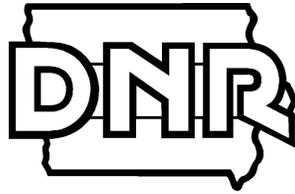


**IOWA DEPARTMENT
OF
NATURAL RESOURCES**



AIR QUALITY BUREAU

**2018 IOWA POINT SOURCE
EMISSIONS SUMMARY**

Prepared by:
Nick Page
Emissions Inventory Unit

September 10, 2020

Table of Contents

I. Summary.....	1
A. Purpose	1
B. Statewide Trends	2
C. Data Collection Methodology	4
II. Detailed Results.....	5
<i>PM</i> _{2.5} & <i>PM</i> ₁₀	5
<i>SO</i> ₂	7
<i>NO</i> _x	8
<i>VOC</i>	9
<i>CO</i>	10
<i>Pb</i>	11
<i>NH</i> ₃	12
<i>THAP</i>	13
III. Data Improvements.....	14
IV. Appendices	15
Appendix A - Emissions Summary by Facility (Tons)	16
Appendix B - Business Types	27
Appendix C - Required Air Emissions Reporting Requirements & Emissions Inventory System Data Elements	29

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 2018, there were 286 facilities subject to the Title V program located throughout the state as shown in Figure 1 below.

The DNR strives to ensure that 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.

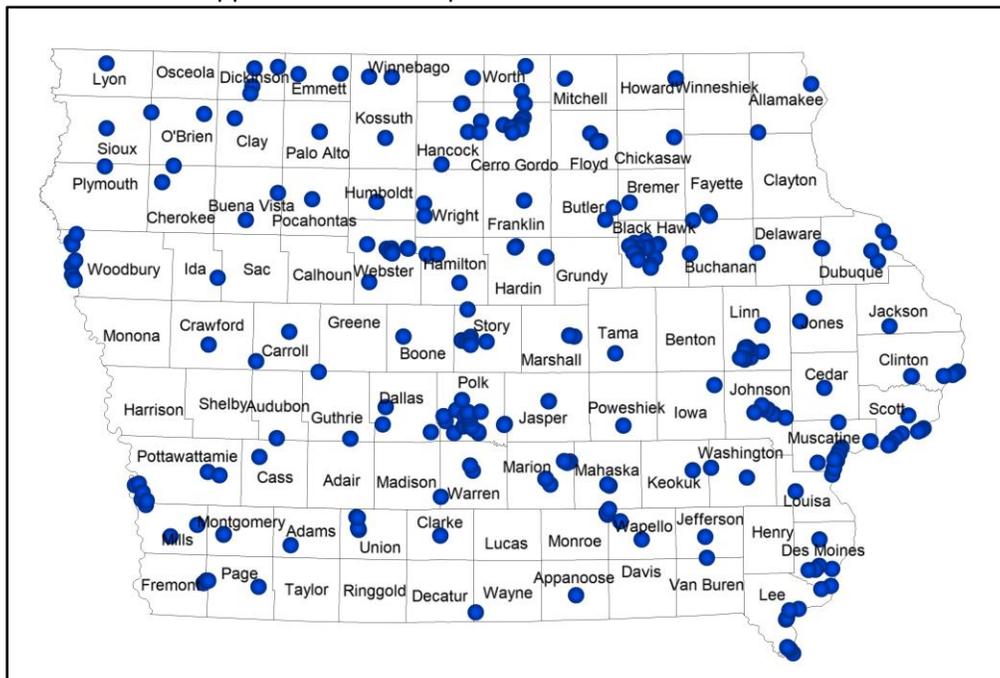


Figure 1 - Iowa Map with Title V Facilities Reporting 2018 Emissions

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

B. Statewide Trends

Overall, Title V point source emissions in Iowa increased slightly from 2017 to 2018. Chart 1 shows the contribution of each pollutant to the total pollutants inventoried in Iowa in 2017. Chart 2 shows the same data for 2018.

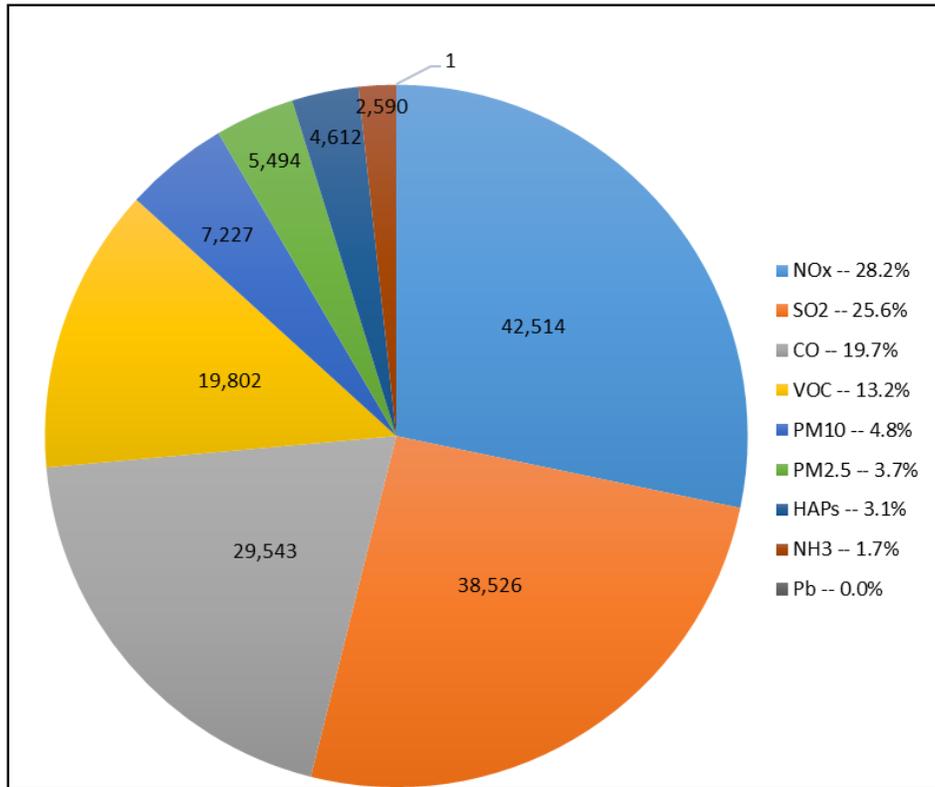


Chart 1 - 2017 Iowa Point Source emissions (Tons) by Pollutant

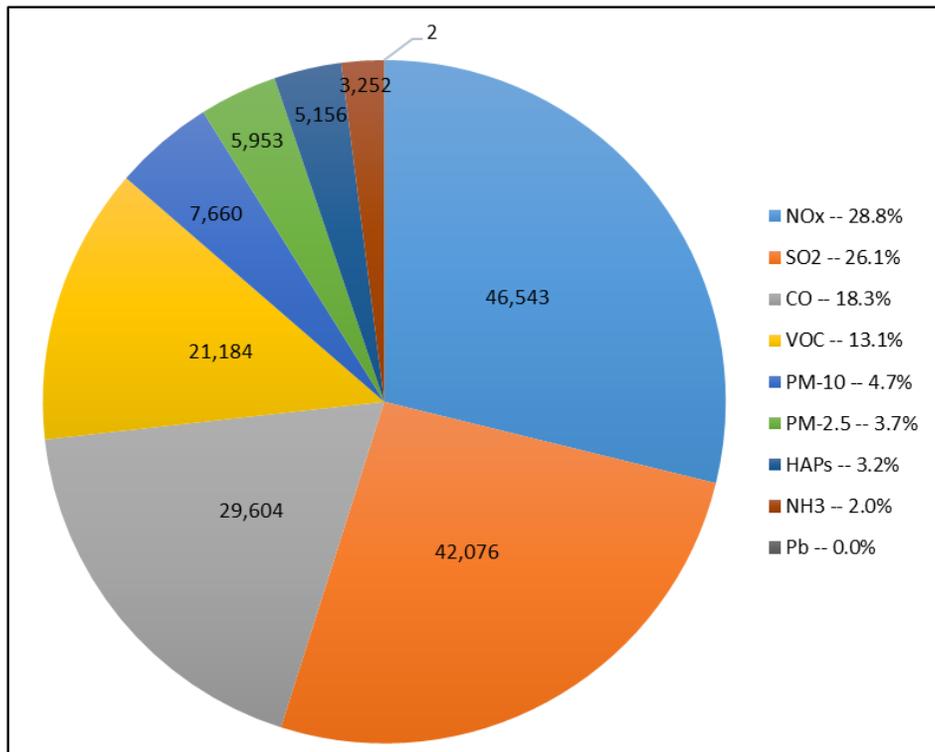


Chart 2 - 2018 Iowa Point Source Emissions (Tons) by Pollutant

This report uses twenty business types to classify sources of air pollution. The twenty 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. Chart 3 below shows the contribution of each business type to the overall emissions in Iowa.

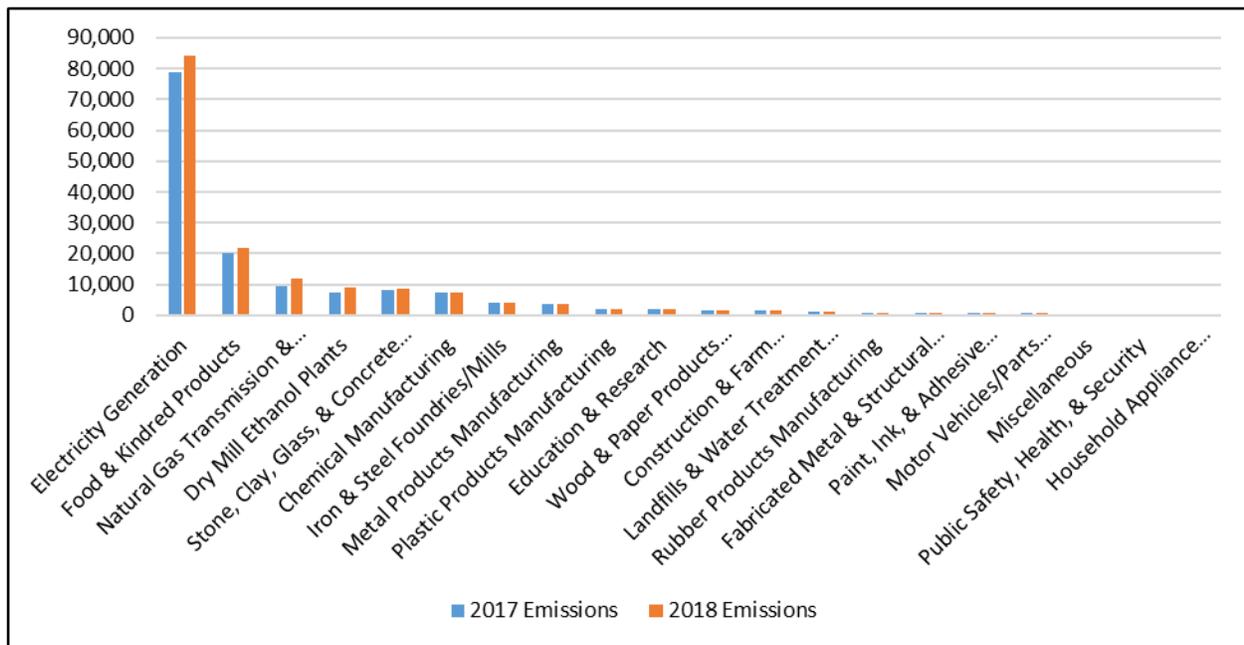


Chart 3 - Statewide Point Source Emissions by Business Type (tons)

The largest contributor of point source emissions comes from the Electricity Generation business type. Thirty-nine of the two hundred eighty-six facilities included in the 2018 NEI were classified as electrical generating facilities. The changes in overall emissions from electrical generating facilities from 2017 to 2018 are as follows:

Table 1 - Total Emissions Difference between DNR’s 2017 & 2018 Point Source NEI Emissions Submittals for Electrical Generating Facilities

Pollutant	2017 (tons)	2018 (tons)	Difference (Tons)	Difference (%)
PM _{2.5}	1,613	1,633	+20	+1.2%
PM ₁₀	2,109	2,211	+102	+4.8%
SO ₂	31,544	35,320	+3,776	+12.0%
NO _x	24,355	26,347	+1,992	+8.2%
VOC	298	308	+10	+3.4%
CO	18,309	17,858	-451	-2.5%
Pb	0.74	0.79	+0.05	+6.8%
NH ₃	127	180	+53	+41.7%
HAPs	265	257	-8	-3.0%
Total ²	78,621	84,115	+5,494	+7.0%

These electrical generating facilities experienced a total emissions increase of 5,494 tons. The total emissions increase from all 286 facilities was 11,121 tons. Therefore, emissions from the non-electrical generating sector increased 5,627 tons (7.9%) from 2017 to 2018.

