



September 12, 2024

Project No. 31406585.016

Mr. Jerry Wick

Texas Commission on Environmental Quality
MC-127
VCP-CA Section, Team 1, Remediation Division
P.O. Box 13087
Austin, Texas 78711-3087

**Re: MONTHLY STATUS UPDATE – ENGLEWOOD INTERMODAL YARD – NAPL COLLECTION
SYSTEM/CONCRETE CAP REPAIRS AND REVISED INTERIM MEASURES WORK PLAN
CONSTRUCTION ACTIVITIES
UNION PACIFIC RAILROAD HOUSTON WOOD PRESERVING WORKS FACILITY
4910 LIBERTY ROAD FACILITY, HOUSTON, TEXAS
POST-CLOSURE CARE PERMIT NO. HW-50343; INDUSTRIAL SWR NO. 31547**

Dear Mr. Wick:

WSP USA Inc. (WSP), on behalf of Union Pacific Railroad Company (UPRR), is pleased to provide this monthly status update for August 2024 summarizing the weekly construction activities being conducted at the Englewood Intermodal Yard concrete cap area within the UPRR Houston Wood Preserving Works Facility (the Site). The construction activities are being conducted following the *Revised Interim Measures Work Plan – Englewood Intermodal Yard (EIY)* dated October 20, 2023, and prepared by WSP. The Texas Commission on Environmental Quality (TCEQ) requested in the Conditional Approval letter dated January 9, 2024, that weekly summaries be provided in the monthly status updates detailing the activities being implemented per the Revised Interim Measures Work Plan (IMWP). In addition, a summary of the weekly inspections conducted at the Englewood Intermodal Yard concrete cap area is provided in this monthly status update as requested by the TCEQ in a letter dated March 20, 2018. Below is a summary of the IMWP activities and inspections for August 2024.

Interim Measures Work Plan Activities

The TCEQ Conditional Approval letter dated January 9, 2024 for the Revised IMWP requested UPRR provide weekly summaries during the remediation activities detailing that adequate air monitoring and dust suppression, soil management, and stormwater protection activities are being implemented in accordance with the approved plans provided in the Revised IMWP. UPRR initiated the remediation activities on April 29, 2024. The following is a summary of the weekly IMWP activities conducted in August 2024:

Week Period August 1 through August 2, 2024:

- **Remediation Activities:**
 - o No backfilling activities were conducted this week.
- **Dust Control and Air Monitoring:**

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wsp.com

- o Atlas Technical Consultants (Atlas) personnel were not present onsite this week due to the absence of dust-generating activities.
- **Soil/Waste Management**
 - o No roll-off containers were filled this week. Roll-off containers staged at the Site were kept covered.
 - o Remediation contractor E3 transported six roll-offs containing Class 1 non-hazardous soil waste to the Republic Services Blue Ridge Facility.
- **Stormwater Management**
 - o E3 prepared and maintained stormwater mitigation measures by placing berms and straw wattles around all open excavations and surface drains and covering all roll-offs.
 - o WSP collected stormwater sample from three frac tanks (A4198C, A1531C, and FO5582).
 - o Following rain events, 3,000 gallons of stormwater were recovered from the secondary containments and roll-off container # 2067, using vacuum trucks and stored in frac tanks located on Site pending characterization and disposal. BMPs were checked before and after the rain events.
 - o As of Friday, August 2nd, approximately 376,500 gallons of stormwater are being stored onsite pending profiling, transportation, and disposal. The stormwater is stored in 17 large (21,000 gallon) frac tanks, 2 mini (10,000 gallon) frac tanks, and vacuum trucks onsite.

Week Period August 5 through August 10, 2024:

- **Remediation Activities:**
 - o E3 conducted backfilling and compaction testing at the following focused excavations: FE-2 and FE-7.
- **Dust Control and Air Monitoring:**
 - o Atlas resumed real time air and dust monitoring at the Site on August 8th on behalf of UPRR in accordance with the Dust Control and Air Monitoring (DCAM) Plan provided in the Revised IMWP. No Target Dust Control Levels were exceeded during the remediation activities on August 8th through 10th (Appendix B).
 - o Atlas did not collect integrated air samples due to inclement weather and work periods lasting less than the required sampling period of eight hours per day.
- **Soil/Waste Management**
 - o No roll-off containers were filled this week. Roll-off containers staged at the Site were kept covered.
 - o Remediation contractor E3 recovered tar material from focused excavations FE-2 and FE-7 and stored in drums.
 - o E3 transported roll-off containers containing excavated soils to the following facilities based on waste profiles:
 - Eighteen roll-offs containing Class 1 non-hazardous soil waste were transported to the Republic Services Blue Ridge Facility.
 - One roll-off containing Class 2 non-hazardous soil waste transported to the Republic Services McCarty Road Facility.

- **Stormwater Management**

- o E3 prepared for rain events by rebuilding stormwater mitigation berms and maintaining straw wattles at FE-4, 5, 6, 8, 9, 10 and 12.
- o Following rain events, approximately 16,500 gallons of stormwater was recovered from the secondary containments, using vacuum trucks and stored in frac tanks located on Site pending characterization and disposal. Stormwater BMPs were checked before and after the rain events.
- o As of Friday August 9th, approximately 389,500 gallons of stormwater are being stored onsite pending profiling, transportation, and disposal. The stormwater is stored in 18 large (21,000 gallon) frac tanks, 2 mini (10,000 gallon) frac tanks, and vacuum trucks onsite.

Week Period August 12 through August 16, 2024:

- **Remediation Activities:**

- o E3 conducted backfilling and compaction testing at the following focused excavations: FE-7, FE-1/3, FE-4, and FE-10.

- **Dust Control and Air Monitoring:**

- o Atlas conducted real time air and dust monitoring this week at the Site on behalf of UPRR in accordance with the DCAM Plan provided in the Revised IMWP. No Target Dust Control Levels were exceeded during the remediation activities on August 12th through 16th (Appendix B).
- o Atlas did not collect integrated air samples due to inclement weather and work periods lasting less than the required sampling period of eight hours per day.

- **Soil/Waste Management**

- o No roll-off containers were filled this week. Roll-off containers staged at the Site were kept covered.
- o E3 recovered tar material from focused excavations FE-4, FE-7, FE-8, FE-10, and FE-12.
- o Fourteen drums containing Class 1 non-hazardous tar waste were profiled and delivered to the Republic Services Blue Ridge Facility.
- o E3 transported roll-off containers to the following facilities based on waste profiles:
 - Nine roll-offs containing Class 1 non-hazardous soil waste to the Republic Services Blue Ridge Facility.
 - One roll-off containing Class 1 non-hazardous asphalt and concrete to the HPP Baytown North Facility.

- **Stormwater Management**

- o No additional stormwater was recovered from the Site this week. Therefore, like the previous week, approximately 393,000 gallons of stormwater are being stored onsite pending profiling, transportation, and disposal.

Week Period August 19 through August 24, 2024:

- **Remediation Activities:**

- o E3 conducted the following activities this week:

- backfilling and compaction testing at the following focused excavations: FE-5, FE-6 FE-8, FE-9, FE-11, FE-12.
 - E3's concrete contractor, Ashton, cut straight edges in concrete at FE-4,6,11,9, and 12 to prepare for concrete cap installation.
 - E3 installed the geosynthetic clay liner (GCL),60-mil HDPE geomembrane, and woven Mirafi 500X geotextile system at FE-12 as per revised Interim Measures Work Plan (IMWP) dated August 8, 2024.
- **Dust Control and Air Monitoring:**
 - o Atlas conducted real time air and dust monitoring at the Site this week on behalf of UPRR in accordance with the DCAM Plan provided in the Revised IMWP. No Target Dust Control Levels were exceeded during the remediation activities on August 19th through 24th (Appendix B).
 - o Atlas did not collect integrated air samples due to inclement weather and work periods lasting less than the required sampling period of eight hours per day.
- **Soil/Waste Management**
 - o No roll-off containers were filled this week. Roll-off containers staged at the Site were kept covered.
 - o E3 recovered tar material from focused excavations FE-5, 9, and 11.
 - o E3 transported roll-off containers to the following facilities based on waste profiles:
 - Four roll-offs containing Class 1 non-hazardous soil waste to the Republic Services Blue Ridge Facility.
 - Fifteen roll-offs containing Class 2 non-hazardous soil waste to the Republic Services McCarty Road Facility.
 - Two roll-offs containing Class 1 non-hazardous asphalt and concrete waste to the HPP Baytown North Facility.
 - Twenty-nine roll-offs containing Class 2 non-hazardous asphalt and concrete to the HPP Baytown North Facility.
- **Stormwater Management**
 - o No additional stormwater was recovered from the Site this week. Therefore, similar to the previous week, approximately 393,000 gallons of stormwater are being stored onsite pending profiling, transportation, and disposal.
 - o On Wednesday August 21st, E3 placed plastic coverings over FE-6, 9, 10, and 12 to protect them from rain.

Week Period August 26 through August 30, 2024:

- **Remediation Activities:**
 - o E3 conducted the following activities this week:
 - E3 placed base material over the liner system at FE-12.
 - Ashton cut straight edges in concrete at FE-5,8, and 13 to prepare for concrete cap installation.
 - E3 installed the GCL/HDPE/geotextile liner system at FE-9, 10, and 11 as per revised IMWP dated August 8, 2024.
- **Dust Control and Air Monitoring:**

- o Atlas conducted real time air and dust monitoring at the Site on behalf of UPRR in accordance with the DCAM Plan provided in the Revised IMWP. No Target Dust Control Levels were exceeded during the remediation activities on August 26th through 29th (Appendix B).
 - o Atlas did not collect integrated air samples due to inclement weather and work periods lasting less than the required sampling period of eight hours per day.
- **Soil/Waste Management**
 - o No roll-off containers were filled this week. Roll-off containers staged at the Site were kept covered.
 - o E3 transported roll-off containers to the following facilities based on waste profiles:
 - Nine roll-offs containing Class 1 non-hazardous asphalt and concrete waste to the HPP Baytown North Facility.
 - Twelve roll-offs containing Class 2 non-hazardous asphalt and concrete to the HPP Baytown North Facility.
- **Stormwater Management**
 - o No additional stormwater was recovered from the Site this week. Therefore, similar to the previous week, approximately 393,000 gallons of stormwater are being stored onsite pending profiling, transportation, and disposal.
 - o On Wednesday, August 28th, E3 placed plastic coverings over FE-9, 10, and 11 to protect them from rain.

Non-Aqueous Phase Liquid (NAPL) Collection System Inspections

A NAPL Collection System was installed in the Englewood Intermodal Yard in January 2019 to address the tar-like substance seeps within parking stalls B100 to B109 (for container trailers). The following is a summary of the observations from the weekly inspections of the NAPL Collection System and Englewood Intermodal Yard concrete pavement near the collection system for August 2024 (select photographs from the weekly inspections are provided in Attachment C):

- The NAPL Collection System Sump 1 (B099/B100 stalls), Sump 2 (B103/B104 stalls), and Sump 3 (B107/B108 stalls) have continued to be checked weekly for NAPL using an interface probe. A hoe has continued to be used to recover NAPL, if present, from the bottom of each of the sumps during the weekly inspections. No NAPL was detected or recovered from Sumps 1, 2 and 3 during the August 2024 weekly inspections. A notation on the presence of NAPL in each sump, tabulation of depth and thickness of NAPL, if detected, and a tabulation of total mass of NAPL recovered from each sump is provided on the enclosed Table 1. NAPL recovered from the sumps is placed in a drum for disposal. The drum is staged at the Container Storage Area (CSA). The inflow protector was monitored for NAPL accumulation, and no accumulation was observed through August 2024.
- Tar material seep was observed at Stall B-107 along the concrete joint for the NAPL Collection System on August 7th (Photo 15), August 14th (Photo 19), August 21st (Photo 24), and August 28th (Photo 29). The tar-like material was recovered during the weekly inspections.
- Water levels in NAPL Collection System Sump 1, Sump 2, and Sump 3 were measured at the following levels below the top of the manholes:

- o August 7th – B099/B100 was measured at 23 inches, B103/B104 was measured at 32 inches, and B107/B108 was measured at 32 inches (Photo 11, 12, and 13).
- o August 14th – at 24, 42.5 and 41.5 inches (Photo 16, 17, and 18).
- o August 21st – at 22.5, 42.5, and 41.5 inches (Photo 21, 22, and 23).
- o August 28th – at 22.5, 22.5, and 41.5 inches (Photo 26, 27, and 28).
- During the August 2024 inspections, the water in Sump 1 was observed to range from clear, tan, brown, to dark brown in color, and the water in Sump 2 was observed to be gray, brown and light brown. The water in Sump 3 was observed to be brown and light brown. A sheen was observed at Sump 1 during the August 14th and 28th, 2024 inspections (Photos 16 and 26). No odors were reported during the August inspections.

Areas Outside NAPL Collection System Inspections

For areas outside the NAPL Collection System, WSP made the following observations during the weekly inspections:

- A small amount of tar-like material was observed at the Track 802 location on August 7th (Photo 14), August 14th (Photo 20), August 21st (Photo 25), and August 28th (Photo 30). The tar-like material during the weekly inspections
- Tar-like material observed during the weekly inspection events was removed and recovered using a hand tool to scrape up the material. With the implementation of the Focused Excavations, there are only two locations where tar material seeps are observed (Stall B-107 and Track 802). For the two locations, the seep activity during the month of August was higher compared to the July inspections. The collection volume of the tar material from the two seeps slightly increased from 0.07 gallons over 5 inspections to 0.1 gallons over 4 inspections due to the quantity of excavations at the seep locations. The material recovered was placed in a drum staged at the CSA for disposal.
- During the August 2024 inspections, no NAPL seeps were observed at the seven August 2020 test pit locations (stalls A010, A021, A098, B013, B057, B096 and B108) or three other stall numbers B042, B056, and B102 Joint.
- The previously observed seeps at A010, A022, B042, B056, B057, B096, B100, B102, B105, and RD-14 have been addressed through the Focused Excavation activities.
- There was no brown water staining observed during the month of August.

If you have any questions or need additional information, please feel free to call us at (512) 501-5547 or Mr. Kevin Peterburs of UPRR at (414) 267-4164.

Sincerely,

WSP USA Inc.



