSTRUCTION PRODUCTS, INC	5.13	5.13	0.05	0.14	34.12	0.04	0.00	0.00	14.80
77-01-114	MAGELLAN PIPELINE CO, LLC - DES MOINES	0.00	0.00	0.09	2.74	171.34	1.58	0.00	0.00	8.82
77-01-169	SIEGWERK USA INC - 129 SE 18TH ST	0.44	0.44	0.00	0.00	59.39	0.00	0.00	0.00	0.00
77-01-174	PRINCIPAL LIFE INSURANCE COMPANY	0.12	0.12	0.01	3.85	0.13	1.53	0.00	0.02	0.00

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
77-01-285	SIEGWERK USA INC - SW 56TH ST	1.91	1.91	0.06	0.24	13.73	0.06	0.00	0.00	0.00
77-01-317	CITY OF DSM METRO WASTEWATER RECLAIM AUTHORITY	1.40	1.40	10.13	11.80	10.47	32.95	0.00	0.23	0.35
77-01-337	Iowa EPS Products, Inc.	1.72	1.72	0.01	1.06	130.00	0.89	0.00	0.00	2.75
77-02-040	Willow Creek / Ginger East Data Centers	0.24	0.24	0.01	4.55	0.24	0.94	0.00	0.00	0.01
77-03-014	QUALITY MANUFACTURING CORP - URBANDALE	5.10	5.10	0.01	2.14	95.63	1.80	0.00	0.00	8.79
77-07-010	Siculus, Inc.	0.45	1.54	0.01	10.87	1.52	4.33	0.00	0.00	0.01
77-09-002	MIDAMERICAN ENERGY CO - SYCAMORE TURBINES	0.55	0.55	0.17	14.80	0.17	6.76	0.00	0.00	0.08
77-10-002	CB&I LLC	7.36	7.44	0.00	0.00	3.70	0.00	0.00	0.00	2.80
77-13-002	MIDAMERICAN ENERGY CO - PLEASANT HILL/GDMEC	81.00	81.00	5.04	97.62	7.03	106.12	0.00	0.00	4.28
77-14-002	METRO METHANE RECOVERY FACILITY	6.24	6.24	17.34	128.21	7.10	223.78	0.00	0.00	12.62
77-14-003	METRO PARK EAST SANITARY LANDFILL	0.00	0.00	0.00	0.00	11.02	0.00	0.00	0.00	7.31
78-01-026	WALTER SCOTT JR ENERGY CTR	284.53	486.04	6,056.95	3,938.22	60.38	3,347.29	0.17	6.62	18.22
78-01-085	BUNGE NORTH AMERICA, INC - 19560 BUNGE AVE	20.59	32.79	0.60	43.10	648.53	85.89	0.00	3.28	421.61
78-01-110	SOUTHWEST IOWA RENEWABLE ENERGY, LLC	16.72	28.29	2.23	49.69	59.86	72.26	0.00	4.09	7.28
78-01-121	GABLE CORPORATION	4.66	4.66	0.01	18.63	0.68	0.61	0.00	0.00	0.00
78-04-001	OSI INDUSTRIES, LLC	41.53	41.53	0.04	18.85	63.20	19.34	0.00	1.37	0.00
78-04-006	NORTHERN NATURAL GAS CO - OAKLAND COMPRESSOR	2.23	2.23	0.05	129.40	4.88	17.73	0.00	0.03	3.17
82-01-002	ARCONIC INC - DAVENPORT WORKS (FORMERLY ALCOA)	154.37	165.72	1.97	248.47	259.81	201.04	0.02	12.12	50.03
82-01-015	LINWOOD MINING & MINERALS CORP	126.27	129.95	16.80	81.43	0.04	121.93	0.00	0.00	0.00
82-01-017	NICHOLS ALUMINUM LLC - DAVENPORT - ROCKINGHAM RD	0.98	0.98	0.05	7.69	11.28	7.51	0.00	0.24	2.25
82-01-043	JOHN DEERE DAVENPORT WORKS	11.79	11.79	0.02	8.94	125.30	1.21	0.00	0.04	5.54
82-01-089	Novelis ALR Aluminum, LLC (Novelis Davenport Casting)	34.92	34.94	0.45	47.27	19.18	43.08	0.06	1.64	18.16
82-01-121	SCOTT COUNTY LANDFILL	0.01	0.01	0.18	0.02	9.23	2.28	0.00	0.00	4.02
82-02-004	SIVYER STEEL CASTINGS LLC	8.83	14.73	0.85	12.86	1.81	25.57	0.06	0.33	0.23