² 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.

C. Data Collection Methodology

Emissions inventory reports are required to be submitted to DNR annually from all Title V facilities. Beginning with the 2019 emissions reporting cycle, 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.

II. Detailed Results

Title V point source emissions in Iowa increased in 2018. The table below compares 2018 emissions to 2017 emissions.

Table 2 - Total Emissions Difference between DNR's 2017 & 2018 Point Source NEI Submittals

Pollutant	2017 (tons)	2018 (tons)	Difference (Tons)	Difference (%)
PM _{2.5}	5,494	5,953	+459	+8.4%
PM ₁₀	7,227	7,660	+433	+6.0%
SO ₂	38,526	42,076	+3,550	+9.2%
NO _x	42,514	46,543	+4,029	+9.5%
VOC	19,802	21,184	+1,382	+7.0%
CO	29,543	29,604	+61	+0.2%
Pb	1.43	1.61	+0.19	+13.4%
NH ₃	2,590	3,252	+662	+25.6%
HAPs	4,612	5,156	+544	+11.8%
Total³	150,309	161,430	+11,121	+7.4%

PM_{2.5} & PM₁₀

Emissions of PM_{2.5} & PM₁₀ increased from 2017 to 2018. As shown in Chart 4 and Chart 5, the two business types with the largest changes were:

- Food & Kindred Products: increase of 388 tons
- Dry Mill Ethanol: increase of 135 tons

The same two business types contributed the majority of the net increase of more than 430 tons for PM₁₀. The changes by business types were:

- Food & Kindred Products: increase of 314 tons
- Dry Mill Ethanol: increase of 154 tons

The main reason for the increase in emissions from the Food and Kindred Products sector was because one facility provided an underestimate of PM_{2.5} emissions from one of their drying operations in 2017 and then in 2018 submitted a more conservative, overestimate for the same process. Both estimates were calculated using stack test data, but the particle size distribution was changed for 2018. Additional testing was done in 2019 that should provide more consistent data in future estimations. An additional factor that contributed to the increase of particulate emissions from the Food and Kindred Products sector was the addition of a new Title V facility that was not included in the 2017 NEI.

The three main reasons for an increase in particulate emissions from Dry Mill Ethanol plants are:

- An overall increase in ethanol production of about 150 million gallons from 2017 to 2018 according to the Iowa Renewable Fuels Association.
- Two facilities reporting the Title V emissions inventory in 2018 that did not report in 2017.
- One facility doubled their operation time from 2017 to 2018 for the release point that vents their DDGS equipment. This resulted in an increase of about 30 tons of PM₁₀ and PM_{2.5} emissions.

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.

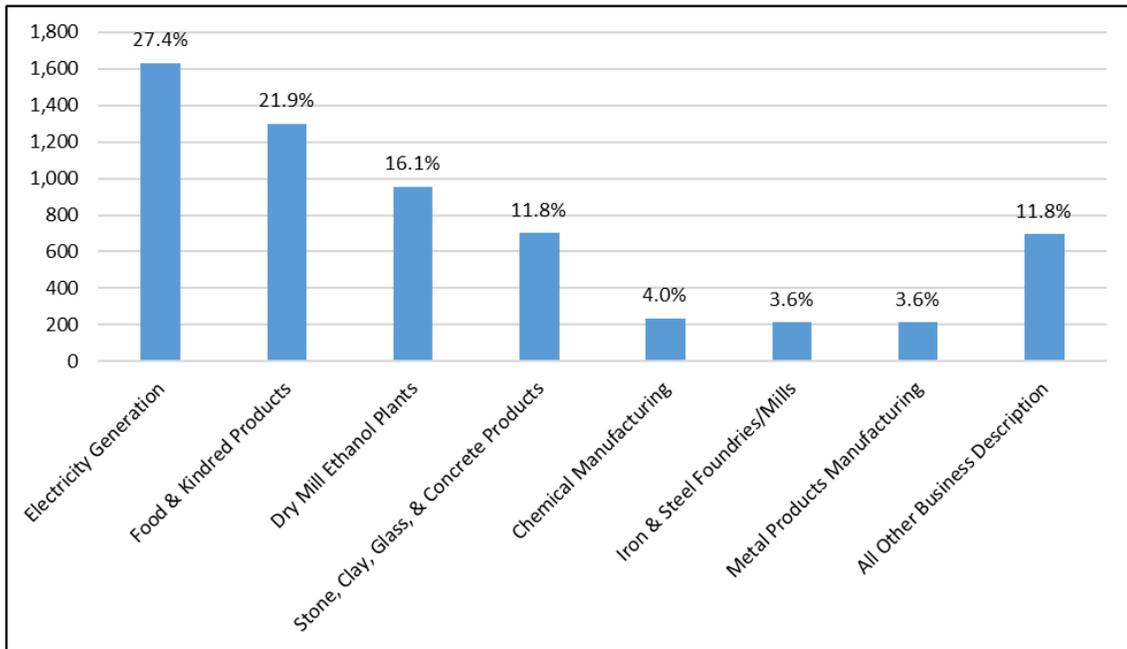


Chart 4 - 2018 Statewide Point Source PM_{2.5} Emissions by Business Type (tons)

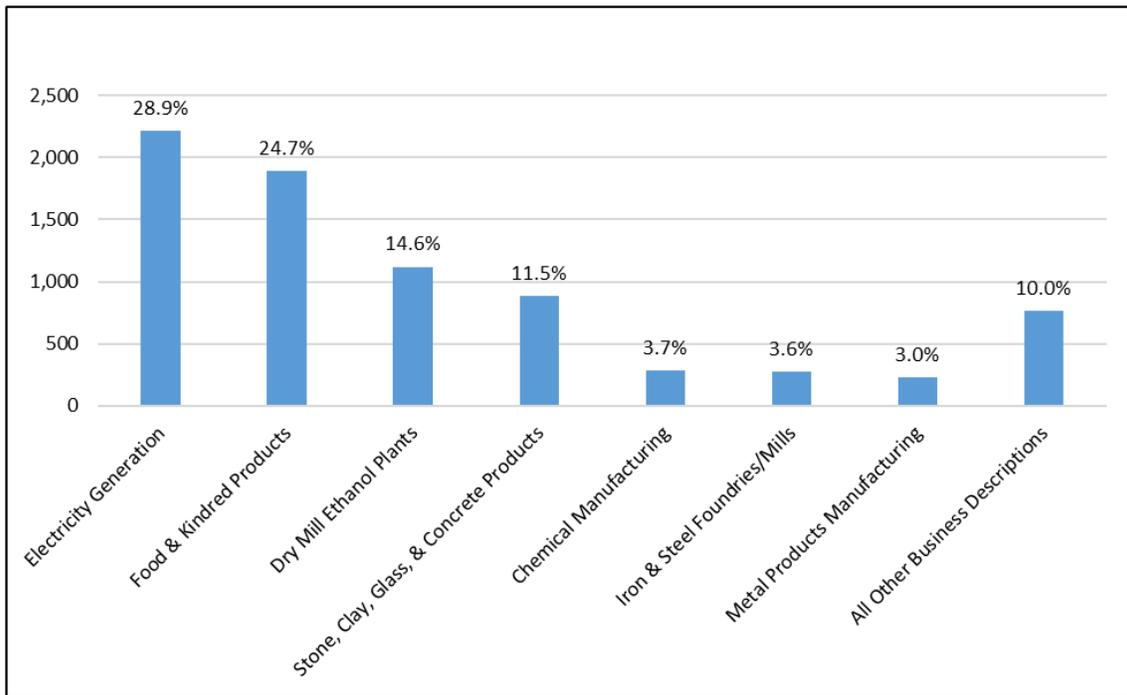


Chart 5 - 2018 Statewide Point Source PM₁₀ Emissions by Business Type (tons)

SO₂

Sulfur Dioxide (SO₂) was mainly emitted from the Electricity Generation business type as shown in Chart 6. The Electricity Generation sector contributed 83.9% of state-wide point source SO₂ emissions in 2018. The majority of SO₂ emissions from the Electricity Generation sector were produced from coal combustion. A slightly greater percentage of SO₂ emissions were attributed to the Electricity Generation sector in 2018 compared to 2017. There are two primary reasons for this:

1. Coal throughput in the Electricity Generation sector increased 12.1%, leading to an increase of about 3,800 tons of SO₂ emissions in that business type.
2. The Food & Kindred Products sector burned 8.2% less coal in 2018. This resulted in a decrease of approximately 130 tons of SO₂ emissions.

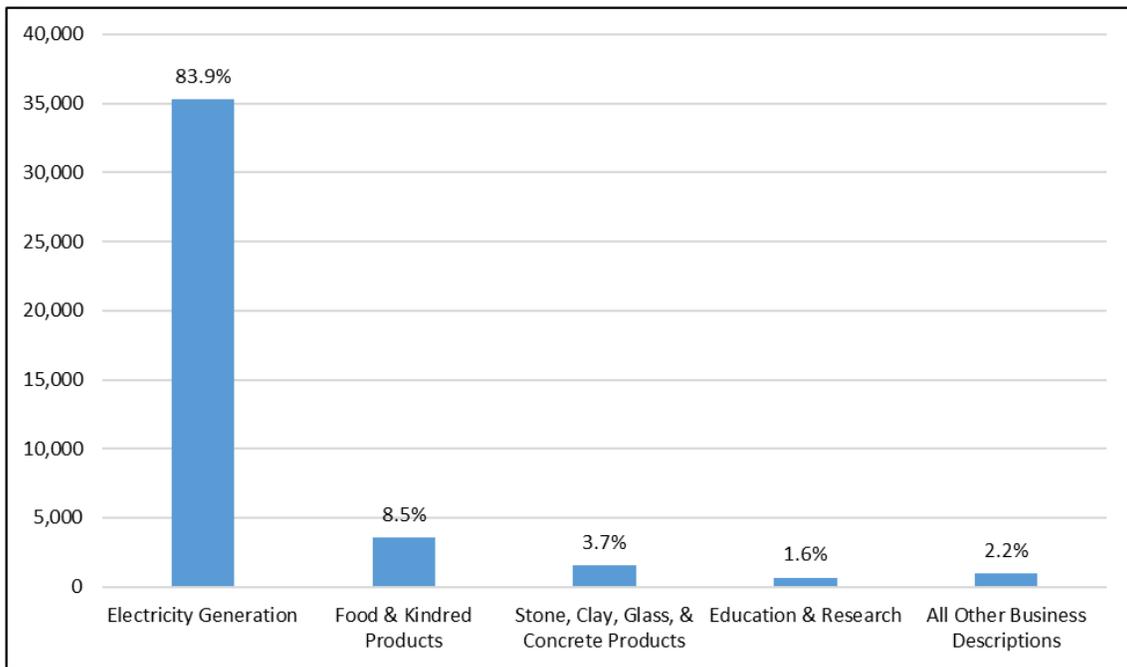


Chart 6 - 2018 Statewide Point Source SO₂ Emissions by Business Type (tons)

NO_x

Nitrogen Oxides (NO_x) emissions increased more than 4,000 tons (9.5%) from 2017 to 2018. Chart 7 shows that this was mainly accounted for in the Electricity Generation and Natural Gas Transmission & Petroleum Product Pipelines/Fuel Storage business types. Four facilities in the Electricity Generation business type had increases of more than 250 tons and one had an increase of more than 1,300 tons from 2017 to 2018. Two facilities had decreases of more than 300 tons. The increase or decrease in emissions from these six facilities had a direct correlation to coal usage. Overall, coal usage from the Electricity Generation business type increased by about 1.9 million tons (12.1%) from 2017 to 2018 leading to the increase in NO_x emissions.

