BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

MIDWEST GENERATION, LLC	)	
	)	
Petitioner,	)	PCB 2021-109
	)	
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	)	
	)	
Respondents,	)	

NOTICE OF FILING

To: See attached service list

PLEASE TAKE NOTICE that I have today electronically filed with the Office of the Clerk of the Pollution Control Board Midwest Generation, LLC's Hearing Exhibits S, T, U and V that were entered into the record for this matter at the July 21, 2021 hearing.

Dated: July 22, 2021

MIDWEST GENERATION, LLC

By: /s/Kristen L. Gale

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CERTIFICATE OF SERVICE

The undersigned, an attorney, certifies that a true copy of the foregoing Notice of Filing, and Midwest Generation, LLC's Hearing Exhibits S, T, U and V were electronically filed on July 22, 2021 with the following:

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and that copies were sent via e-mail on July 22, 2021 to the parties on the service list.

Dated: July 22, 2021 /s/Kristen L. Gale

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CERTIFICATION OF HEARING EXHIBITS

The undersigned, an attorney, certifies that each of the Hearing Exhibits being filed is an accurate reproduction of the corresponding exhibit offered by Midwest Generation, LLC at the July 21, 2021 hearing in this matter.

Dated: July 22, 2021 /s/Kristen L. Gale

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Petitioner’s Hearing Exhibit S

Fugitive Particulate Matter Operating Program
Revision 6

Midwest Generation, LLC – Powerton Generating Station – Source ID 179801AAA

TABLE OF CONTENTS

OPERATING PROGRAM REVISION LOG

Revision	Revision Date	Summary of Revisions
0	March 1983	Initial Issue
1	September 1986	
2	March 2006	
3	August 2016	Plan updates per operational changes
4	March 2017	Plan updates per completion of installation of DSI systems for Unit 5 & Unit 6
5	May 2017	Updates to provide clarity and consistency with CAAPP Permit
6	September 2018	Revised to specifically reference fly ash and bottom ash (removed references to "byproduct")

1. INTRODUCTION

This document constitutes the Operating Program for Fugitive Particulate Matter Control for the Powerton Generating Station located in Pekin, Illinois (Powerton Station). Fugitive particulate matter (PM) is regulated under Title 35 of the Illinois Administrative Code (IAC) Part 212, Subpart K. Pursuant to 35 IAC 212.309(a), fugitive emissions from storage piles, conveyor loading operations, conveyors, traffic areas, fly ash and bottom ash truck loading, crushers, materials collected by pollution control equipment, and any other units for which spraying or choke-feeding is required must be operated under the provisions of an operating program.

This document is organized such that it follows the regulatory requirements of 35 IAC 212.309, 35 IAC 212.310, and 35 IAC 212.312.

Pursuant to 35 IAC 212.309, emission units and activities that are subject to 35 IAC 212.304 through 212.308 must be addressed in the Operating Program. At the Powerton Station, these units and activities include the following:

1. Storage Piles (35 IAC 212.304);
2. Conveyor Loading Operations (35 IAC 212.305)
3. Conveyors (35 IAC 212.308);
4. Transfer Points (35 IAC 212.308);
5. Truck Loading/Unloading (35 IAC 212.308);
6. Traffic Areas/Roadways or Parking Areas (35 IAC 212.306); and
7. Materials Collected by Pollution Control Equipment / Dust Collectors (35 IAC 212.307).

The emission limitations for emission units located in certain areas (35 IAC 212.316) are not applicable because the Powerton Station is not located in one of the areas specified in 35 IAC 212.324(a)(1).

A record of amendments to this Operating Program is documented in the Operating Program Revision Log. In accordance with 35 IAC 212.312, this Operating Program will be amended from time to time, as necessary, to ensure that the program is current. Any revisions to the Operating Program will be submitted to the Illinois EPA for review.

This Operating Program is designed to significantly reduce fugitive particulate matter (PM) emissions, as required by 35 IAC 212.309.

2. SOURCE INFORMATION

The following source information is provided pursuant to 35 IAC 212.310(a) through 35 IAC 212.310(c).

2.1. 35 IAC 212.310(a) - NAME AND ADDRESS OF THE SOURCE

Powerton Generating Station
13082 East Manito Road
Pekin, Illinois 61554-8587

2.2. 35 IAC 212.310(b) - OWNER OR OPERATOR RESPONSIBLE FOR EXECUTION OF THE OPERATING PROGRAM

Oversight and on-going execution of the Operating Program is the responsibility of the Powerton Station Director, supported by the Environmental Specialist/Engineer. Both of these individuals are located at 13082 East Manito Road, Pekin, Illinois 61554.

2.3. 35 IAC 212.310(c) - MAP OR DIAGRAM OF THE SOURCE

A site map[1] of the Powerton Station showing the facility boundaries, buildings, storage piles, conveyor loading operations, normal traffic pattern access areas surrounding storage piles and all normal traffic patterns within the facility is provided in Appendix A to this Operating Program.

[1] Pursuant to 35 IAC 212.310(c), the site map should include approximate locations of storage piles, conveyor loading operations, normal traffic pattern access areas surrounding storage piles, and all normal traffic patterns within the source. Additionally, pursuant to 35 IAC 212.310(d), the location of unloading and transporting operations with pollution control equipment should be identified.

3. 35 IAC 212.310(d) - LOCATION OF UNLOADING AND TRANSPORTING OPERATIONS WITH POLLUTION CONTROL EQUIPMENT

3.1. UNLOADING OPERATIONS

Coal is transported and delivered to Powerton Station via railcars and unloaded using a rotary car dumper. The rotary car dumper building is located on the north side of the property and is identified in Appendix A. The rotary car dumper is housed in an open-ended building which utilizes a dust collection system to reduce the potential for fugitive dust emissions.

Activated carbon is transported and delivered to the Powerton Station via pneumatic discharge truck. The activated carbon silos are located to the north and south of the boiler/turbine building and are identified in Appendix A. The activated carbon storage silos are equipped with bin vent filters to control particulate matter emissions during loading of the silos.

Sorbent for sulfur dioxide control (SO2 sorbent) is transported and delivered to the Powerton Station primarily via pneumatic discharge rail car, with pneumatic discharge truck delivery as back-up. The SO2 sorbent storage silos are located to the north of the boiler/turbine building and are identified in Appendix A. The SO2 sorbent storage silos are equipped with bin vent filters to control particulate matter emissions.

S-Sorb sorbent is transported and delivered to the Powerton Station via pneumatic discharge truck. The S-Sorb Receiving Silo and Active Silo are located to the west of the crusher house and are identified in Appendix A. The S-Sorb silos are equipped with bin vent filters to control particulate matter emissions.

3.2. TRANSPORTING OPERATIONS

Transporting operations at the Powerton Station consist of truck, railcar, and front-end loader operations, along with conveyors and enclosed pneumatic systems.

Coal is transported and delivered to the Powerton Station via railcars. The railcars are uncovered; however they travel long distances prior to arriving at the Powerton Station. Therefore, any loose material and/or fugitive emissions from the railcars are expected to have been released prior to arrival at the facility, and minimal emissions are anticipated from the transport of coal via railcar within the Powerton Station site boundary. Rail lines utilized for coal delivery are located along the perimeter of the facility boundary as depicted in Appendix A.

Within Powerton Station, coal is transported from the rotary car dumper to the active coal pile, and to the crusher house and individual unit buildings via a series of coal conveyors and transfer points. The coal conveyors and transfer points are all covered to prevent release of fugitive PM emissions. Coal is transported from the active coal pile on the north side of the facility to the crusher house at the center of the facility and finally to the unit building to the south as depicted in Appendix A.

Activated carbon and SO2 sorbent are pneumatically transferred from storage silos to air pollution control ductwork between the boilers and the ESPs. The ESPs collect reacted and unreacted activated carbon and SO2 sorbent. The location of the activated carbon and SO2 sorbent storage silos are identified in Appendix A.

S-Sorb is pneumatically transferred from the Receiving Silo to the Active Silo. Both the Receiving Silo and Active Silo are equipped with an integrated filter system to hold the S-Sorb material in the silo as the pneumatic air stream and displacement air inside are vented during loading events. The location of the Active Silo and Receiving Silo are identified in Appendix A.

Trucks are used to transport fly ash and bottom ash from Powerton Station to the disposal site. The fly ash trucks are covered to reduce the potential for fugitive emissions, in accordance with 35 IAC 212.315. In addition, the truck operators sweep off the truck coverings and wash the backs of the fly ash trucks prior to transporting material offsite to minimize the fugitive emissions leaving the facility. The fly ash loading area is situated near the base of the common stack, as depicted in Appendix A.

Bottom ash materials are transported from Powerton Station by a third party. Bottom ash is sluiced from the boiler building to hydrobins located on the east side of the property, as depicted in Appendix A. Because the sluicing of bottom ash is an inherently wet process, the potential for fugitive PM emissions is minimal.

4. 35 IAC 212.310(e) - BEST MANAGEMENT PRACTICES

The following sections of the Operating Program, as required by 35 IAC 212.310(e), detail the best management practices used to achieve compliance with 35 IAC 212 Subpart K. Additionally, this Operating Program includes a description of control measures, devices, and equipment used to minimize and control all emission units that have the potential to emit fugitive dust. Engineering specifications of particulate collection equipment, as required by 35 IAC 212.310(e), are included in Table 4-1. The frequency of the application of any dust suppressants, as required per 35 IAC 212.310(f), is also noted.

4.1. STORAGE PILES

Emission Limit: CAAPP Condition 7.2.4(a) and 5.2.2(a) – Pursuant to 35 IAC 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including material handling or storage activity that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
Operational Requirements per Regulation: Protected by a cover or sprayed with water or a surfactant solution on a regular basis, or treated by an equivalent method (35 IAC 212.304)
Fugitive Dust Control: Water sprays or equivalent method

The coal storage pile covers thirteen (13) acres in the northwest portion of the Powerton Station facility. The coal pile consists of active and inactive areas, which are managed differently for fugitive dust. The active pile area is the portion of the pile which receives new deliveries of coal or is frequently being worked or disturbed by the action of coal pile vehicles and equipment. The inactive portion of the pile remains relatively undisturbed for several days at a time. A log is maintained by the Shift Supervisor or designee that documents the active and inactive areas of the pile.

Potential fugitive dust emissions from the coal storage pile are estimated to be greater than 50 tons per year.[2] Therefore, the pile covering or watering requirements of 35 IAC 212.304 apply to the bulk storage pile at this facility.

Personnel at the Powerton Station employ a number of best management practices to reduce fugitive emissions from the storage pile. The active areas of the pile are treated with water sprays from a mobile water wagon. On days when coal handling vehicles are not operational nor anticipated to be operational, the pile is sprayed with water when coal is unusually dry and, absent use, there could be an exceedance of an applicable standard. The inactive portion of the coal pile is treated with water sprays or a chemical binding agent when coal is unusually dry and, absent use, there could be an exceedance of an applicable standard. Water spray treatments are tracked on a Fugitive Dust Log.

Water spray treatments are suspended for up to twenty-four (24) hours following a precipitation event. In addition, water spray treatments cannot be operated when ambient temperature is near or below freezing, as such operation could pose a safety risk or cause equipment damage. Furthermore, pursuant to 35 IAC 212.314, water spray treatments are not applied when the wind speed is greater than 25 miles per hour. Daily rainfall, temperatures, and wind speed are tracked on a Fugitive Dust Log which is maintained on site.[3]

[2] Potential fugitive dust emissions from the storage pile were calculated using EPA AP-42 emission factors and typical wind speed per AP-42, Table 7.1-9 for Peoria, Illinois.
[3] Note that the daily Fugitive Dust Log may be maintained electronically.

Additionally, pursuant to CAAPP Permit Condition 7.4.11(c), Powerton Station is authorized to temporarily stockpile and handle fly ash for offsite shipment. These temporary activities are managed in accordance with this Fugitive PM Operating Program. . The temporary stockpiles are either covered or controlled by other wind barrier or treated with water sprays to maintain compliance with the limits of 35 IAC 212.301.

4.2. CONVEYOR LOADING OPERATIONS

Emission Limit: CAAPP Condition 7.2.4(a) and 5.2.2(a) – Pursuant to 35 IAC 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including material handling or storage activity that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
Operational Requirements per Regulation: Utilize spray systems, telescopic chutes, stone ladders, or other equivalent methods (35 IAC 212.305)
Fugitive Dust Control: Dust control systems and reclaim hopper feed systems

The conveyors at the Powerton Station are used to transfer coal to and from the storage pile. As the storage pile is subject to the pile covering or watering requirements outlined in 35 IAC 212.304, all conveyor loading operations to this storage pile are required to use spray systems and/or telescopic chutes (radial boom which moves up and down) to reduce fugitive PM emissions.

The "A" conveyor is loaded inside the rotary car dumper building via vibrating feeders. PM emissions from "A" conveyor loading are controlled by a dust collection system. The coal is transferred and unloaded onto the coal pile via a radial boom stacker, as discussed in Section 4.4. The "C1" and "C2" conveyers are loaded underneath the coal pile via vibrating reclaim feeders. PM emissions from loading the "C" conveyors are minimized because they are loaded from underneath the coal pile.

S-Sorb material is delivered via two rotary vane feeders / air locks located on the bottom on the Active Silo, which are used to discharge S-Sorb onto two small 18-inch wide enclosed conveyors. The transfer of S-Sorb material to the S-Sorb conveyors is a totally enclosed process minimizing the potential for fugitive PM emissions.

Personnel at the Powerton Station Facility inspect the conveyor loading operations and applicable control equipment monthly to ensure they are functioning properly and to check for fugitive emissions. Additional details regarding the activities performed as part of the inspections are provided in Appendix B. Observations are recorded on an inspection log, similar to the log provided in Appendix C. The inspection logs are signed-off by supervisory or management personnel.

4.3. CONVEYORS

Emission Limit: CAAPP Condition 7.2.4(a) and 5.2.2(a) – Pursuant to 35 IAC 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including material handling or storage activity that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
Operational Requirements per Regulation: Sprayed with water or a surfactant solution, utilize choke-feeding or be treated by an equivalent method (35 IAC 212.308)
Fugitive Dust Control: Fully or partially covered conveyors, dust control systems and equivalent method

Coal is transferred to and from the storage pile using conveyors. All conveyors at the Powerton Station are either fully or partially covered to reduce the potential for wind-borne fugitive emissions during conveyor transport. In addition, since water sprays are used to minimize fugitive emissions at the coal pile (refer to Section 4.1 of this Operating Program), the material transferred on the conveyors is sufficiently wetted, further reducing the potential for fugitive emissions from the conveyors. Dust collection systems are utilized on the J1 and J2 conveyor belts, and wet dust extractors are used on H system, K system, L system, F1, F2, F3, F4, G1, and G2.

Conveyors transfer the S-Sorb material to a chute that passes through the cover of Powerton's coal conveyor, where it drops onto the coal stream as it passes under the chute. The S-Sorb conveyors are totally enclosed, minimizing the potential for fugitive emissions.

Personnel at the Powerton Station Facility observe the conveyors and applicable control equipment monthly to ensure they are functioning properly and to observe for fugitive emissions. Additional details regarding the activities performed as part of the inspections are provided in Appendix B. Observations are recorded on an inspection log, similar to the log provided in Appendix C. The inspection logs are signed-off by supervisory or management personnel.

4.4. TRANSFER POINTS

Emission Limit CAAPP Condition 7.2.4(a) and 5.2.2(a) – Pursuant to 35 IAC 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including material handling or storage activity that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
Operational Requirements per Regulation: Sprayed with water or a surfactant solution, utilize choke-feeding or be treated by an equivalent method (35 IAC 212.308)
Fugitive Dust Control: Dust control systems and equivalent operational practices

Coal is transferred from "A" conveyor to the coal pile using a radial boom stacker with adjustable height, which is operated such that it maintains the minimum practical free-fall distance of conveyed coal onto the coal pile, and also includes water spray control. The use of water sprays in association with the radial stacker will be in accordance with the water spray best practices outlined in Section 4.1. Dust collection systems are utilized on the F-J-K1-L1 transfer point and the J-K2-L2 transfer point.

Conveyors transfer the S-Sorb material to chutes that pass through the cover of Powerton's "H" coal conveyors, where it drops onto the coal stream as it passes under the chute. The area around the discharge conveyor transfer points is shrouded to minimize the potential for fugitive dust emissions. The emissions are further suppressed via the spray application of the liquid M-Sorb sorbent immediately downstream of the S-Sorb transfer points.

Personnel at the Powerton Station observe the radial stacker and other material transfer points monthly to ensure they are functioning properly and to observe for fugitive emissions. Additional details regarding the activities performed as part of the inspections are provided in Appendix B. Observations are recorded on an inspection log, similar to the log provided in Appendix C. The inspection logs are signed-off by supervisory or management personnel.

4.5. TRUCK/RAILCAR LOADING/UNLOADING

Emission Limit: CAAPP Condition 7.2.4(a) 7.4.4(a) and 5.2.2(a) – Pursuant to 35 IAC 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including material handling or storage activity that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
Operational Requirements per Regulation: Sprayed with water or a surfactant solution, utilize choke-feeding or be treated by an equivalent method (35 IAC 212.308)
Fugitive Dust Control: Equivalent operational practices

Coal is transported and delivered to the Powerton Station via railcars. Railcars are individually rotated within the car dumper building to transfer the contents of the rail car into hoppers. The coal is then transported to the active coal storage pile via the "A" covered conveyor and radial boom stacker. The rotary railcar dumper is located in an open ended building controlled by a dust collection system.

Fly ash is transferred from silos into trucks in a partially enclosed area to minimize fugitive PM emissions during gravity loadout of dry byproduct. The fly ash is unloaded into the top of the haul trucks from the fly ash silos via unloading spouts. The truck operator manages fly ash loading activities to minimize spills. Any fly ash spills are cleaned up using the street sweeper, vacuum truck, washed down to concrete storage pad for disposal or similar method after a spill occurs.