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
82-02-052	VEOLIA WATER NORTH AMERICA - DAVENPORT	1.88	1.88	0.17	0.33	1.38	16.72	0.00	0.00	0.00
82-04-005	CONTINENTAL CEMENT COMPANY - DAVENPORT PLANT	172.31	217.62	1,488.88	1,940.99	73.39	1,311.19	0.09	5.17	84.13
85-01-006-01	CITY OF AMES COMBUSTION TURBINE	0.15	0.15	0.31	1.73	0.00	0.87	0.00	0.00	0.01
85-01-006-02	CITY OF AMES STEAM ELECTRIC PLANT	33.19	33.92	27.01	314.32	10.42	5.15	0.07	5.44	124.59
85-01-007	IOWA STATE UNIVERSITY	17.49	21.12	38.77	70.13	6.42	40.02	0.01	0.16	2.12
85-01-017	USDA - NATIONAL ANIMAL DISEASE CENTER	5.47	5.47	0.58	19.64	1.24	21.51	0.00	0.08	0.61
85-02-017	LINCOLNWAY ENERGY, LLC	30.66	31.33	0.57	53.58	71.36	80.18	0.00	0.00	8.48
85-03-003	AMERICAN PACKAGING CORPORATION	3.06	3.06	0.02	4.14	82.11	3.48	0.00	0.13	0.07
88-01-002	WDC Acquisition LLC	7.67	7.67	0.01	2.03	42.81	1.71	0.00	0.07	4.43
88-01-004	CENTRAL IOWA POWER COOP - SUMMIT LAKE	1.06	1.06	0.17	41.76	8.72	6.03	0.00	0.35	10.54
88-01-017	GREEN VALLEY CHEMICAL CORPORATION	4.19	4.19	0.54	111.96	122.06	250.56	0.00	0.74	2.60
88-01-021	BENSON HILL INGREDIENTS, LLC	4.57	8.32	0.06	10.14	140.53	8.52	0.00	0.00	88.36
90-01-003	JOHN DEERE OTTUMWA WORKS	2.62	2.86	0.03	5.40	106.30	4.55	0.01	0.17	3.81
90-01-020	JBS USA Pork	13.68	13.68	25.88	28.65	6.57	20.33	0.00	0.77	0.45
90-01-023	American Bath Group	0.32	0.32	0.00	0.00	3.23	0.00	0.00	0.00	1.78
90-01-070	MTBT- Ottumwa	0.17	0.17	0.04	5.66	0.09	9.38	0.00	0.00	1.18
90-07-001	IPL - OTTUMWA GENERATING STATION	354.29	362.77	1,015.91	1,004.48	0.40	1,061.14	0.04	33.85	13.36
91-01-002	INDIANOLA MUNICIPAL UTILITIES	0.10	0.10	0.01	2.09	0.02	0.02	0.00	0.00	0.00
91-01-015	CITY OF INDIANOLA - WWTP	0.10	0.10	0.03	1.43	0.11	0.31	0.00	0.00	0.00
91-06-001	NATURAL GAS PIPELINE CO OF AMERICA - STATION 108	2.46	2.46	0.04	155.64	5.92	20.05	0.00	0.00	3.77
91-09-005	Osmium Data Center	0.09	0.09	0.00	1.53	0.09	0.14	0.00	0.00	0.00
92-01-021	Atlas Molded Productions- A Division of Atlas Roofing Corporation	0.11	0.11	0.01	1.41	91.84	1.18	0.00	0.00	0.48
92-10-001	NATURAL GAS PIPELINE CO OF AMERICA - STATION 205	2.38	2.38	0.02	2.38	1.45	1.46	0.00	0.00	1.03
93-05-001	ANR PIPELINE CO - LINEVILLE COMPRESSOR	0.57	0.57	0.03	72.63	6.48	21.19	0.00	0.00	3.96
94-01-002	CERTAINTED GYPSUM & CEILING MFG, INC	8.36	19.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94-01-005	KOCH FERTILIZER FT. DODGE, LLC	11.27	11.27	0.34	238.84	21.78	76.16	0.00	275.55	5.52