The Natural Gas Transmission & Petroleum Product Pipelines/Fuel Storage business type also experienced a moderate increase in NO_x emissions from 2017 to 2018. NO_x emissions from this business type increased more than 1,800 tons (31.6%). The majority of this emissions increase can be attributed to eight compressor station facilities. These eight facilities combined to increase NO_x emissions by more than 1,600 tons as all eight consumed more natural gas in 2018 compared to 2017.

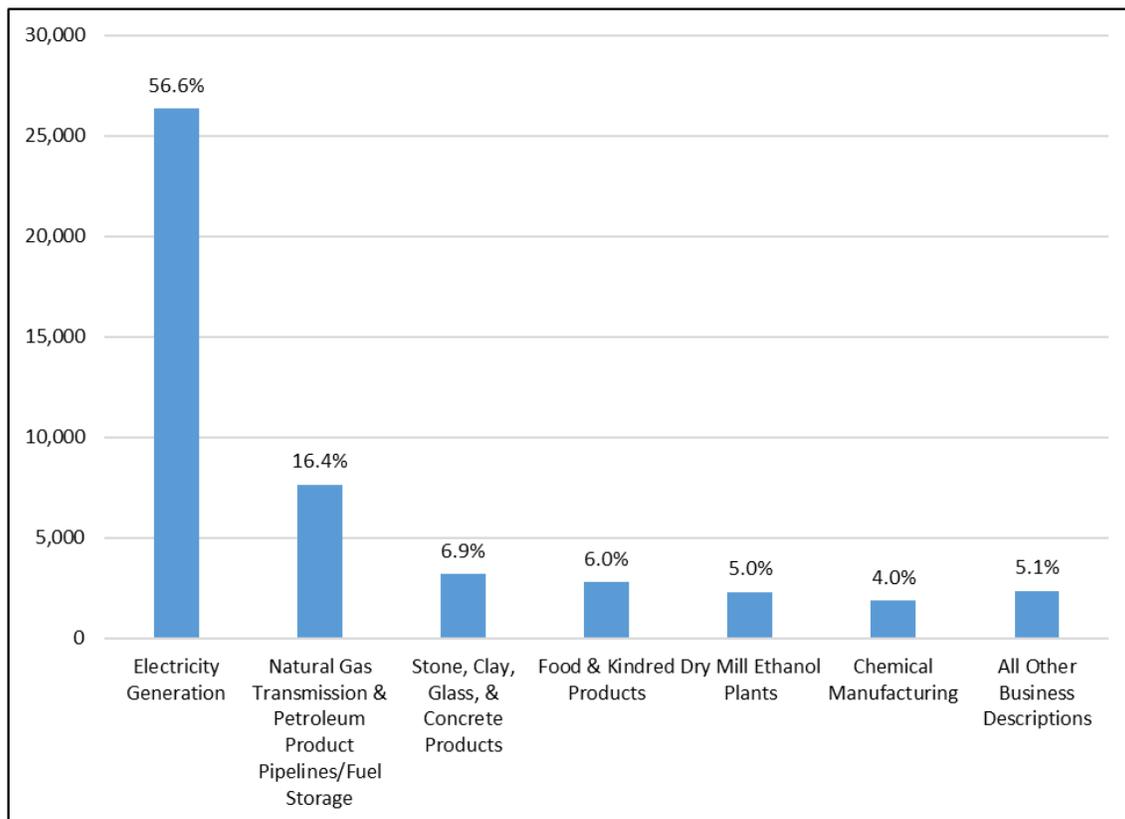


Chart 7 - 2018 Statewide Point Source NO_x Emissions by Business Type (tons)

VOC

Overall, Volatile Organic Compound (VOC) emissions increased about 1,400 tons from 2017 to 2018. The largest change in VOC emissions was accounted for in the Food & Kindred Products business type as shown in Chart 8. The VOC emissions from this sector increased more than 600 tons from 2017 to 2018, mainly driven by soybean oil mills. Eight soybean oil mills combined for a 600 ton increase in VOC emissions. Not all soybean oil mills report their throughput in terms of soybeans or in terms of solvent usage. Because of the differences in reporting throughput, a percent increase in throughput is unavailable. However, when looking at these eight facilities, it is clear that solvent usage and soybean throughput increased from 2017 to 2018.

Another contribution to the overall VOC increase from 2017 to 2018 was the increase in VOC emissions from the Dry Mill Ethanol Plant business type. The Iowa Renewable Fuels Association reported ethanol production increased by about 150 million gallons in Iowa from 2017 to 2018. This overall production increase, along with the re-permitting of two Title V facilities, led to the VOC emissions increase from Dry Mill Ethanol Plants.

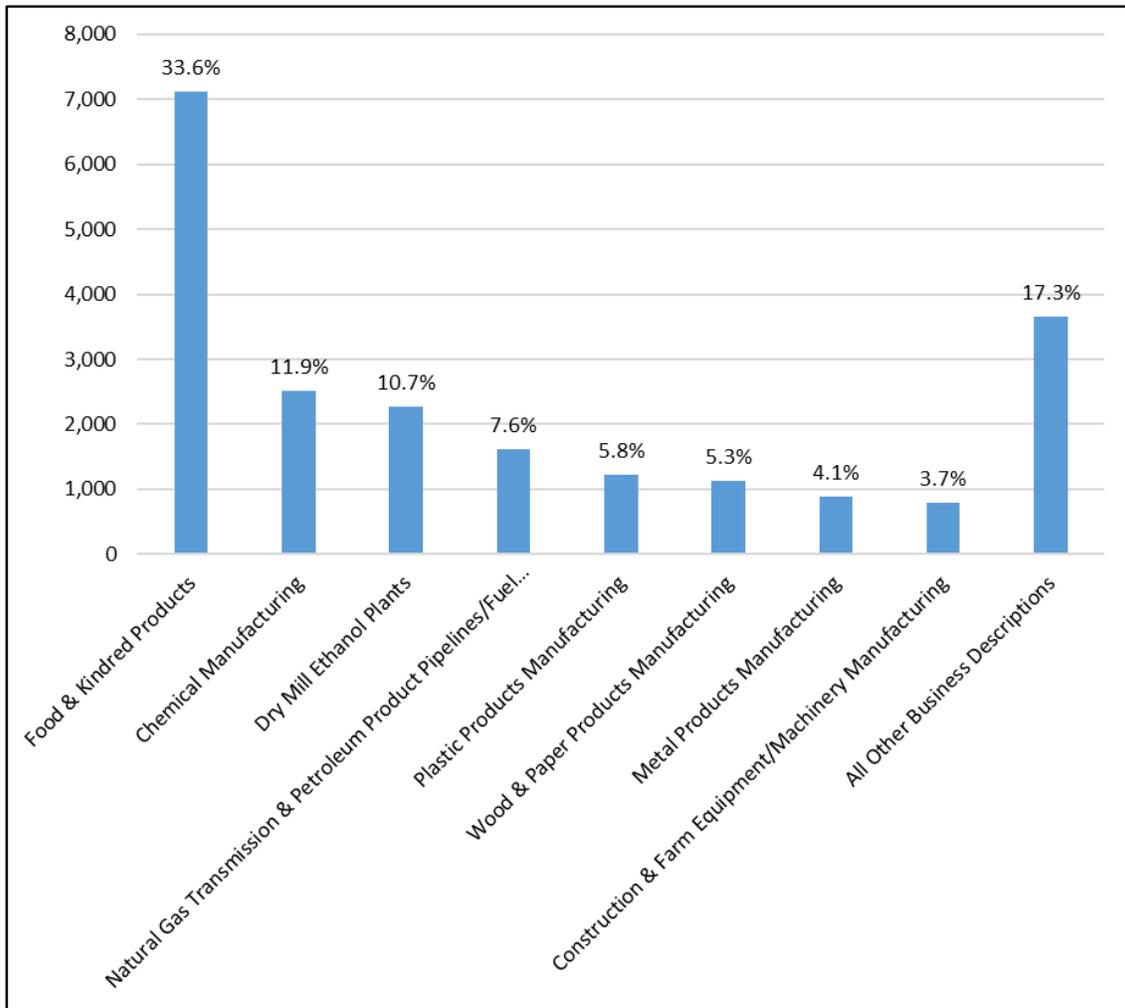


Chart 8 - 2018 Statewide Point Source VOC Emissions by Business Type (tons)

CO

Carbon monoxide (CO) emissions remained relatively unchanged in 2018 compared to 2017 (increased 60 tons). CO was mainly emitted from the Electricity Generation business type as shown in Chart 9. The Electricity Generation business type contributed 60.3% of state-wide point source CO emissions in 2018. The percent contribution of overall CO emissions from each business type remained steady from 2017 to 2018. All of the business types experienced less than a 2.0% change in emissions from 2017 to 2018. Despite a 12.1% increase in coal combustion from Electricity Generation facilities, CO emissions remained largely unchanged. This is due to less frequent start-up and shut-down conditions for large utility boilers. Wet corn mills were the biggest contributor of CO emissions within the Food & Kindred Products business type. Those facilities contributed 4.5% of state-wide point source CO emissions in 2018. Two Portland Cement manufacturing facilities accounted for 4.1% of state-wide CO emissions.

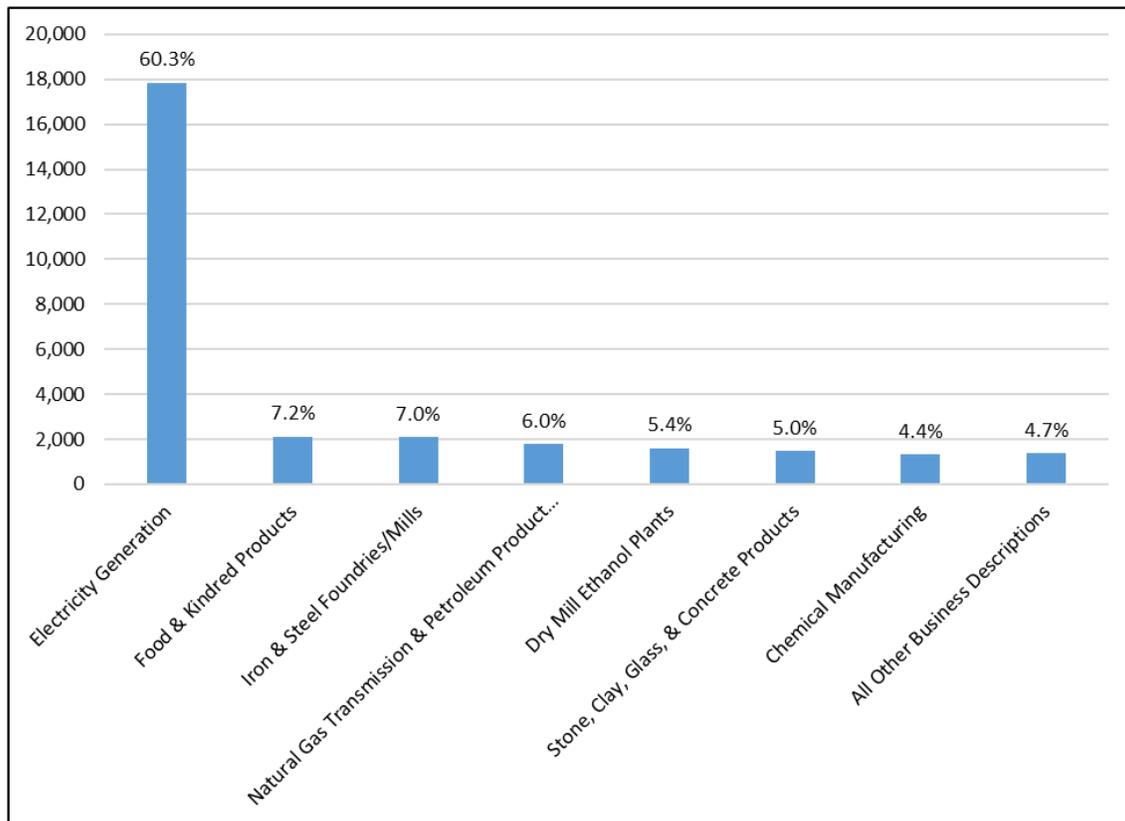


Chart 9 - 2018 Statewide Point Source CO Emissions by Business Type (tons)

Pb

Chart 10 shows that lead (Pb) was mainly emitted from the Electricity Generation and Iron & Steel Foundries/Mills business types. The lead emissions from the Electricity Generation business type were produced from facilities with coal-fired boilers. Therefore, coal-fired boilers accounted for about 49.1% state-wide point source Pb emissions in 2018. The other significant contributor to lead emissions was Steel Foundries Not Elsewhere Classified (included in the Iron & Steel Foundries/Mills business type). These facilities contributed about 21.7% of state-wide point source Pb emissions in 2018.