Personnel at the Powerton Station inspect the fly ash silos and loading operations each month to ensure they are functioning properly and to observe for potential fugitive emissions. Fly ash loadout operations are inspected weekly. Additional details regarding the activities performed as part of the inspections are provided in Appendix B. Observations are recorded on inspection logs, similar to the logs provided in Appendix C and Appendix D. The inspection logs are signed-off by supervisory or management personnel.

4.6. TRAFFIC AREAS/ROADWAY CLEANING

Emission Limit CAAPP Condition 5.2.3(c) – Pursuant to 35 IAC 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including material handling or storage activity that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
Operational Requirements per Regulation: All normal traffic pattern roads and parking facilities shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment applied on a regular basis, as needed (35 IAC 212.306)
Fugitive Dust Control: Operational practices and wet street sweeping, as weather conditions allow

Traffic areas at the Powerton Station are primarily paved, although some unpaved areas are present in less-traveled portions of the facility. Paved areas are swept or treated with water as needed, or at least monthly, to minimize fugitive emissions. Sweeping or watering of paved areas may be suspended from December 1 through the end of February and when ambient temperature is near or below freezing, as such operation may pose a safety risk. Sweeping or watering of paved roads may also be suspended following a precipitation event. Daily low temperatures and rainfall amounts are tracked on a Fugitive Dust Log.

Unpaved roads are located along the canals, west of the main station building, and around the crusher house and coal pile; however, routine truck traffic is generally limited to paved areas. All unpaved roads and parking areas are treated with water sprays at least quarterly, weather permitting. The application of water sprays and chemical dust suppressants may be suspended during the period from December 1 through the

end of February, when ambient temperature is near or below freezing, as such operation may pose a safety, and for up to 24 hours following a precipitation event. Daily low temperature and rainfall amounts are tracked on a Fugitive Dust Log.

A site plan showing facility truck routes is located in Appendix A. The posted speed limit is 10 miles per hour. All truck traffic enters[4] and exits from the driveway on the south side of the Powerton facility.

4.7. MATERIAL COLLECTED BY POLLUTION CONTROL EQUIPMENT/DUST COLLECTORS

Emission Limit: CAAPP Condition 5.2.3(f) – Pursuant to 35 IAC 212.313, if particulate matter collection equipment is operated pursuant to 35 IAC 212.304 through 212.310 (as addressed in Conditions 5.2.3(a) through (e) and 5.2.4(a)), emissions of particulate matter from such equipment shall not exceed 68 mg/dscm (0.03 gr/dscf).
Operational Requirements per Regulation: Materials collected by pollution control equipment shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods pursuant to 35 IAC 212.307
Fugitive Dust Control: Materials collected by the dust collectors are enclosed or wetted.

The ESPs are the most significant particulate matter collection devices at Powerton Station. Other dust collectors provide control for the coal and byproduct handling operations. Dust collectors are installed on the railcar dumper building to reduce the potential for fugitive dust emissions from railcar unloading. The material collected in the rotary railcar dumper building baghouse goes through a pin mill, and is recovered and sent to the coal pile with the coal. Additionally, each byproduct silo vents through three (3) bin vent filters (one of which is used in stand-by mode).

The activated carbon silos are equipped with bin vent filters to capture PM from loading of the silos. The SO2 sorbent and the S-Sorb silos are also equipped with bin vent filters to control PM emissions.

Additional fugitive PM emissions from the surge bins and conveyor transfer points are captured using wet dust extractors. The wet dust collectors capture fugitive material in a water stream, and then blowdown to the wastewater treatment system. As this is a wet system, fugitive emissions are not anticipated.

The Shift Supervisor or designee inspects the dust collectors and bin vents on a monthly basis to assess the presence of visible emissions from the exhaust points. Any visible emissions are noted on the Fugitive Dust Inspection Log similar to the log provided in Appendix C, and corrective action is performed as soon as practicable. Additional details regarding activities performed as part of the inspections can be found in Appendix B. The inspection logs are signed-off by supervisory or management personnel.

[4] Per 35 IAC 212.315, "No person shall cause or allow the operation of a vehicle of the second division as defined by 625 ILCS 5/1-217 or a semi-trailer as defined by 625 ILCS 5/1-187 without a covering sufficient to prevent the release of particulate matter into the atmosphere, provided that this rule shall not pertain to automotive exhaust emissions.". As a standard practice, all fly ash trucks transporting material within the facility or offsite are tarped.

Table 4-1. Particulate Collection Equipment Specifications

Particulate Matter Control Equipment	Design Flow Rate (scfm)	Outlet Grain Loading (gr/scf)	Notes
BH-1 - Car Dumper Baghouse	140,000	0.015	
DE1 – Crusher House Dust Extractor	13,500	0.03	
DE2 – Crusher House Dust Extractor	13,000	0.03	
DE3 – Crusher House Dust Extractor	13,000	0.03	
DE4 – Crusher House Dust Extractor	12,000	0.03	
DE5 – Crusher House Dust Extractor	11,000	0.03	
DE8 – 61 62 West Coal Silos Dust Extractor	13,500	0.03	
DE10 – 61 62 East Coal Silos Dust Extractor	13,500	0.03	
DE9 – 51 52 West Coal Silos Dust Extractor	13,500	0.03	
DE11 – 51 52 East Coal Silos Dust Extractor	13,500	0.03	
DE6 – J1 Conveyor Belt, J2 Conveyor Belt, H-J-K1-L1 Transfer Point Dust Extractor	12,000	0.03	
DE7 - J-K2-L2 Transfer Point Dust Extractor	12,500	0.03	
BF13 - Unit 5 Fly Ash Handling System Bag Filter	2,910	0.02	Only 2 of the 3 fly ash systems (FAS) for Unit 5 are operational at a given time, and one is in standby mode
BF14 - Unit 5 Fly Ash Handling System Bag Filter	2,910	0.02	
BF15 - Unit 5 Fly Ash Handling System Bag Filter	2,910	0.02	
BF16 - Unit 6 Fly Ash Handling System Bag Filter	2,910	0.02	Only 2 of the 3 fly ash systems (FAS) for Unit 6 are operational at a given time, and one is in standby mode
BF17 - Unit 6 Fly Ash Handling System Bag Filter	2,910	0.02	
BF18 - Unit 6 Fly Ash Handling System Bag Filter	2,910	0.02	
BVF1 - Unit 5 Fly Ash Silo Bin Vent Filter	7,000	0.01	
BVF2 - Unit 6 Fly Ash Silo Bin Vent Filter	7,000	0.01	
BVF19 – Unit 5 ACI Storage Silo	400	0.01	
BVF20 – Unit 6 ACI Storage Silo	400	0.01	
BVF51A - Unit 5 SO2 sorbent Storage Silo Bin Vent Filter	1,509	0.01	
BVF51B - Unit 5 SO2 sorbent Storage Silo Bin Vent Filter	1,509	0.01	
BVF51C - Unit 5 SO2 sorbent Storage Silo Bin Vent Filter	1,509	0.01	
BVF52A - Unit 5 SO2 sorbent Storage Silo Bin Vent Filter	1,509	0.01	

Particulate Matter Control Equipment	Design Flow Rate (scfm)	Outlet Grain Loading (gr/scf)	Notes
BVF52B - Unit 5 SO2 Sorbent Storage Silo Bin Vent Filter	1,509	0.01	
BVF52C - Unit 5 SO2 Sorbent Storage Silo Bin Vent Filter	1,509	0.01	
Unit 5 SO2 Sorbent Weigh Hopper Bin Vent Filter (6 pairs)	340	0.01	Two bin vent filters corresponding to each weigh hopper (i.e., 12 total BVF for 6 weigh hoppers)
BVF61A - Unit 6 SO2 Sorbent Storage Silo Bin Vent Filter	1,509	0.01	
BVF61B - Unit 6 SO2 Sorbent Storage Silo Bin Vent Filter	1,509	0.01	
BVF61C - Unit 6 SO2 Sorbent Storage Silo Bin Vent Filter	1,509	0.01	
BVF62A - Unit 6 SO2 Sorbent Storage Silo Bin Vent Filter	1,509	0.01	
BVF62B - Unit 6 SO2 Sorbent Storage Silo bin Vent Filter	1,509	0.01	
BVF62C - Unit 6 SO2 Sorbent Storage Silo Bin Vent Filter	1,509	0.01	
Unit 6 SO2 sorbent Weigh Hopper Bin Vent Filter (6 pairs)	340	0.01	Two bin vent filters corresponding to each weigh hopper (i.e., 12 total BVF for 6 weigh hoppers)
S-Sorb Receiving Silo Bin Vent Filter	712	0.01	
S-Sorb Active Silo Bin Vent Filter	712	0.01	

APPENDIX A: SITE DIAGRAM

Figure A-1. F


Rotary Dumper
Railcar Unloading
Conveyor Transfer
Locations
SO2 sorbent
Silos
Ash Truck
Loading
Activated
Carbon Silos
Boilers and
Steam
Turbines

Site Plan

APPENDIX B: SCHEDULE AND DETAILS OF INSPECTION ACTIVITIES

SCHEDULE OF ACTIVITIES – Fugitive Dust Operating Program

INSPECTION ACTIVITY	NOTES	APPLICABLE CAAPP PERMIT CONDITION
Coal Handling Equipment (Railcar Unloading, Transfer Conveyors, Storage Pile, Storage Silos) – CAAPP 7.2		
Monthly Inspections of Control Measures	Inspect the coal handling equipment enclosure, coal natural surface moisture, application of dust suppressant/ water sprays, and use of dust collection devices at least monthly. Note any equipment not in use at the time of inspection. Maintain records of all inspections on a Fugitive Dust Inspection Log similar to the one provided in Appendix C. Inspection logs are signed by supervisory or management personnel.	7.2.8.a
Visible Emissions Observations	Perform Method 22 visible emissions observations in conjunction with the monthly inspections at least once per calendar year while the affected operation is in use for each coal handling operation, unless a certified observer is performing a Method 9 per CAAPP Condition 7.2.7.a. Take corrective action within two hours of observing visible emissions, or conduct a Method 9 within one week.	7.2.8.b
Annual Dust Collector Inspections	Inspect the dust collector at least annually while out of service, with additional inspections after any maintenance and/or repairs. Refer to the sample Dust Collector Inspection Checklist in Appendix E for additional information.	7.2.8.c
Coal Processing Equipment (Coal Conditioners including Enclosures and Covers, Dust Suppression, and Dust Collection Devices) – CAAPP 7.3		
Monthly Inspections of Control Measures	Inspect the coal processing equipment enclosure, coal natural surface moisture, application of dust suppressant, and use of dust collection devices at least monthly. Note any equipment not in use at the time of inspection. Maintain records of all inspections on a Fugitive Dust Inspection Log similar to the one provided in Appendix C. Inspection logs must be signed by supervisory or management personnel.	7.3.8.a
Visible Emissions Observations	Perform Method 22 visible emissions observations in conjunction with the monthly inspections at least once per calendar year while the affected operation is in use for each coal processing operation, unless a certified observer is performing a Method 9 per CAAPP Condition 7.3.7.a. Take corrective action within two hours of observing visible emissions, or conduct a Method 9 within one week.	7.3.8.b

SCHEDULE OF ACTIVITIES – Fugitive Dust Operating Program

INSPECTION ACTIVITY	NOTES	APPLICABLE CAAPP PERMIT CONDITION
Fly Ash Handling Equipment (Transfer Systems, Storage Silos and Loadout with Bin Vent Filters) – CAAPP 7.4		
Monthly Inspections of Control Measures	Inspect the fly ash handling equipment enclosure at least monthly. Note any equipment not in use at the time of inspection. Maintain records of all inspections on a Fugitive Dust Inspection Log similar to the one provided in Appendix C. Inspection logs are signed by supervisory or management personnel.	7.4.8.a
Weekly Inspections of Control Measures	Inspect the fly ash load out operations at least weekly. Note any equipment not in use at the time of inspection. Maintain records of all inspections on a Fugitive Dust Inspection Log similar to the one provided in Appendix C. Inspection logs are signed by supervisory or management personnel.	7.4.8.a
Visible Emissions Observations	Perform Method 22 visible emissions observations in conjunction with the monthly and weekly inspections at least once per calendar quarter while the affected operation is in use for the fly ash load out operations and at least once per calendar year while the affected operation is in use for each fly ash handling operation other than load out, unless a certified observer is performing a Method 9 per CAAPP Condition 7.4.7.a. Take corrective action within two hours of observing visible emissions, or conduct a Method 9 within one week.	7.4.8.b
Dry Sorbent Injection ("DSI") Equipment (SO2 sorbent Silos, Weigh Hoppers, SO2 sorbent Grinding Mill Building)		
Quarterly Visible Emission Inspections	For the Unit 5 & 6 SO2 sorbent silos & weigh hoppers, conduct quarterly 30 minute visible emission inspection using Method 22 while the BVF is operational. If visible emissions are observed, then conduct Method 9 to ensure compliance with the 7% opacity standard. Otherwise corrective actions must be initiated within 24 hours.	N/A Condition 2.7(b)(i) of Construction Permit NOs 10120020 & 10120021.
Activated Carbon Injection ("ACI") Equipment (ACI Silos)		
Monthly Inspection of Control Measures	Inspect the ACI silos for any visible emissions while facility is operational. Maintain records of all inspections on a Fugitive Dust Inspection Log similar to the one provided in Appendix C.	N/A

APPENDIX C: MONTHLY FUGITIVE DUST INSPECTION LOG

SAMPLE MONTHLY INSPECTION - COAL PROCESSING, COAL HANDLING, AND FLY ASH EQUIPMENT

Monthly, while the Coal Processing, Coal Handling and Fly Ash Processing Sources are in use, operation shall be observed and recorded. If visible emissions (coal or fly ash) are evident, contact the Supervisor immediately. Process need to be stopped or returned to no visible emissions within 2 hours of initial discovery.

Refer to TVprocessweightcalm.xls for the PWR calcs

SOURCES	Inspection Point	Date and Time of Inspection	Observed Conditions C = Clear S = Steam Only V = Coal/Fly Ash/SO2 sorbent/Activated Carbon (If present call shift to stop process or return to no V within 2 hours)	Process in Operation (Yes/No)	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Must be Performed within 2 hours if V is present)	Maintenance Activities Description/ Work Order Number
COAL PROCESSING AND COAL HANDLING SOURCES							
Car Dumper Bag House	Bag house Exhaust	Date: Time:					
A-Conveyor Belt	Belt	Date: Time:					
A to B Belt Transfer Point	Transfer Point	Date: Time:					

SAMPLE MONTHLY INSPECTION - COAL PROCESSING, COAL HANDLING, AND FLY ASH EQUIPMENT

SOURCES	Inspection Point	Date and Time of Inspection	Observed Conditions C = Clear S = Steam Only V = Coal/Fly Ash/SO2 sorbent/Activated Carbon (if present call shift to stop process or return to no V within 2 hours)	Process In Operation (Yes/No)	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Must be Performed within 2 hours if V is present)	Maintenance Activities Description/ Work Order Number
B- Conveyor Belt	Belt	Date: Time:					
Coal Over C-1 Conveyor Belt	Pile	Date: Time:			Normal Active Coal Pile		
Coal Over C-2 Conveyor Belt	Pile	Date: Time:			Normal Active Coal Pile		
C-1 Conveyor Belt	Belt	Date: Time:					
C-2 Conveyor Belt	Belt	Date: Time:					

SAMPLE MONTHLY INSPECTION - COAL PROCESSING, COAL HANDLING, AND FLY ASH EQUIPMENT

SOURCES	Inspection Point	Date and Time of Inspection	Observed Conditions C = Clear S = Steam Only V = Coal/Fly Ash/SO2 sorbent/Activated Carbon (if present call shift to stop process or return to no V within 2 hours)	Process In Operation (Yes/No)	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Must be Performed within 2 hours if V is present)	Maintenance Activities Description/ Work Order Number
Crusher House Engart Dust Extractor (System 4 – DE-1)	Extractor Exhaust	Date: Time:					
Crusher House Engart Dust Extractor (System 5 – DE-2)	Extractor Exhaust	Date: Time:					
Crusher House Engart Dust Extractor (System 2 – DE-3)	Extractor Exhaust	Date: Time:					
Crusher House Engart Dust Extractor (System 3 – DE-4)	Extractor Exhaust	Date: Time:					
Crusher House Engart Dust Extractor (System 1 – DE-5)	Dust Extractor Exhaust	Date: Time:					

SAMPLE MONTHLY INSPECTION - COAL PROCESSING, COAL HANDLING, AND FLY ASH EQUIPMENT

SOURCES	Inspection Point	Date and Time of Inspection	Observed Conditions C = Clear S = Steam Only V = Coal/Fly Ash/SO2 sorbent/Activated Carbon (if present call shift to stop process or return to no V within 2 hours)	Process In Operation (Yes/No)	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Must be Performed within 2 hours if V is present)	Maintenance Activities Description/ Work Order Number
H2 Headend Tripper Room Exhaust	Vent West Side of Building	Date: Time:					
K1 Headend Tripper Room North Exhaust	Vent North Side of Building	Date: Time:					
K1 Headend Tripper Room South Exhaust	Vent on 620 Elev. DC Heater Roof	Date: Time:					
K1 Tailend Tripper Room Exhaust	Vent on Service Roof	Date: Time:					
K2 Headend Tripper Room North Exhaust	Vent North Side of Building	Date: Time:					
K2 Tailend Tripper Room Exhaust	Vent on Service Roof	Date: Time:					