Facility ID	Facility Name	PM25- PRI	PM10- PRI	SO2	NOX	VOC	CO	Pb	NH3	Total HAPs
94-01-010	GEORGIA-PACIFIC GYPSUM, LLC - FORT DODGE	58.87	119.11	0.23	38.51	90.96	135.25	0.00	0.00	5.19
94-01-015	GOLD BOND BUILDING PRODUCTS, LLC	30.00	30.00	30.15	25.40	25.74	36.08	0.00	1.24	2.97
94-01-017	UNITED STATES GYPSUM CO - FORT DODGE	24.02	27.16	0.06	2.32	0.13	1.95	0.00	0.07	0.04
94-01-040	SILGAN CONTAINERS MFG CORP - FORT DODGE	0.39	0.39	0.01	1.47	230.01	1.23	0.00	0.04	0.69
94-01-073	VALERO RENEWABLE FUELS CO, LLC - FORT DODGE	44.42	51.00	1.09	68.62	94.41	34.30	0.00	0.00	12.36
94-01-079	NORTH CENTRAL IA REGIONAL SANITARY LANDFILL	0.00	0.00	0.00	0.00	4.07	2.02	0.00	0.00	5.44
94-01-080	CARGILL, INC - FORT DODGE	18.25	20.00	19.92	79.65	159.59	40.04	0.00	0.00	17.27
94-02-004	POET BIOREFINING - GOWRIE, LLC	75.15	90.65	1.29	93.72	85.30	94.44	0.00	0.00	9.41
94-07-001	GROWMARK, INC - FORT DODGE TERMINAL	0.00	0.00	0.00	0.00	27.57	0.00	0.00	0.00	4.57
94-07-004	PRAXAIR, INC	3.59	3.59	0.00	0.00	0.16	1.97	0.00	0.00	0.79
95-01-001	WINNEBAGO INDUSTRIES, INC - FOREST CITY	1.39	1.44	0.41	1.61	16.21	1.58	0.00	0.01	11.31
95-01-012	CDI, LLC. - FOREST CITY	0.28	0.28	0.00	0.00	42.77	0.00	0.00	0.00	7.24
95-02-012	CENTRAL DISPOSAL SYSTEMS, INC	9.26	42.06	1.71	33.31	14.68	65.58	0.00	0.00	13.66
97-01-001	CARGILL, INC - SIOUX CITY	18.70	24.28	0.34	36.66	620.24	46.93	0.00	0.00	399.86
97-01-030	CF INDUSTRIES NITROGEN, LLC - PORT NEAL COMPLEX	124.92	125.36	3.68	364.36	67.38	76.76	0.00	292.61	45.50
97-01-118	MAGELLAN PIPELINE CO, LLC - SIOUX CITY	0.37	0.37	0.00	20.85	39.40	11.44	0.00	0.00	2.02
97-01-193	Smithfield Packaged Meats Corp	0.54	1.13	0.04	6.02	9.96	47.89	0.00	0.19	0.11
97-01-200-03	SABRE INDUSTRIES TOWERS AND POLES	3.57	4.33	0.00	0.00	1.04	0.00	0.00	0.00	0.02
97-04-005	AG PROCESSING, INC - SERGEANT BLUFF	10.72	23.62	0.36	49.56	335.49	50.52	0.00	0.00	215.99
97-04-010	MIDAMERICAN ENERGY CO - GEORGE NEAL NORTH	74.11	107.18	2,508.80	1,817.04	26.60	1,855.88	0.01	0.55	11.56
97-04-011	MIDAMERICAN ENERGY CO - GEORGE NEAL SOUTH	100.35	119.21	1,771.67	861.18	19.00	503.34	0.00	0.56	6.70
98-02-004	MANLY TERMINAL, LLC	0.09	0.23	0.00	0.00	22.92	0.00	0.00	0.00	6.75
98-07-004	POET BIOREFINING - HANLONTOWN	58.74	65.83	0.90	64.43	69.62	62.39	0.00	0.00	7.52
99-01-001	AG PROCESSING, INC - EAGLE GROVE	15.50	51.26	0.39	22.78	467.28	54.35	0.00	0.00	304.20
99-05-003	CORN, LP	17.58	18.30	0.46	28.34	82.60	79.95	0.00	0.00	7.30