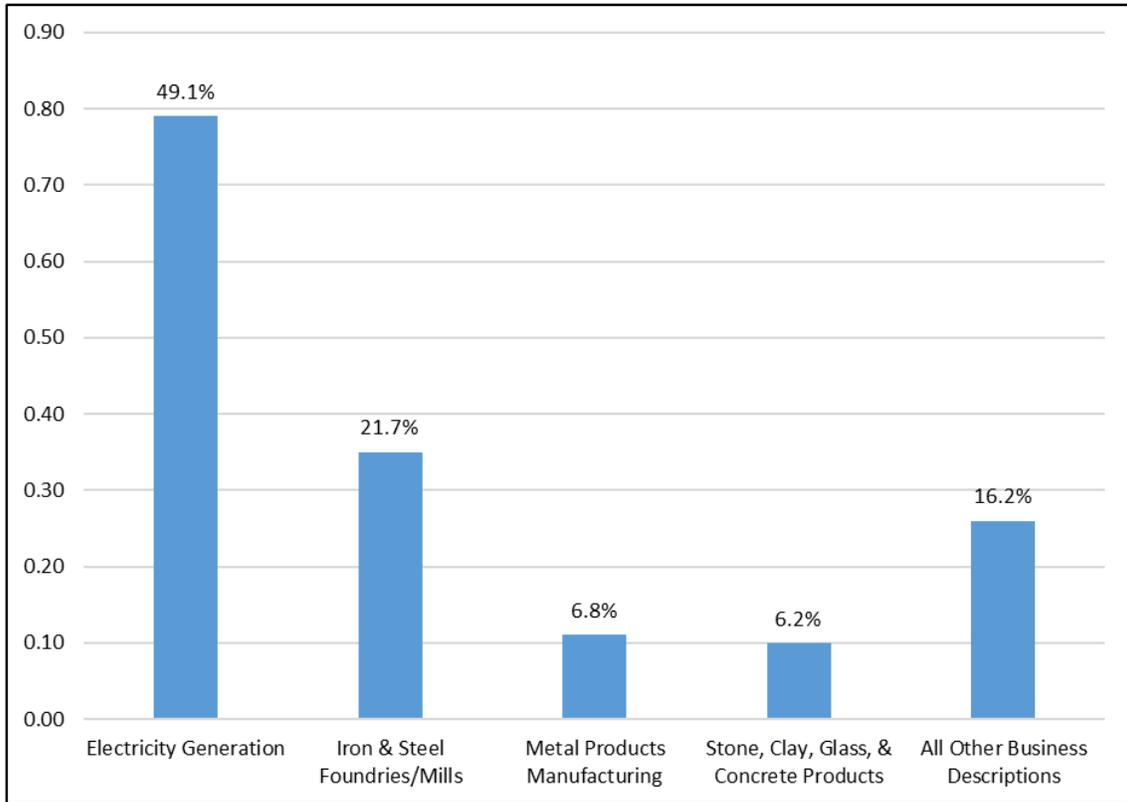


Chart 10 - 2018 Statewide Point Source Pb Emissions by Business Type (tons)

NH₃

Ammonia (NH₃) was mainly emitted from the Metal Products Manufacturing and Chemical Manufacturing business types as shown in Chart 11. The specific sectors within these business types that contributed the most NH₃ emissions were the Refining of Non-Ferrous Metals and Nitrogenous Fertilizer sectors. One facility that refines molybdenum sulfide to produce molybdenum oxide, ammonium dimolybdate, ammonium actamolydate, ammonium heptamolybdate, sodium molybdate, and sulfuric acid accounted for 52.5% of state-wide point source NH₃ emissions in 2018, while the Nitrogenous Fertilizer sector accounted for 32.8% of state-wide point source NH₃ emissions in 2018.

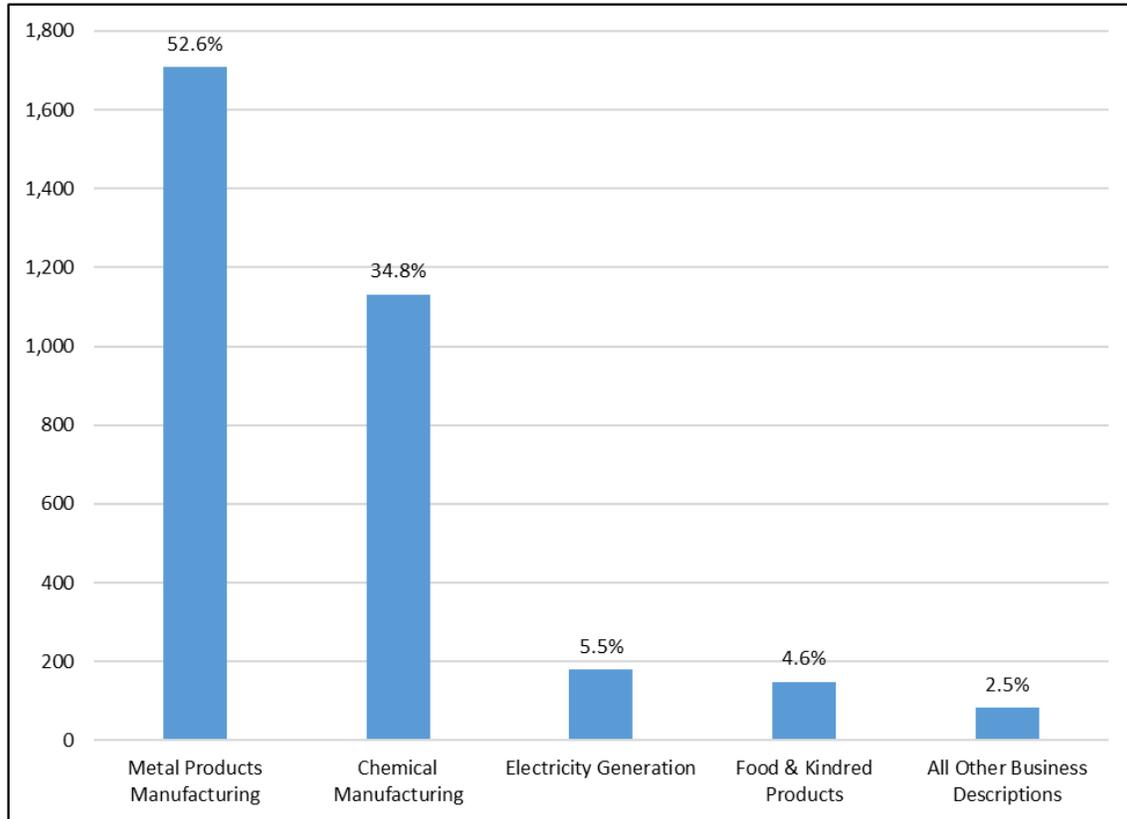


Chart 11 - 2018 Statewide Point Source NH₃ Emissions by Business Type (tons)

THAP

Total hazardous air pollutants were mainly emitted from the Food and Kindred Products type as shown in Chart 12. The specific sectors within the Food and Kindred Products business type 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 38.6% of state-wide point source total HAPs emissions in 2018. The Wet Corn Milling sector contributed 12.5% of state-wide point source total HAPs emissions in 2018. The Plastic Products Manufacturing sector contributed 6.9% of state-wide point source total HAPs emissions in 2018.

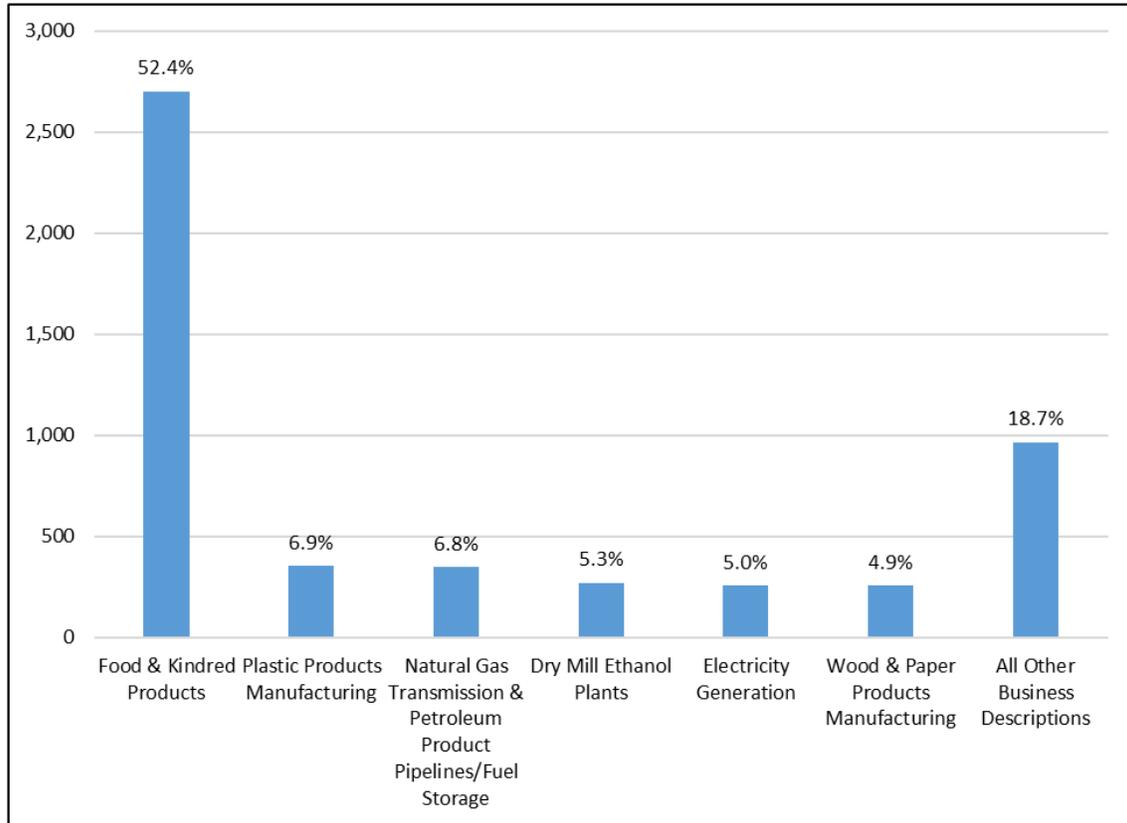


Chart 12 - 2018 Statewide Point Source THAP Emissions by Business Type (tons)

III. 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. Four in-person training sessions were held to facilitate accurate 2018 reporting. Additionally, on-line tutorials have been updated to reflect enhancements that were made to the SLEIS database. These on-line tutorials enable facilities to learn how to use SLEIS when they cannot attend in-person 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.