Manny Higa, GIT
Consultant, Environmental Scientist



Keshab Gyawali, P.E.
Senior Consultant, Civil Engineer



CC: Kevin Peterburs, UPRR – Milwaukee, WI
Karina Rocha, Waste Section Manager, TCEQ Region 12, Houston

Attachment Table 1 – NAPL Measurements – NAPL Collection System
Attachment A – Weekly Inspection Photolog
Attachment B – Air Monitoring Monthly Report – June 2024
Attachment C – Dust Control and Air Monitoring Plan Addendum



ATTACHMENT A

Weekly Inspection Photolog



PHOTOGRAPHIC LOG

Client Name: Union Pacific Railroad		Site Location: Englewood Intermodal Yard, Houston, Texas	Project No. 31406585.016
Photo No. 1	Inspection Date: 8/12/2024		
Description: Compaction of backfill material and dust control at FE-07 Lat: 29.784167 Long: -95.320556			
Photo No. 2	Inspection Date: 8/12/2024		
Description: Compaction of backfill material and moisture testing at FE-7. Lat: 29.784167 Long: -95.320556			



PHOTOGRAPHIC LOG

Client Name: Union Pacific Railroad		Site Location: Englewood Intermodal Yard, Houston, Texas	Project No. 31406585.016
Photo No. 3	Inspection Date: 8/12/2024		
Description: Placement of backfill material and dust control at FE-1&3. Lat: 29.784313 Long: -95.320746			
Photo No. 4	Inspection Date: 8/12/2024		
Description: Compaction of backfill material and moisture testing at FE-1&3. Lat: 29.784313 Long: -95.320746			



PHOTOGRAPHIC LOG

Client Name:
Union Pacific Railroad

Site Location:
Englewood Intermodal Yard, Houston, Texas

Project No.
31406585.016

Photo No.
5

Inspection Date:
8/16/2024

Description:

Compaction of backfill material and moisture testing at FE-12.

Lat: 29.785571
Long: -95.318592



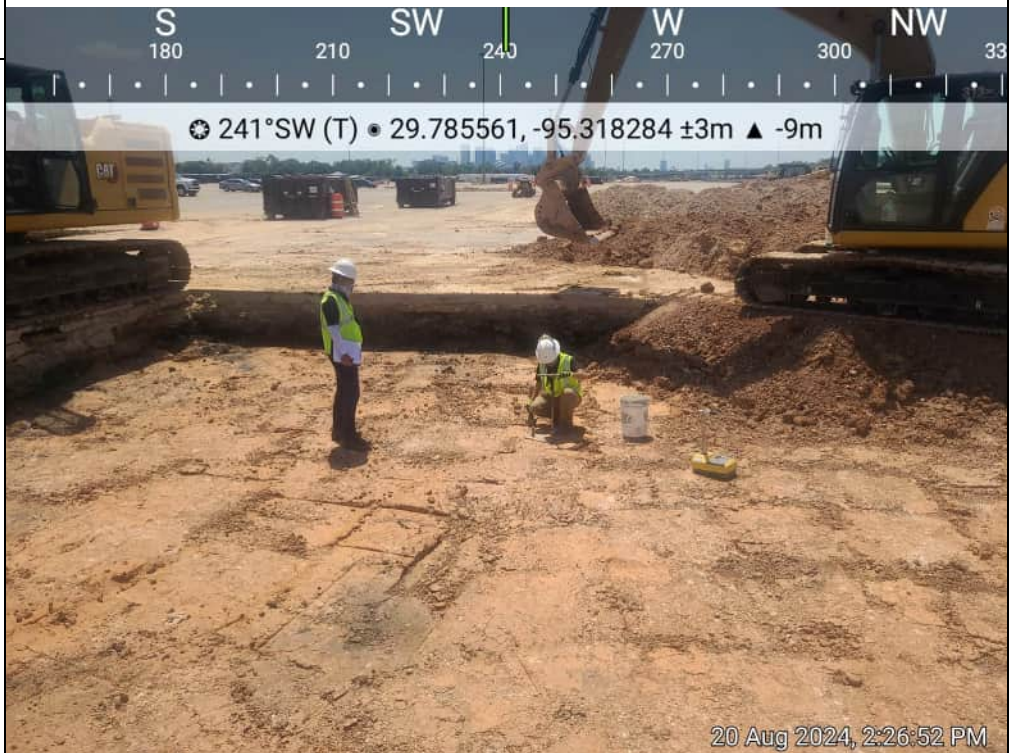
Photo No.
6

Inspection Date:
8/20/2024

Description:

Compaction of backfill material and moisture testing at FE-6.

Lat: 29.785561
Long: -95.318284





PHOTOGRAPHIC LOG

Client Name:

Union Pacific Railroad

Site Location:

Englewood Intermodal Yard, Houston, Texas

Project No.

31406585.016

Photo No.

7

Inspection Date:

8/21/2024

Description:

Compaction of backfill material and moisture testing at FE-5.

Lat: 29.785295

Long: -95.318733



Photo No.

8

Inspection Date:

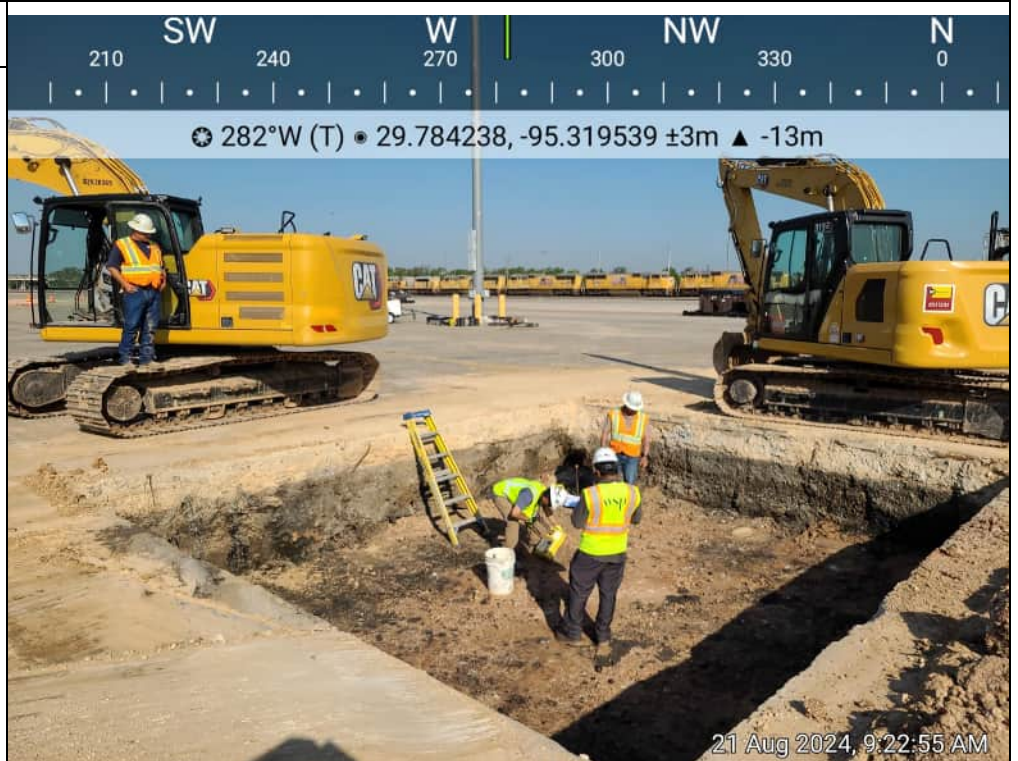
8/21/2024

Description:

Compaction of backfill material and moisture testing at FE-11.

Lat: 29.784238

Long: -95.319539





PHOTOGRAPHIC LOG

Client Name:

Union Pacific Railroad

Site Location:

Englewood Intermodal Yard, Houston, Texas

Project No.

31406585.016

Photo No.

9

Inspection Date:

8/23/2024

Description:

Placement of geosynthetic clay liner (GCL) and preparation of seams with bentonite powder at FE12.

Lat: 29.785571

Long: -95.318592



Photo No.

10

Inspection Date:

8/23/2024

Description:

Installation of 60-mil high density polyethylene (HDPE) liner on top of GCL at FE-12.

Lat: 29.785571

Long: -95.318592





PHOTOGRAPHIC LOG

Client Name:

Union Pacific Railroad

Site Location:

Englewood Intermodal Yard, Houston, Texas

Project No.

31406585.016

Photo No.

11

Inspection Date:

8/7/2024

Description:

Sump 1 (B099/B100), 23 inches of freeboard in sump. No odor. Color brown and no sheen observed. Water cloudy from backfill sediment washing into sump.

Lat: 29.7844000

Long: -95.3205861



Photo No.

12

Inspection Date:

8/7/2024

Description:

Sump 2 (B103/B104), 32 inches of freeboard in sump. No odor. Color brown and no sheen observed.

Lat: 29.7842861

Long: -95.3208611





PHOTOGRAPHIC LOG

Client Name:

Union Pacific Railroad

Site Location:

Englewood Intermodal Yard, Houston, Texas

Project No.

31406585.016

Photo No.

13

Inspection Date:

8/7/2024

Description:

Sump 3 (B107/B108), 32 inches of freeboard in sump. No odor. Color brown and no sheen observed.

Lat: 29.7844000

Long: -95.3205861



Photo No.

14

Inspection Date:

8/7/2024

Description:

NAPL seep at Track 802. ~9 in³ of tar removed.

Lat: 29.784947

Long: -95.321214





PHOTOGRAPHIC LOG

Client Name:

Union Pacific Railroad

Site Location:

Englewood Intermodal Yard, Houston, Texas

Project No.

31406585.016

Photo No.

15

Inspection Date:

8/7/2024

Description:

NAPL seep at B107. ~10 in³ of tar removed.

Lat: 29.7844000

Long: -95.3205861



Photo No.

16

Inspection Date:

8/14/2024

Description:

Sump 1 (B099/B100), 24 inches of freeboard in sump. No odor. Color brown and sheen observed.

Lat: 29.7844000

Long: -95.3205861





PHOTOGRAPHIC LOG

Client Name: Union Pacific Railroad		Site Location: Englewood Intermodal Yard, Houston, Texas	Project No. 31406585.016
Photo No. 17	Inspection Date: 8/14/2024		
Description: Sump 2 (B103/B104), 42.5 inches of freeboard in sump. No odor. Color gray and no sheen observed. Lat: 29.7842861 Long: -95.3208611			
Photo No. 18	Inspection Date: 8/14/2024		
Description: Sump 3 (B107/B108), 41.5 inches of freeboard in sump. No odor. Color light brown and no sheen observed. Lat: 29.7844000 Long: -95.3205861			



PHOTOGRAPHIC LOG

Client Name: Union Pacific Railroad		Site Location: Englewood Intermodal Yard, Houston, Texas	Project No. 31406585.016
Photo No. 19	Inspection Date: 8/14/2024		
Description: NAPL seep at B107. ~5 in ³ of tar removed. Lat: 29.7844000 Long: -95.3205861			
Photo No. 20	Inspection Date: 8/14/2024		
Description: NAPL seep at Track 802. ~2.5 in ³ of tar removed. Lat: 29.784947 Long: -95.321214			



PHOTOGRAPHIC LOG

Client Name: Union Pacific Railroad		Site Location: Englewood Intermodal Yard, Houston, Texas	Project No. 31406585.016
Photo No. 21	Inspection Date: 8/21/2024		
Description: Sump 1 (B099/B100), 22.5 inches of freeboard in sump. No odor. Color brown and no sheen observed. Lat: 29.7844000 Long: -95.3205861			
Photo No. 22	Inspection Date: 8/21/2024		
Description: Sump 2 (B103/B104), 42.5 inches of freeboard in sump. No odor. Color brown and no sheen observed. Lat: 29.7842861 Long: -95.3208611			



PHOTOGRAPHIC LOG

Client Name: Union Pacific Railroad	Site Location: Englewood Intermodal Yard, Houston, Texas	Project No. 31406585.016
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Photo No. 23	Inspection Date: 8/21/2024
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Description:

Sump 3 (B107/B108), 41.5 inches of freeboard in sump. No odor. Color brown and no sheen observed.

Lat: 29.7844000
Long: -95.3205861



Photo No. 24	Inspection Date: 8/21/2024
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Description:

NAPL seep at B107. ~6 in³ of tar removed.

Lat: 29.7844000
Long: -95.3205861





PHOTOGRAPHIC LOG

Client Name: Union Pacific Railroad		Site Location: Englewood Intermodal Yard, Houston, Texas	Project No. 31406585.016
Photo No. 25	Inspection Date: 8/21/2024		
Description: NAPL seep at Track 802. ~7 in ³ of tar removed. Lat: 29.784947 Long: -95.321214			
Photo No. 26	Inspection Date: 8/28/2024		
Description: Sump 1 (B099/B100), 22.5 inches of freeboard in sump. No odor. Color brown and sheen observed. Lat: 29.7844000 Long: -95.3205861			



PHOTOGRAPHIC LOG

Client Name:

Union Pacific Railroad

Site Location:

Englewood Intermodal Yard, Houston, Texas

Project No.

31406585.016

Photo No.

27

Inspection Date:

8/28/2024

Description:

Sump 2 (B103/B104), 22.5 inches of freeboard in sump. No odor. Color brown and no sheen observed.

Lat: 29.7842861

Long: -95.3208611



Photo No.

28

Inspection Date:

8/28/2024

Description:

Sump 3 (B107/B108), 41.5 inches of freeboard in sump. No odor. Color brown and no sheen observed.

Lat: 29.7844000

Long: -95.3205861





PHOTOGRAPHIC LOG

Client Name: Union Pacific Railroad		Site Location: Englewood Intermodal Yard, Houston, Texas	Project No. 31406585.016
Photo No. 29	Inspection Date: 8/28/2024		
Description: NAPL seep at B107. ~6 in ³ of tar removed. Lat: 29.7844000 Long: -95.3205861			
Photo No. 30	Inspection Date: 8/28/2024		
Description: NAPL seep at Track 802. ~9 in ³ of tar removed. Lat: 29.784947 Long: -95.321214			



ATTACHMENT B

Air Monitoring Monthly Report – August 2024



**Union Pacific Railroad
Houston Wood Preserving Works Site
Focused Excavation Project**

Air Monitoring Monthly Report
August 2024

Houston, Texas

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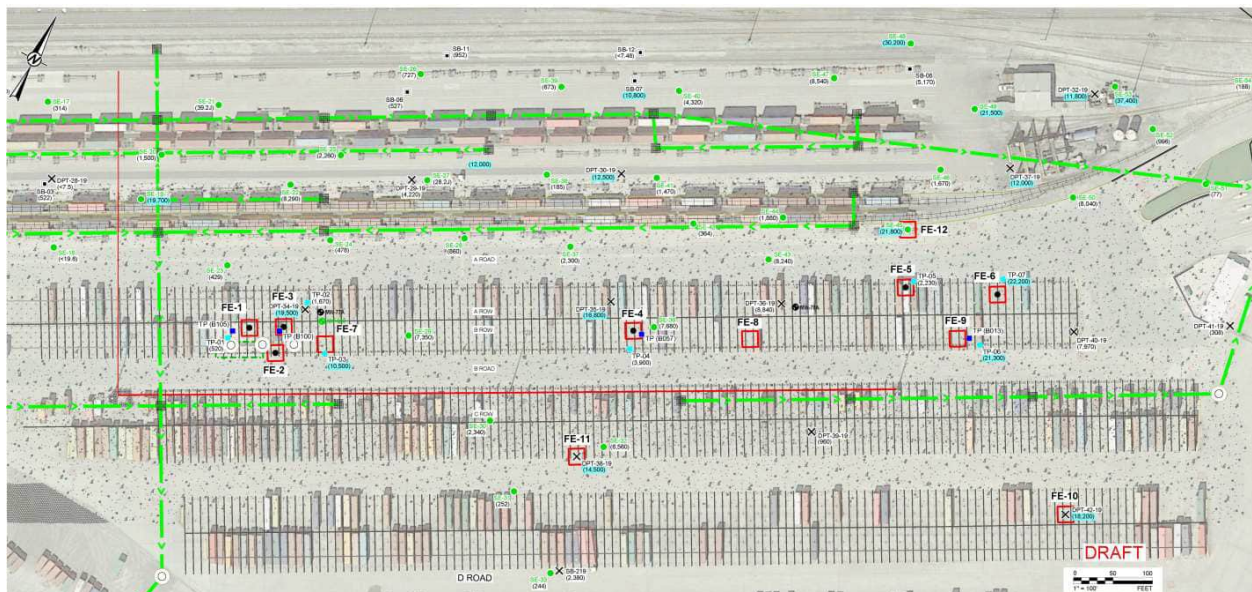
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SECTION 1 INTRODUCTION

1.1 Background Information

Atlas Technical Consultants, LLC (Atlas) is assisting Union Pacific Railroad (UPRR) with industrial hygiene consulting services in the Union Pacific Railroad (UPRR) Houston Wood Preserving Works Railyard (Site) portion of the Englewood Intermodal Yard (Site). Daily air monitoring is being performed during focused excavation work associated with the remediation of twelve (12) seep areas at the Site. The focused excavations are taking place on the east end of the Site, in the concrete-covered parking area just south of the southernmost rail track in the railyard. Figure 1 shows the approximate locations of the initial focused excavations. The exact size and location of the focus excavation locations may change as the project develops.