Appendix B - Business Types

- **Electricity Generation** - Includes facilities that provide electricity or steam to the public. This business type includes facilities contained in the major SIC groups of "4911" and "4931."
- **Food and Kindred Products** - Includes soybean and wet/dry corn mills, wet mill ethanol plants, meat packing plants, and facilities producing canned goods. This business type includes facilities contained in major SIC groups beginning with "20."
- **Natural Gas Transmission and Petroleum Product Pipelines/Fuel Storage** - Includes natural gas compressor stations, oil and natural gas pipelines, petroleum product storage facilities, and other fuel storage facilities. This business type includes facilities contained in major SIC groups beginning with "46," "49," and "51."
- **Stone, Clay, Glass, and Concrete Products** - Includes facilities processing or manufacturing portland cement, gypsum, bricks, slag, and glass products. This business type includes facilities contained in major SIC groups beginning with "32."
- **Dry Mill Ethanol Plants** - Includes facilities manufacturing ethanol from a dry mill process only. This business type includes facilities contained in the major SIC group "2869."
- **Education and Research** - Includes processes specific to education and research projects. This business type includes facilities contained in the major SIC groups of "8221," "8733," and "8734."
- **Iron and Steel Foundries/Mills** - Includes facilities manufacturing rail car wheels, water/wastewater pipes, rebar, and miscellaneous castings. This business type includes facilities contained in the major SIC groups of "3312," "3321," "3325," and "3365."
- **Chemical Manufacturing** - Includes facilities processing or manufacturing industrial organic chemicals, nitrogenous fertilizers, herbicides, cyclodextrin encapsulants, or medicinal chemicals. This business type includes facilities contained in major SIC groups beginning with "28."
- **Metal Products Manufacturing** - Includes facilities manufacturing cast aluminum ingots, aluminum coils, aluminum cans, and metal furniture. This business type includes facilities contained in the major SIC groups of "2522," "3339," "3351," "3353," and "3411."
- **Plastic Products Manufacturing** - Includes facilities manufacturing fiberglass and resin products, foam products, laminates, plastic bags, and bathtubs, showers, and whirlpools. This business type includes facilities contained in the major SIC group "2821" as well as facilities contained in the major SIC groups beginning with "26" and "30."
- **Wood and Paper Products Manufacturing** - Includes facilities manufacturing office furniture, cabinets, windows and doors, and paperboard. This business type includes facilities contained in the major SIC groups of "2521" and "2631" as well as facilities contained in the major SIC group beginning with "24."
- **Construction and Farm Equipment/Machinery Manufacturing** - Includes facilities manufacturing end loaders, skidders, graders, backhoes, diesel engines, and agricultural equipment and machinery. This business type includes facilities contained in the major SIC groups of "3519," "3253," and "3531."
- **Public Safety, Health, and Security** - Includes penitentiaries, hospitals, and ammunition plants. This business type includes facilities contained in major SIC groups beginning with "80," "92," and "97."
- **Rubber Products Manufacturing** - Includes facilities manufacturing tires, inner tubes, and automotive rubber parts. This business type includes facilities contained in the major SIC groups of "3011," "3061," and "3069."

- **Paint, Ink, and Adhesive Manufacturing and Application** - Includes facilities manufacturing ink, paint, and adhesives as well as facilities applying these materials. This business type includes facilities contained in the major SIC groups of "2672," "2851," and "2893" as well as facilities contained in the major SIC groups beginning with "27" and "34."
- **Landfills and Water Treatment** - Includes municipal landfills and water treatment facilities. This business type includes facilities contained in the major SIC groups of "4941," "4952," "4953," and "4959."
- **Motor Vehicles/Parts Manufacturing and Repair Shops** - Includes facilities manufacturing truck bodies, motor homes and parts, trailers, and rims and wheels for agricultural machinery. This business type includes facilities contained in major SIC groups beginning with "37," "50," and "75."
- **Fabricated Metal and Structural Metal Products Manufacturing** - Includes facilities manufacturing steel buildings, joists, doors, frames, pallet racks, dumpsters, bins, valves, and pipefittings. This business type includes facilities contained in major SIC groups beginning with "25," "34," and "35."
- **Miscellaneous** - Includes insurance companies, data storage facilities, and facilities manufacturing batteries, buttons, communication equipment, distilled spirits, and blades for wind turbines. This business description includes facilities contained in the major SIC groups of "3511," "4741," "5093," "6311," "4789," "5182," and "7374" as well as facilities contained in the major SIC groups beginning with "36" and "39."