IV. 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	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
02-05-001	PINNACLE ETHANOL, LLC DBA POET BIOREFINING CORNING	36.47	37.78	0.79	69.97	64.76	33.88	0.00	0.00	7.20
03-02-001	NORPLEX – MICARTA	46.62	46.62	0.09	7.16	407.37	5.76	0.00	0.22	199.30
03-03-001	IPL - LANSING GENERATING STATION	138.66	147.67	302.61	242.05	17.99	305.58	0.01	26.24	3.27
04-01-002	BEMIS COMPANY, INC - CENTERVILLE	0.13	0.13	0.01	1.73	38.01	1.45	0.00	0.06	0.01
05-04-002	WESTERN MINNESOTA MUNICIPAL POWER AGENCY	3.05	3.06	1.64	37.48	0.96	13.94	0.00	0.00	0.00
07-01-010	JOHN DEERE FOUNDRY WATERLOO	43.75	63.89	1.77	2.19	236.42	514.15	0.01	0.03	58.56
07-01-038	MIDAMERICAN ENERGY CO - ELECTRIFARM TURBINES	0.40	0.40	0.07	26.73	0.13	2.75	0.00	0.00	0.06
07-01-040	MAGELLAN PIPELINE CO, LLC - WATERLOO	0.00	0.00	0.00	2.74	21.92	6.86	0.00	0.00	16.51
07-01-057	NORTHERN NATURAL GAS CO - WATERLOO COMPRESSOR	7.94	7.94	0.10	358.71	16.61	69.37	0.00	0.01	12.53
07-01-061	MASTERBRAND CABINETS, INC. - WATERLOO OPERATIONS	6.66	8.31	0.07	3.97	234.19	3.42	0.00	0.12	72.88
07-01-063	BERTCH CABINET MFG, INC - WATERLOO	18.20	18.94	0.17	3.27	90.35	4.00	0.00	0.00	22.61
07-01-077	JOHN DEERE WATERLOO WORKS - DRIVE TRAIN OPERATIONS	1.59	1.59	0.12	21.12	10.09	21.87	0.00	0.65	2.47
07-01-085	JOHN DEERE WATERLOO WORKS - TCAO - DONALD ST	1.46	1.46	0.07	8.67	48.27	7.10	0.00	0.27	3.57
07-01-086	BERTCH CABINET MFG, INC - OASIS FACILITY	1.37	1.37	0.00	0.00	25.74	0.00	0.00	0.00	17.46
07-01-087	JOHN DEERE PRODUCT ENGINEERING CENTER	3.16	3.16	0.22	130.17	3.59	12.17	0.00	0.05	0.07
07-01-091	JOHN DEERE ENGINE WORKS	1.53	1.65	0.07	27.18	26.20	16.65	0.00	0.11	0.23
07-01-111	JOHN DEERE COATING SERVICE CENTER	0.24	0.24	0.02	3.16	18.30	2.65	0.00	0.10	0.31
07-01-121	BLACK HAWK COUNTY SANITARY LANDFILL	0.00	0.00	0.00	0.00	16.68	0.00	0.00	0.00	10.44
07-01-133	MIDAMERICAN ENERGY CO - WATERLOO LUNDQUIST STA.	0.04	0.04	0.00	1.59	0.05	0.18	0.00	0.00	0.00
07-02-005-01	CEDAR FALLS MUNICIPAL ELECTRIC UTILITY	0.20	0.21	7.65	12.46	0.19	3.25	0.00	0.11	0.16
07-02-005-02	CEDAR FALLS MUNICIPAL ELECTRIC UTILITY - CTS	0.04	0.04	0.03	2.15	0.03	0.43	0.00	0.00	0.00
07-02-005-03	CITY OF CEDAR FALLS - MUNICIPAL WATER UTILITY	0.00	0.00	0.00	0.09	0.00	0.02	0.00	0.00	0.00
07-02-006-01	UNIVERSITY OF NORTHERN IOWA - MAIN CAMPUS	0.05	0.05	0.04	0.63	0.57	0.34	0.00	0.00	0.01
07-02-006-02	UNIVERSITY OF NORTHERN IOWA - POWER PLANT	5.34	5.45	242.83	39.29	1.34	26.28	0.00	0.07	3.29

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
07-02-023	METOKOTE CORPORATION - PLANT 15 - CEDAR FALLS	2.97	2.97	0.02	3.93	86.58	3.30	0.00	0.00	0.97
08-03-004	NORTHERN NATURAL GAS CO - OGDEN COMPRESSOR	20.95	20.96	0.30	1,300.03	55.54	176.30	0.00	0.01	36.40
09-01-013	WAVERLY LIGHT & POWER - NORTH & SOUTH PLANTS	0.12	0.18	0.00	6.06	0.75	0.57	0.00	0.00	0.00
10-02-008	BERTCH CABINET MFG, INC - LEGACY DIVISION - JESUP	2.70	2.74	0.08	1.64	60.12	1.96	0.00	0.00	12.92
10-02-008	BERTCH CABINET MFG, INC - LEGACY DIVISION - JESUP	2.70	2.74	0.08	1.64	60.12	1.96	0.00	0.00	12.92
10-04-007	FLINT HILLS RESOURCES FAIRBANK, LLC	23.90	35.62	10.41	94.85	108.31	73.73	0.00	5.25	12.47
11-01-029	MERIDIAN MANUFACTURING GROUP	4.39	5.07	0.09	17.18	13.87	7.95	0.00	0.04	2.80
11-05-004	VALERO RENEWABLE FUELS CO, LLC - ALBERT CITY	38.32	45.70	0.22	89.64	84.10	30.06	0.01	0.00	8.15
12-04-005	UNVERFERTH MANUFACTURING CO, INC	1.51	1.51	0.09	1.32	31.39	0.18	0.00	0.00	2.16
12-04-007	FLINT HILLS RESOURCES SHELL ROCK, LLC	19.60	28.50	0.82	101.19	88.02	27.73	0.00	5.15	7.70
14-01-010	PELLA CORPORATION - CARROLL DIVISION	0.41	2.11	0.03	1.09	50.33	0.65	0.01	0.12	1.29
14-02-003	AG PROCESSING, INC - MANNING	4.26	15.02	0.14	9.72	128.57	16.12	0.00	0.00	80.78
15-01-042	Elite Octane, LLC	25.59	25.69	11.76	50.69	60.94	48.93	0.00	0.00	6.66
16-01-004	XERXES CORPORATION	0.10	0.10	0.00	0.00	75.80	0.00	0.00	0.00	63.72
17-01-005	LEHIGH CEMENT COMPANY - MASON CITY	53.50	94.74	141.85	761.40	27.72	304.99	0.01	3.65	36.23
17-01-027	AG PROCESSING, INC - MASON CITY	5.99	20.56	0.15	19.99	56.56	16.77	0.00	0.00	35.23
17-01-066	IPL - LIME CREEK COMBUSTION TURBINES STATION	0.18	0.19	0.01	5.40	0.01	1.24	0.00	0.00	0.02
17-01-068	WOODHARBOR CUSTOM CABINETRY	0.31	0.57	0.00	0.19	91.81	0.18	0.00	0.01	17.13
17-01-069-01	Masonite Corporation - 19TH ST SW	0.51	1.00	0.00	0.17	5.77	0.13	0.00	0.00	4.25
17-01-087-02	CURRIES DIVISION OF AADG, INC - 12 TH ST NW	7.53	9.47	0.00	0.08	171.66	0.64	0.00	0.00	32.92
17-01-100	GOLDEN GRAIN ENERGY, LLC - MASON CITY	27.17	27.80	14.63	93.04	78.60	112.26	0.00	4.74	14.49
17-02-002	MAGELLAN PIPELINE CO, LLC - MASON CITY	0.00	0.00	0.00	3.85	54.15	9.65	0.00	0.00	2.33
17-02-016	IPL - EMERY GENERATING STATION	50.21	50.21	6.12	79.91	0.12	26.20	0.00	29.83	7.08
17-02-024	LANDFILL OF NORTH IOWA	0.00	0.00	0.00	0.00	8.32	2.05	0.00	0.00	5.19
18-02-006	LITTLE SIOUX CORN PROCESSORS, LLLP	49.02	52.32	6.35	123.62	128.63	67.62	0.00	0.00	11.01
18-06-002	NORTHERN NATURAL GAS CO - PAULLINA COMPRESSOR	0.27	0.27	0.01	30.47	0.41	51.26	0.00	0.00	0.40
19-04-002	HOMELAND ENERGY SOLUTIONS, LLC	32.70	33.93	44.95	108.63	80.89	90.86	0.00	0.00	16.80
20-01-018	ALTEC OSCEOLA BODY PLANT	0.00	0.00	0.00	0.00	31.47	0.00	0.00	0.00	22.68

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
21-01-003	CORN BELT POWER - WISDOM GENERATING STATION	6.12	6.12	0.12	7.12	0.46	2.35	0.00	0.09	0.16
23-01-004	EQUISTAR CHEMICALS, LP	33.23	63.48	0.21	845.50	2,071.10	505.49	0.00	27.69	21.77
23-01-006-01	ADM CLINTON CORN PROCESSING	57.40	65.59	59.64	51.16	625.82	41.41	0.00	4.19	203.72
23-01-006-02	ADM CORN PROCESSING / COGEN PLANT - CLINTON	44.50	73.45	499.12	1,377.35	3.28	24.03	0.01	4.28	21.59
23-01-006-03	ADM CLINTON BIOPROCESSING	1.13	1.22	0.08	1.46	5.49	0.63	0.00	0.00	0.01
23-01-014	IPL - M.L. KAPP GENERATING STATION	0.13	0.13	0.00	1.75	0.10	0.60	0.00	0.05	0.03
23-02-013	GUARDIAN INDUSTRIES CORPORATION	58.30	58.30	150.10	332.22	60.52	12.87	0.00	0.50	0.00
23-02-028	LATHAM POOL PRODUCTS, INC.	0.00	0.07	0.00	0.00	27.10	0.00	0.00	0.00	25.04
24-01-007	THE ANDERSONS DENISON ETHANOL, LLC	27.41	32.35	25.74	33.07	63.03	35.60	0.00	2.08	8.46
25-05-002	NORTHERN NATURAL GAS CO - REDFIELD COMPRESSOR	5.05	5.05	0.84	73.01	26.61	42.63	0.00	0.05	6.55
25-05-008	GLEN-GERY CORPORATION	10.11	14.60	5.21	6.76	2.10	13.32	0.00	0.00	4.18
28-01-026	ALLIANCE PIPELINE L.P. - MANCHESTER	5.28	5.28	2.72	74.31	9.69	70.02	0.00	0.00	1.11
28-12-001	BIG RIVER UNITED ENERGY, LLC - DYERSVILLE	17.96	20.54	5.12	72.62	61.39	55.53	0.00	0.00	11.22
29-01-004	IOWA ARMY AMMUNITION PLANT	9.87	10.04	188.41	71.27	13.62	42.19	0.02	0.63	12.82
29-01-006	CNH INDUSTRIAL AMERICA, LLC.	8.06	8.31	0.04	5.99	17.25	5.07	0.00	0.00	0.55
29-01-013	IPL - BURLINGTON GENERATING STATION	100.88	100.97	3,324.52	963.94	22.06	86.66	0.02	0.34	15.52
29-01-079	RILEY INDUSTRIAL PAINTING	2.94	2.94	0.00	0.03	1.73	0.01	0.00	0.00	0.51
29-02-010	DES MOINES COUNTY REGIONAL SANITARY LANDFILL	0.00	0.00	0.00	0.00	6.22	1.54	0.00	0.00	3.94
29-02-012	BIG RIVER RESOURCES WEST BURLINGTON, LLC	37.11	40.58	67.18	111.83	86.07	88.95	0.00	0.00	8.17
29-06-001	UNITED STATES GYPSUM CO - SPERRY	37.09	37.09	0.55	65.84	25.13	55.35	0.00	2.27	5.76
30-01-012	POLARIS INDUSTRIES, INC - SPIRIT LAKE	8.61	8.61	0.03	5.36	67.98	4.50	0.00	0.00	2.18
30-02-004	MAGELLAN PIPELINE CO, LLC - MILFORD	0.00	0.00	0.00	0.00	263.00	0.00	0.00	0.00	9.66
30-02-010	NUSTAR PIPELINE OP PARTNERSHIP LP - MILFORD	0.00	0.00	0.00	0.00	79.03	0.00	0.00	0.00	6.40
30-08-002	GREEN PLAINS ETHANOL STORAGE, LLC (GP SUPERIOR)	14.27	17.17	1.29	46.04	29.77	16.51	0.00	2.63	3.87
31-01-009	JOHN DEERE DUBUQUE WORKS	11.47	11.52	0.20	20.42	97.24	15.95	0.00	0.38	3.41
31-01-034	MAGELLAN PIPELINE CO, LLC - DUBUQUE	0.00	0.00	0.00	0.00	162.36	0.00	0.00	0.00	7.29
31-01-061	EAGLE WINDOW & DOOR, INC	0.52	0.52	0.01	1.26	147.97	1.06	0.00	0.04	15.03
31-01-151	DUBUQUE METROPOLITAN SANITARY LANDFILL	0.57	0.57	0.79	1.15	5.86	4.24	0.00	0.00	3.66
31-02-002	MODERNFOLD, INC	6.37	6.37	0.00	0.00	31.11	0.00	0.00	0.00	1.93