Figure 1-1 General Site Location Map



Atlas representatives are conducting area air monitoring for particulate matter 2.5 micrometers or less in diameter ($PM_{2.5}$), particulate matter 10 micrometers or less in diameter (PM_{10}), lead, arsenic and polynuclear aromatic hydrocarbons (PAHs) during excavation activities. Air monitoring stations are deployed each day of excavation activities and air monitoring is conducted until activities are complete each day. Atlas Industrial Hygienists continuously monitor particulate concentrations and equipment status throughout the sample period each day.

The Atlas team consisted of three (3) Industrial Hygienists (IH), Sarah VanderWielen, Armando Medina and Jaimen Shepherd, two (2) Senior Project Managers, Cynthia M. Garner and Sarah Vanderwielen. The onsite team worked under the direct supervision of Catherine G. McLain, an Atlas American Board of Industrial Hygiene (ABIH) Certified Industrial Hygienist (CIH). All air monitoring work is being conducted under the guidance of the TCEQ approved Dust Control and Air Monitoring Plan dated October 20, 2023.

1.2 Sampling Methodologies

Atlas employees utilize the following methodologies for air monitoring:

The area air sampling methodology is summarized in Table 1. The sampling analytical methods are those published by the National Institute for Occupational Safety and Health (NIOSH) and by the United States Environmental Protection Agency (USEPA). Analytical methods included Inductively Coupled Plasma (ICP) and Gas Chromatography-Mass Spectrometry (GC-MS). Collection media included unweighted (UW) 37 millimeter (mm) Mixed Cellulose Ester (MCE) filters and Polyurethane Foam (PUF) and XAD Resin packed Tubes. The collected samples were sealed and uniquely labeled at the end of the monitoring period and prepared for delivery to a certified analytical laboratory.

The samples were analyzed by CON-TEST, a Pace Analytical Laboratory (Pace) in East Longmeadow, Massachusetts. Pace is accredited by the American Industrial Hygiene Association (AIHA) Laboratory Accreditation Programs, LLC (AIHA LAP, LLC) Industrial Hygiene Laboratory Accreditation Program (IHLAP).

Table 1 – Analytical Methods Union Pacific Houston Wood Preserving Works			
Houston, Texas			
Analytes	Sampling/Analytical Method	Collection Media	Flow Rate
Lead	NIOSH Method 7303; ICP	UW 37mm MCE Filter	1-4 l/min
Arsenic	NIOSH Method 7303; ICP	UW 37mm MCE Filter	2 l/min
Polynuclear Aromatic Hydrocarbons (PAH)	EPA TO-13A; GC-MS	PUF & XAD Resin Packed Tubes	1-5 l/min
Acronyms: NA – Not Applicable			

Overall averages presented are for the sample period specified by the start and stop time of each monitor. Unless otherwise stated, the sample periods are inclusive of all excavation activities.

The locations of the air monitors are consistent with the TCEQ approved Dust Control and Air Monitoring Plan dated October 20, 2023. Minor variations to monitor placement may occur as a result of excavation activities and/or environmental factors.

1.3 Equipment

Atlas is using the following equipment for onsite air monitoring:

Weather Station

A Lufft WS500 Weather Station is co-located with the Unit 01 air sampler. The weather station measured wind direction, wind speed, temperature, relative humidity and precipitation. The weather station logs data at one (1) minute intervals.

Direct Read Area Monitoring

Direct read air monitoring for PM_{2.5} and PM₁₀ is being conducted using a DustTrak DRX Desktop Aerosol Monitor, Model 8533 (DustTrak). The DustTrak is a real-time particulate monitor. Seven (7) air monitoring stations are setup for continuous PM_{2.5} and PM₁₀ air monitoring. PM_{2.5} and PM₁₀ concentrations are logged at one (1) minute intervals and reported as a 30-minute average. The air monitoring stations are mounted on tripods on at an approximate height of 5-6 feet. The air samplers are set in the same location daily.

SECTION 1

Air monitoring stations are connected to the internet using Pine Environmental Global Telemetry Solutions (GTS). GTS is an advanced cellular and web-based system that provides access to real-time data.

The real-time data collection software is configured to generate text alerts of 30-minute dust concentration averages that exceed the specified particulate control levels. Notifications are sent directly to the onsite industrial hygienists. The onsite industrial hygienists respond to each alarm to make observations and determine the source of the elevated particulate readings. If the source of the elevated particulates was determined to be related to excavation activities, the industrial hygienists communicates findings to the designated UPRR representative along with any dust mitigation recommendations.

Air Samples

Area air samples are collected using a SKC Airchek 52 Sampling Pump, Tygon tubing and sampling media specified by sampling methods. The sampling pumps were positioned on tripods at a height representative of the breathing zone. Air sampling pumps were pre and post calibrated to the sampling method recommended flowrate using a TSI Primary Calibrator, Model 4146.

Atlas utilized the equipment described in Table 2 to record weather data and conduct direct read and area air monitoring.

Table 2 – Equipment Union Pacific Houston Wood Preserving Works		
Houston, Texas		
Nomenclature	Function	Photo
Lufft WS500	Weather Station	
TSI DustTrak™ DRX Desktop Aerosol Monitor, Model 8533	Direct Reading Air Monitoring – PM _{2.5} & PM ₁₀	
SKC Airchek 52 Sampling Pump	Area Air Monitoring – Lead, Arsenic, PAH	

Table 2 – Equipment Union Pacific Houston Wood Preserving Works		
Houston, Texas		
Nomenclature	Function	Photo
TSI Primary Calibrator Model 4146	Air Sampling Pump Primary Calibrator	

SECTION 2 ONSITE METEOROLOGY AND AIR MONITORING RESULTS

2.1 National Ambient Air Quality Standards

The USEPA's 2012 National Ambient Air Quality Standards (NAAQS) for PM_{2.5} and PM₁₀ were used to develop the Action Levels for this project. The 24-hour NAAQS are presented below:

- PM_{2.5} (24-hour average): 35 µg/m³
- PM₁₀ (24-hour average): 150 µg/m³

Action levels have been established for this project to ensure that excavation activities conducted at the Site do not contribute significantly to airborne particulate concentrations off property. Background particulate concentrations vary throughout the Houston area and can exceed the NAAQS for PM_{2.5}. Control levels were chosen to minimize the contribution of fugitive dust emissions from the excavation activities to the overall PM_{2.5} and PM₁₀ concentrations. The established control levels are presented below:

Table 3 – Established Control Levels Union Pacific Houston Wood Preserving Works, Houston, Texas		
	PM _{2.5} 30-minute Average	PM ₁₀ 30-minute Average
Notice Level	>30 µg/m ³	>75 µg/m ³
	The Notice Level is intended as an early warning of potential elevations in airborne dust levels. When the notice level is exceeded the onsite IH will investigate the area(s) where the initial elevations in dust levels are indicated, and inform the Remediation Manager, Environmental Manager and other designated personnel of the known or most likely source(s) of the elevated levels, and advise what actions, if any, appear warranted to limit airborne dust generation. The Remediation Manager and Environmental Manager will determine how to best implement the recommendations of the IH.	
Action Level	>55 µg/m ³	>150 µg/m ³
	The Action Level is intended as an indication that control measures should be implemented in a timely manner to mitigate generation of airborne dusts. When the Action Level is exceeded, the IH will investigate the area(s) where the elevations in dust levels are indicated, and inform the Remediation Manager, Environmental Manager and other designated personnel of the known or most likely source(s) of the elevated levels, and advise what actions, if any, appear warranted to limit airborne dust generation. The Remediation Manager and Environmental Manager will determine how to best implement the recommendations of the IH.	
Stop-Work Level	>85 µg/m ³	>300 µg/m ³
	The Stop-Work Level is intended as an indication that continued generation of airborne dusts at or above the specified levels are likely to result in overall daily averages or short-term elevations in airborne dust levels that could be greater than the parameters established for the project. When the Stop-Work Level is exceeded, work in the affected area(s) should be stopped until additional controls are implemented. The IH will investigate the area(s) where the elevations in dust levels are indicated, reporting his findings and recommendations to the Remediation Manager, Environmental Manager and other designated personnel. This team will work together to determine what control measures will be effective in reducing dust levels and how to best implement those measures and resume remediation activities. If stop-work levels are reached more than twice per day, the dust-generating activity will be stopped for the remainder of the workday and UPRR will design and implement a more effective dust control program prior to resuming work the following workday.	
Acronyms: IH – Industrial Hygienist		

Rolling 30 minute averages of PM_{2.5} and PM₁₀ are calculated by each monitor on each sampling day during the excavation activities. Both PM_{2.5} and PM₁₀ are measured by the monitor every two

SECTION 2

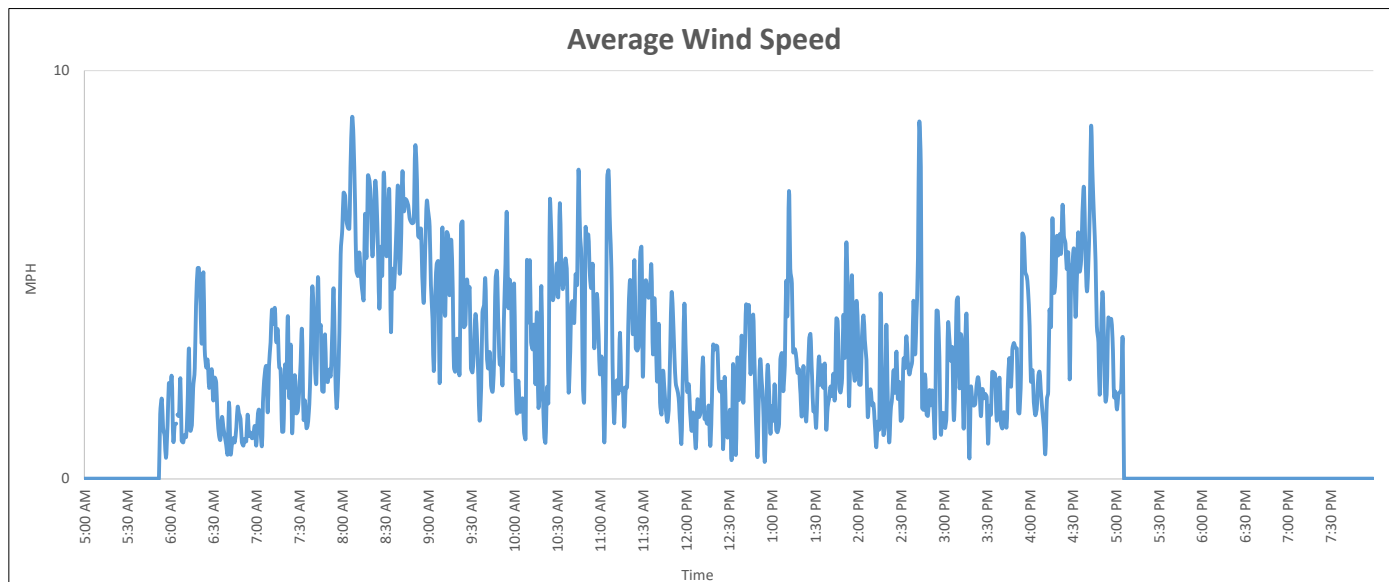
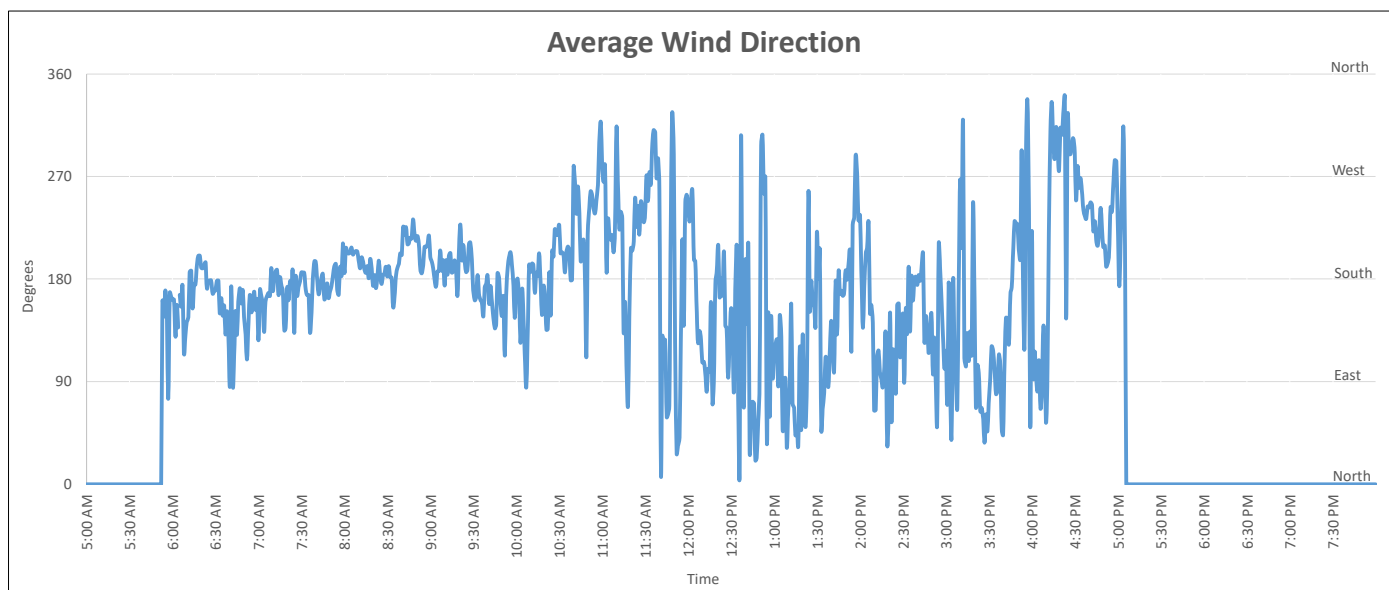
(2) minutes during the sampling period. The concentration shown on the graphs below represent the average $PM_{2.5}$ and PM_{10} concentration at the end of the 30 minute period.