SAMPLE MONTHLY INSPECTION - COAL PROCESSING, COAL HANDLING, AND FLY ASH EQUIPMENT

SOURCES	Inspection Point	Date and Time of Inspection	Observed Conditions C = Clear S = Steam Only V = Coal/Fly Ash/SO2 sorbent/Activated Carbon (if present call shift to stop process or return to no V within 2 hours)	Process In Operation (Yes/No)	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Must be Performed within 2 hours if V is present)	Maintenance Activities Description/ Work Order Number
L1 Headend Tripper Room South Exhaust	Vent on 620 Elev. DC Heater Roof	Date: Time:					
L1 Tailend Tripper Room Exhaust	Vent West Side of Building	Date: Time:					
L2 Headend Tripper Room North Exhaust	Vent on 662 Roof	Date: Time:					
L2 Headend Tripper Room South Exhaust	Vent South Side of Building	Date: Time:					
L2 Tailend Tripper Room Exhaust	Vent on Service Roof	Date: Time:					
In-House Engart Dust Extractor (System 8 - DE-6)	Extractor Exhaust	Date: Time:					

SAMPLE MONTHLY INSPECTION - COAL PROCESSING, COAL HANDLING, AND FLY ASH EQUIPMENT

SOURCES	Inspection Point	Date and Time of Inspection	Observed Conditions C = Clear S = Steam Only V = Coal/Fly Ash/SO2 sorbent/Activated Carbon (If present call shift to stop process or return to no V within 2 hours)	Process In Operation (Yes/No)	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Must be Performed within 2 hours if V is present)	Maintenance Activities Description/ Work Order Number
In-House Engart Dust Extractor (System 10 – DE-7)	Extractor Exhaust	Date: Time:					
In-House Engart Dust Extractor (System 9 – DE-8)	Extractor Exhaust	Date: Time:					
In-House Engart Dust Extractor (System 11 – DE-9)	Extractor Exhaust	Date: Time:					
In-House Engart Dust Extractor (System 6 – DE-10)	Extractor Exhaust	Date: Time:					
In-House Engart Dust Extractor (System 7 – DE-11)	Extractor Exhaust	Date: Time:					

SAMPLE MONTHLY INSPECTION - COAL PROCESSING, COAL HANDLING, AND FLY ASH EQUIPMENT

SOURCES	Inspection Point	Date and Time of Inspection	Observed Conditions C = Clear S = Steam Only V = Coal/Fly Ash/SO2 sorbent/Activated Carbon (if present call shift to stop process or return to no V within 2 hours)	Process In Operation (Yes/No)	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Must be Performed within 2 hours if V is present)	Maintenance Activities Description/ Work Order Number
FLY ASH SOURCES							
51 Fly Ash Bag House	Bag house Exhaust	Date: Time:					
52 Fly Ash Bag House	Bag house Exhaust	Date: Time:			STANDBY		
53 Fly Ash Bag House	Bag house Exhaust	Date: Time:					
61 Fly Ash Bag House	Bag house Exhaust	Date: Time:					

SAMPLE MONTHLY INSPECTION - COAL PROCESSING, COAL HANDLING, AND FLY ASH EQUIPMENT

SOURCES	Inspection Point	Date and Time of Inspection	Observed Conditions C = Clear S = Steam Only V = Coal/Fly Ash/SO2 sorbent/Activated Carbon (if present call shift to stop process or return to no V within 2 hours)	Process In Operation (Yes/No)	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Must be Performed within 2 hours if V is present)	Maintenance Activities Description/ Work Order Number
62 Fly Ash Bag House	Bag house Exhaust	Date: Time:			Stand-by		
63 Fly Ash Bag House	Bag house Exhaust	Date: Time:					
ACTIVATED CARBON							
U-5 PAC Storage Silo	Exhaust Vent	Date: Time:					
U-6 PAC Storage Silo	Exhaust Vent	Date: Time:					

SAMPLE MONTHLY INSPECTION - COAL PROCESSING, COAL HANDLING, AND FLY ASH EQUIPMENT

Operator's Signature: _____ Date: _____

Operator's Signature: _____ Date: _____

Operator's Signature: _____ Date: _____

Supervisor's Signature: _____ Date: _____

APPENDIX D: WEEKLY FUGITIVE DUST INSPECTION LOG

SAMPLE WEEKLY INSPECTION – FLY ASH LOAD OUT EQUIPMENT

Weekly, Fly Ash Processing Sources operation shall be observed and recorded while in use.
If excess emissions are evident, contact the Supervisor to stop the process. The emissions must be stopped within 2 hours or returned to no visible emissions.
All maintenance required is to be noted.

SOURCES	Inspection Point	Date and Time of Inspection	Process in Operation (Yes/No)	Observed Conditions C = Clear S = Steam or water vapor only E= Coal/Combustion Emissions (fly ash or incomplete combustion) B= Both Steam and Coal/Combustion Emissions	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Maintenance is required when there are emissions other than steam- Contact shift to stop process immediately)	Maintenance Activities Description/ Work Order Number
Unit 5 Fly Ash Silo Bin Vent BVF1	Bin Vent Exhaust While Trucks Load Fly Ash	Date: Time:					
Unit 6 Fly Ash Silo Bin Vent BVF2	Bin Vent Exhaust While Trucks Load Fly Ash	Date: Time:					

SAMPLE WEEKLY INSPECTION – FLY ASH LOAD OUT EQUIPMENT

SOURCES	Inspection Point	Date and Time of Inspection	Process In Operation (Yes/No)	Observed Conditions C = Clear S = Steam or water vapor only E= Coal/Combustion Emissions (fly ash or incomplete combustion) B= Both Steam and Coal/Combustion Emissions	Control Equipment in service (IS) or out of service (OOS) (IS/OOS)	Maintenance Required (Maintenance is required when there are emissions other than steam- Contact shift to stop process immediately)	Maintenance Activities Description/ Work Order Number
U5 Fly Ash Unloading Roadway	Roadway While Truck Passes Through	Date: Time:					
U6 Fly Ash Unloading Roadway	Roadway While Truck Passes Through	Date: Time:					

Operator's Signature: _____ Date: _____

Operator's Signature: _____ Date: _____

Operator's Signature: _____ Date: _____

Supervisor's Signature: _____ Date: _____

APPENDIX E: SAMPLE CAR DUMPER DUST COLLECTOR INSPECTION CHECKLIST

DUST COLLECTOR INSPECTED BY _____ DATE _____

Supervisory/Management Signature: _____

Date: _____

INSPECTION ACTIVITY	YES	NO	IF NO, INCLUDE NOTE AND DATE REPAIR ACTIVITY PERFORMED/SCHEDULED
Is overall dust collector operational condition acceptable?			
Is the condition of the dust collector filter/ filter bags acceptable?			
Are the capture ducts properly aligned (or within the recommended alignment) and properly connected to the capture system?			
Is the inlet duct free from any material accumulation?			
Is the fan motor/blower performance (e.g., condition of bearings, level of vibration) acceptable?			
Is the fan belt condition acceptable?			
Is the condition of the dust chamber acceptable (e.g., no excessive buildup/accumulation)?			
Is there an adequate inventory of spare parts on hand, including replacement filter elements?			

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Petitioner’s Hearing Exhibit T

Illinois

Ambient Air Monitoring

2022 Network Plan

Illinois Environmental Protection Agency

Bureau of Air

June 2021

Table of Contents

Acronyms

AQI	Air Quality Index
AQS	Air Quality System
BAM	Beta Attenuation Monitor
CAA	Clean Air Act
CASTNET	Clean Air Status and Trends Network
CCDES	Cook County Department of Environment and Sustainability
CFR	Code of Federal Regulations
CO	Carbon Monoxide
FEM	Federal Equivalent Method
FRM	Federal Reference Method
GECC	Gateway Energy & Coke Company
IEPA or Illinois EPA	Illinois Environmental Protection Agency
IMPROVE	Interagency Monitoring of Protected Visual Environments
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NCore	National Core multi-pollutant station
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NO_y	Total Reactive Nitrogen Oxides
NPS	National Park Service
O_3	Ozone
PAMS	Photochemical Assessment Monitoring Station
Pb	Lead
$PM_{2.5}$	Particulate matter with a diameter less than or equal to 2.5 micrometers
PM_{10}	Particulate matter with a diameter less than or equal to 10 micrometers
$PM_{10\text{-}2.5}$	Particulate matter with a diameter less than or equal to 10 micrometers and greater than or equal to 2.5 micrometers
ppb	Parts per billion
ppm	Parts per million
PWEI	Population Weighted Emissions Index
QA	Quality Assurance
SASS	Speciation Air Sampling System
SLAMS	State or Local Air Monitoring Station
SO_2	Sulfur Dioxide
SPM	Special Purpose Monitor
STN	Speciation Trends Network
SWS	State Water Survey
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UV	Ultraviolet
VOC	Volatile Organic Compounds

Introduction

In 1970, Congress enacted the Clean Air Act (CAA), empowering the United States Environmental Protection Agency (USEPA) to develop and implement National Ambient Air Quality Standards (NAAQS) for pollutants shown to threaten human health.

NAAQS exist for six criteria pollutants – carbon monoxide (CO), ozone (O_3), lead (Pb), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with a diameter less than or equal to 10 micrometers (PM_{10}), and fine particulate matter ($PM_{2.5}$). There are primary and secondary NAAQS. Primary standards protect public health, whereas secondary standards protect public welfare including the environment.

A predominant goal of the air monitors within Illinois' network is to collect data with which to assess compliance with the NAAQS. A listing of these NAAQS calculations and contributions can be found at https://www.epa.gov/criteria-air-pollutants/naaqs-table.

Illinois has designed its ambient air monitoring network to provide timely air pollution data to the public, support compliance with ambient air quality standards and emissions strategy development, and support air pollution research studies. Data gathered from the Illinois EPA's monitoring network is used to produce a daily Air Quality Index (AQI) report, compile daily air quality forecast reports, support short- and long-term health risk assessments, identify localized health concerns, and track long-term trends in air quality that could potentially threaten Illinois citizen's quality of life.

The Illinois air monitoring network includes monitors for the seven criteria pollutants: CO, O_3, Pb, NO_2, SO_2, PM_{10}, and $PM_{2.5}$. The Illinois air monitoring network meets or, in most cases, exceeds the applicable minimum network requirements.

Monitor siting takes into consideration: peak (the highest concentration of pollution in a given area), population (presence of pollutants in areas with high population densities), source (pollution resulting from significant sources or source categories), background (general pollutant levels), and transport (extent of regional pollutant transport between populated areas). Federal regulations prescribe requirements for monitor and probe siting to ensure that the ambient air quality data is accurately representative. The criteria for the placement and operation of each monitor and probe vary. Site surveys ensure that each requirement is satisfied.

Federal regulations require each State to submit to USEPA an air monitoring network plan annually for the prospective year. Additionally, a five-year network assessment must be completed by USEPA Region 5 monitoring organizations. The last five-year network assessment was completed in 2020 and found the criteria pollutant monitoring network was adequate in meeting USEPA's minimum criteria. The next network assessment will be completed in 2025. The annual network plans take into consideration findings of these assessments. The annual network plan provides a description of the monitoring network for each criteria pollutant including proposed changes. The air monitoring network plan is subject to public review and comment prior to its submission to the USEPA.

Monitoring Designations

The following designations describe the various types of monitors at the sites within Illinois' air monitoring network:

- **NCore** - National Core multi-pollutant monitoring station. Illinois is required by federal regulations to operate one NCore site, which includes monitors for CO, nitric oxide/reactive nitrogen (NO/NO_y), SO_2, O_3, PM_{10}, speciated $PM_{2.5}$, $PM_{2.5}$, $PM_{10\text{-}2.5}$, wind speed, wind direction, relative humidity, and ambient temperature. Illinois operates an NCore site in Northbrook and provides support for the federal rural NCore site located in Bondville measuring $PM_{2.5}$.
- **Near-road** - Placed near busy roadways, near-road sites measure hourly concentrations of NO_2 and sometimes CO or $PM_{2.5}$ in urban areas. Illinois EPA operates two near-road locations, one in Chicago and one in Lansing. The Lansing near-road location began operating off the Kingery Expressway on March 1, 2019. The Chicago near-road location, along the Kennedy Expressway, began operating July 26, 2019.
- **PAMS** - Photochemical Assessment Monitoring Station. In addition to monitoring of criteria pollutants, Illinois also participates in a regional Photochemical Assessment Monitoring Station (PAMS) network in the Chicago area that is part of the USEPA approved "Alternate Plan for the Regional Lake Michigan PAMS Network." This regional PAMS network focuses on both the Milwaukee and Chicago areas that are classified as ozone nonattainment areas. These sites are dedicated to obtaining more information about ozone and its precursors. The Illinois sites participating in the 2022 regional PAMS network will include enhanced monitoring in Schiller Park as well as regulatorily-required monitoring in Northbrook. Illinois' regional PAMS sites will collect and monitor some or all of the following: speciated volatile organic compounds (VOCs), carbonyls, NO_2, NO/NO_y, O_3, CO, and meteorological data in order to monitor potential threats of nonattainment.
- **SLAMS** - State or Local Ambient Monitoring Station. SLAMS monitoring is for comparison to the NAAQS.
- **SPM** - Special Purpose Monitor. The monitors in this category are included in the Agency network but do not apply toward the determination of area NAAQS compliance.

Siting and operation, including collocation requirements, of each monitor meets the requirements of Part 58 Appendices A, B, C, D, and E.

Monitoring Objectives

Monitoring objectives describe the various purposes of the monitors within Illinois' air monitoring network:

- **General Concentration (Background)** - These sites are positioned to measure the general background concentration of pollutants in an area.
- **Highest Concentration (Highest Conc.)-** These sites are located to determine the expected peak concentrations of pollutants in an area.

- **Population** - Located in areas categorized by high population density, these sites are used to determine the typical pollutant concentrations in a specific area.
- **Regional Transport (Transport)** - These sites are located to monitor the level of regional pollution transport from one area to the next.
- **Source-Oriented Source (Source)** - As certain sources contribute to pollution more significantly than others, source-oriented monitors are placed in order to identify the impact of these sources.

Spatial Scale Designations

Sites are not only characterized by type and by the objective, but also according to spatial scale. These scales are used to categorize siting areas and link them with the specific monitoring objectives. Spatial scales as outlined by the USEPA include:

- **Micro** - Concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
- **Middle** - Concentrations typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometer.
- **Neighborhood** - Concentrations within some extended area of the city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers range.
- **Urban** - Overall, citywide conditions with dimensions on the order of four to 50 kilometers.
- **Regional** - A rural area of reasonably homogenous geography without large sources, extending from tens to hundreds of kilometers.

Sampling Methodology

Every ambient air monitor can be classified by a specific method number which identifies sample collection and analysis methods. A comprehensive list of these numbers can be found at: https://www.epa.gov/aqs/aqs-code-list.

Federal regulations specify that monitoring methods used for comparison to the NAAQS must be Federal Reference or Equivalent Methods (FRM or FEM). Almost all monitors listed in Illinois' network plan use either FRM or FEM with only a few exceptions. Locations hosting continuous $PM_{2.5}$ samplers solely for AQI purposes are not operated as FRM or FEM.

Quality Assurance

Guidance, policies, and federal regulations establish quality system requirements for data submitted to USEPA. Currently, there are two Primary Quality Assurance Organizations under this network plan – the Illinois EPA and the Cook County Department of Environment and Sustainability (CCDES).

Proposed Network for 2022

Ozone

Illinois is required to operate a minimum of 14 O_3 monitoring sites across the state to meet SLAMS O_3 requirements. NCore requires the operation of one O_3 monitor year-round. Additionally, 19 other O_3 monitors are operated for purposes of supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, enhanced monitoring, and supporting air pollution research studies. In 2021, Illinois operated 33 O_3 monitors. Additionally, USEPA operated three ozone monitors as part of the Clean Air Status and Trends Network (CASTNET). The number of ozone monitors will not change in 2022.

Discussions are currently ongoing with the property owner of the Maryville ozone monitoring location. The property owner has indicated construction will take place in the area of the current monitoring trailer. It is not yet known whether the property owner will allow the trailer to be moved elsewhere at the current location or whether a new location will need to be established.

Fine Particulate Matter ($PM_{2.5}$)

Illinois is required to operate a minimum of 13 FRM or FEM $PM_{2.5}$ monitors. NCore requires one continuous and one filter based $PM_{2.5}$ monitor. One near-road monitoring site with one FRM or FEM $PM_{2.5}$ monitor is also required. Illinois must operate at least one FRM or FEM $PM_{2.5}$ site monitoring regional background and at least one FRM or FEM $PM_{2.5}$ site to monitor regional transport. Additionally, 18 other $PM_{2.5}$ monitoring sites are operated for purposes of supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. Depending on funding availability, monitoring site logistics, and manufacturer repair status, additional primary designated $PM_{2.5}$ monitors will be switched from manual filter-based FRM monitors to continuous FEM monitors. As of May 2021, monitors that have FEM continuous units include Bondville, Braidwood, Decatur, Des Plaines, Houston, Jerseyville, Joliet, Knight Prairie, Lansing near-road, Naperville, Normal, Northbrook, Peoria, Rock Island, Rockford, and Springfield. The sites that currently are planned to have FEM monitors between 2021 and 2022 are listed in Table 3.

Illinois EPA initially planned to install new $PM_{2.5}$ FEM monitors at several locations starting in 2020. After delays caused by Covid, Illinois EPA now plans to begin this work in 2021. Some of these new monitors will replace existing FEM monitors while others will replace FRM monitors. Illinois EPA is currently focusing on discontinuing aging Anderson single event monitors (method code 153) as well as removing problematic Thermo 5014i continuous FEM monitors (method code 183). At sites where monitors will be changed, Teledyne T640s (method code 236) will be used. The first round of changes in 2021 includes replacing the Thermo 5014i FEM monitors at Braidwood, Joliet, Knight Prairie, Lansing near-road, Naperville, Northbrook, Rock Island, and Rockford. The Agency is also planning on converting FRM monitors to FEM monitors at Cary and Alton. At Cary, this will allow the removal of the FRM Anderson and BAM monitors. At Alton, the FRM BGIs will be moved to Aurora which will allow aging Andersons to be removed from the network and eliminate collocation requirements for that method. Illinois EPA plans to replace additional Thermo 5014i monitors after the next round of

purchasing in 2021 and 2022. The next round of 2021 and 2022 changes in monitoring methods include switching the Thermo 5014i continuous FEM monitors with Teledyne T640 continuous FEM monitors at the following locations: Decatur, Des Plaines, East St. Louis, Houston, Jerseyville, Normal, Peoria, Springfield, and Wood River. Champaign is also planned to be switched to a T640 when a suitable replacement site is found.