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
32-01-016	GKN ARMSTRONG WHEELS, INC - ESTHERVILLE	4.61	4.61	0.01	2.46	54.66	2.06	0.00	0.08	2.98
32-02-004	GKN ARMSTRONG WHEELS, INC - ARMSTRONG	2.82	2.82	0.01	1.11	24.65	0.90	0.00	0.03	1.07
33-01-003	ASHLEY INDUSTRIAL MOLDING, INC	0.45	0.48	0.01	2.04	68.78	1.71	0.00	0.07	17.82
33-01-016	TRANSCO RAILWAY PRODUCTS, INC. - OELWEIN	0.42	0.86	0.01	0.88	67.90	0.74	0.00	0.00	8.87
33-01-020	BERTCH CABINET MFG, INC - OELWEIN	1.01	1.02	0.00	0.29	60.33	0.24	0.00	0.00	7.82
34-01-015	CAMBREX CHARLES CITY, INC	0.00	0.02	0.01	0.00	1.52	0.18	0.00	0.08	3.42
34-01-023	MIDAMERICAN ENERGY CO - MERL PARR TURBINES	0.03	0.03	0.00	1.61	0.01	0.41	0.00	0.00	0.00
34-01-027	WINNEBAGO INDUSTRIES, INC - CHARLES CITY	0.42	0.67	0.00	0.05	57.03	0.05	0.00	0.00	4.67
34-01-035	CDI, LLC - CHARLES CITY	0.31	0.31	0.00	0.00	14.81	0.00	0.00	0.00	3.48
34-01-040	VALERO RENEWABLE FUELS CO, LLC - CHARLES CITY	29.85	34.89	1.30	91.87	81.84	40.63	0.00	0.00	12.43
35-01-008	SEABEE - 1ST ST - HAMPTON HYDRAULICS	4.34	3.36	0.00	0.00	11.81	0.00	0.00	0.00	0.00
36-10-001-01	GREEN PLAINS ETHANOL STORAGE, LLC (GP SHENANDOAH)	19.52	23.49	3.90	63.23	57.14	28.25	0.00	2.85	10.96
39-06-002	FLINT HILLS RESOURCES MENLO, LLC	21.02	29.08	3.57	81.32	114.44	25.89	0.00	5.00	13.14
39-11-001	POET BIOREFINING - COON RAPIDS	48.98	54.13	0.66	75.41	116.21	29.76	0.00	0.00	10.33
40-01-003	WEBSTER CITY COMBUSTION TURBINE	0.09	0.09	0.07	1.33	0.00	0.00	0.00	0.00	0.00
40-01-011	VAN DIEST SUPPLY COMPANY	1.68	11.45	0.40	5.77	83.06	4.63	0.00	2.18	16.29
40-02-002	POET BIOREFINING - JEWELL	44.18	55.96	1.08	61.63	44.68	59.51	0.00	0.30	4.86
41-02-005-01	NORTHERN NATURAL GAS CO - GARNER LNG PLANT	0.31	0.31	0.03	4.09	0.51	3.55	0.00	0.05	0.03
41-02-005-02	NORTHERN NATURAL GAS CO - VENTURA COMPRESSOR	2.07	2.07	0.44	122.70	3.25	20.61	0.00	0.03	2.05
41-02-011	STELLAR INDUSTRIES, INC	1.27	1.27	0.00	0.30	30.92	0.25	0.00	0.01	1.74
41-03-003	STELLAR INDUSTRIES, INC. - KANAWHA PLANT	0.09	0.09	0.00	0.13	3.58	0.11	0.00	0.00	0.25
42-01-003	CARGILL, INC - IOWA FALLS	25.29	27.42	0.33	37.40	267.43	45.56	0.00	1.73	126.26
42-01-019	FLINT HILLS RESOURCES IOWA FALLS, LLC	21.23	28.42	2.62	92.38	60.80	87.97	0.00	6.89	5.14
42-08-001	PLCP, L.P.	37.08	38.21	0.66	94.29	139.98	64.78	0.00	0.00	15.63
42-08-003	NATURALLY RECYCLED PROTEINS of IOWA	32.18	32.18	0.02	4.55	0.09	2.73	0.00	0.10	0.06
45-01-003	DONALDSON COMPANY, INC - CRESCO	0.04	0.04	0.01	0.56	55.83	0.45	0.00	0.02	6.66
45-01-007	IEA-SBD-9206-DONALDSON	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00
46-01-034	PRECISION TANK & EQUIPMENT CO	2.05	2.05	0.00	0.00	5.63	0.00	0.00	0.00	5.14
47-04-001	FLINT HILLS RESOURCES ARTHUR, LLC	32.78	42.99	2.48	90.78	85.32	60.61	0.00	5.19	5.62

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
48-05-001	WHIRLPOOL CORPORATION - AMANA DIVISION	1.32	1.32	0.05	6.38	47.32	5.26	0.00	0.20	1.15
Facility ID	Facility Name	PM ₂₅ -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
49-01-013-01	MAQUOKETA MUNICIPAL ELEC UTILITY	0.06	0.08	0.00	1.63	0.14	0.24	0.00	0.00	0.00
50-01-049	TRINITY STRUCTURAL TOWERS, INC - NEWTON	8.24	8.24	0.01	1.26	120.82	1.06	0.00	0.00	30.84
50-01-059	TPI IOWA II BUS PLANT	1.18	2.07	0.01	0.36	4.49	0.11	0.00	0.01	2.37
51-01-005	FAIRFIELD CASTING, LLC	24.50	29.00	0.52	3.23	37.23	10.88	0.02	0.16	5.75
51-03-001	ANR PIPELINE CO - BIRMINGHAM COMPRESSOR	16.03	16.03	0.20	875.45	37.27	195.37	0.00	0.00	26.34
52-01-003	IAC IOWA CITY, LLC	2.14	2.14	0.03	3.02	0.30	2.43	0.00	0.00	0.01
52-01-005-01	UNIVERSITY OF IOWA	5.09	5.23	0.28	23.52	19.24	12.38	0.00	0.01	0.98
52-01-005-02	UNIVERSITY OF IOWA MAIN POWER PLANT	12.48	13.38	108.40	344.95	52.22	196.15	0.02	0.46	15.40
52-01-032	ENTERPRISE PROD. OPERATING LLC - IOWA CITY NGL FAC	3.91	3.91	0.61	28.76	61.49	11.59	0.00	0.00	0.04
52-01-037	LOPAREX, INC	2.86	2.86	0.05	8.64	79.53	7.25	0.00	0.28	26.51
52-01-053	IOWA CITY SANITARY LANDFILL	1.72	14.83	0.03	1.37	4.87	6.36	0.00	0.10	1.95
52-02-001	MIDAMERICAN ENERGY CO - CORALVILLE TURBINES	0.08	0.08	0.01	3.98	0.03	1.02	0.00	0.00	0.01
52-02-006	MAGELLAN PIPELINE CO, LLC - IOWA CITY	0.00	0.00	0.00	5.76	77.21	14.39	0.00	0.00	3.40
53-01-002	ANAMOSA STATE PENITENTIARY	0.44	0.51	0.04	6.79	5.50	3.40	0.01	0.02	4.26
53-02-008	ROBERTSON CECO II DBA STAR BUILDING SYSTEMS	7.62	10.20	0.00	1.08	49.99	0.73	0.00	0.00	2.59
54-10-001	NATURAL GAS PIPELINE CO OF AMERICA - STATION 109	25.95	25.95	0.33	854.16	97.57	304.64	0.00	0.12	42.15
55-01-032	AG PROCESSING, INC - ALGONA	1.28	5.66	0.06	5.25	5.76	8.82	0.00	0.00	5.18
55-03-004	BRAND FX BODY COMPANY - SWEA CITY	2.21	2.21	0.00	0.00	35.91	0.00	0.00	0.00	16.98
55-09-003	GREEN PLAINS ETHANOL STORAGE, LLC (GP LAKOTA)	37.17	41.44	6.78	123.75	103.93	38.98	0.00	5.23	13.53
56-01-008	HENNIGES AUTOMOTIVE IOWA, INC	73.18	73.19	0.03	2.26	27.25	3.42	0.01	0.15	12.42
56-01-009	ROQUETTE AMERICA, INC	59.75	109.46	325.76	229.75	159.73	113.75	0.01	3.04	4.67
56-01-013	MORSE RUBBER, LLC	0.09	0.09	0.00	0.57	2.64	0.48	0.00	0.02	1.81
56-01-023	AMSTED RAIL COMPANY, INC	42.65	48.54	4.33	41.74	24.54	454.25	0.17	6.67	7.12
56-01-025	Keokuk Mills, LLC dba KEOKUK STEEL CASTING, INC	11.85	11.85	0.01	1.83	26.64	1.54	0.00	0.06	4.21
56-02-021	CLIMAX MOLYBDENUM COMPANY	20.49	21.02	133.45	15.66	0.96	11.45	0.00	1,698.29	0.19
56-02-030	SILGAN CONTAINERS MFG. CORP. - FORT MADISON	0.23	0.23	0.00	0.20	178.45	0.17	0.00	0.01	0.01