The maximum, minimum and average monitored value per day for each air monitor is presented in Table 5. Due to Hurricane Beryl and subsequent weather, excavation activities did not resume until August 8, 2024.

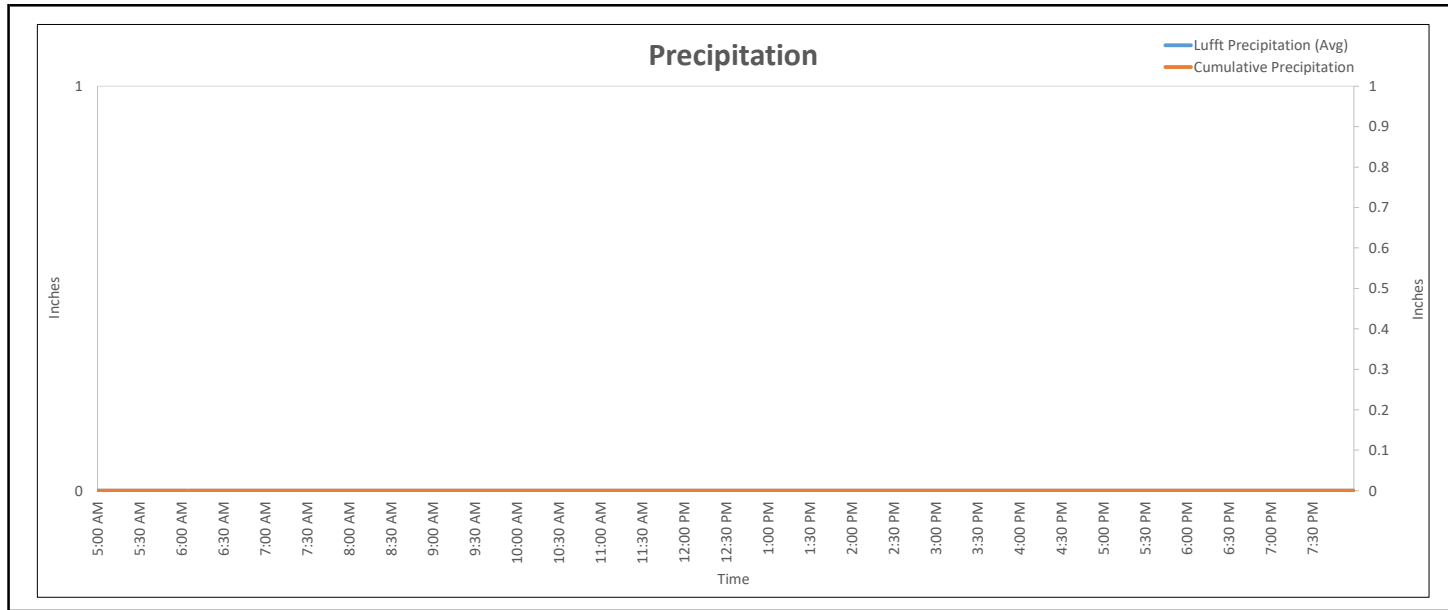
Monitoring levels did not reach the Stop Work threshold during the month of August.

Table 5 – Direct Read Summary							
Union Pacific Houston Wood Preserving Works							
Houston, Texas							
Date	Modem #	PM ₁₀ Concentration (µg/m ³)			PM _{2.5} Concentration (µg/m ³)		
		Min	Max	Average	Min	Max	Average
Week 11							
8/8/2024	48374	5.00	39.00	21.32	4.00	37.00	20.44
	47161	4.00	38.00	20.44	4.00	37.00	19.97
	48033	3.00	42.00	22.90	3.00	40.00	21.74
	48571	4.00	42.00	22.73	4.00	39.00	21.46
	48375	3.00	39.00	19.46	3.00	35.00	18.40
	801245	5.00	48.00	27.60	5.00	45.00	26.53
	49911	4.00	43.00	24.03	3.00	40.00	22.77
8/9/2024	48374	2.00	46.00	28.41	2.00	45.00	27.33
	47161	3.00	45.00	26.70	3.00	45.00	26.09
	48033	3.00	47.00	28.64	3.00	46.00	27.03
	48571	4.00	47.00	29.58	4.00	45.00	27.86
	48375	3.00	46.00	29.41	3.00	43.00	27.45
	801245	3.00	50.00	30.16	3.00	49.00	28.76
	49911	3.00	42.00	28.19	3.00	40.00	25.79
8/10/2024	48374	7.00	39.00	27.91	7.00	36.00	26.86
	47161	7.00	40.00	27.73	7.00	38.00	26.80
	48033	0.00	45.00	29.47	0.00	40.00	27.62
	48571	8.00	52.00	31.29	8.00	41.00	28.26
	48375	7.00	50.00	33.60	7.00	43.00	30.62
	801245	9.00	51.00	29.73	8.00	46.00	28.09
	49911	8.00	49.00	37.35	7.00	41.00	35.20
Note:							
1. Values shown in GREEN are above the Notice Level Threshold.							
2. Values shown in ORANGE are above the Action Level Threshold.							
3. Values shown in RED are above the Stop-Work Level Threshold.							

Union Pacific Railroad
Houston Wood Preserving Works Site
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Weather Daily Summary
Thursday, August 8, 2024

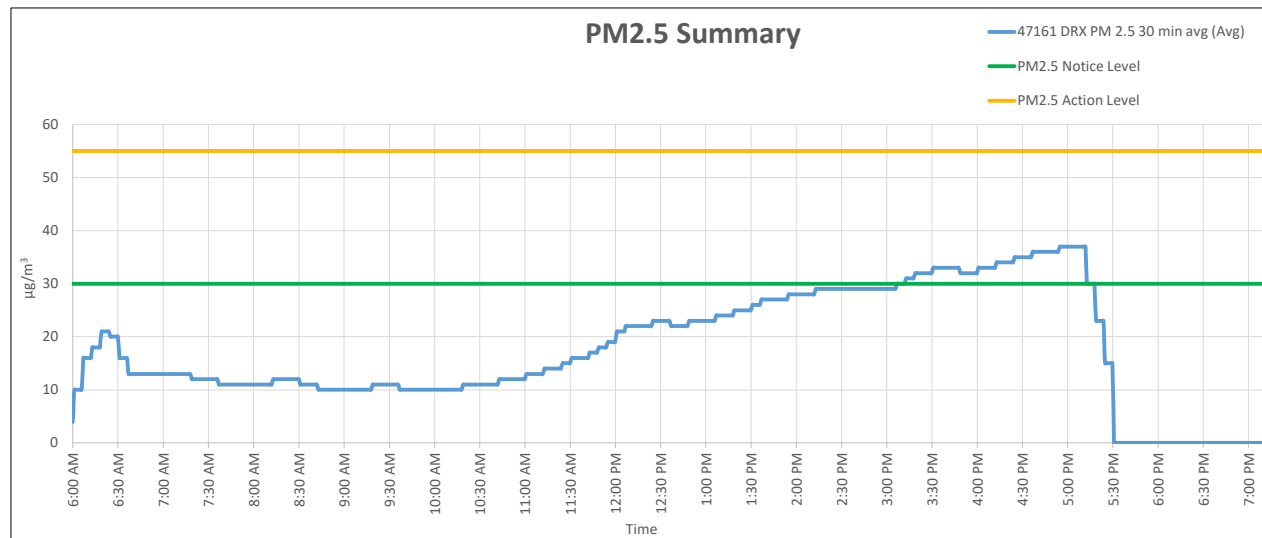
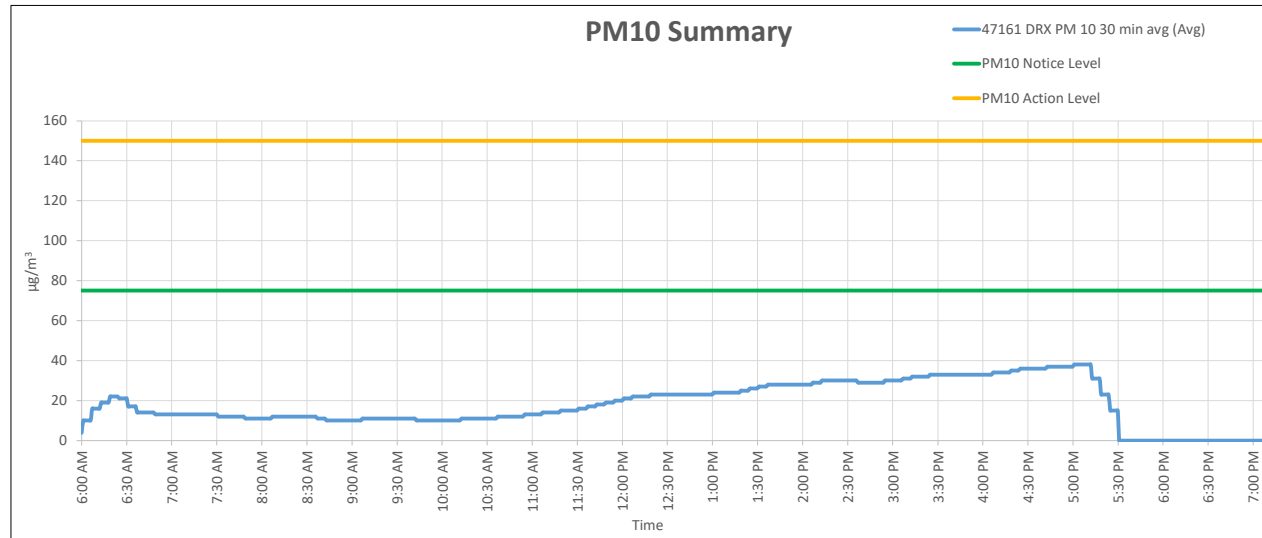


Union Pacific Railroad
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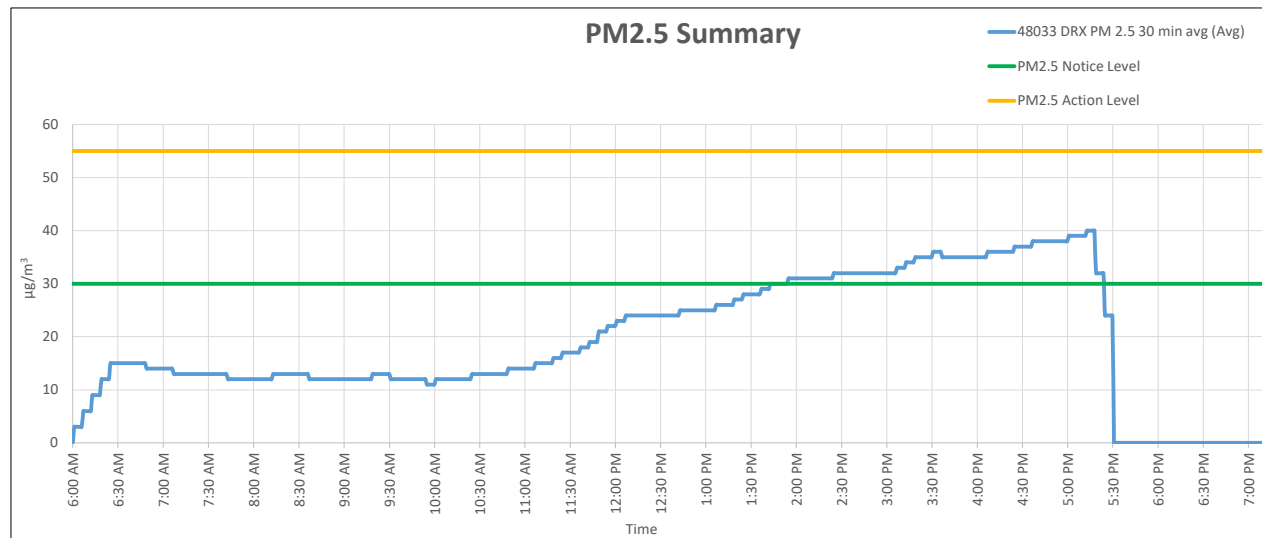
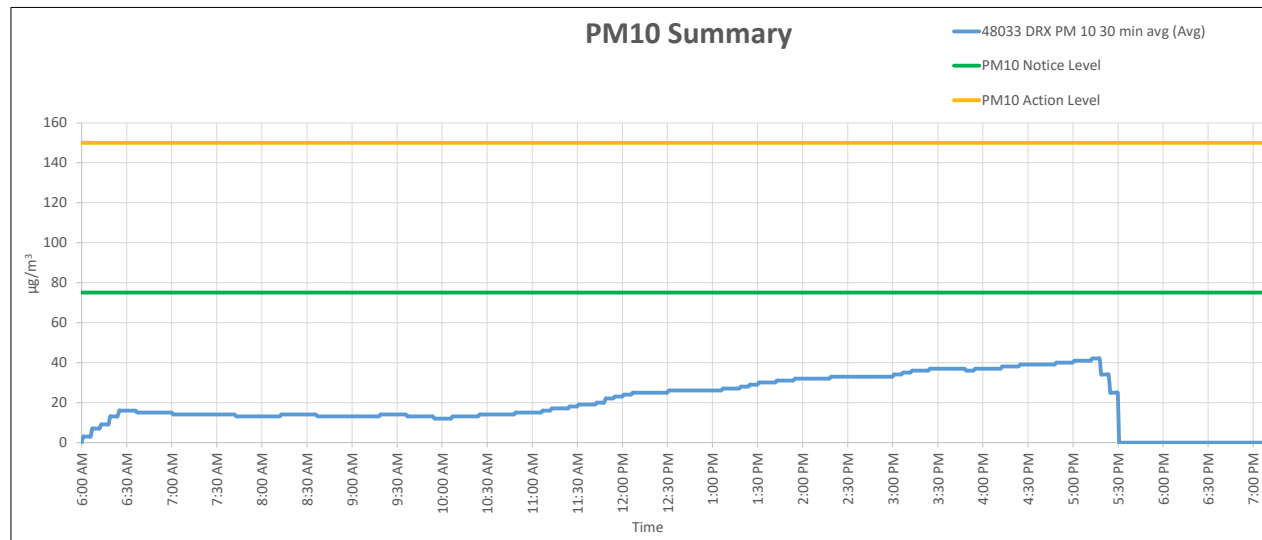
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 8, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	5:55 AM	5:30 PM	20.54	38.00	20.08	37.00