A new monitoring location was established in 2020 in Alton at the Horace Mann Elementary School, 2708 Edwards Street, measuring ozone. This location is approximately two blocks from the existing $PM_{2.5}$ location at the SIU Dental Clinic, 1700 Annex Street. Illinois EPA requested and was approved by USEPA for site relocation and consolidation of the $PM_{2.5}$ monitoring equipment to the new location at Horace Mann Elementary School.

Due to roof construction at the Northbrook NCore location in 2020, all particulate samplers were moved to a lower level roof at the water plant. The samplers change in location was approximately 80 feet to the northeast from the former location.

In 2021, 34 $PM_{2.5}$ sites were operating in Illinois. In 2022, the number of $PM_{2.5}$ sites will not change.

Sulfur Dioxide

Illinois is required to operate six SO_2 monitors. One SO_2 monitor is required at each of the Northbrook and Bondville NCore sites to fulfill NCore requirements. The Illinois State Water Survey operates the Bondville SO_2 monitor. Additionally, five SO_2 monitoring sites are operated in Illinois' network supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. SO_2 data requirements established by USEPA require either modeling or monitoring to characterize current air quality in areas with large sources of SO_2 (40 CFR 51 Subpart BB). Tate & Lyle are contracting with Environmental Resources Management, Inc. operating two SO_2 monitors under this rule.

A total of 12 SO_2 monitors were operated in Illinois in 2021. In 2022, the number of SO_2 sites will remain at twelve.

Nitrogen Dioxide

Illinois is required to operate two near-road NO_2 monitors. In addition to area-wide monitors, federal regulations require the Regional Administrator to collaborate with each State in determining the need for additional NO_2 monitoring requirements beyond the minimum, with a primary focus on siting monitors in locations to protect susceptible and vulnerable populations. In Illinois, two NO_2 monitoring sites are designated, East St. Louis and ComEd, as susceptible and vulnerable population monitoring sites. Illinois operates one NO/NO_y monitor in Northbrook. Additionally, the Illinois State Water Survey operates an NO/NO_y monitor at the rural NCore site in Bondville.

During the spring of 2021, Illinois EPA will install a direct measure NO_2 monitor at the NCore site in Northbrook to meet new Photochemical Assessment Monitoring Station requirements. This monitor will be installed before the June 1, 2021, required start date.

In 2021, the monitoring network consisted of eight NO_2 monitoring sites. Two NO/NO_y monitors will continue to be operated by Illinois EPA and the State Water Survey. In 2022, the number of NO_2 sites will remain at eight.

Carbon Monoxide

Illinois must operate one CO monitor in conjunction with one near-road NO_2 monitor. In addition, it must operate one CO monitor at NCore sites, Northbrook and Bondville. (The Illinois State Water Survey operates the Bondville CO monitor at the rural NCore site.) An additional CO monitoring site is operated in Illinois' network supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. In 2021, three CO monitors were in operation. The number of CO monitors will not change in 2022.

Particulate Matter (PM_{10})

Illinois must operate three PM_{10} monitors to satisfy MSA requirements. One PM_{10} monitor must also be operated for NCore purposes. Additionally, Illinois operates one $PM_{10-2.5}$ (PM coarse) monitor at the Northbrook location to fulfill NCore requirements. The National Park Service operates one PM_{10} monitor at the Bondville NCore location. In 2021, Illinois EPA operated a total of four PM_{10} monitoring sites. In 2022, Illinois EPA will continue to operate four PM_{10} monitors and one $PM_{10-2.5}$ monitor.

Lead

Illinois is required to operate source-oriented monitors near facilities emitting 0.5 tons/year of lead that also have maximum lead concentrations in ambient air in excess of 50 percent of the NAAQS unless a waiver for that site has been approved. Lead monitoring waivers are currently in place with USEPA for Kincaid Generation Power Plant, Keystone Steel & Wire Corporation, Sterling Steel Corporation, Gateway Energy and Coke Company, and Gunite Corporation. The waivers were approved by USEPA in 2017 for Kincaid, in 2018 for Keystone Steel, Sterling Steel, and Gunite, and in 2020 for Gateway Energy and Coke Company. Waivers must be renewed every five years. Modeling and/or monitoring results for these facilities demonstrated that they do not have the potential to contribute to a maximum lead concentration greater than 50 percent of the NAAQS.

In 2021, Olin Corporation began operating a special purpose lead monitor in Alton measuring lead concentrations at its facility for a period of at least one year. With the addition of the Alton lead monitor, the number of lead sites will increase from three to four. In 2022, Illinois EPA will continue to operate four lead monitors.

Photochemical Assessment Monitoring

Illinois is required to collect and report additional PAMS measurements at the Northbrook monitoring location by June 1, 2021. At a minimum, Illinois plans to add to the existing PAMS measurements the following items:

Hourly average speciated volatile organic compounds, three eight-hour carbonyls samples on a one-in-three day schedule, true nitrogen dioxide, hourly precipitation, and averaged mixing height. In addition, new solar radiation and ultraviolet radiation sensors will be procured. Illinois plans to run these additional items during the months of June, July, and August.

Table 1: Illinois Monitoring Network by Criteria Pollutant

AQS ID	County	City	Address	Site Description	Owner	CO	NO_2	NOy	SO_2	O_3	PM_{10} / Coarse	$PM_{2.5}$	Pb
17-001-0007	Adams	Quincy	1301 S. 48th St	John Wood Community College	IEPA					X			
17-019-0006	Champaign	Champaign	904 N. Walnut	Ameren Substation Platform	IEPA							X	
17-019-0007	Champaign	Thomasboro	North Thomas St.	Resident's Building	IEPA					X			
17-019-1001	Champaign	Bondville	Twp. Rd. 500 E.	State Water Survey Climate Station	SWS	X		X	X				
17-019-1001	Champaign	Bondville	Twp. Rd. 500 E.	State Water Survey Climate Station	IEPA							X	
17-019-1001	Champaign	Bondville	Twp. Rd. 500 E.	CASTNET Station	USEPA					X			
17-019-1001	Champaign	Bondville	Twp. Rd. 500 E.	IMPROVE Station	NPS						PM_{10} / Coarse		
17-031-0001	Cook	Alsip	4500 W. 123rd St.	Village Garage	CCDES					X		X	
17-031-0022	Cook	Chicago	3535 E. 114th St	Washington High School	CCDES						X	X	X
17-031-0032	Cook	Chicago	3300 E. Cheltenham Pl.	South Water Filtration Plant	CCDES					X			
17-031-0052	Cook	Chicago	4850 Wilson Ave.	Mayfair Pump Station	CCDES							X	
17-031-0057	Cook	Chicago	1745 N. Springfield Ave.	Springfield Pump Station	CCDES							X	
17-031-0076	Cook	Chicago	7801 Lawndale	Com Ed Maintenance Bldg. Trailer	CCDES		X		X	X		X	
17-031-0110	Cook	Chicago	1241 19th St.	Perez Elementary School	CCDES								X
17-031-1003	Cook	Chicago	6545 W. Hurlbut St.	Taft High School	CCDES					X			
17-031-0119	Cook	Lansing	Kingery Expy & Torrence Ave.	Kingery Near-road #1	IEPA	X	X					X	
17-031-0219	Cook	Chicago	Kennedy Expy & W. Webster Ave.	Kennedy Near-road #2	IEPA		X						
17-031-1016	Cook	Lyons Township	50th St. & Glencoe	Village Hall	IEPA						X	X	

AQS ID	County	City	Address	Site Description	Owner	CO	NO_2	NOy	SO_2	O_3	PM_{10} / Coarse	$PM_{2.5}$	Pb
17-031-1601	Cook	Lemont	729 Houston	Lemont Trailer	CCDES				X	X			
17-031-3103	Cook	Schiller Park	4743 Mannheim Rd.	Schiller Park Trailer	IEPA		X			X		X	
17-031-3301	Cook	Summit	60th St. & 74th Ave.	Graves Elementary School	CCDES							X	
17-031-4002	Cook	Cicero	1820 S. 51st Ave.	Cicero Trailer	CCDES		X			X			
17-031-4007	Cook	Des Plaines	9511 W. Harrison St.	Regional Office Bldg.	IEPA					X		X	
17-031-4201	Cook	Northbrook	750 Dundee Rd.	Northbrook Water Plant	IEPA	X	X	X	X	X	Coarse	X	
17-031-6005	Cook	Cicero	13th St. & 50th Ave.	Liberty School	CCDES							X	
17-031-7002	Cook	Evanston	531 E. Lincoln	Evanston Water Plant	IEPA					X			
17-043-4002	DuPage	Naperville	400 S. Eagle St.	City Hall	IEPA							X	
17-043-6001	DuPage	Lisle	Route 53	Morton Arboretum	IEPA					X			
17-049-1001	Effingham	Effingham	10421 N. US Hwy. 45	Central Grade School	IEPA					X			
17-065-0002	Hamilton	Knight Prairie Twp	Route 14	Knight Prairie Trailer	IEPA					X		X	
17-083-0117	Jersey	Jerseyville	21965 Maple Summit Rd.	Jerseyville Trailer	IEPA					X		X	
17-085-9991	Jo Daviess	Stockton	10952 E. Parker Rd.	CASTNET Station	USEPA					X			
17-089-0003	Kane	Elgin	258 Lovell St.	McKinley School	IEPA							X	
17-089-0005	Kane	Elgin	665 Dundee Rd.	Larsen Junior High School	IEPA					X			
17-089-0007	Kane	Aurora	1240 N. Highland	Health Department	IEPA							X	
17-097-1007	Lake	Zion	Illinois Beach State Park	Zion Trailer	IEPA					X			
17-099-0007	La Salle	Oglesby	308 Portland Ave.	Oglesby Trailer	IEPA				X				

AQS ID	County	City	Address	Site Description	Owner	CO	NO_2	NOy	SO_2	O_3	PM_{10} / Coarse	$PM_{2.5}$	Pb
17-111-0001	McHenry	Cary	First St. & Three Oaks Rd.	Cary Grove High School	IEPA					X		X	
17-113-2003	McLean	Normal	Main & Gregory	Normal-ISU Physical Plant Trailer	IEPA					X		X	
17-115-0013	Macon	Decatur	2200 N. 22nd St.	Decatur Trailer	IEPA				X	X		X	
17-115-0217	Macon	Decatur	Folk & E. Marietta Sts.	Tate & Lyle Northwest	ERM Inc.				X				
17-115-0317	Macon	Decatur	El Dorado St.	Tate & Lyle Southeast	ERM Inc.				X				
17-117-0002	Macoupin	Nilwood	Heaton & Dubois	Nilwood Trailer	IEPA		X		X	X			
17-119-0120	Madison	Alton	2708 Edwards St.	Horace Mann School	IEPA					X		X	
17-119-0121	Madison	Alton	Powder Mill Rd.	Olin Corporation	IEPA								X
17-119-0010	Madison	Granite City	15th & Madison	Air Products	IEPA								X
17-119-0024	Madison	Granite City	2100 Madison	Gateway Medical Center	IEPA							X	
17-119-1007	Madison	Granite City	23rd. & Madison	Fire Station # 1	IEPA						X	X	
17-119-1009	Madison	Maryville	200 W. Division	Maryville Trailer.	IEPA					X			
17-119-3007	Madison	Wood River	54 N. Walcott	Wood River Water Treatment Plant	IEPA				X	X		X	
17-119-9991	Madison	Highland	5403 State Rd. 160	CASTNET Station	USEPA					X			
17-143-0024	Peoria	Peoria	Hurlburt & MacArthur	Fire Station #8	IEPA					X			
17-143-0037	Peoria	Peoria	613 N.E. Jefferson	City Office Bldg.	IEPA							X	
17-143-1001	Peoria	Peoria Heights	508 E. Glen Ave.	Peoria Heights High School	IEPA					X			
17-157-0001	Randolph	Houston	Hickory Grove & Fallview	Houston Trailer	IEPA					X		X	
17-161-3002	Rock Island	Rock Island	32 Rodman Ave.	Rock Island Arsenal	IEPA					X		X	

AQS ID	County	City	Address	Site Description	Owner	CO	NO_2	NOy	SO_2	O_3	PM_{10} / Coarse	$PM_{2.5}$	Pb
17-163-0010	St. Clair	East St. Louis	13th & Tudor	ESTL Trailer	IEPA		X		X	X		X	
17-167-0012	Sangamon	Springfield	State Fair Grounds	Agriculture Bldg.	IEPA							X	
17-167-0014	Sangamon	Springfield	Illinois Building	State Fairgrounds Shelter	IEPA					X			
17-179-0004	Tazewell	Pekin	272 Derby	Pekin Fire Station #3	IEPA				X				
17-197-1002	Will	Joliet	Midland & Campbell Sts.	Pershing Elementary School	IEPA							X	
17-197-1011	Will	Braidwood	36400 S. Essex Rd.	Com Ed Training Ctr. Trailer	IEPA					X		X	
17-201-0118	Winnebago	Rockford	204 South 1st St.	Fire Department Admin. Bldg.	IEPA							X	
17-201-2001	Winnebago	Loves Park	1405 Maple Ave.	Maple Elementary School	IEPA					X			
					IEPA	2	6	1	7	27	3	27	2
					CCDES	0	2	0	2	6	1	7	2
					NPS/SWS	1	0	1	1	0	1	0	0
					ERM Inc.	0	0	0	2	0	0	0	0
					USEPA	0	0	0	0	3	0	0	0
					Total	3	8	2	12	36	5	34	4

Red indicates monitor/site proposed for removal or has been removed, Green indicates monitor/site proposed for installation or has been installed.

Table 2: Ozone Sites

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-001-0007	Quincy	+39.91540937 -91.33586832	Quincy, IL-MO	Population	Highest Conc.	Urban	SLAMS	T400	Hourly/S
17-019-0007	Thomasboro	+40.244913 -88.188519	Champaign-Urbana, IL	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-019-1001	Bondville	+40.052780 -88.372510	Champaign-Urbana, IL	Highest Conc.	N/A	Regional	NCORE	49i	Hourly/Y
17-031-0001	Alsip	+41.6709919 -87.7324569	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-031-0032	South Water Filtration Plant	+41.75583241 -87.54534967	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Population	Neighborhood	SLAMS	T400	Hourly/S
17-031-0076	Com Ed.	+41.75139998 -87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	Ecotech 187	Hourly/S
17-031-1003	Taft High School	+41.98433233 -87.7920017	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-031-1601	Lemont	+41.66812034 -87.99056969	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	Ecotech 187	Hourly/S
17-031-3103	Schiller Park	+41.96519348 -87.87626473	Chicago-Naperville-Michigan City, IL-IN-WI	Population	Source	Neighborhood	PAMS/SLAMS	49i	Hourly/S
17-031-4002	Cicero	+41.85524313 -87.7524697	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	SLAMS	Ecotech 187	Hourly/S
17-031-4007	Des Plaines	+42.06028469 -87.86322543	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	NA	Urban	PAMS/NCORE	49i	Hourly/Y
17-031-7002	Evanston	+42.062053 -87.675254	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	SLAMS	T400	Hourly/S
17-043-6001	Lisle	+41.81304939 -88.0728269	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-049-1001	Effingham	+39.06715932 -88.54893401	Effingham, IL	Population	N/A	Regional	SLAMS	T400	Hourly/S
17-065-0002	Knight Prairie	+38.08215516 -88.6249434	Mt Vernon, IL	Background	N/A	Regional	SLAMS	T400	Hourly/S
17-083-0117	Jerseyville	+39.101439 -90.344494	St Louis, IL-MO	Transport	Population	Regional	SLAMS	T400	Hourly/S
17-085-9991	Stockton	+42.2869 -89.9997	Stockton, IL	Highest Conc.	N/A	Regional	SLAMS	49i	Hourly/S
17-089-0005	Elgin	+42.04914776 -88.27302929	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-097-1007	Zion	+42.4675733 -87.81004705	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Transport	Urban	PAMS/SLAMS	T400	Hourly/S
17-111-0001	Cary	+42.22144166 -88.24220734	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T400	Hourly/S

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-113-2003	Normal	+40.51873537 -88.99689571	Bloomington-Normal, IL	Population	Highest Conc.	Urban	SLAMS	T400	Hourly/S
17-115-0013	Decatur	+39.866933 -88.925452	Decatur, IL	Population	Highest Conc.	Urban	SLAMS	49i	Hourly/S
17-117-0002	Nilwood	+39.39607533 -89.80973892	St Louis, IL-MO	Transport	Population	Regional	SLAMS	49i	Hourly/S
17-119-1009	Maryville	+38.72657262 -89.95996251	St Louis, IL-MO	Population	N/A	Urban	SLAMS	T400	Hourly/S
17-119-0120	Alton	+38.901316 -90.146211	St Louis, IL-MO	Highest Conc.	Population	Urban	SLAMS	T400	Hourly/S
17-119-3007	Wood River	+38.86066947 -90.10585111	St Louis, IL-MO	Population	N/A	Urban	SLAMS	49i	Hourly/S
17-119-9991	Highland	+38.8690 -89.6228	St Louis, IL-MO	Highest Conc.	N/A	Regional	SLAMS	49i	Hourly/S
17-143-0024	Peoria	+40.68742038 -89.60694277	Peoria, IL	Population	N/A	Neighborhood	SLAMS	T400	Hourly/S
17-143-1001	Peoria Heights	+40.74550393 -89.58586902	Peoria, IL	Highest Conc.	Population	Urban	SLAMS	T400	Hourly/S
17-157-0001	Houston	+38.17627761 -89.78845862	N/A	Background	N/A	Regional	SLAMS	T400	Hourly/S
17-161-3002	Rock Island	+41.51472697 -90.51735026	Davenport-Moline-Rock Island, IA-IL	Population	Highest Conc.	Neighborhood	SLAMS	T400	Hourly/S
17-163-0010	East St. Louis	+38.61203448 -90.16047663	St Louis, IL-MO	Population	N/A	Neighborhood	SLAMS	49i	Hourly/S
17-167-0014	Springfield	+39.831522 -89.640926	Springfield, IL	Population	Highest Conc.	Urban	SLAMS	T400	Hourly/S
17-197-1011	Braidwood	+41.22153707 -88.19096718	Chicago-Naperville-Michigan City, IL-IN-WI	Background	N/A	Regional	PAMS/SLAMS	T400	Hourly/S
17-201-2001	Loves Park	+42.33498222 -89.0377748	Rockford, IL	Highest Conc.	Population	Urban	SLAMS	T400	Hourly/S