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
56-02-035	GREGORY MANUFACTURING CO, INC	0.01	0.01	0.00	0.00	0.26	0.00	0.00	0.00	0.01
56-02-053	SIEMENS GAMESA RENEWABLE ENERGY INC.	0.78	1.24	0.01	1.18	94.34	0.99	0.00	0.00	29.47
56-10-001	IOWA FERTILIZER COMPANY	40.87	44.04	3.06	265.17	83.67	323.65	0.00	303.86	11.16
57-01-002	CARGILL, INC - DOMESTIC SOYBEAN PROCESSING	21.28	30.40	0.08	14.04	204.46	11.00	0.00	0.00	130.63
57-01-003	CARGILL, INC - CEDAR RAPIDS - SOYBEAN EAST PLANT	21.94	21.94	0.20	13.07	214.01	28.27	0.00	1.08	6.97
57-01-004	CARGILL, INC - CEDAR RAPIDS	18.36	50.38	18.63	62.91	183.90	96.72	0.00	2.56	52.76
57-01-012	GENERAL MILLS OPERATIONS, INC	29.05	29.05	0.31	40.26	37.27	33.54	0.00	1.27	0.00
57-01-025	INGREDION INCORPORATED	52.66	110.60	55.53	42.75	164.22	18.74	0.00	3.41	14.14
57-01-027	QUAKER MANUFACTURING, LLC	44.96	45.22	0.15	25.59	6.28	21.49	0.00	0.82	1.28
57-01-042	IPL - PRAIRIE CREEK GENERATING STATION	133.19	133.19	1,130.84	939.39	13.55	400.41	0.02	2.92	15.85
57-01-045	DIAMOND V MILLS, INC - NORTH PLANT	1.52	5.68	0.01	1.88	48.65	1.58	0.00	0.06	25.15
57-01-077	CEDAR RAPIDS WPCF	4.52	4.52	1.44	29.29	8.74	8.78	0.03	0.29	8.04
57-01-080	ADM CORN PROCESSING - CEDAR RAPIDS	71.73	199.95	2,367.59	888.48	731.39	390.33	0.01	96.63	118.91
57-01-095	PMX INDUSTRIES, INC	20.28	20.59	0.27	10.54	20.41	7.49	0.00	0.51	0.29
57-01-130-02	CEDAR RAPIDS LINN CTY SLD WST AGCY SANI LNDFFL #2	0.52	3.20	1.94	14.49	6.82	63.65	0.00	0.00	12.16
57-01-153	INTERNATIONAL PAPER CEDAR RIVER MILL	32.96	37.61	0.01	1.16	142.64	0.92	0.00	0.00	60.05
57-01-226-01	RED STAR YEAST COMPANY, LLC	3.93	4.71	0.00	0.02	182.78	0.17	0.00	0.00	38.39
57-01-226-02	BIO SPRINGER NORTH AMERICA CORP	0.00	4.74	0.00	0.01	0.18	0.01	0.00	0.00	0.00
58-02-007	NATURAL GAS PIPELINE CO OF AMERICA - STATION 204	5.53	5.53	0.13	122.38	35.66	24.85	0.00	0.02	11.22
58-04-002	NATURAL GAS PIPELINE CO OF AMERICA - STATION 199	0.02	0.02	0.01	0.88	0.01	1.60	0.00	0.00	0.00
58-07-001	MIDAMERICAN ENERGY CO - LOUISA STATION	140.63	218.98	7,331.73	4,874.16	4.80	4,686.35	0.28	1.11	16.99
60-01-012	NUSTAR PIPELINE OP PARTNERSHIP LP - ROCK RAPIDS	0.00	0.00	0.00	0.00	40.69	0.00	0.00	0.00	2.60
62-01-001-01	CLOW VALVE COMPANY - FOUNDRY	3.02	3.60	1.61	1.92	20.22	51.40	0.00	0.01	6.82
62-01-001-02	CLOW VALVE COMPANY - MACHINE SHOP	2.44	2.55	0.04	7.11	2.01	5.97	0.00	0.23	0.79
63-01-001	3M (MINNESOTA MINING & MFG CO) - KNOXVILLE	1.27	4.09	0.07	11.58	143.11	9.73	0.00	0.37	35.96
63-01-013	NATURAL GAS PIPELINE CO OF AMERICA - STATION 198	2.80	2.80	1.44	117.25	0.70	64.55	0.00	0.00	0.41
63-01-017	MIDAMERICAN ENERGY CO - KNOXVILLE POWER STATION	0.02	0.02	0.00	0.64	0.02	0.07	0.00	0.00	0.00

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
63-02-003	PELLA CORPORATION - PELLA DIVISION	21.80	21.80	0.05	7.72	202.57	6.48	0.00	0.11	20.88
63-02-004	VERMEER CORPORATION	6.52	9.17	1.47	33.28	130.77	15.32	0.00	0.00	9.30
63-02-023	PELLA WEST SUBSTATION	0.14	0.15	0.11	2.76	0.19	0.07	0.00	0.00	0.00
64-01-012	IPL - MARSHALLTOWN GENERATING STATION	37.21	37.21	6.93	104.74	2.69	128.00	0.00	94.08	7.83
64-01-015	JBS USA LLC	3.06	16.24	33.49	40.30	20.15	33.85	0.00	0.00	0.67
64-01-045	INDUSTRIAL ENERGY APPLICATIONS, INC. - JBS USA	0.03	0.03	0.00	1.45	0.04	0.01	0.00	0.00	0.00
65-02-005	LOESS HILLS SANITARY LANDFILL	0.00	0.00	0.00	0.00	9.84	2.43	0.00	0.00	6.24
65-04-001	NATURAL GAS PIPELINE CO OF AMERICA - STATION 107	27.77	27.77	0.37	1,519.98	31.66	276.43	0.00	0.00	46.62
66-10-001	ABSOLUTE ENERGY, LLC	21.16	37.53	15.29	105.43	58.31	70.34	0.00	0.00	13.65
68-09-001	CARGILL, INC - EDDYVILLE	391.85	407.99	324.54	179.65	516.40	348.39	0.00	11.33	130.25
68-09-002	AJINOMOTO HEARTLAND LLC	28.61	28.95	0.79	92.45	7.13	108.78	0.00	4.14	3.05
68-09-005	CARGILL - VITAMIN E - EDDYVILLE	0.92	0.92	0.01	1.57	1.24	1.56	0.00	0.00	0.90
68-09-006	WACKER CHEMICAL CORPORATION	1.95	2.11	0.07	5.37	12.69	11.95	0.00	0.22	8.27
69-01-013	MINSA CORPORATION	149.85	214.18	0.08	13.82	0.76	11.61	0.00	0.44	0.25
69-01-020	FRES-CO SYSTEM USA, INC	0.03	0.13	0.01	1.60	37.23	1.28	0.00	0.03	0.00
70-01-004	GRAIN PROCESSING CORPORATION	93.70	160.78	84.17	483.78	701.25	276.65	0.00	13.35	94.48
70-01-005	KRAFT HEINZ - MUSCATINE	0.08	0.11	0.07	2.07	22.82	0.11	0.00	0.00	0.41
70-01-006	HNI CORPORATION - CENTRAL CAMPUS	2.65	2.65	0.06	9.74	127.96	7.33	0.00	0.08	8.30
70-01-008-01	MONSANTO COMPANY - MUSCATINE 3670	4.60	4.60	0.04	6.59	22.48	8.81	0.00	0.17	8.92
70-01-008-02	MONSANTO COMPANY - MUSCATINE 6908	0.56	0.56	0.00	0.00	2.72	0.00	0.00	0.72	0.72
70-01-008-03	MONSANTO COMPANY - MUSCATINE 6909	6.71	6.96	0.38	63.24	27.66	53.05	0.00	2.09	8.18
70-01-011	MUSCATINE POWER & WATER	61.17	99.62	1,457.90	2,273.05	26.84	101.27	0.04	0.00	8.45
70-01-025	MCKEE BUTTON COMPANY	0.13	0.13	0.00	0.00	1.96	0.00	0.00	0.00	1.96
70-01-048	UNION TANK CAR CO - MUSCATINE	2.98	4.63	0.02	3.59	34.15	5.09	0.00	0.10	14.93
70-01-050	HNI CORPORATION - NORTH CAMPUS	4.10	4.10	0.04	8.01	14.59	7.70	0.00	0.04	3.04
70-01-054	HARSCO METALS	4.40	4.40	0.76	2.56	0.40	0.59	0.00	0.00	0.00
70-03-003	GERDAU	10.61	20.06	29.52	37.26	74.97	111.52	0.00	0.00	4.30
70-08-002	SSAB IOWA, INC - MUSCATINE	62.69	77.20	234.32	516.07	36.68	895.32	0.01	0.00	0.22
71-01-001	AG PROCESSING, INC - SHELDON	7.33	33.86	0.18	15.88	215.24	19.54	0.00	0.00	134.91
71-02-010	VALERO RENEWABLE FUELS CO, LLC - HARTLEY	52.56	57.70	1.30	84.94	50.78	22.99	0.00	0.00	9.24

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
73-01-018	MIDAMERICAN ENERGY CO - SHENANDOAH POWER STATION	0.04	0.04	0.00	1.45	0.04	0.17	0.00	0.00	0.00
73-01-026	CITY OF SHENANDOAH - SHENANDOAH SANITATION, INC	0.11	0.21	0.06	2.57	0.05	3.37	0.00	0.00	0.00
73-02-010	NSK CORPORATION	0.14	0.14	0.01	1.79	72.39	1.50	0.00	0.00	1.30
74-01-012	AG PROCESSING, INC - EMMETSBURG	4.49	10.61	0.19	10.51	96.54	17.63	0.00	0.00	61.02
74-01-022	Poet Biorefining - Emmetsburg	95.36	98.31	55.73	83.74	88.54	80.23	0.01	1.86	7.59
75-01-018	NUSTAR PIPELINE OP PARTNERSHIP LP - LE MARS	0.00	0.00	0.00	0.00	69.75	0.00	0.00	0.00	3.79
76-01-014	BRAND FX BODY COMPANY - POCAHONTAS	2.20	2.20	0.00	0.00	26.31	0.00	0.00	0.00	15.58
77-01-003	TITAN TIRE CORPORATION	1.32	8.87	0.10	17.71	140.01	14.71	0.00	0.56	5.18
77-01-022	BRIDGESTONE AMERICAS TIRE OPERATIONS, LLC	18.26	32.53	0.40	42.53	312.78	34.27	0.00	1.29	8.44
77-01-035	JOHN DEERE DES MOINES WORKS	11.04	11.06	0.13	21.19	71.47	17.78	0.00	0.65	2.23
77-01-045	ADM - DES MOINES SOYBEAN	25.04	33.11	132.55	195.90	705.98	36.37	0.02	0.00	453.63
77-01-054	MIDAMERICAN ENERGY CO - RIVER HILLS TURBINES	0.05	0.05	0.01	2.54	0.02	0.65	0.00	0.00	0.00
77-01-109	CONSTRUCTION PRODUCTS, INC	22.95	22.95	0.01	0.20	35.81	0.04	0.00	0.00	20.82
77-01-114	MAGELLAN PIPELINE CO, LLC - DES MOINES	0.00	0.00	0.09	3.45	174.22	3.44	0.00	0.00	8.46
77-01-169	SIEGWERK USA INC - 129 SE 18TH ST	0.58	0.58	0.00	0.13	64.71	0.05	0.00	0.00	0.00
77-01-174	PRINCIPAL LIFE INSURANCE COMPANY	0.18	0.19	0.19	4.99	0.18	2.27	0.00	0.03	0.00
77-01-175	IOWA E.P.S. PRODUCTS, INC. - DES MOINES	5.63	5.63	0.01	0.96	165.78	0.81	0.00	0.00	2.42
77-01-285	SIEGWERK USA INC - SW 56TH ST	1.94	1.94	0.09	0.94	23.28	0.63	0.00	0.00	0.00
77-01-317	CITY OF DSM METRO WASTEWATER RECLAIM AUTHORITY	5.02	5.02	3.48	38.27	34.80	111.29	0.00	0.21	0.51
77-03-014	QUALITY MANUFACTURING CORP - URBANDALE	16.04	16.04	0.01	1.98	89.58	1.57	0.00	0.06	0.97
77-07-010	Siculus, Inc.	0.15	0.15	0.02	26.05	0.25	2.25	0.00	0.00	0.01
77-09-002	MIDAMERICAN ENERGY CO - SYCAMORE TURBINES	0.35	0.35	3.43	24.74	0.11	4.18	0.00	0.00	0.05
77-10-002	CB&I LLC	13.95	14.10	0.00	0.00	5.67	0.00	0.00	0.00	5.02
77-13-002	MIDAMERICAN ENERGY CO - PLEASANT HILL/GDMEC	25.78	25.78	1.49	40.71	2.51	38.03	0.00	0.03	1.47
77-14-002	METRO METHANE RECOVERY FACILITY	7.31	7.31	21.25	135.00	7.89	226.17	0.00	0.00	12.89
77-14-003	METRO PARK EAST SANITARY LANDFILL	0.00	0.00	0.00	0.00	9.84	0.00	0.00	0.00	6.24
78-01-012	GRIFFIN PIPE PRODUCTS COMPANY	0.03	0.23	0.00	0.03	0.10	0.77	0.02	0.00	0.00
78-01-026	WALTER SCOTT JR ENERGY CTR	269.82	572.00	9,952.44	6,737.72	89.42	5,181.71	0.31	9.78	34.70