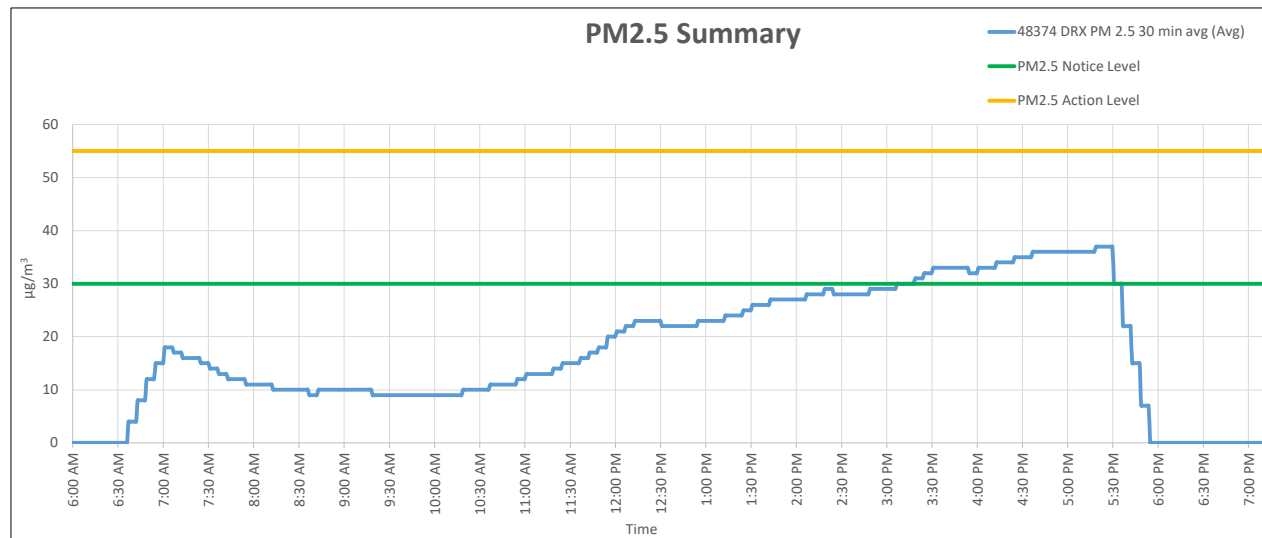
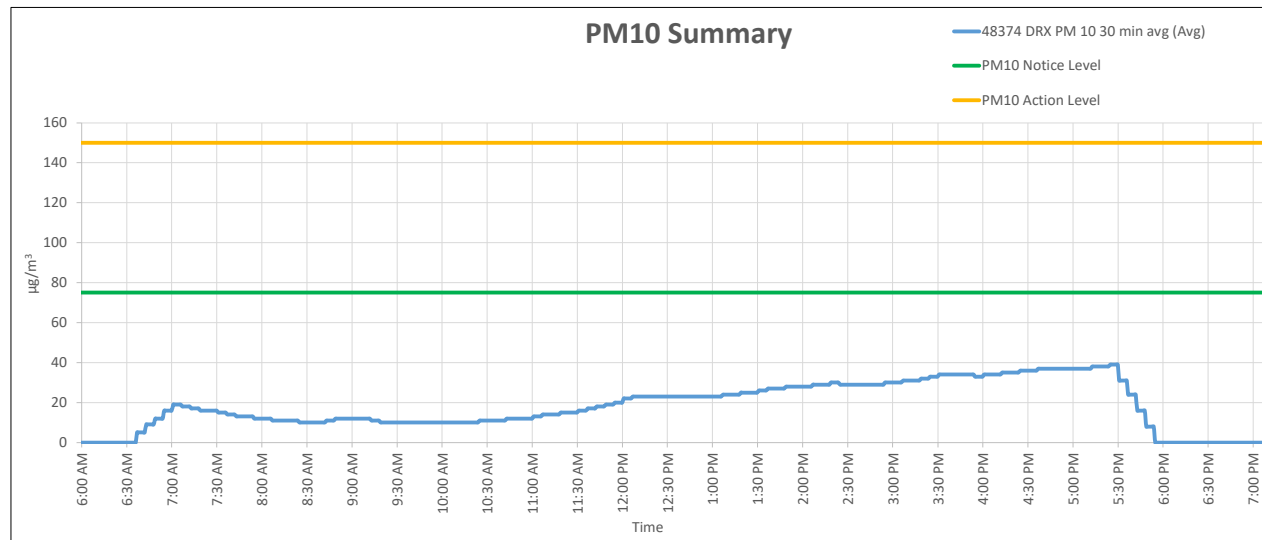
Union Pacific Railroad
Houston Wood Preserving Works Site
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Air Monitoring Values
Thursday, August 8, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	6:01 AM	5:30 PM	23.07	42.00	21.90	40.00



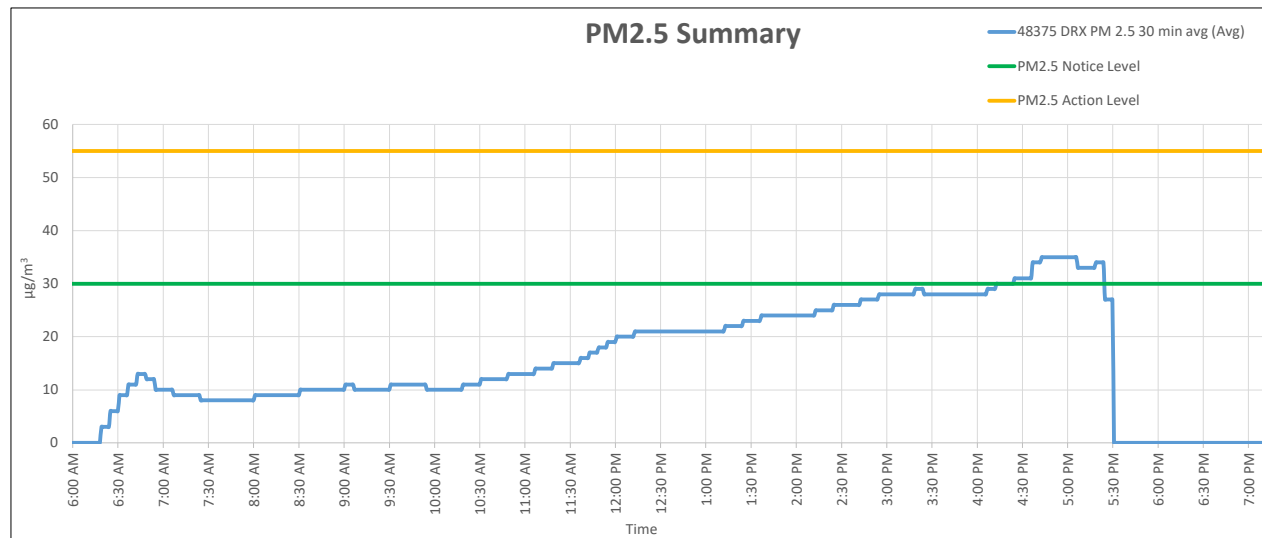
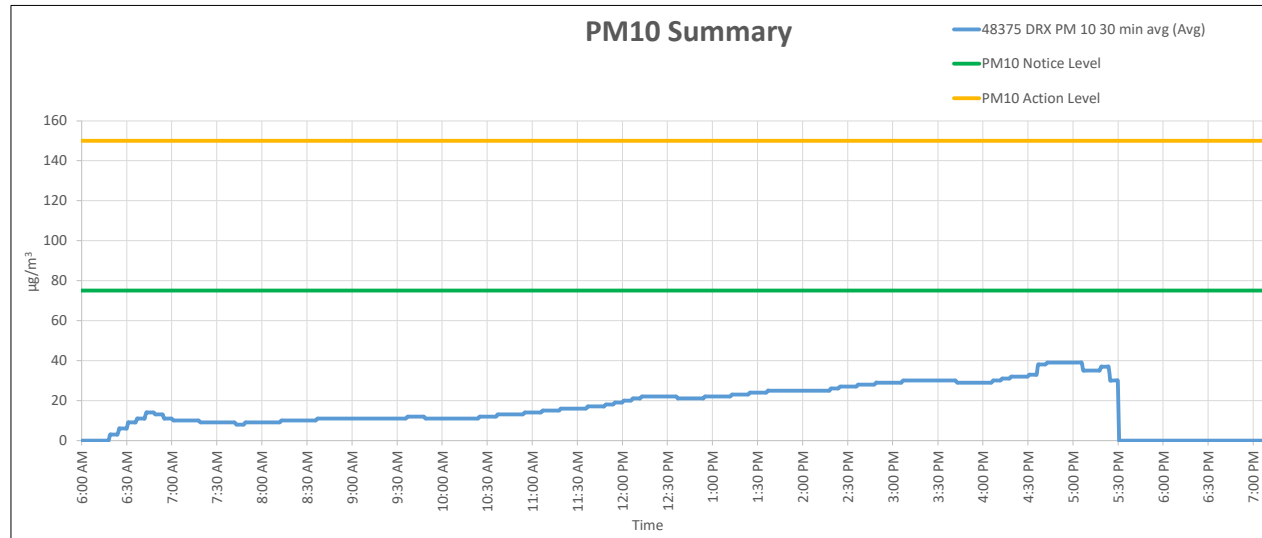
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 8, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:37 AM	5:54 PM	21.32	39.00	20.44	37.00



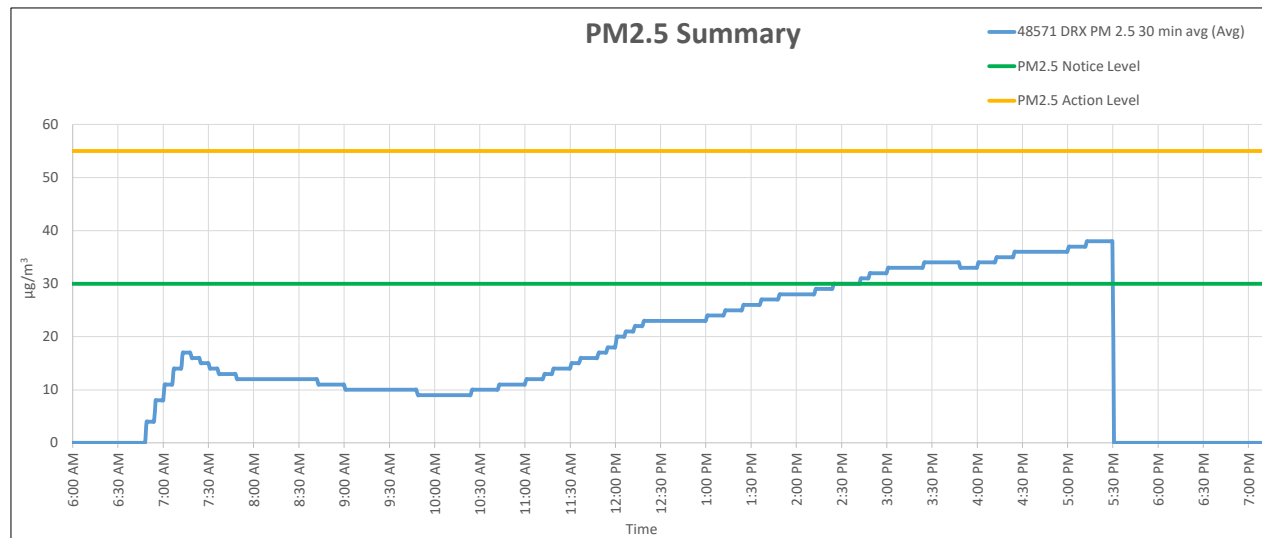
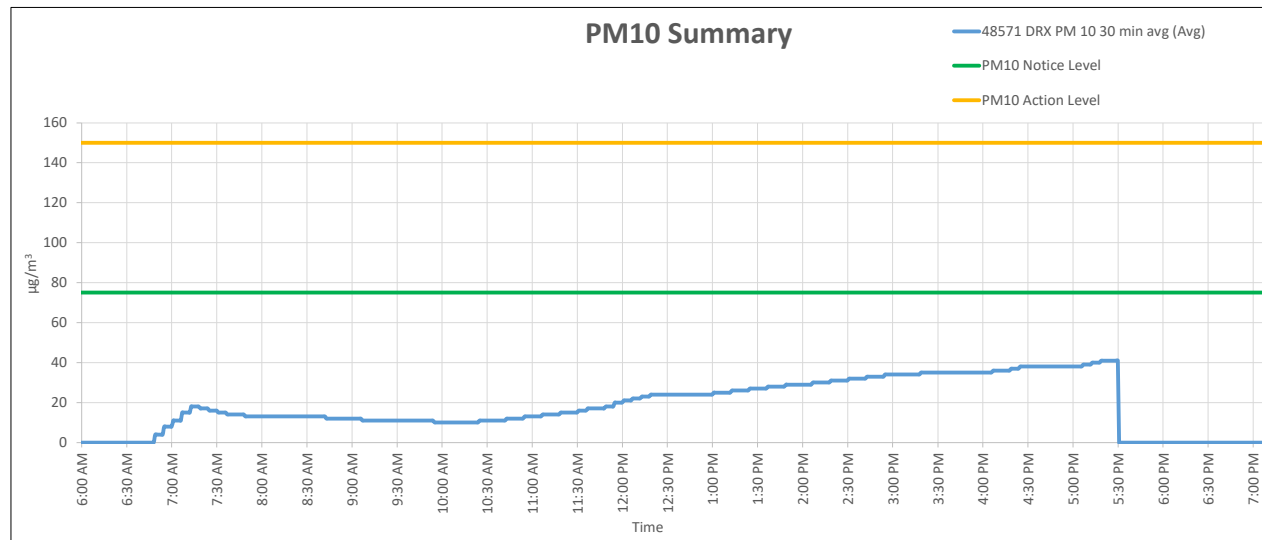
Union Pacific Railroad
Houston Wood Preserving Works Site
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Air Monitoring Values
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	6:19 AM	5:30 PM	19.57	39.00	18.52	35.00