For more information regarding the Standard Industrial Classification (SIC), SIC structure, and SIC descriptions please visit <https://www.osha.gov/pls/imis/sicsearch.html>.

Appendix C - Required Air Emissions Reporting Requirements & Emissions Inventory System Data Elements

AERR¹ Data Element	Corresponding EIS Data Element	Included in DNR's Submittal?
Emissions Year	Emissions Year	Yes
State and County FIPS Code or Tribal Code	State and County FIPS Code	Yes
Facility Site Identifier	Facility Site Identifier	Yes
Unit Identifier	Unit Identifier	Yes
Emission Process Identifier	Emissions Process Identifier	Yes
Release Point Identifier	Release Point Identifier	Yes
Facility Site Name	Facility Site Name	Yes
Physical Address (Location Address, Locality Name, State and Postal Code)	Location Address Text, Locality Name, Location Address State Code, Location Address Postal Code	Yes
Latitude and Longitude at facility level	Latitude Measure and Longitude Measure	Yes
Source Classification Code	Source Classification Code	Yes
Aircraft Engine Type (where applicable)	Aircraft Engine Type Code	No
Facility Site Status and Year	Facility Site Status Code and Facility Site Status Code Year	Yes
Release Point Stack Height and Unit of Measure	Release Point Stack Height Measure and Release Point Stack Height Unit of Measure Code	Yes
Release Point Stack Diameter and Unit of Measure	Release Point Stack Diameter Measure and Release Point Stack Diameter Unit of Measure Code	Yes
Release Point Exit Gas Temperature and Unit of Measure	Release Point Exit Gas Temperature Measure	Yes
Release Point Exit Gas Velocity or Release Point Exit Gas Flow Rate and Unit of Measure	Release Point Exit Gas Flow Rate Measure and Release Point Exit Gas Flow Rate Unit of Measure Code	Yes
Release Point Status and Year	Release Point Status Code and Release Point Status Code Year	Yes
NAICS at facility level	NAICS Code	Yes
Unit Design Capacity and Unit of Measure (for some unit types)	Unit Design Capacity and Unit Design Capacity Unit of Measure Code	Yes
Unit Type	Unit Type Code	Yes
Unit Status and Year	Unit Status Code and Unit Status Code Year	Yes
Release Point Apportionment Percent	Average Percent Emissions	Yes
Release Point Type	Release Point Type Code	Yes
Control Measure and Control Pollutant (where applicable)	Control Measure Code and Pollutant Code	Yes
Percent Control Approach Capture Efficiency (where applicable)	Percent Control Approach Capture Efficiency	No
Percent Control Measures Reduction Efficiency (where applicable)	Percent Control Measure Reduction Efficiency	Yes
Percent Control Approach Effectiveness (where applicable)	Percent Control Approach Effectiveness	No
Emission Factor	Emission Factor, Emission Factor Numerator Unit of Measure Code and Emission Factor Denominator Unit of Measure Code	Yes

AERR ¹ Data Element	Corresponding EIS Data Element	Included in DNR's Submittal?
Throughput (Value, Material, Unit of Measure, and Type)	Calculation Parameter Value, Calculation Material Code, Calculation Parameter Unit of Measure and Calculation Parameter Type Code	Yes
Pollutant Code	Pollutant Code	Yes
Annual Emissions and Unit of Measure	Total Emissions and Emissions Unit of Measure Code	Yes
Reporting Period Type (Annual)	Reporting Period Type Code	Yes
Emission Operating Type (Routine)	Emission Operating Type Code	Yes
Emission Calculation Method	Emission Calculation Method Code	Yes

¹Where Required By 40 CFR 51.30