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
78-01-085	BUNGE NORTH AMERICA, INC - 19560 BUNGE AVE	11.90	29.92	0.56	40.73	389.81	76.57	0.00	2.91	243.99
78-01-092	NuStar Council Bluff Terminal	0.00	0.00	0.00	2.69	24.24	6.47	0.00	0.00	1.02
78-01-110	SOUTHWEST IOWA RENEWABLE ENERGY, LLC	12.78	24.07	1.83	48.48	85.20	51.87	0.00	2.33	4.32
78-01-121	GABLE CORPORATION	5.27	5.27	0.01	23.40	0.69	6.63	0.00	0.00	0.02
78-04-001	OSI INDUSTRIES, LLC	49.38	49.38	0.05	33.29	60.51	20.39	0.00	1.49	0.00
78-04-006	NORTHERN NATURAL GAS CO - OAKLAND COMPRESSOR	8.08	8.08	0.16	478.72	18.21	63.31	0.00	0.02	11.91
79-02-006	A-1 FIBERGLASS - RINEHART MFG	0.01	0.03	0.00	0.00	2.61	0.00	0.00	0.00	2.28
82-01-002	ARCONIC INC - DAVENPORT WORKS (FORMERLY ALCOA)	138.33	149.37	1.46	208.90	223.72	187.56	0.02	7.84	59.92
82-01-015	LINWOOD MINING & MINERALS CORP	168.24	172.94	13.94	55.47	0.00	100.61	0.00	0.00	1.44
82-01-017	NICHOLS ALUMINUM LLC - DAVENPORT - ROCKINGHAM RD	0.99	0.99	0.04	6.95	12.04	5.84	0.00	0.22	2.32
82-01-043	JOHN DEERE DAVENPORT WORKS	17.96	17.96	0.16	6.77	138.37	2.33	0.00	0.07	7.87
82-01-089	NICHOLS ALUMINUM LLC - DAVENPORT	30.78	30.81	0.47	40.62	26.51	37.63	0.08	1.43	41.93
82-01-121	SCOTT COUNTY LANDFILL	0.01	0.01	0.14	0.02	7.34	1.81	0.00	0.00	4.59
82-02-004	SIVYER STEEL CASTINGS LLC	7.72	14.30	1.44	20.17	2.84	33.93	0.12	0.61	2.17
82-02-006	MIDAMERICAN ENERGY CO - RIVERSIDE STATION	0.33	0.33	0.02	5.13	0.60	2.62	0.00	0.10	0.26
82-02-052	VEOLIA WATER NORTH AMERICA - DAVENPORT	1.93	1.93	0.17	0.38	0.97	17.19	0.00	0.00	0.00
82-04-005	CONTINENTAL CEMENT COMPANY - DAVENPORT PLANT	151.79	203.47	1,257.60	1,935.76	269.44	896.24	0.09	5.14	83.77
84-03-015	GROSCHOPP	0.02	0.02	0.00	0.11	2.45	0.09	0.00	0.00	0.41
85-01-006-01	CITY OF AMES COMBUSTION TURBINE	0.04	0.04	0.11	1.11	0.00	0.19	0.00	0.00	0.00
85-01-006-02	CITY OF AMES STEAM ELECTRIC PLANT	9.64	10.12	19.00	293.20	6.43	95.16	0.03	3.29	62.85
85-01-007-01	IOWA STATE UNIVERSITY	2.99	2.99	0.56	15.14	1.67	17.00	0.01	0.11	1.14
85-01-007-02	IOWA STATE UNIVERSITY - POWER PLANT	8.51	12.83	318.11	133.45	4.42	45.99	0.00	0.02	14.94
85-01-017	USDA - NATIONAL ANIMAL DISEASE CENTER	9.40	9.40	0.33	27.54	1.35	23.72	0.00	0.06	0.85
85-01-056	USDA - NATIONAL VETERINARY SERVICES LABORATORIES	0.00	0.00	0.00	0.18	0.00	0.05	0.00	0.00	0.00
85-02-017	LINCOLNWAY ENERGY, LLC	21.32	21.53	0.53	36.17	61.16	69.93	0.00	2.71	6.94
85-03-003	AMERICAN PACKAGING CORPORATION	0.26	0.26	0.02	3.40	103.78	2.85	0.00	0.11	0.00
86-01-001	TAMA PAPERBOARD, LLC	2.07	2.07	0.14	23.11	29.90	19.41	0.00	0.74	0.58
88-01-002	WDC Acquisition LLC	5.97	5.97	0.01	0.00	73.16	0.00	0.00	0.00	6.13
88-01-004	CENTRAL IOWA POWER COOP - SUMMIT LAKE	0.48	0.50	0.13	49.72	0.18	5.40	0.00	0.46	0.00

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
88-01-017	GREEN VALLEY CHEMICAL CORPORATION	8.17	8.17	0.61	122.15	136.03	278.31	0.00	32.08	7.38
88-01-021	ZFS-Creston	0.75	0.75	0.01	2.15	62.88	1.81	0.00	0.00	39.73
90-01-003	JOHN DEERE OTTUMWA WORKS	2.90	3.14	0.04	6.49	157.82	5.45	0.01	0.00	5.16
90-07-001	IPL - OTTUMWA GENERATING STATION	341.31	352.33	1,307.82	2,930.91	0.46	2,191.95	0.04	4.07	14.99
91-01-002	INDIANOLA MUNICIPAL UTILITIES	0.06	0.06	0.01	2.79	0.02	0.01	0.00	0.00	0.00
91-01-015	CITY OF INDIANOLA - WWTP	0.03	0.03	0.61	0.36	0.02	0.21	0.00	0.01	0.00
91-06-001	NATURAL GAS PIPELINE CO OF AMERICA - STATION 108	29.09	29.09	0.37	1,174.10	50.53	260.77	0.05	0.06	46.64
92-01-021	ACH FOAM TECHNOLOGIES, LLC	0.00	0.00	0.01	1.65	203.01	1.39	0.00	0.05	0.03
92-10-001	NATURAL GAS PIPELINE CO OF AMERICA - STATION 205	2.82	2.82	0.03	10.55	7.80	3.12	0.00	0.04	2.75
93-05-001	ANR PIPELINE CO - LINEVILLE COMPRESSOR	3.46	3.46	0.20	463.87	40.53	88.20	0.00	0.00	24.81
94-01-002	CERTAINTED GYPSUM & CEILING MFG, INC	155.68	182.49	0.12	19.64	1.08	16.50	0.00	0.47	0.37
94-01-005	KOCH FERTILIZER FT. DODGE, LLC	30.89	30.89	0.33	229.51	16.07	37.84	0.00	250.46	2.35
94-01-010	GEORGIA-PACIFIC GYPSUM, LLC - FORT DODGE	38.33	87.84	0.16	12.68	41.81	51.89	0.00	0.00	1.68
94-01-017	UNITED STATES GYPSUM CO - FORT DODGE	16.22	18.53	0.11	13.56	0.75	11.39	0.00	0.43	0.25
94-01-040	SILGAN CONTAINERS MFG CORP - FORT DODGE	0.42	0.42	0.01	1.85	287.56	1.51	0.00	0.05	0.90
94-01-073	VALERO RENEWABLE FUELS CO, LLC - FORT DODGE	43.94	48.70	0.96	85.33	46.91	49.59	0.00	0.00	7.17
94-01-080	CARGILL, INC - FORT DODGE	16.87	18.87	19.32	68.50	201.70	27.50	0.00	0.00	18.06
94-02-004	FRONTIER ETHANOL LLC DBA POET BIOREFINING - GOWRIE	41.91	58.03	1.11	62.16	48.23	54.33	0.00	0.00	6.34
94-07-001	GROWMARK, INC - FORT DODGE TERMINAL	0.00	0.00	0.00	0.00	92.96	0.00	0.00	0.00	7.01
94-07-004	PRAXAIR, INC	2.63	2.63	0.00	0.00	0.06	0.96	0.00	0.00	0.47
95-01-001	WINNEBAGO INDUSTRIES, INC - FOREST CITY	1.94	1.96	0.75	5.70	60.90	5.27	0.00	0.06	25.91
95-01-012	CDI, LLC. - FOREST CITY	0.68	0.68	0.00	0.00	46.97	0.00	0.00	0.00	7.09
95-02-012	CENTRAL DISPOSAL SYSTEMS, INC	7.47	22.41	1.76	37.65	15.67	73.70	0.00	0.00	14.81
97-01-001	CARGILL, INC - SIOUX CITY	25.38	25.38	0.35	29.64	405.80	49.33	0.00	0.00	254.45
97-01-030	CF INDUSTRIES NITROGEN, LLC - PORT NEAL COMPLEX	104.68	105.12	3.31	332.08	63.40	84.63	0.00	512.78	43.40
97-01-118	MAGELLAN PIPELINE CO, LLC - SIOUX CITY	0.45	0.45	0.01	24.42	49.35	10.15	0.00	0.00	2.62
97-01-193	Smithfield Packaged Meats Corp	1.10	1.79	0.04	6.50	11.51	57.55	0.00	0.21	0.12
97-01-200-03	SABRE INDUSTRIES TOWERS AND POLES	4.99	4.99	0.00	0.00	1.24	0.00	0.00	0.00	1.89
97-04-005	AG PROCESSING, INC - SERGEANT BLUFF	10.48	22.65	0.42	60.18	366.89	58.15	0.00	0.00	229.40

Facility ID	Facility Name	PM _{2.5} -PRI	PM ₁₀ -PRI	SO ₂	NO _x	VOC	CO	Pb	NH ₃	Total HAP
97-04-010	MIDAMERICAN ENERGY CO - GEORGE NEAL NORTH	91.36	132.59	4,335.81	2,498.97	41.49	1,767.86	0.02	1.33	15.08
97-04-011	MIDAMERICAN ENERGY CO - GEORGE NEAL SOUTH	169.41	222.70	5,628.43	2,751.00	56.39	2,710.79	0.01	2.03	15.61
98-01-006	TRUSTILE DOORS OF IOWA	0.35	0.74	0.00	0.00	2.70	0.00	0.00	0.00	0.30
98-02-004	MANLY TERMINAL, LLC	0.59	5.31	0.00	0.00	11.39	0.00	0.00	0.00	6.17
99-01-001	AG PROCESSING, INC - EAGLE GROVE	28.42	62.07	150.07	63.38	301.27	131.80	0.01	0.01	191.23
99-05-003	CORN, LP	26.24	26.58	0.48	32.96	86.97	83.88	0.00	0.00	8.17
PP-183-000	RAM DEVELOPMENT	0.05	0.05	0.00	0.05	0.23	0.67	0.00	0.00	0.00

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, and blades for wind turbines. This business type includes facilities contained in the major SIC groups of "3511," "4741," "5093," "6311," and "7374" as well as facilities contained in the major SIC groups beginning with "36" and "39."
- **Household Appliance Manufacturing** - Includes facilities manufacturing vacuums, HVAC equipment, and refrigerators. This business type includes facilities contained in the major SIC groups of "3585," "3632," and "3633."

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