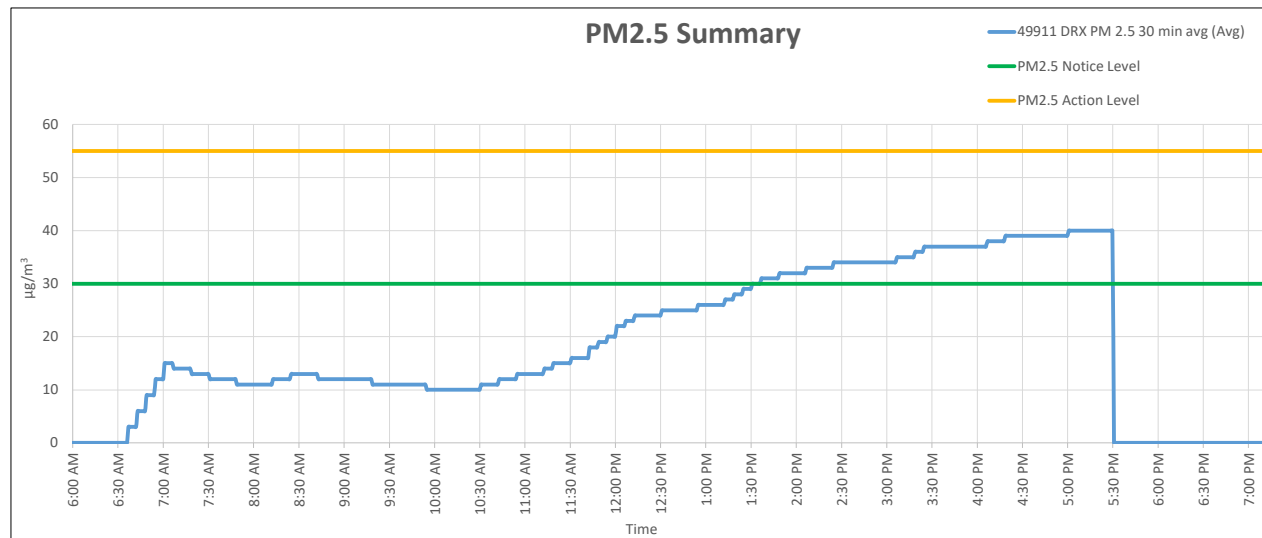
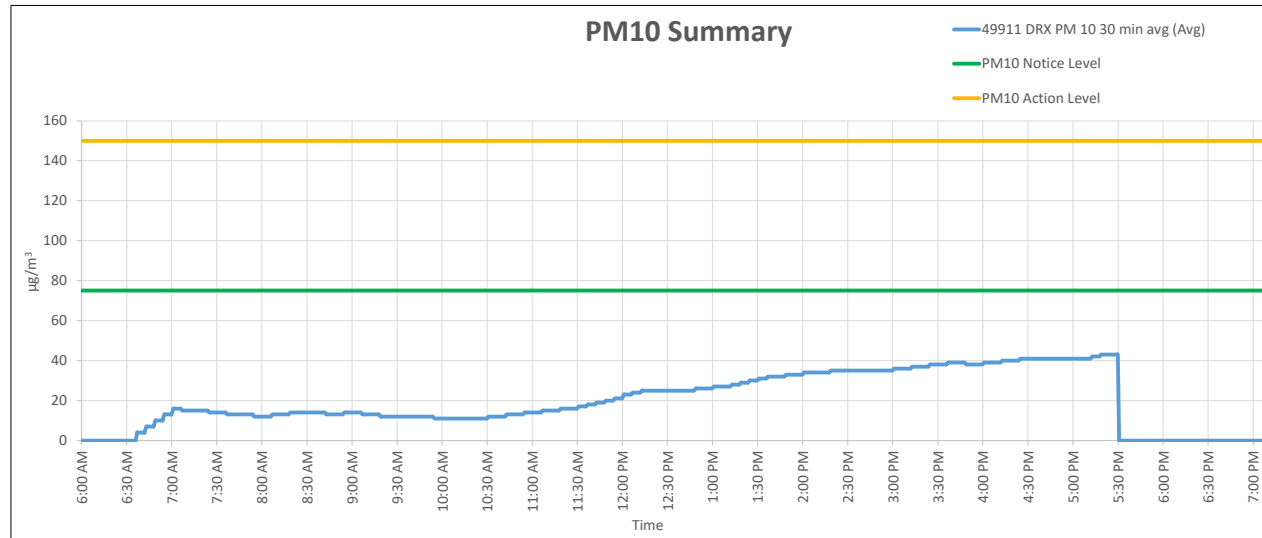
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	6:49 AM	5:30 PM	22.44	41.00	21.21	38.00



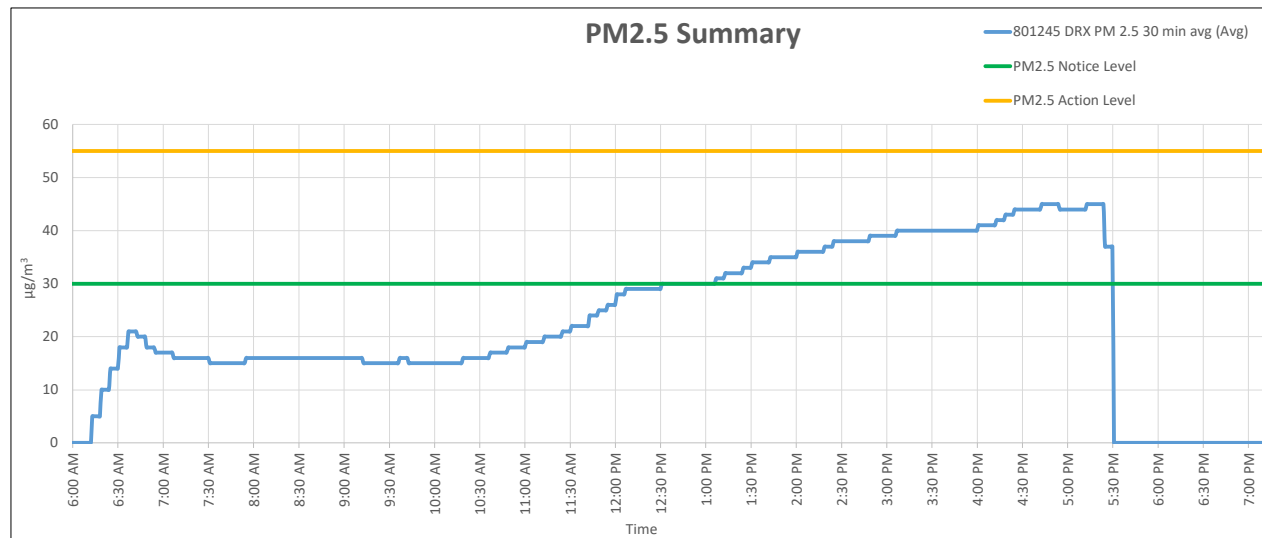
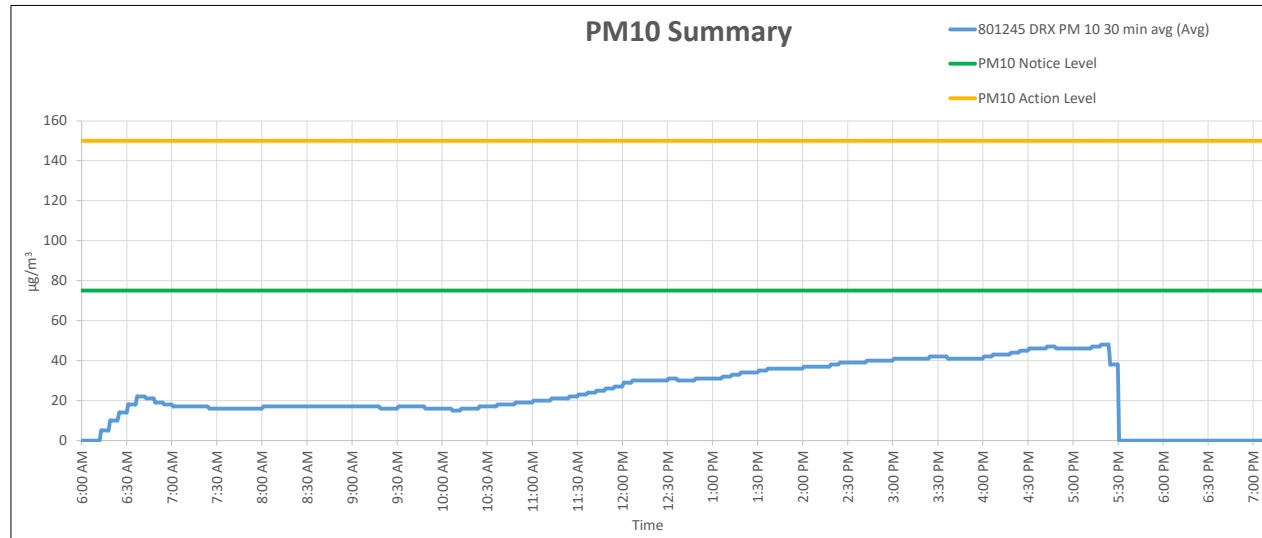
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	6:37 AM	5:30 PM	23.94	43.00	22.72	40.00

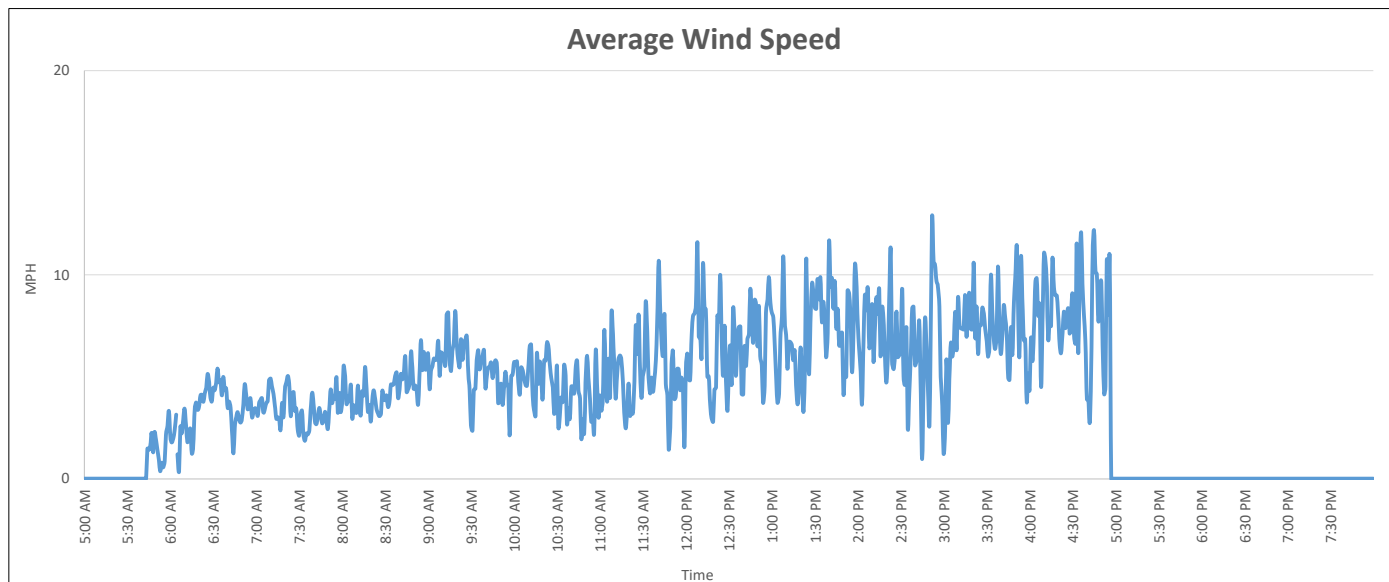
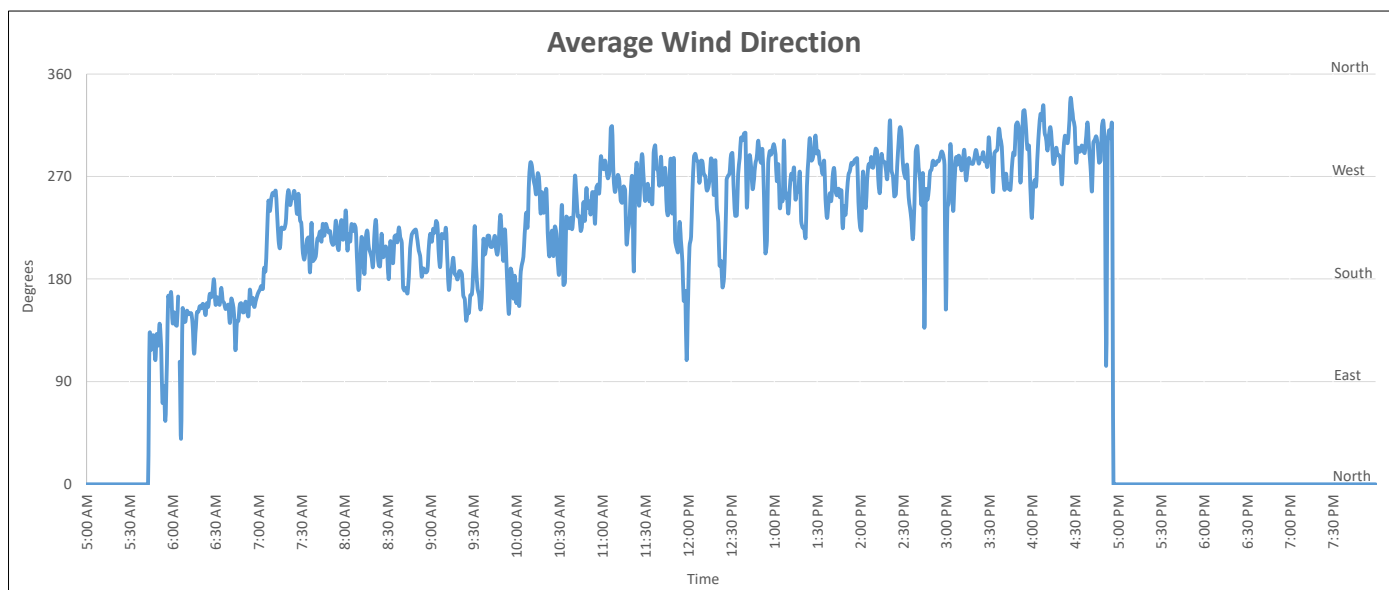


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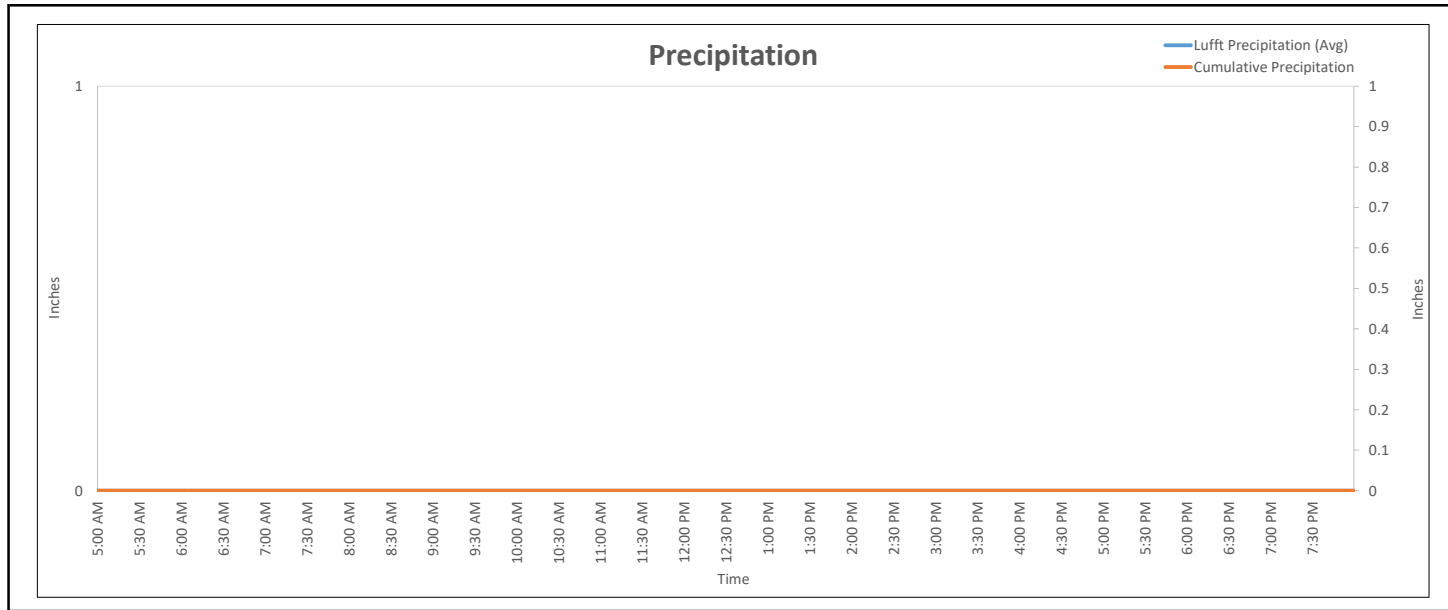
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	6:13 AM	5:30 PM	27.81	48.00	26.73	45.00