T400 – Teledyne (method 087); 49i – ThermoScientific (method 047), Ecotech 187 – Ecotech Serinus 10 (method 187)

S = Seasonal – March through October ozone monitoring season

Y = Year-round monitoring

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 2a: Ozone Sites – Illinois

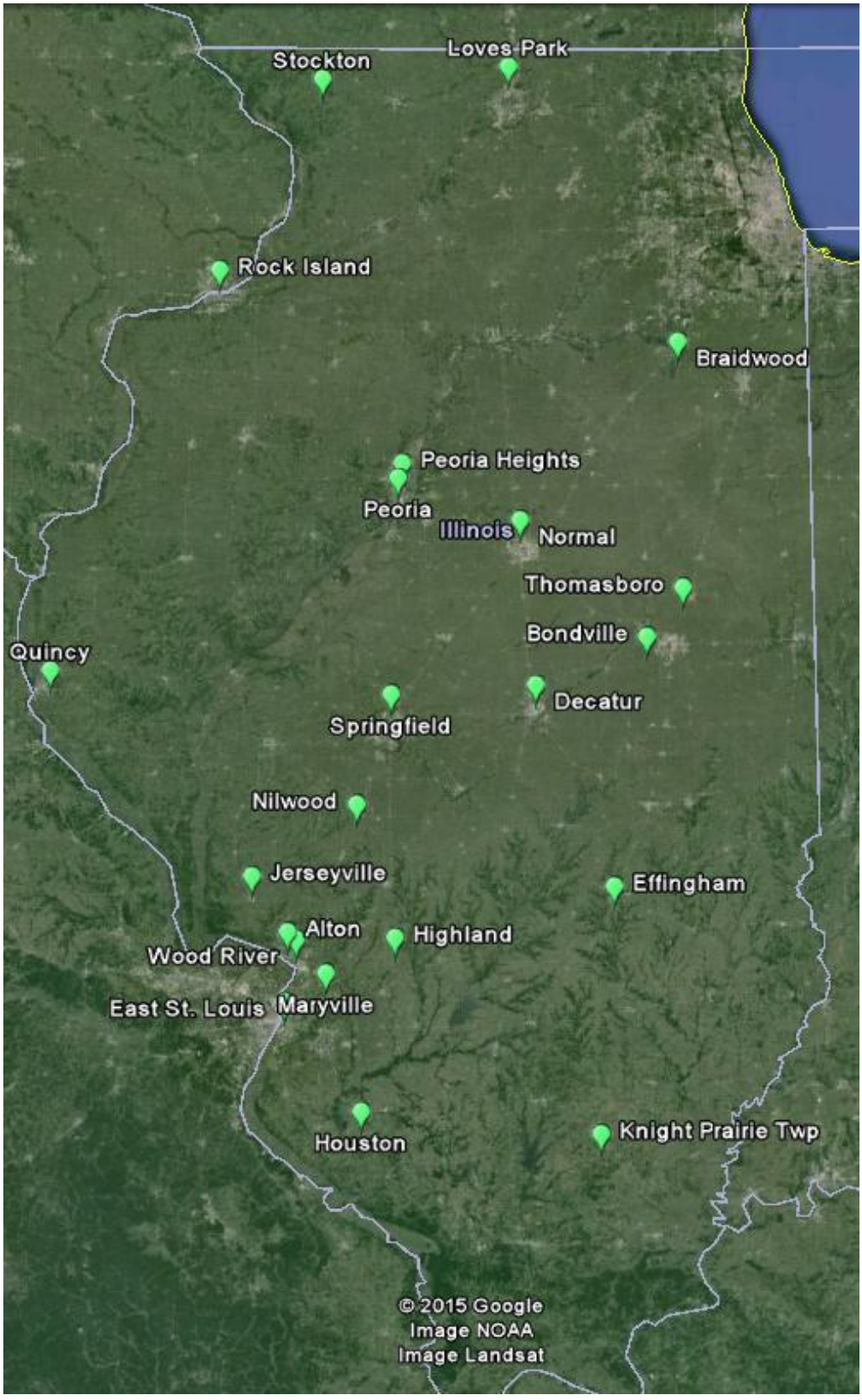


Figure 2b: Ozone Sites – Illinois Chicago Area

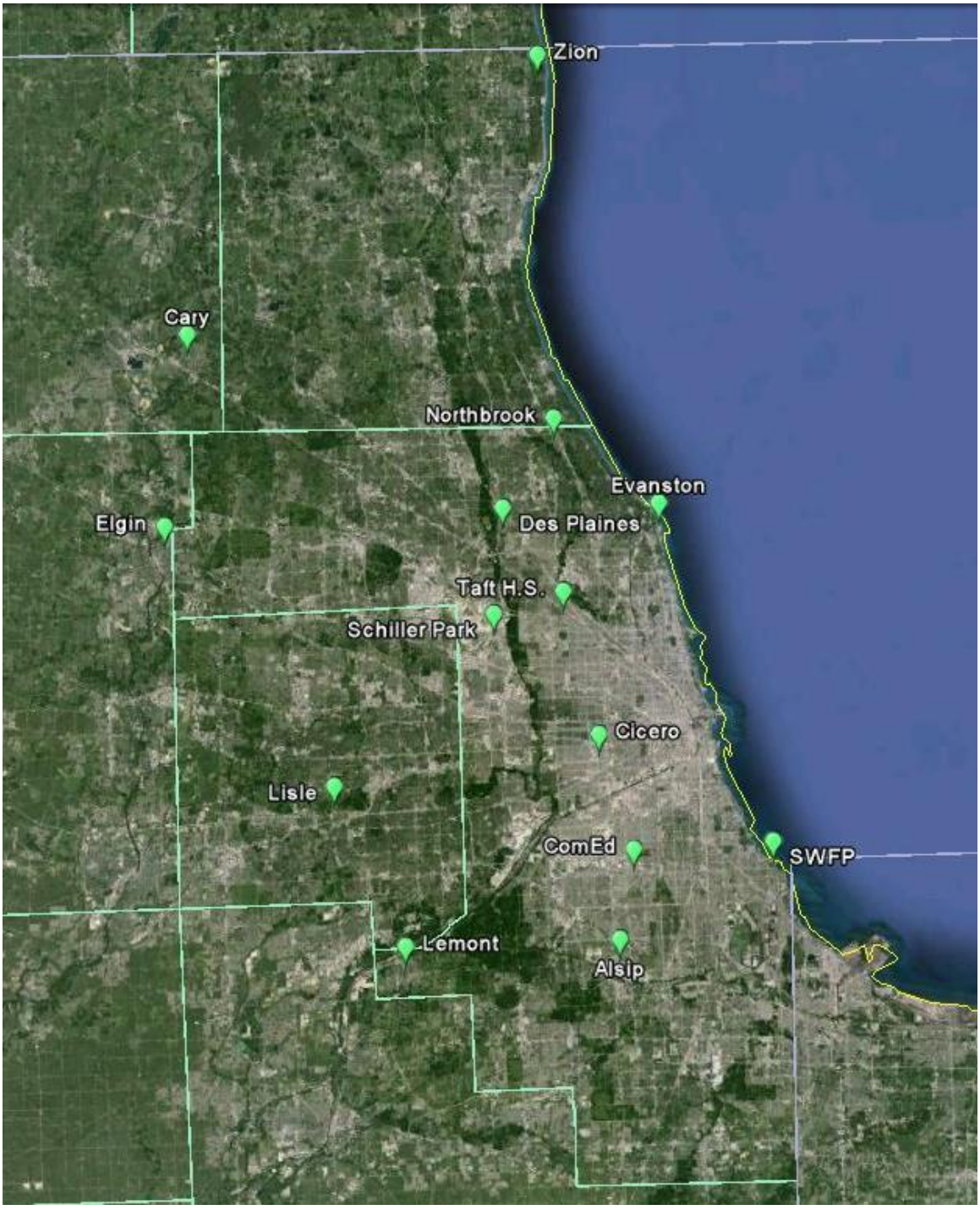


Table 3: $PM_{2.5}$ Sites

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-019-0006	Champaign	+40.123883 -88.240550	Champaign-Urbana, IL	Population	N/A	Neighborhood	Annual/24	SLAMS	FEM Teledyne	1/3			
17-019-1001	Bondville	+40.052780 -88.372510	Champaign-Urbana, IL	Transport	Population	Regional	Annual/24	RURAL NCORE	BGI	1/3, Hourly	FEM Thermo	YES	1/3
17-031-0001	Alsip	+41.6709919 -87.7324569	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS, SPM	Met One, BAM	1/6, Hourly			
17-031-0022	Washington High School	+41.68716544 -87.53931548	Chicago-Naperville-Michigan City, IL-IN-WI	Population	Source	Neighborhood	Annual/24	SLAMS	AS	1/3	AS (1/12 day)		
17-031-0052	Mayfair Pump Station	+41.96548483 -87.74992806	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Population	Neighborhood	Annual/24	SLAMS	Met One	1/3			

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-031-0057	Springfield Pump Station	+41.912739 -87.722673	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS, SPM	Met One, BAM	1/6, Hourly		YES	1/6
17-031-0076	Com Ed	+41.75139998 -87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS, SPM	Met One, BAM	1/6, Hourly		YES	1/3
17-031-1016	Lyons Township	+41.801180 -87.832349	Chicago-Naperville-Michigan City, IL-IN-WI	Source	Population	Middle	24	SLAMS	THRM	1/3	THRM (1/12 day)		
17-031-3103	Schiller Park	+41.96519348 -87.87626473	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Population	Middle	Annual/24	SLAMS	BGI	1/3			
17-031-3301	Summit	+41.78276601 -87.80537679	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS	Met One	1/3	Met One (1/12 day)		
17-031-4007	Des Plaines	+42.06028469 -87.86322543	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	Hourly			

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	URBAN NCORE	FEM Teledyne	1/3, H	THRM (1/12 day)	YES	1/3
17-031-6005	Cicero	+41.86442642 -87.74890238	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS, SPM	AS, BAM	1/6, H			
17-031-0119	Lansing Kingery near-road #1	+41.578603 -87.557392	Kingery high traffic near-road segment	Highest Conc.	N/A	Micro	Annual/24	SLAMS	FEM Teledyne	H			
17-043-4002	Naperville	+41.77107094 -88.15253365	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			
17-065-0002	Knight Prairie	+38.08215516 -88.6249434	Mt Vernon, IL	Background	Population	Regional	Annual/24	SLAMS	FEM Teledyne	H			
17-083-0117	Jerseyville	+39.101439 -90.344494	St Louis, IL-MO	Population	Transport	Urban	Annual/24	SLAMS	FEM Teledyne	H			
17-089-0003	Elgin	+42.050403 -88.28001471	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	BGI	1/3			
17-089-0007	Aurora	+41.78471651 -88.32937361	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	BGI	1/6			
17-111-0001	Cary	+42.22144166 -88.24220734	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-113-2003	Normal	+40.51873537 -88.99689571	Bloomington-Normal, IL	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H	FEM Teledyne		
17-115-0013	Decatur	+39.86683389 -88.92559445	Decatur, IL	Population	Source	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-119-0024	Granite City Gateway	+38.7006315 -90.14476267	St Louis, IL-MO	Source	Population	Middle	24	SLAMS, SPM	BGI	1/3		YES	1/6
17-119-1007	Granite City	+38.70453426 -90.13967484	St Louis, IL-MO	Highest Conc.	Population	Neighborhood	Annual/24	SLAMS, SPM	BGI, BAM	1/6, H	BGI (1/12 day)		
17-119-0120	Alton	+38.901316 -90.146211	St Louis, IL-MO	Population	N/A	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-119-3007	Wood River	+38.86066947 -90.10585111	St Louis, IL-MO	Population	N/A	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-143-0037	Peoria	+40.697007 -89.58473722	Peoria, IL	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			
17-157-0001	Houston	+38.17627761 -89.78845862	N/A	Background	Population	Regional	Annual/24	SLAMS	FEM Teledyne	H			
17-161-3002	Rock Island	+41.51472697 -90.51735026	Davenport-Moline-Rock Island, IA-IL	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Standard	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated	Chemical Speciation	Frequency
17-163-0010	East St. Louis	+38.61203448 -90.16047663	St Louis, IL-MO	Population	Source	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-167-0012	Springfield	+39.83192087 -89.64416359	Springfield, IL	Population	N/A	Urban	Annual/24	SLAMS	FEM Teledyne	H			
17-197-1002	Joliet	+41.52688509 -88.11647381	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	SLAMS	FEM Teledyne	H			
17-197-1011	Braidwood	+41.22153707 -88.19096718	Chicago-Naperville-Michigan City, IL-IN-WI	Background	Population	Regional	Annual/24	SLAMS	FEM Teledyne	H			
17-201-0118	Rockford	+42.2670002 -89.089170	Rockford, IL	Population	N/A	Middle	Annual/24	SLAMS	FEM Teledyne	H			

AS – Anderson Sequential (method 155); A1 – Anderson Single Event (method 153); Met One - MetOne sequential (method 545); BGI – BGI Instruments (method 142); THRM – ThermoScientific (method 143); FEM Thermo – Federal Equivalent Method Thermo Continuous (method 183); FEM Teledyne – Federal Equivalent Method Teledyne T640 Continuous (method 236); BAM - Beta Attenuation Monitor, Air Quality Index only (method 731), H = Hourly.

Sites that are part of the Chemical Speciation Network are listed in the Chemical Speciation column.

Red indicates monitor proposed for removal
Green indicates monitor proposed for installation