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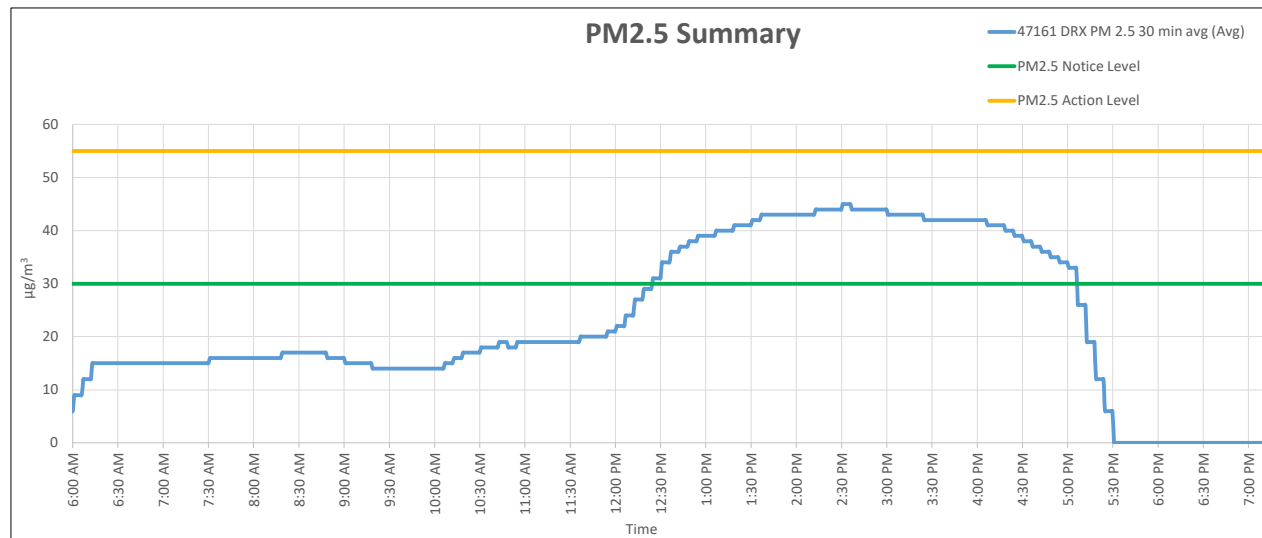
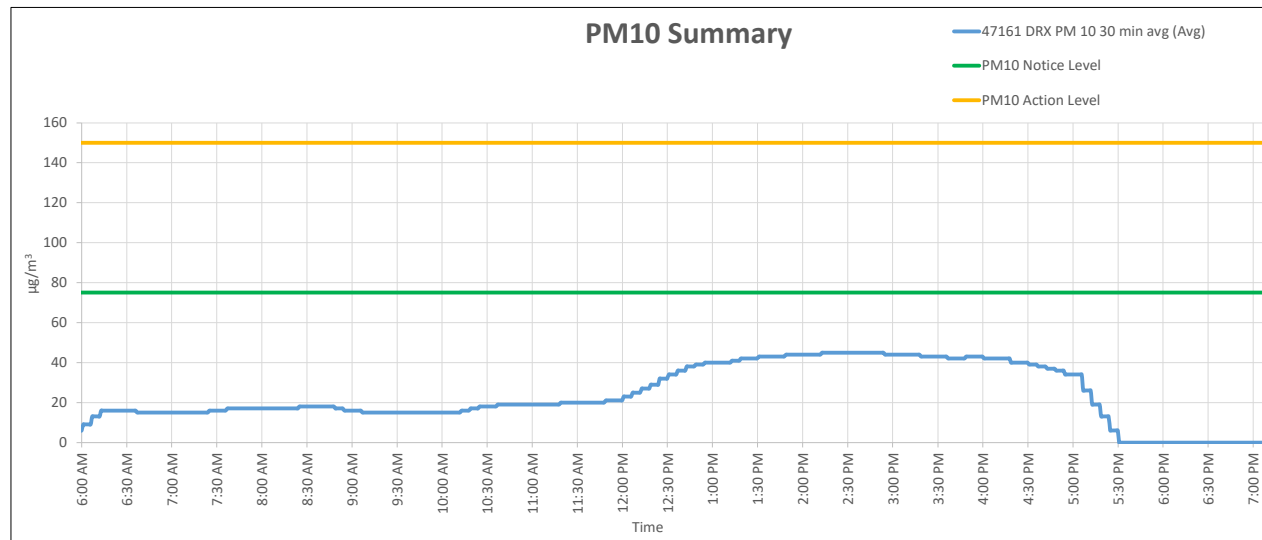


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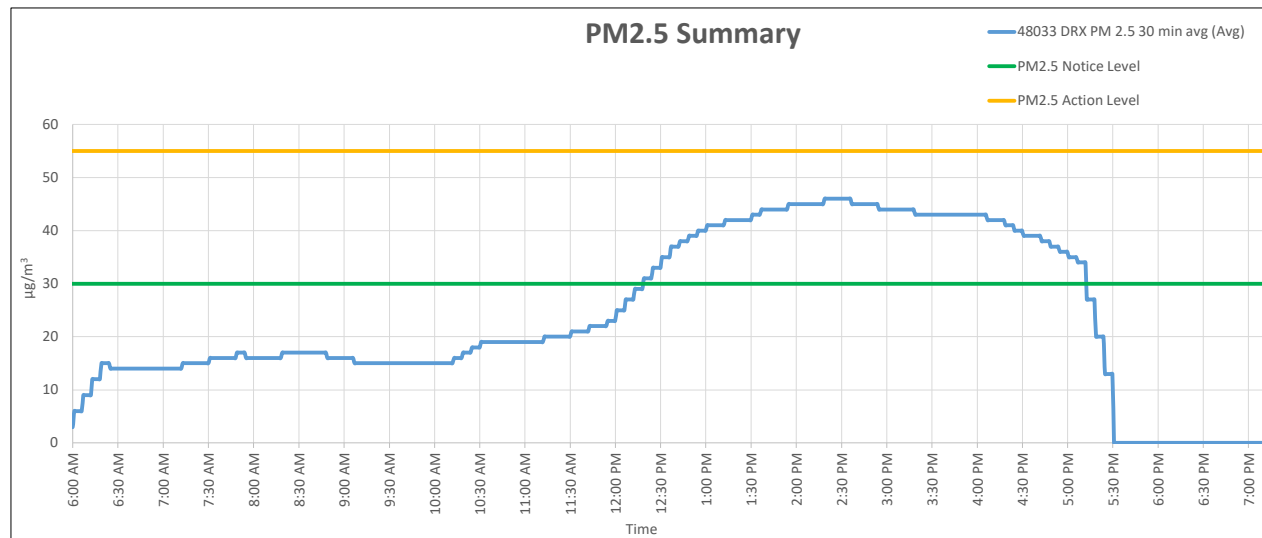
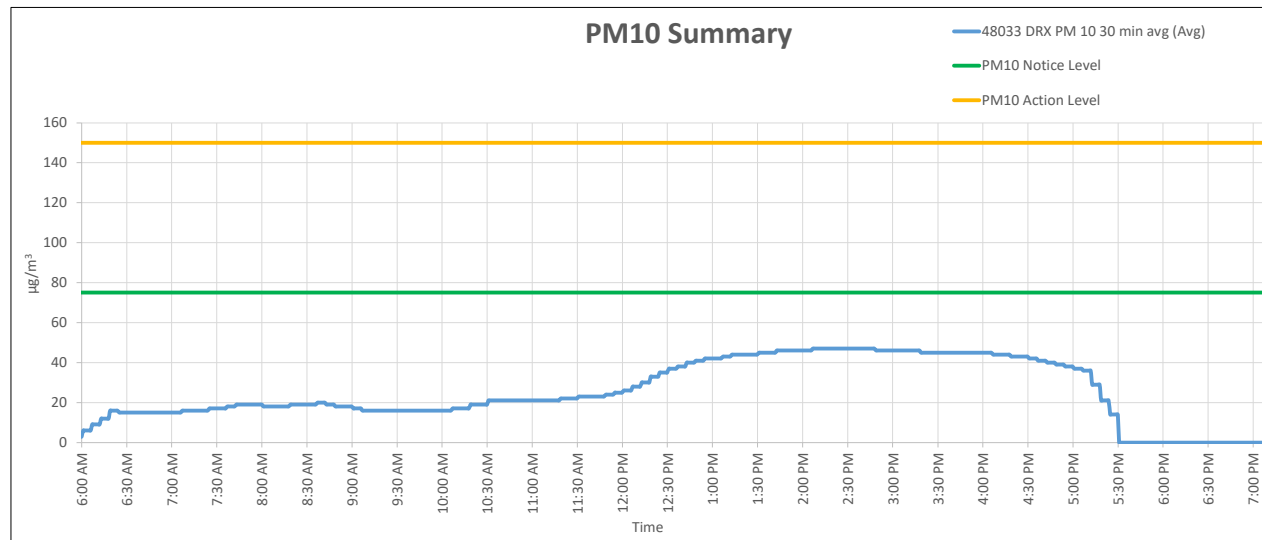
Union Pacific Railroad
Houston Wood Preserving Works Site
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	5:49 AM	5:30 PM	26.70	45.00	26.09	45.00



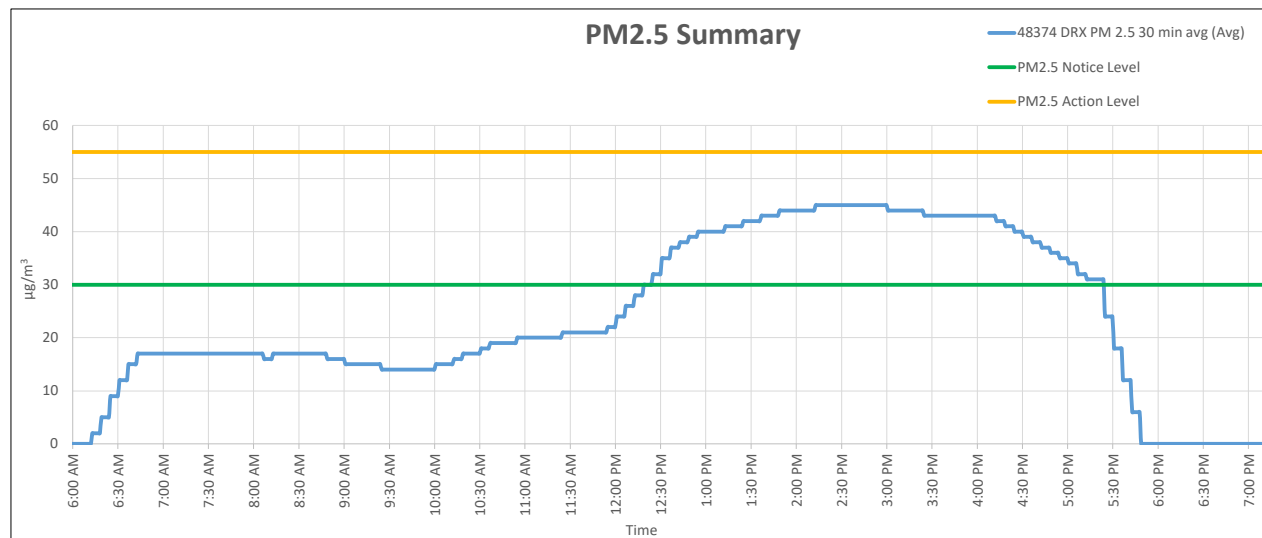
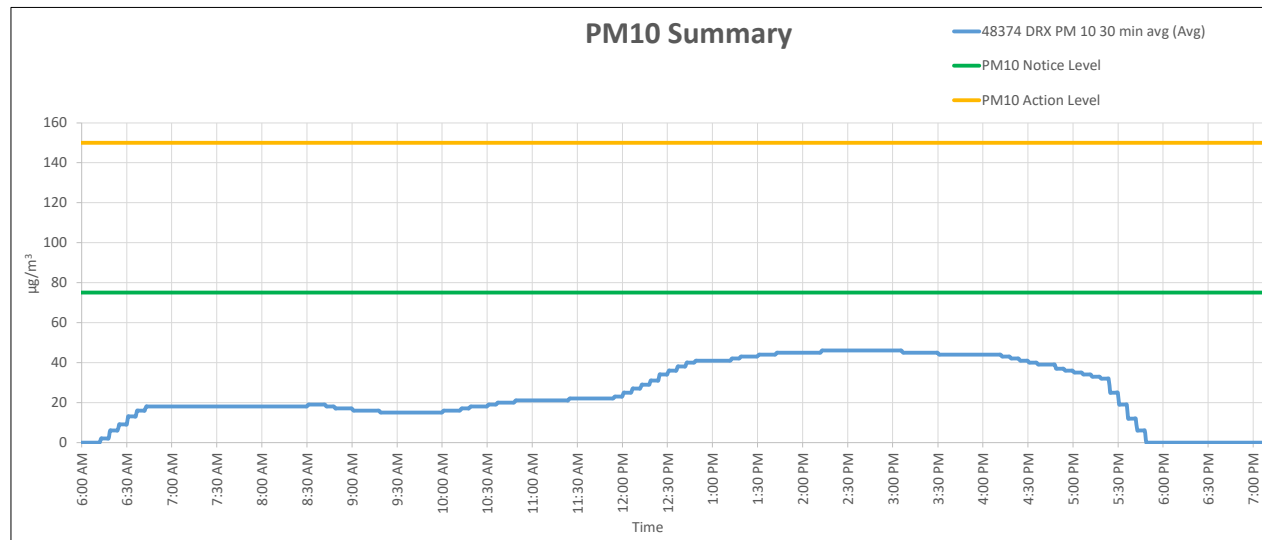
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	5:55 AM	5:30 PM	28.83	47.00	27.20	46.00