Figure 3a: $PM_{2.5}$ Sites – Illinois

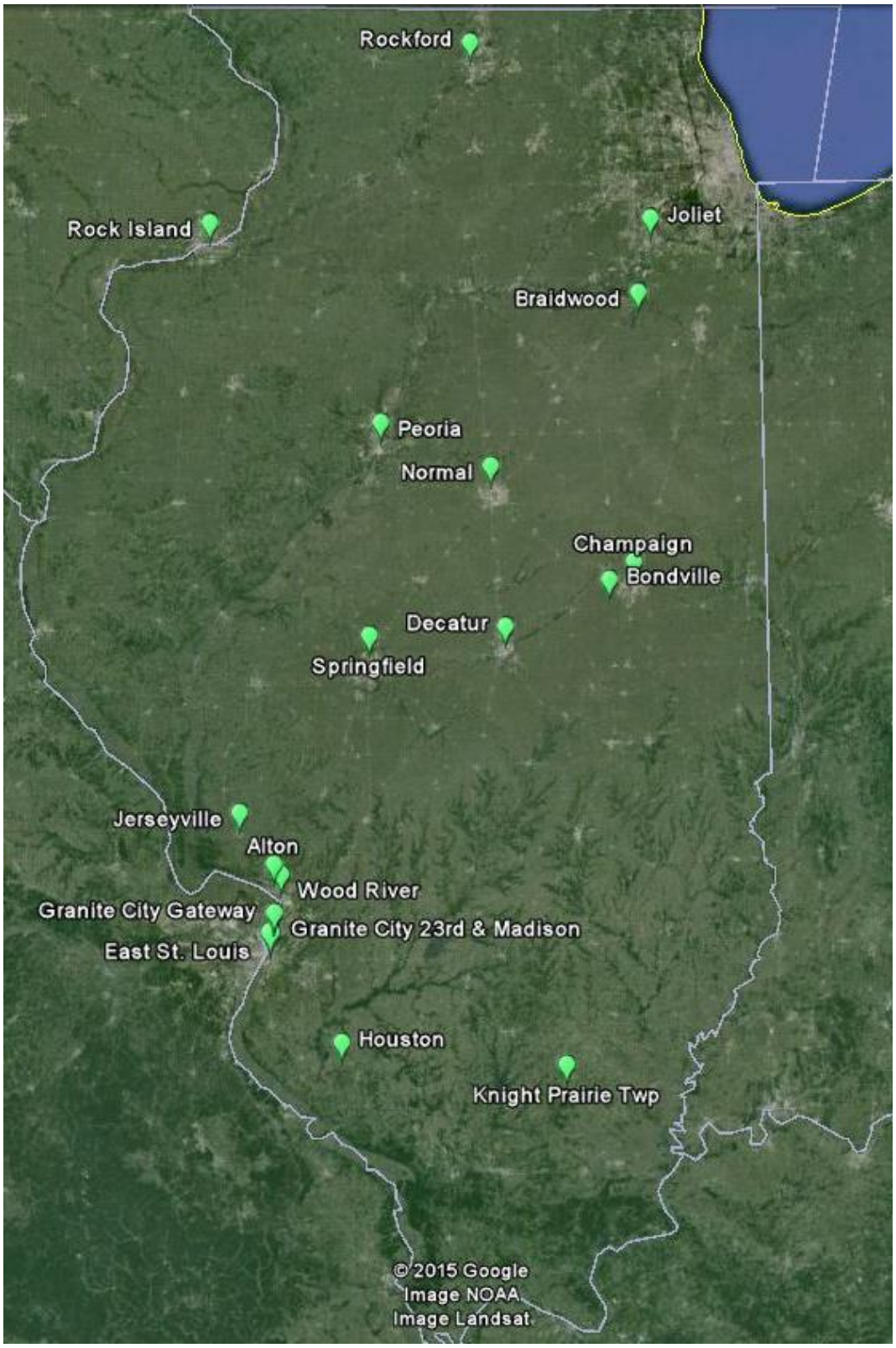


Figure 3b: $PM_{2.5}$ Sites – Illinois Chicago Area

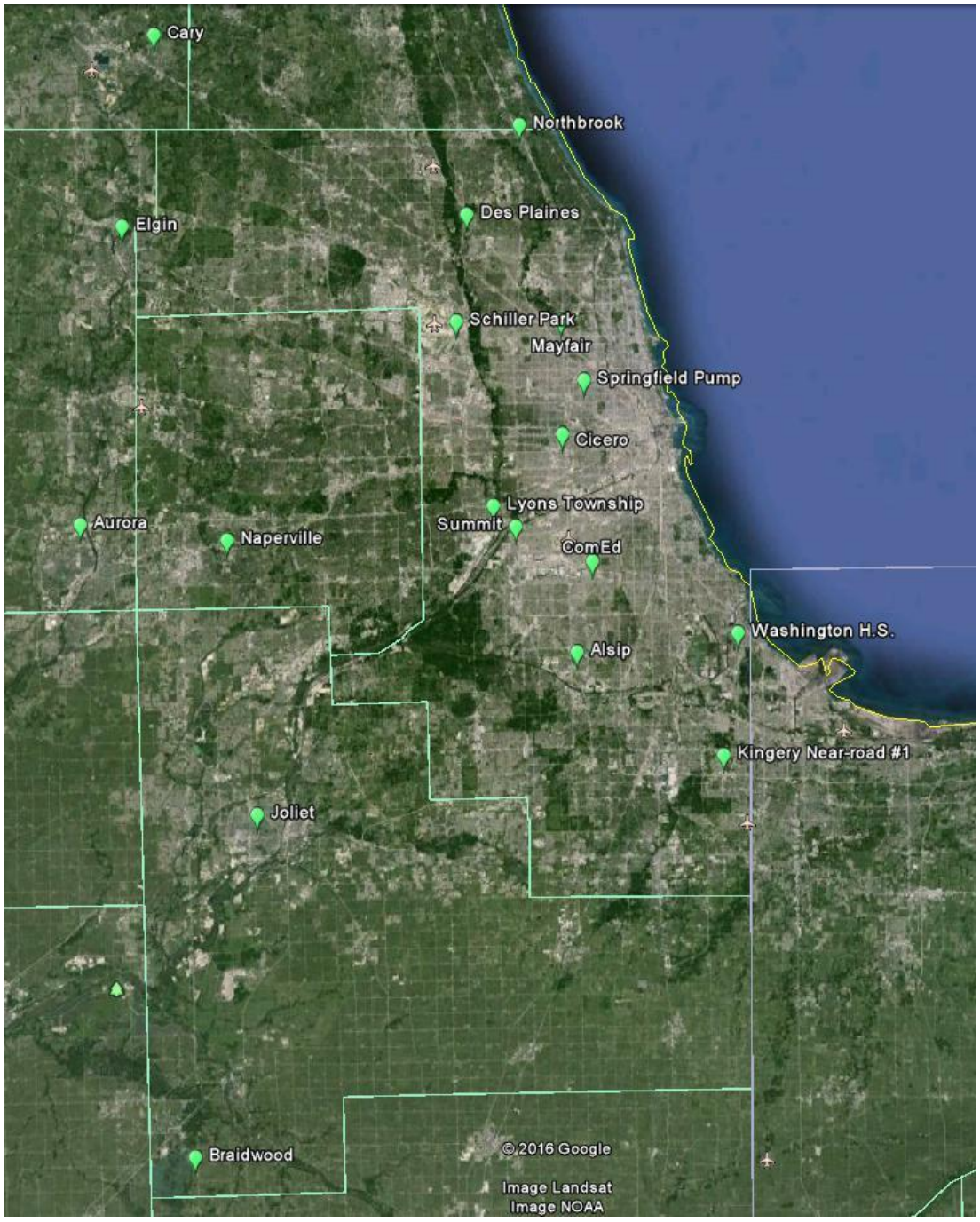


Table 4: SO_2 Sites

AQS ID	Site	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-019-1001	Bondville	+40.052780 -88.372510	Champaign-Urbana, IL	Highest Conc.	N/A	Regional	NCORE	T100U	Hourly
17-031-0076	Com Ed	+41.75139998 -87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	SLAMS	T100	Hourly
17-031-1601	Lemont	+41.66812034 -87.99056969	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	SLAMS	T100	Hourly
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	NCORE	T100U	Hourly
17-099-0007	Oglesby	+41.29301454 -89.04942498	Ottawa-Streator, IL	Highest Conc.	Source	Neighborhood	SLAMS	T100	Hourly
17-115-0013	Decatur	+39.86683389 -88.92559445	Decatur, IL	Population	N/A	Neighborhood	SLAMS	T100	Hourly
17-115-0217	Tate & Lyle NW	+39.850712 -88.933635	Tate & Lyle	Source	N/A	Neighborhood	SLAMS	43i	Hourly
17-115-0317	Tate & Lyle SE	+39.846856 -88.923323	Tate & Lyle	Source	N/A	Neighborhood	SLAMS	43i	Hourly
17-117-0002	Nilwood	+39.39607533 -89.80973892	St Louis, IL-MO	Background	Population	Regional	SLAMS	T100	Hourly
17-119-3007	Wood River	+38.86066947 -90.10585111	St Louis, IL-MO	Population	N/A	Neighborhood	SLAMS	T100	Hourly
17-163-0010	East St. Louis	+38.61203448 -90.16047663	St Louis, IL-MO	Population	N/A	Neighborhood	SLAMS	T100	Hourly
17-179-0004	Pekin	+40.55646017 -89.65402807	Peoria, IL	Highest Conc.	Source	Neighborhood	SLAMS	T100	Hourly

T100 – Teledyne (method 100); T100U – Teledyne Trace Level (method 600); 43i – Thermo Scientific Model 43i (method 060)

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 4: SO_2 Sites – Illinois

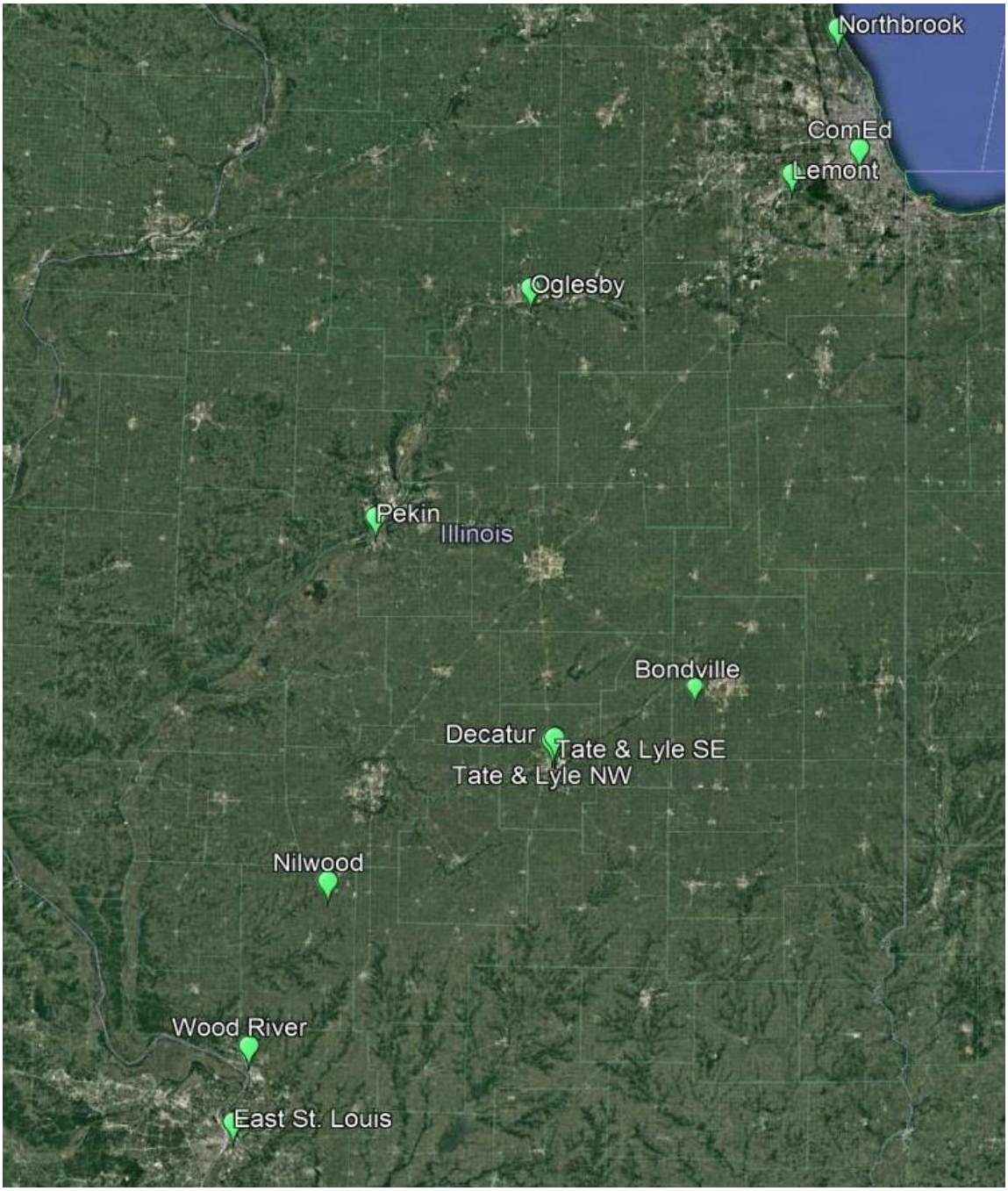


Table 5: NO_2 Sites

AQS ID	Site Description	Latitude Longitude	Area Represented	Monitoring Type	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-031-0076	Com Ed	+41.75139998 -87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Area-wide	Population	N/A	Neighborhood	SLAMS	TE	Hourly
17-031-3103	Schiller Park	+41.96519348 -87.87626473	Chicago-Naperville-Michigan City, IL-IN-WI	Susceptible Population	Highest Conc.	Source	Middle	PAMS/SLAMS	T500U	Hourly
17-031-4002	Cicero	+41.85524313 -87.7524697	Chicago-Naperville-Michigan City, IL-IN-WI	Area-wide	Population	Highest Conc.	Neighborhood	SLAMS	T200	Hourly
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Area-wide	Population	N/A	Urban	PAMS/NCORE	T500U	Hourly
17-031-0119	Lansing Kingery near-road #1	+41.578603 -87.557392	Kingery high traffic road segment	Near-road	Highest Conc.	Source	Micro	SLAMS	T500U	Hourly
17-031-0219	Chicago Kennedy near-road #2	+41.920681 -87.674425	Kennedy high traffic road segment	Near-road	Highest Conc.	Source	Micro	SLAMS	T500U	Hourly
17-117-0002	Nilwood	+39.39607533 -89.80973892	St Louis, IL-MO	Area-wide	Background	Population	Regional	SPM	T500U	Hourly
17-163-0010	East St. Louis	+38.61203448 -90.16047663	St Louis, IL-MO	Area-wide	Population	N/A	Neighborhood	SLAMS	T500U	Hourly

T200 – Teledyne (method 099); TE – ThermoScientific (method 074); T500U – Teledyne (method 212)

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 5: NO_2 Sites – Illinois

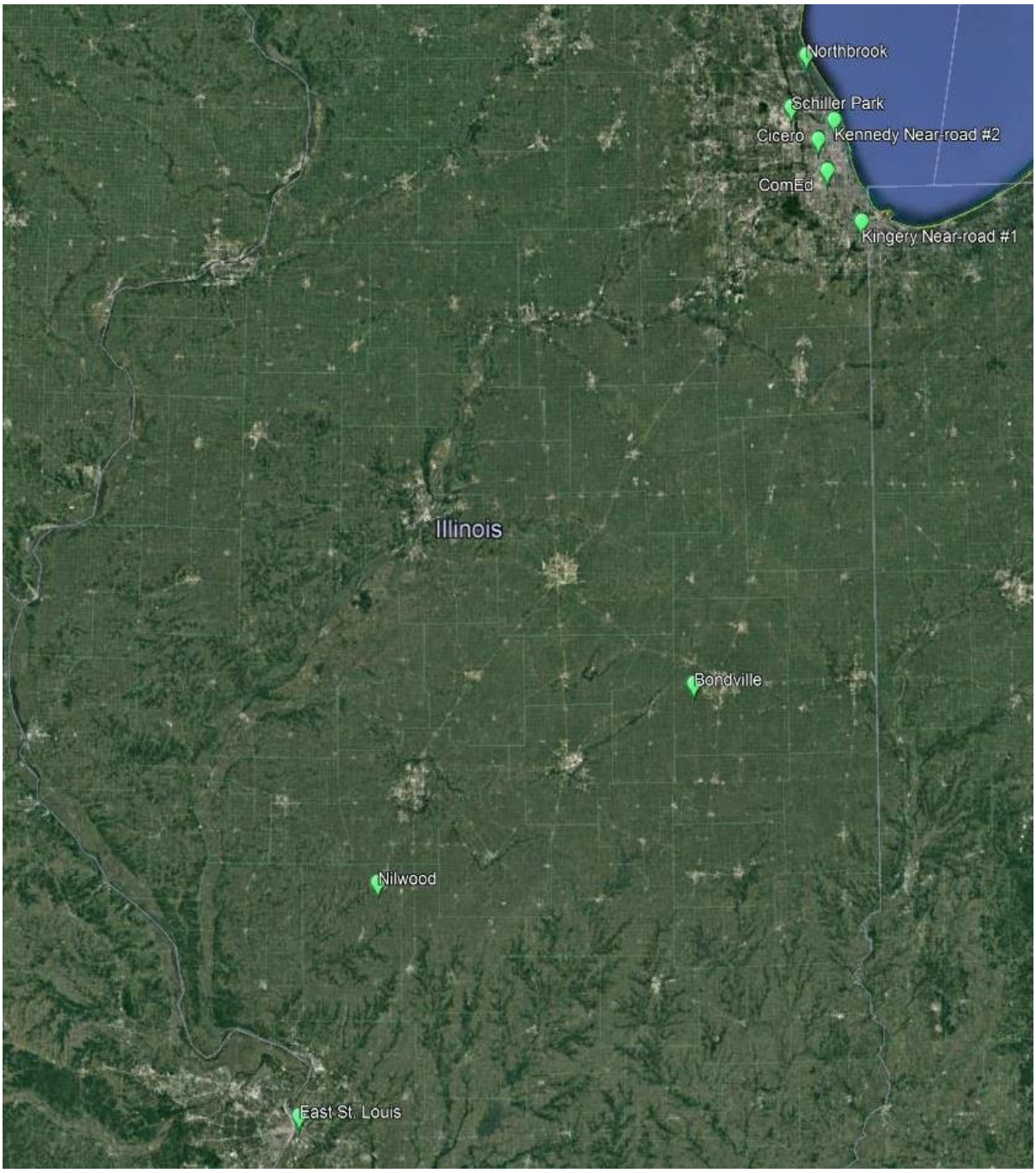


Table 6: CO Sites

AQS ID	Site Description	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type	Sampling Schedule
17-019-1001	Bondville	+40.052780 -88.372510	Champaign-Urbana, IL	Highest Conc.	N/A	Regional	NCORE	API 300EU	Hourly
17-031-4201	Northbrook	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	PAMS/NCORE	48iTLE	Hourly
17-031-0119	Lansing Kingery near-road #1	+41.578603 -87.557392	Kingery high traffic road segment	Highest Conc.	Source	Micro	SLAMS	API 300	Hourly

48i – ThermoScientific (method 054); 48iTLE – ThermoScientific Trace Level (method 554); API 300EU – Teledyne Trace Level (method 593) API 300 – Teledyne/API non-trace level (method 093)

Red indicates monitor proposed for removal
Green indicates monitor proposed for installation

Figure 6: CO Sites – Illinois

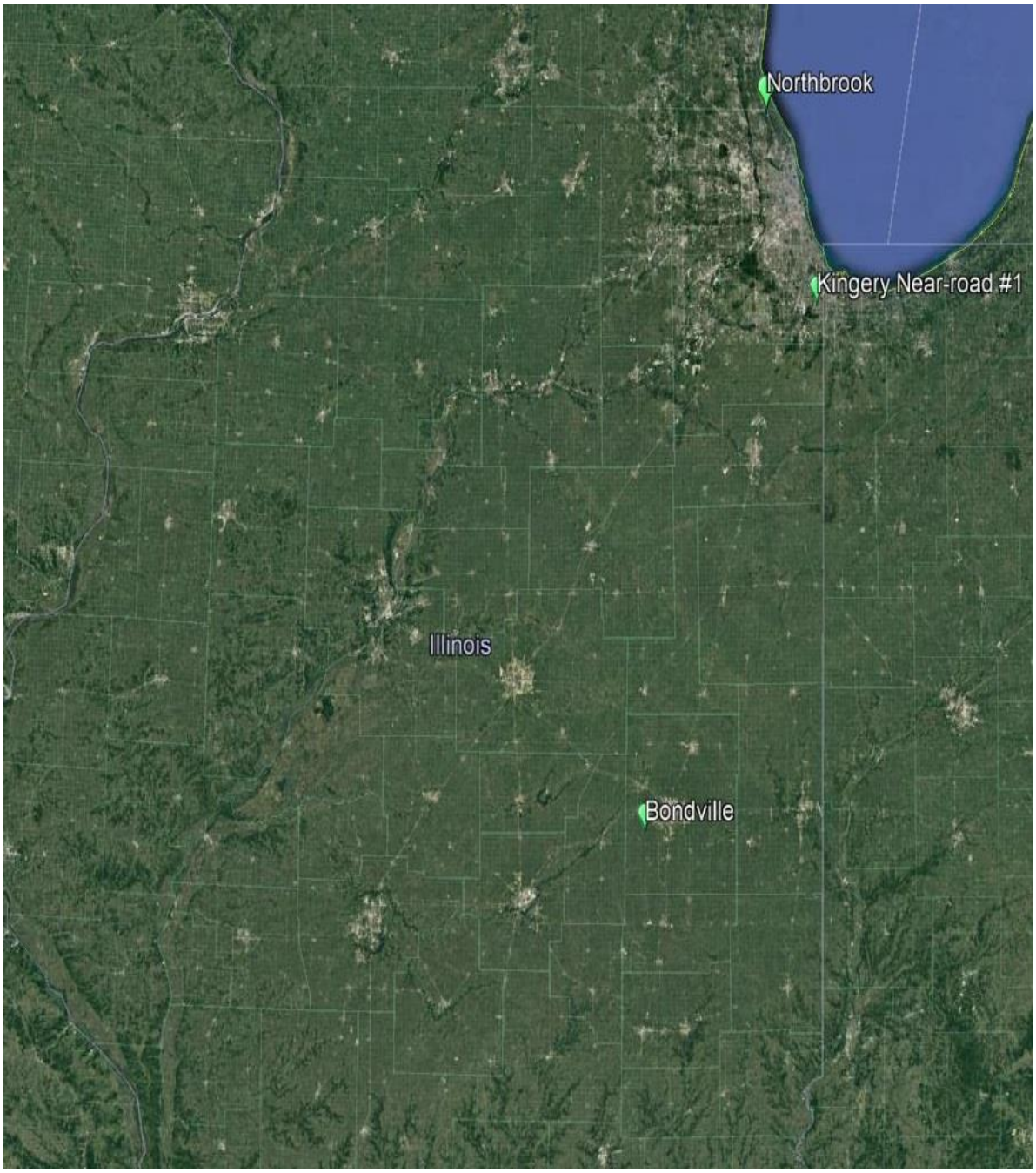


Table 7: PM_{10} and $PM_{10-2.5}$ Sites

AQS ID	Site Description	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type (Primary)	Sampling Schedule	Collocated
17-031-0022	Washington High School (PM10)	+41.68716544 -87.53931548	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Source	Neighborhood	SLAMS	BAM 1020	Hourly	
17-031-1016	Lyons Township (PM10)	+41.801180 -87.832349	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Source	Middle	SLAMS	BAM 1020	Hourly	
17-031-4201	Northbrook (PM10)	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	NCORE	SA/GMW	1/6	YES (1/12 day)
17-031-4201	Northbrook (PM coarse)	+42.13999619 -87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	NCORE	Thermo Pair	1/3	
17-119-1007	Granite City (PM10)	+38.70453426 -90.13967484	St Louis, IL-MO	Highest Conc.	Source	Neighborhood	SLAMS	SA/GMW	1/6	

BAM 1020 - Met One 1020 Beta Attenuation Monitor (method 122);

SA/GMW - Sierra Anderson/General Metal Works Hi-Volume Sampler, Standard Conditions (method 063);

Thermo Pair - Thermo Scientific Partisol Model 2000 Sampler Pair for PM coarse (method 175).

The National Park Service operates an additional PM_{10} monitor in Bondville as part of the IMPROVE network.

Red indicates monitor proposed for removal

Green indicates monitor proposed for installation

Figure 7: PM_{10} Sites – Illinois

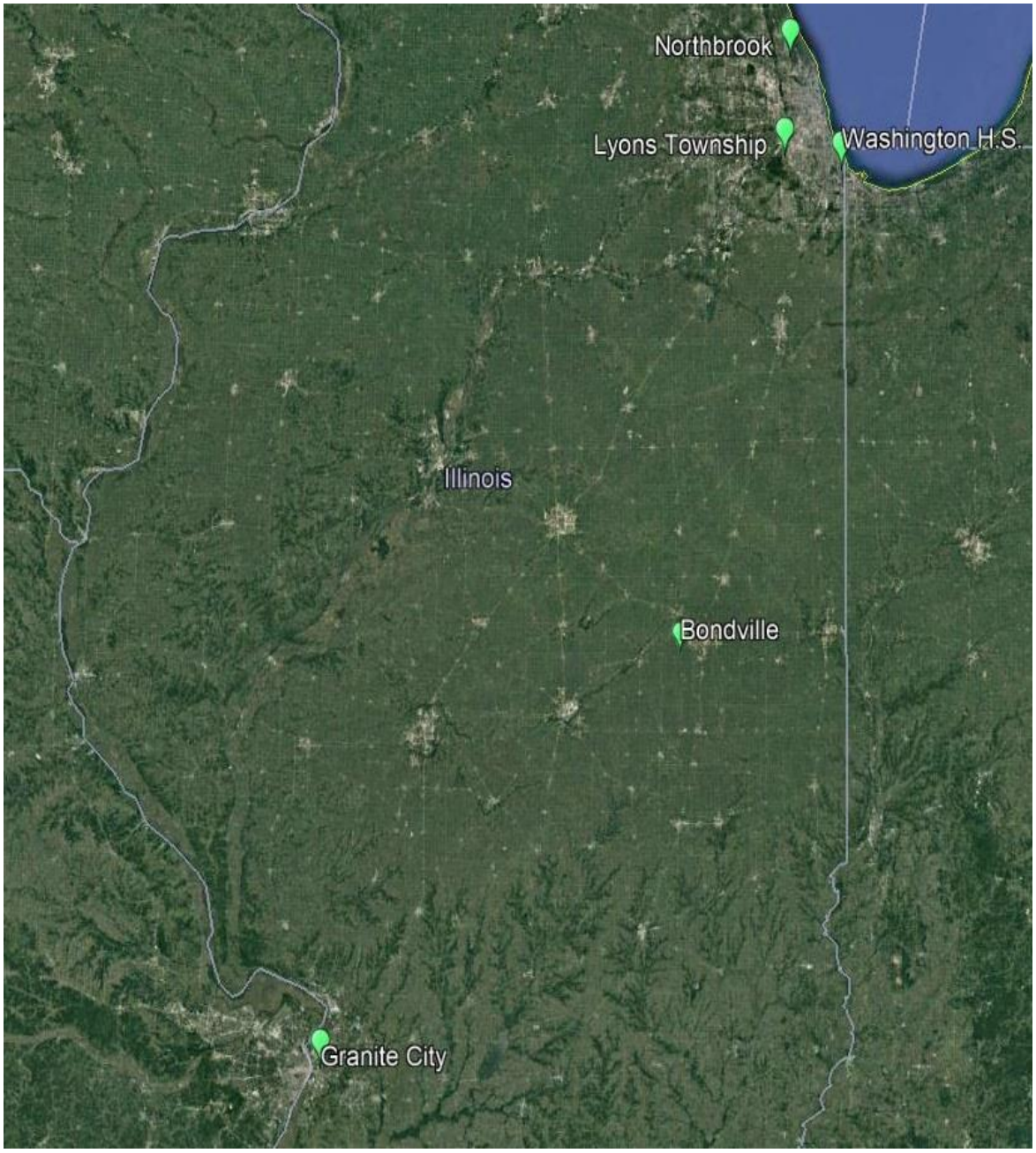


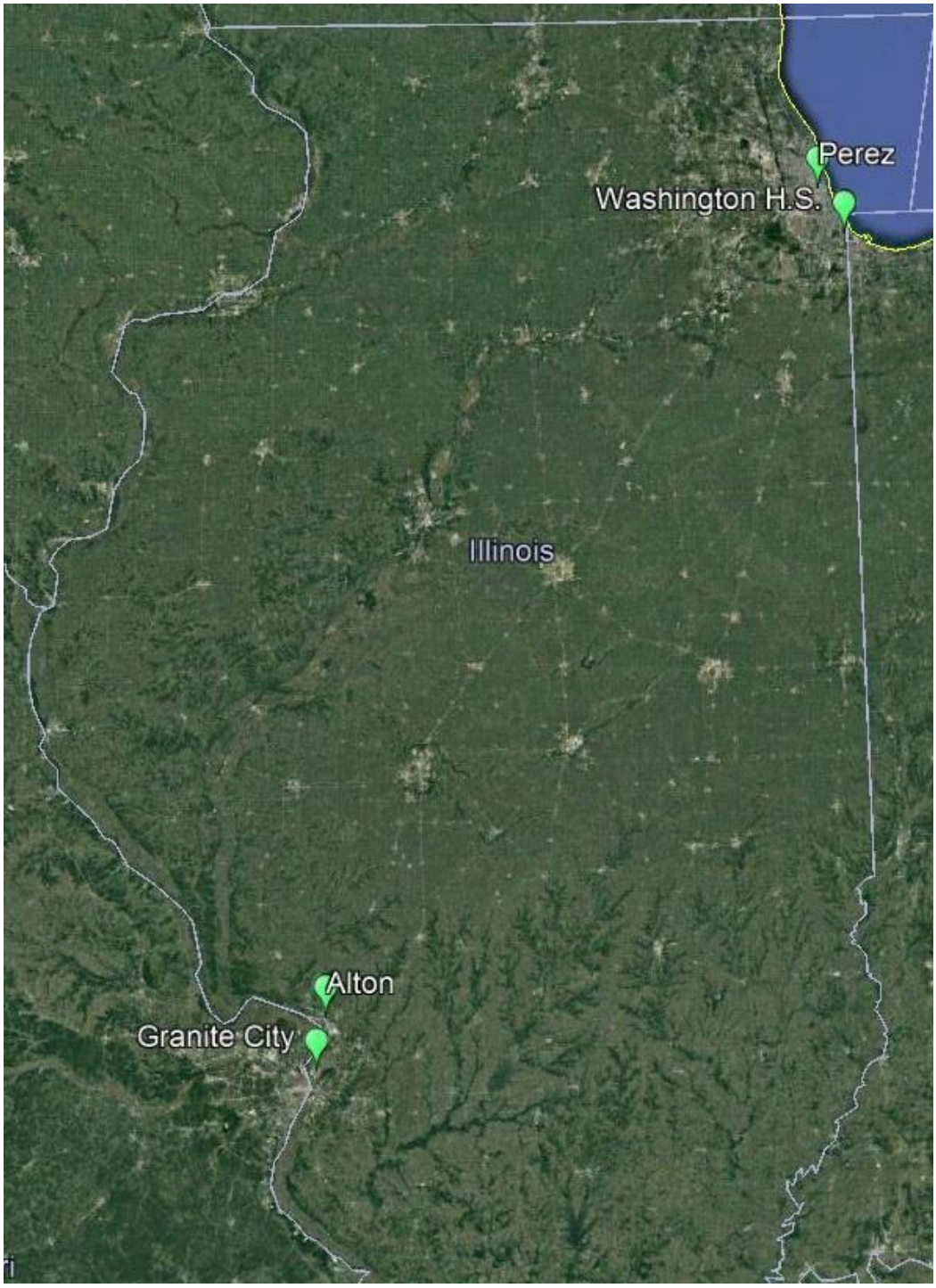
Table 8: Lead Sites

AQS ID	Site Description	Latitude Longitude	Area Represented	Primary Objective	Secondary Objective	Spatial Scale	Station Type	Monitor Type (Primary)	Frequency	Collocated
17-031-0022	Washington High School	+41.68716544 -87.53931548	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	N/A	Neighborhood	SLAMS	SA/GMW	1/6	
17-031-0110	Perez	+41.855917 -87.658419	H. Kramer	Source	N/A	Middle	SLAMS	SA/GMW	1/6	YES (1/12 day)
17-119-0010	Granite City	+38.69443831 -90.15395426	Mayco / US Steel	Highest Conc.	Source	Middle	SLAMS	Hi-Vol	1/6	YES (1/12 day)
17-119-0121	Alton	+38.888373 -90.107592	Olin Corporation	Highest Conc.	Source	Middle	SPM	To Be Determined	1/6	

Hi-Vol - Environmental Products Hi-Volume Sampler, Local Conditions (laboratory method 813);
SA/GMW – Sierra Anderson/General Metal Works Hi-Volume Sampler, Local Conditions (laboratory method 043)

Red indicates monitor proposed for removal
Green indicates monitor proposed for installation

Figure 8: Lead Sites – Illinois



Appendix A

Data Requirements Rule SO_2 Emissions Assessment for Illinois Areas Modeled to be in Attainment with the 2010 1-hour SO_2 NAAQS

Background

Pursuant to Section 51.1205(b) of the Data Requirements Rule (DRR) (40 CFR 51 Subpart BB), Illinois EPA is required to submit an annual report to the Regional Administrator that documents the annual SO_2 emissions of each applicable source in each area previously modeled to be attaining the 2010 1-hour SO_2 NAAQS. This report is to be submitted to the Regional Administrator by July 1 of each year and must provide an assessment of the cause of any emissions increases from the previous year and a recommendation regarding the need for additional modeling to determine if the areas are still meeting the 1-hour SO_2 NAAQS.

Multiple areas in Illinois have been designated by USEPA as attaining the 1-hour SO_2 NAAQS, based upon a technical analysis by USEPA that considered, in part, modeling results submitted by Illinois EPA pursuant to the DRR or the 2015 SO_2 Consent Decree. Six of the attainment areas have both active applicable DRR sources and model design values greater than 50% of the 1-hour SO_2 NAAQS (see Table A-1). These six areas are still subject to the ongoing data requirements listed under Section 51.1205(b).

Table A-1: SO_2 Attainment/Unclassifiable Areas in Illinois Subject to Ongoing Data Requirements Pursuant to Section 51.1205(b)

Attainment/Unclassifiable Area	Applicable Source(s)	Modeled Period	Model Design Value	Percent of 1-hour SO_2 NAAQS*
Jasper County	Newton Power Station	2012-2014	138.89 ug/m^3	70.75%
Massac County	Joppa Power Station	2012-2014	168.29 ug/m^3	85.72%
Crawford County	Rain CII Carbon	2015-2017	118.2 ug/m^3	60.21%
Lake County	Midwest Generation LLC -Waukegan	2013-2015	98.91 ug/m^3	50.38%
Granite City Area	U.S. Steel-Granite City Works; Gateway Energy & Coke Company	2016-2018	578.83	294.84%
Williamson County	Southern Illinois Power Coop	2013-2015	194.92 ug/m^3	99.29%

*Based on 1-hour SO_2 NAAQS value of 196.32 ug/m^3

2014-2020 SO_2 Emission Trends Data and Recommendations

Table A-2 presents the annual SO_2 emissions data for the applicable attainment/unclassifiable areas for the period 2014 through 2020. Annual SO_2 emissions are listed for the applicable DRR source in each area, along with all the background sources that were included in the DRR and SO_2 Consent Decree modeling.

USEPA's implementation of the primary SO_2 NAAQS occurred in phases and continues with ongoing annual emissions assessment requirements. As a result, progressively more recent years of emissions data have been used in modeling demonstrations that have been the basis of some area designations and in verification modeling. The year with the maximum annual emissions in each three-year modeled period was determined for each area and then compared with the area emission totals for 2020. These data were then compared with USEPA's recommended guidelines for additional modeling presented in the Preamble to the DRR (80 FR 51052). Emissions data for 2012-2014 were used in the SO_2 Consent Decree modeling, whereas emissions data for 2013-2015 were used in the DRR modeling. The Crawford County area modeling was updated using emissions data for 2015-2017 due to the 2017 emissions increase. The Granite City area modeling was updated using emissions data for 2016-2018 due to the 2018 emissions increase. The results of these analyses are presented below:

Jasper County – The highest modeled annual SO_2 emissions total for the Jasper County attainment/unclassifiable area was 16,533.83 tons, which occurred in 2012. Emissions from the Newton Power Station, the only applicable SO_2 source for this area, decreased to 4,632.20 tons in 2020 (-72.0%). Given the emissions decrease in 2020, Illinois EPA recommends no additional modeling for the Jasper County attainment/unclassifiable area at this time.

Massac County – The highest modeled annual SO_2 emissions total for the Massac County attainment/unclassifiable area was 48,599.45 tons, which occurred in 2014. Emissions from SO_2 sources in the area decreased to 17,536.30 tons in 2020 (-63.9%). Given the emissions decrease in 2020, Illinois EPA recommends no additional modeling for the Massac County attainment/unclassifiable area at this time.

Crawford County – The highest modeled annual SO_2 emissions total for the Crawford County attainment/unclassifiable area was 9,625.37 tons, which occurred in 2017. Emissions from SO_2 sources in the area decreased to 5,793.68 tons in 2020 (-39.8%). Given the emission decreases in 2020, Illinois EPA recommends no additional modeling for the Crawford County attainment/unclassifiable area at this time.

Lake County – The highest modeled annual SO_2 emissions total for the Lake County attainment/unclassifiable area was 9,205.90 tons, which occurred in 2013. Emissions from SO_2 sources in the area decreased to 612.68 tons in 2020 (-93.3%). Given the emissions decrease in 2020, Illinois EPA recommends no additional modeling for the Lake County attainment/unclassifiable area at this time.

Granite City Area – The highest modeled annual SO_2 emissions total for the Granite City attainment/unclassifiable area was 2,995.99 tons, which occurred in 2018. Emissions from SO_2

sources in the area decreased to 1,444.19 tons in 2020 (-51.8%). Given the emissions decrease in 2020, Illinois EPA recommends that no additional modeling be performed for the Granite City attainment/unclassifiable area at this time.

Williamson County – The highest modeled annual SO_2 emissions total for the Williamson County attainment/unclassifiable area was 8,651.60 tons, which occurred in 2014. Emissions from SO_2 sources in the area decreased to 2,927.42 tons in 2020 (-66.2%). Given the emissions decrease in 2020, Illinois EPA recommends no additional modeling for the Williamson County attainment/unclassifiable area at this time.

Table A-2: Annual SO_2 Emissions Data for Attainment/Unclassifiable Areas

ID Number	Facility Name	2014 Emissions	2015 Emissions	2016 Emissions	2017 Emissions	2018 Emissions	2019 Emissions	2020 Emissions	Modeled Maximum	2020 Area Total
079808AAA	Newton Power Station	16,372.76	12,805.40	7,742.70	4,873.20	4,638.60	5,000.30	4,632.20	16,533.83	4,632.20
127855AAC	Joppa Power Station	18,229.24	13,230.00	7,634.00	10,310.20	11,968.40	10,436.10	8,243.00	48,599.45	17,536.30
127855AAA	Holcim US Inc.	491.65	259.42	698.18	409.31	332.38	208.59	268.70		
127899AAA	Midwest Electric Power Inc. (MEPI)	0.00	0.01	0.01	0.02	0.01	0.03	0.10		
127855AAB	Trunkline Gas Company	0.866	0.60	0.20	0.12	0.12	0.18	0.10		
127854AAD	Honeywell International Inc.	143.15	147.30	148.89	100.60	0.04	0.00	0.00		
2114500006	TVA – Shawnee Power Plant	29,734.54	24,301.80	*23,807.80*	*20,494.00*	*15,149.50*	*16,345.70*	*9,024.40*		
033025AAJ	Rain CII Carbon	3,134.10	2,161.40	3,836.20	6,810.10	4,162.60	5,451.60	4,067.00	9,625.37	5,793.68
033808AAB	Marathon Petroleum	207.10	213.40	262.22	177.17	114.07	146.16	138.78		
1815300005	Merom Generating Station	3,315.90	2,579.40	*3,143.80*	*2,638.10*	*3,802.70*	*2,897.90*	*1,587.90*		
097190AAC	Midwest Generation LLC – Waukegan	5,792.40	2,339.30	2,733.95	1,705.94	1,173.77	754.15	416.40	9,205.90	612.68
097190AAP	New NGC Inc.	8.70	8.70	7.72	0.13	0.12	0.13	0.13		
097025AAR	Countryside Genco LLC	53.10	41.50	19.43	41.85	50.73	51.76	43.00		
097806AAG	Countryside Landfill	6.30	14.50	30.90	21.80	17.20	16.20	37.50		
097809AAD	Abbott Laboratories	22.80	0.20	0.32	0.31	0.31	0.31	0.31		
097125AAA	AbbVie Inc.	16.20	6.60	12.35	1.50	1.57	0.40	0.36		
097200AAV	ADS Zion Landfill Inc.	28.40	26.70	23.40	32.87	47.80	81.83	98.09		
097200ABC	Bio Energy (Illinois) LLC	24.70	22.30	15.10	21.60	25.30	32.54	16.89		
230006260	Pleasant Prairie Generating Station	1,310.10	1,335.50	*1,087.00*	*931.00*	*258.30*	*Shutdown*	*Shutdown*		
119813AAI	U.S. Steel – Granite City Works	961.30	828.30	9.94	12.10	350.30	418.67	375.25	2,995.99	1,444.19
119040ATN	Gateway Energy & Coke	1,240.60	1,187.70	1,190.74	1,470.37	2,542.82	1,171.37	976.71		
119465AAG	Green Plains Madison LLC	7.90	7.80	3.10	1.96	1.72	0.96	0.60		
119040AAC	Amsted Rail Co. Inc.	5.20	5.90	4.00	3.50	5.10	4.00	1.00		
163121AAB	Afton Chemicals	96.70	98.00	72.97	73.78	71.18	73.40	58.02		
163050AAD	Milam Recycling & Disposal	28.90	17.50	7.35	15.98	24.10	32.87	31.85		
119801AAK	Chain of Rocks Recycling & Disposal	4.70	4.80	4.81	4.66	0.77	0.80	0.76		
199856AAC	Southern Illinois Power Coop	8,651.60	4,233.60	3,699.20	3,830.80	5,112.70	5,843.70	2,927.40	8,651.62	2,927.42
199862AAD	United States Penitentiary	0.02	0.01	0.02	0.02	0.02	0.02	0.02		

Source: Illinois EPA Annual Emissions Reports, except for those values listed in *red italics*, which were obtained from USEPA's Clean Air Markets database

Petitioner’s Hearing Exhibit U

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R 2020-019
STANDARDS FOR THE DISPOSAL	)	
OF COAL COMBUSTION RESIDUALS	)	(Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:	)	
PROPOSED NEW 35 ILL. ADM.	)	
CODE 845	)	

ILLINOIS EPA'S PRE-FILED ANSWERS

NOW COMES the Illinois Environmental Protection Agency (Illinois EPA or Agency), by and through one if its attorneys, and submits the following information with respect to its pre-filed answers.

1. On March 30, 2020, the Illinois EPA filed a rulemaking, proposing new rules at 35 Ill. Adm. Code 845 concerning coal combustion residual surface impoundments at power generating facilities in the State.

2. Public Act 101-171, effective July 30, 2019, amended the Illinois Environmental Protection Act, by among other things, adding a new Section 22.59 (415 ILCS 5/22.59). Public Act 101-171 includes a rulemaking mandate in Section 22.59(g) which directs the Board to adopt rules "establishing construction permit requirements, operating permit requirements, design standards, reporting, financial assurance, and closure and post-closure care requirements for CCR surface impoundments." 415 ICLS 5/22.59(g). The Board is required is adopt new rules for 35 Ill. Adm. Code part 845 by March 30, 2021.

3. The Agency timely filed pre-filed testimony for eight witnesses.

4. Based on the pre-filed testimony, Illinois EPA received over 1000 questions counting subparts.

5. On June 30, 2020, the Agency asked that it be granted until August 3, 2020 to respond to the pre-filed questions.

B) ~~**located in wetlands under**~~ **Section 845.310 (Wetlands);**

C) ~~**located in fault areas under**~~ **Section 845.320 (Fault areas);**

D) ~~**located in a seismic impact zone under**~~ **Section 845.330 (Seismic impact zones); and**

E) ~~**located in an unstable area under**~~ **Section 845.340 (Unstable areas).**

Response: The Agency has no objection to the revisions as suggested by the Board.

22. The proposed subsection Section 845.230(d)(2)(E) is numbered as (d)(2)(D) due to a typographical oversight. Therefore, subsections Section 845.230(d)(2)(D) thru (d)(2)(L) needs to be renumbered, as well as any cross references.

Response: The typographical errors in the numbering are noted. The only cross references the Agency has identified for 845.230(d)(2) are 845.230(d)(2)(C) in 845.530(b) and 845.230(d)(2)(A) in 845.540(b)(1)(A), neither of which are indicated in the affected subsections of 845.230(d)(2).

23. The proposed subsections 845.230(d)(2)(H)(i) thru (iv) specify detailed groundwater monitoring information that must be submitted for Initial Operating Permit for Existing, Inactive and Inactive Closed CCR Surface Impoundments. Please comment on why similar information is not required for construction permit applications under Section 845.210, as well as initial operating permit for new construction.

Response: The groundwater monitoring data required by this subsection, is necessary to determining the current site characteristics and compliance status for existing CCR surface impoundments. This data will be used to determine the operational conditions or corrective action which might be necessary under the rule for these existing facilities. Groundwater monitoring needs for construction permits, or operating permits for new construction, will be evaluated during the application review. Determinations on the need for a revised groundwater monitoring program will be based on the effects on the physical, operational, or environmental conditions following construction.

24. Subsection 845.240(b) requires the owner or operator to prepare and circulate a notice explaining the proposed construction project and any related activities and the time and place of the public meeting. Please comment on whether this section should specify that the public notification must include the owner or operator's contact information, including the owner or operator's publicly accessible internet site where all documentation relied upon in preparing the tentative construction

Petitioner’s Hearing Exhibit V

	A	B	C	D	E	F	G	H	I	J
1	Company	Facility	Pond ID Number	Pond Description	Closure Complete	Post Closure Care Complete	Status	Close before July 31, 2021	Area of EJ Concern	Exceeds 620/GWPS
2	Ameren	Venice	W1191050002-01	N. Pond	yes, Nov. 2012	no	Inactive Closed	see closure date	yes	yes has GMZ
3	Ameren	Venice	W1191050002-02	S. Pond	yes, Nov. 2012	no	Inactive Closed	see closure date	yes	yes has GMZ
4	Ameren	Hutsonville	W0330100003-01	Pond A	yes, Nov. 2016	no	Inactive	see closure date	no	yes has GMZ
5	Ameren	Hutsonville	W0330100003-02	Pond B	no, removal Nov. 2016	no pond specific monitoring	Inactive	see closure date	no	unkown, no pond specific monitoring
6	Ameren	Hutsonville	W0330100003-03	Pond C	no, removal Nov. 2016	no pond specific monitoring	Inactive	see closure date	no	unkown, no pond specific monitoring
7	Ameren	Hutsonville	W0330100003-04	Pond D	yes, Jan. 2013	no	Inactive Closed	see closure date	no	yes
8	Ameren	Hutsonville	W0330100003-05	Bottom Ash	no, removal Nov. 2016	no pond specific monitoring	Inactive	see closure date	no	unkown, no pond specific monitoring
9	Ameren	Meredosia	W1370300005-01	Bottom Ash Pond	yes, Jan 2019	no	Inactive	see closure date	no	yes has GMZ
10	Ameren	Meredosia	W1370300005-02	Fly Ash	yes, Aug 2019	no	Inactive	see closure date	no	yes has GMZ
11	Ameren	Meredosia	W1370300005-03	Old Ash Pond	no	no	Inactive	no	no	Not Fully Evaluated
12	CWLP	City Water Light and Power	W1671200052-01	Lake Side Pond	no	no	Existing	no	yes	yes
13	CWLP	City Water Light and Power	W1671200052-02	Dallman Pond	no	no	Existing	no	yes	yes
14	Vistra	Baldwin Energy Center	W1578510001-01	Old East Fly Ash Pond	no	no	Existing	Likely	no	yes has GMZ
15	Vistra	Baldwin Energy Center	W1578510001-02	East Fly Ash Pond	no	no	Existing	Likely	no	yes has GMZ
16	Vistra	Baldwin Energy Center	W1578510001-03	West Fly Ash Pond	no	no	Existing	Likely	no	yes has GMZ
17	Vistra	Baldwin Energy Center	W1578510001-06	Bottom Ash Pond	no	no	Existing	no	no	yes
18	Vistra	Coffeen Station	W1350150004-01	Ash Pond 1	no	no	Existing	no	no	Not Fully Evaluated
19	Vistra	Coffeen Station	W1350150004-02	Ash Pond 2	no	no	Existing	Likely	no	yes has GMZ
20	Vistra	Coffeen Station	W1350150004-03	GMF Pond	no	no	Existing	no	no	Not Fully Evaluated
21	Vistra	Coffeen Station	W1350150004-04	GMF Recycle Pond	no	no	Existing	no	no	Not Fully Evaluated
22	Vistra	Duck Creek Station	W0578010001-01	Ash Pond No.1	no	no	Existing	Likely	yes	yes has GMZ
23	Vistra	Duck Creek Station	W0578010001-02	Ash Pond No.2	no	no	Existing	Likely	yes	yes has GMZ
24	Vistra	Duck Creek Station	W0578010001-03	Bottom Ash Basin	no	no	Existing	no	yes	Not Fully Evaluated
25	Vistra	Duck Creek Station	W0578010001-04	GMF Pond	no	no	Existing	no	yes	Not Fully Evaluated
26	Vistra	Duck Creek Station	W0578010001-05	GMF Recycle Pond	no	no	Existing	no	yes	Not Fully Evaluated
27	Vistra	Edwards Station	W1438050005-01	Ash Pond 1	no	no	Existing	no	no	Not Fully Evaluated
28	Vistra	Joppa Station	W1270100004-01	West Pond 1	no	no	Inactive	no	no	Not Fully Evaluated
29	Vistra	Joppa Station	W1270100004-02	East Ash Pond 2	no	no	Existing	no	no	Not Fully Evaluated
30	Vistra	Havana Station	W1250200004-01	East Ash Pond Cell 1	no	no	Existing	no	yes	Not Fully Evaluated
31	Vistra	Havana Station	W1250200004-02	East Ash Pond Cell 2	no	no	Existing	no	yes	Not Fully Evaluated
32	Vistra	Havana Station	W1250200004-03	East Ash Pond Cell 3	no	no	Existing	no	yes	Not Fully Evaluated
33	Vistra	Hennepin Station	W1550100002-01	West Ash Pond 1	no	no	Inactive	Likely	yes	yes has GMZ
34	Vistra	Hennepin Station	W1550100002-02	West Ash Pond 3	no	no	Inactive	Likely	yes	yes has GMZ
35	Vistra	Hennepin Station	W1550100002-03	West Secondary Ash Pond	no	no	Inactive	Likely	yes	yes has GMZ
36	Vistra	Hennepin Station	W1550100002-04	East Ash Pond 2	no	no	Inactive	Likely	yes	yes has GMZ
37	Vistra	Hennepin Station	W1550100002-05	East New Primary Pond	no	no	Existing	no	yes	Not Fully Evaluated
38	Vistra	Hennepin Station	W1550100002-07	East Pond 4	no	no	Inactive	Likely	yes	yes has GMZ
39	Vistra	Kincaid Generation	W0218140002-01	Ash Pond	no	no	Existing	no	no	Not Fully Evaluated
40	Vistra	Newton Station	W0798070001-01	Primary Ash Pond	no	no	Existing	no	no	yes
41	Vistra	Vermilion Station	W1838000002-01	North Pond Cell 1 & 2	no	no	Inactive	no	no	yes
42	Vistra	Vermilion Station	W1838000002-03	Old East Pond	no	no	Inactive	no	no	yes
43	Vistra	Vermilion Station	W1838000002-04	New East Pond Cell 1 & 2	no	no	Inactive	no	no	yes
44	CTI Developmen	Wood River Station	W1190200004-01	West Ash Pond 1	no	no	Inactive	Likely	yes	yes has GMZ
45	CTI Developmen	Wood River Station	W1190200004-02	West Ash Pond 2W	no	no	Inactive	Likely	yes	yes has GMZ
46	CTI Developmen	Wood River Station	W1190200004-03	West Ash Pond 2E	no	no	Inactive	Likely	yes	yes has GMZ
47	CTI Developmen	Wood River Station	W1190200004-05	Pond	no	no	Existing	no	yes	Not Fully Evaluated
48	Grand Tower	Grand Tower	W0770400003-01	Ash Pond	no	no	Inactive	Likely	no	yes has GMZ
49	NRG	Will County Station	W1978100011-01	Pond 1 North	no	no	Inactive	no	no	yes VN/CCA/GMZ
50	NRG	Will County Station	W1978100011-02	Pond 3 South	no	no	Existing	no	no	yes VN/CCA/GMZ
51	NRG	Will County Station	W1978100011-03	Pond 2 South	no	no	Existing	no	no	yes VN/CCA/GMZ
52	NRG	Will County Station	W1978100011-04	Pond 1 South	no	no	Inactive	no	no	yes VN/CCA/GMZ

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53	NRG	Waukegan Station	W0971900021-01	East Pond	no	no	Existing	no	yes	yes VN/CCA
54	NRG	Waukegan Station	W0971900021-02	West Pond	no	no	Existing	no	yes	yes VN/CCA
55	NRG	Waukegan Station	W0971900021-03	Old Pond	no	no	Exsiting	no	yes	Not Fully Evaluated
56	NRG	Powerton	W1798010008-01	Ash Basin	no	no	Existing	no	no	yes VN/CCA/GMZ
57	NRG	Powerton	W1798010008-02	Sec. Ash Basin	no	no	Existing	no	no	yes VN/CCA/GMZ
58	NRG	Powerton	W1798010008-03	Metal Cleaning Basin	no	no	Existing	no	no	yes VN/CCA/GMZ
59	NRG	Powerton	W1798010008-04	Bypass Basin	no	no	Existing	no	no	yes VN/CCA/GMZ
60	NRG	Powerton	W1798010008-05	Former Ash Basin	no	no	Inactive	no	no	Not Fully Evaluated
61	NRG	Joliet 29	W1970450047-01	Pond 1	no	no	Inactive	no	yes	yes VN/CCA/GMZ
62	NRG	Joliet 29	W1970450047-02	Pond 2	no	no	Existing	no	yes	yes VN/CCA/GMZ
63	NRG	Joliet 29	W1970450047-03	Pond 3	no	no	Inactive	no	yes	yes VN/CCA/GMZ
64	NRG	Joliet 9	W1970450046-01	Lincoln Stone Quarry	no	no	Existing	no	yes	yes
65	Prairie Power	Prairie Power Inc	W1490650005-01	N. Pond	yes,Nov. 2014	no	Inactive Closed	see closure date	no	yes has GMZ
66	SIPC	Southern Illinois Power Co-op	W1998600002-01	Pond 1	no	no	Existing	no	no	unkown, no pond specific monitoring
67	SIPC	Southern Illinois Power Co-op	W1998600002-02	Pond 2	no	no	Existing	no	no	unkown, no pond specific monitoring
68	SIPC	Southern Illinois Power Co-op	W1998600002-03	Pond 4	no	no	Exisiting	no	no	unkown, no pond specific monitoring
69	SIPC	Southern Illinois Power Co-op	W1998600002-04	Pond A-1	no, removal Nov. 2017(may	not compliant W/GWPS	Inactive	no	no	unkown, no pond specific monitoring
70	SIPC	Southern Illinois Power Co-op	W1998600002-05	Pond B-3	no, removal Nov. 2017	not compliant W/GWPS	Existing	no	no	unkown, no pond specific monitoring
71	SIPC	Southern Illinois Power Co-op	W1998600002-06	South Fly Ash Pond	no	no	Existing	no	no	unkown, no pond specific monitoring
72	SIPC	Southern Illinois Power Co-op	W1998600002-07	Pond 3	no	no	Existing	no	no	unkown, no pond specific monitoring
73	SIPC	Southern Illinois Power Co-op	W1998600002-09	Pond 6	no	no	Existing	no	no	unkown, no pond specific monitoring
74	SIPC	Southern Illinois Power Co-op	W1998600002-10	Emery Pond	no	no	Existing	Likely	no	Yes, GMZ application