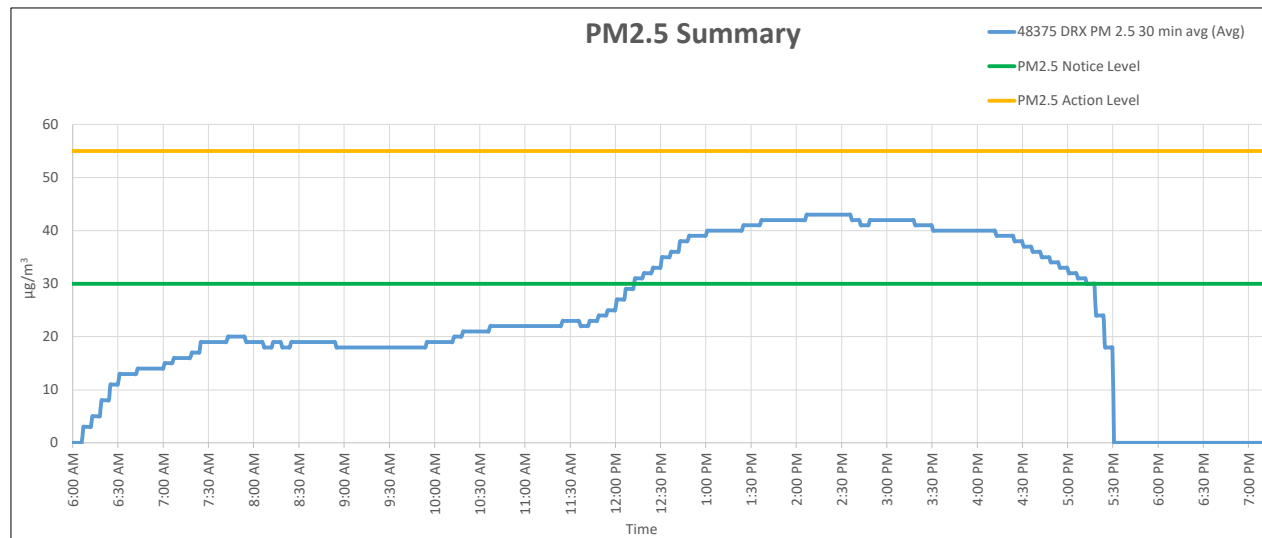
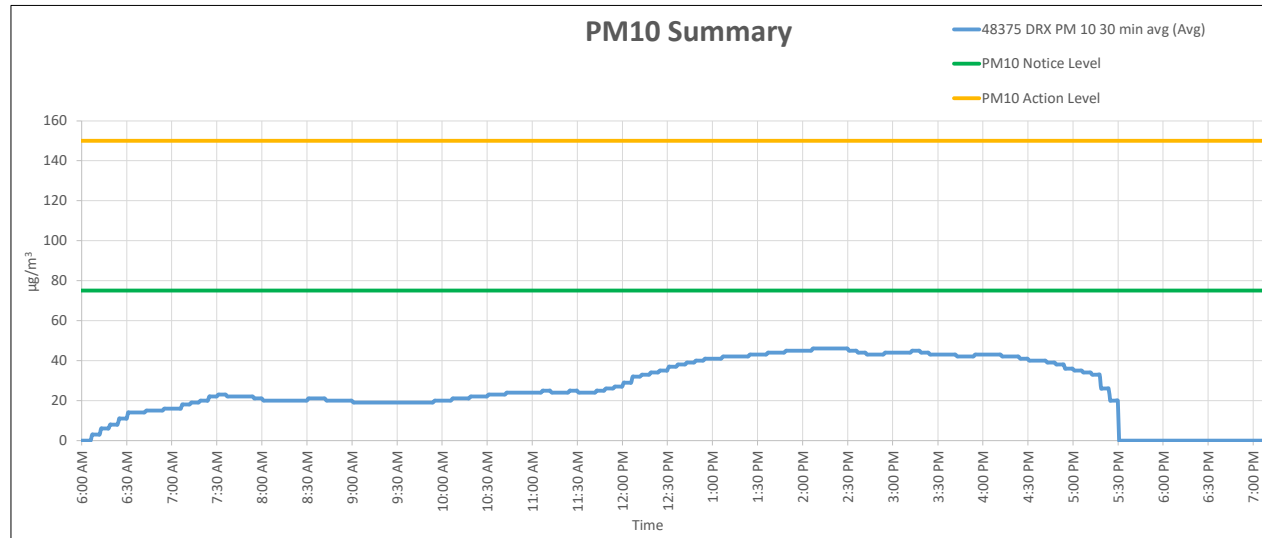
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:13 AM	5:48 PM	28.41	46.00	27.33	45.00



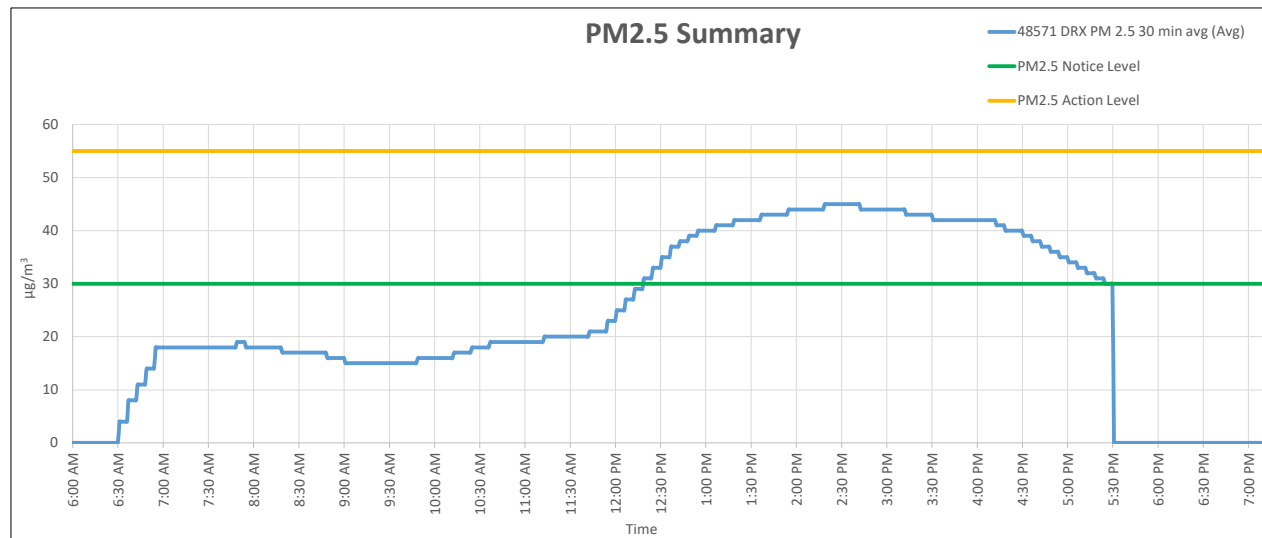
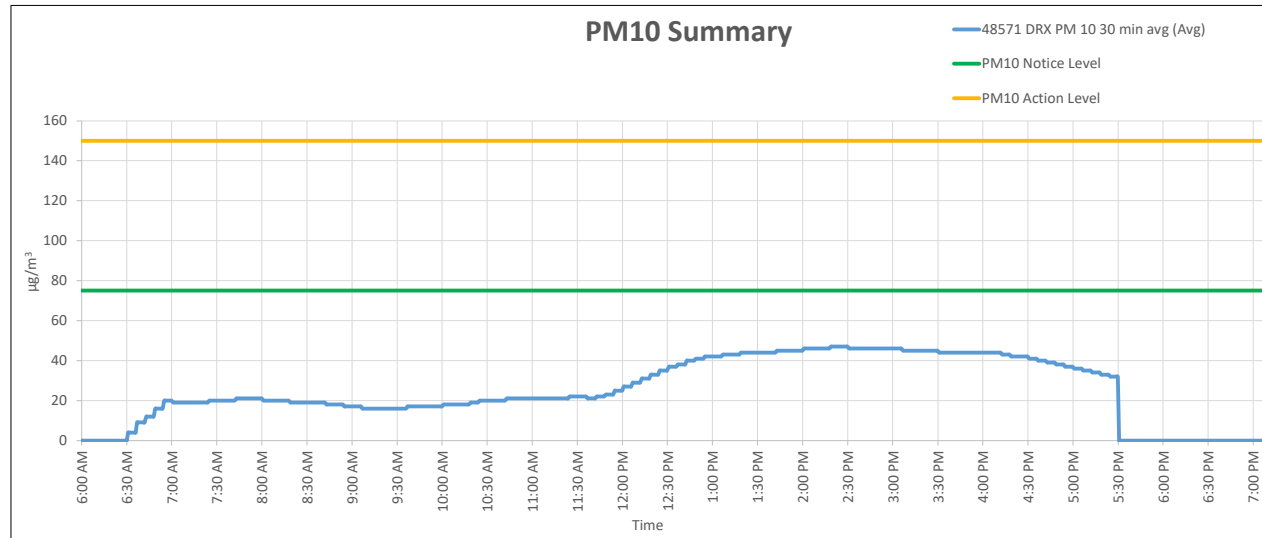
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	6:07 AM	5:30 PM	29.77	46.00	27.78	43.00



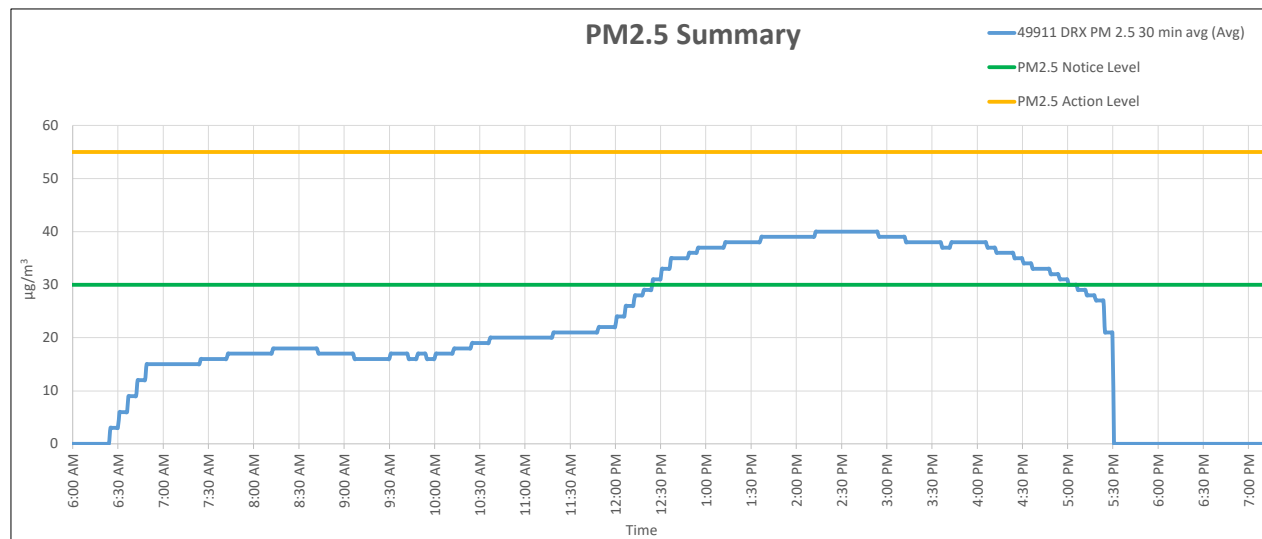
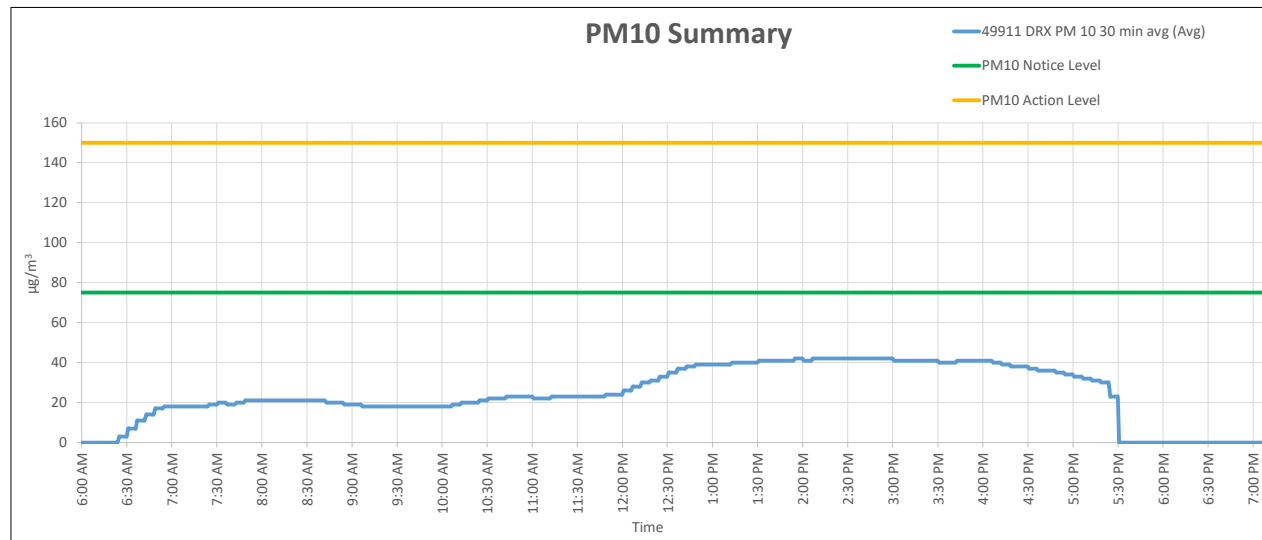
Union Pacific Railroad
Houston Wood Preserving Works Site
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Friday, August 9, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	6:31 AM	5:30 PM	30.08	47.00	28.33	45.00



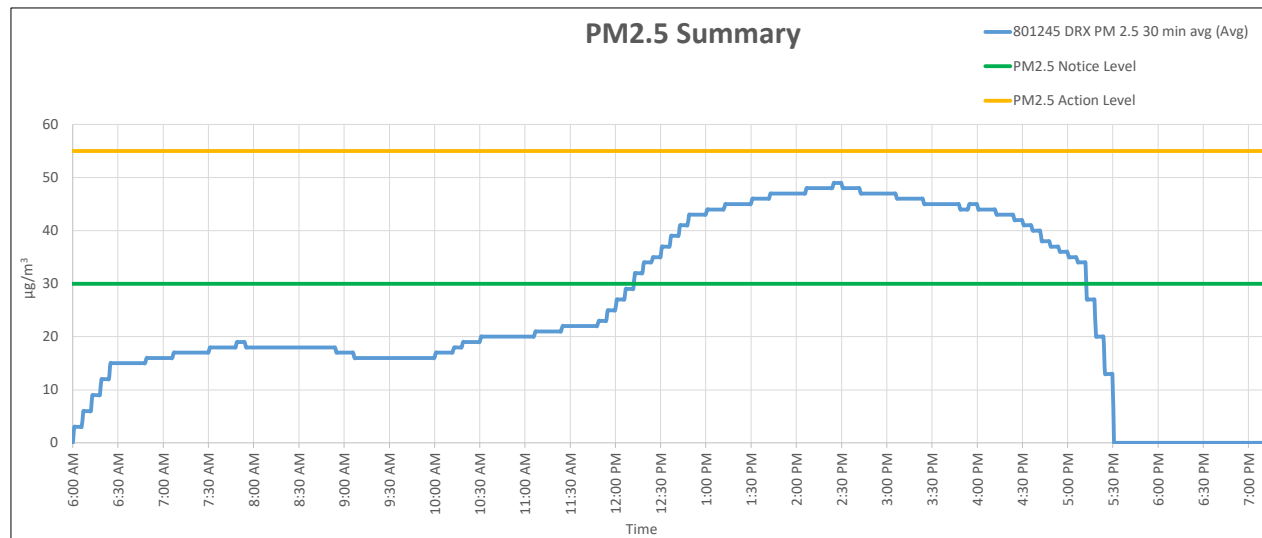
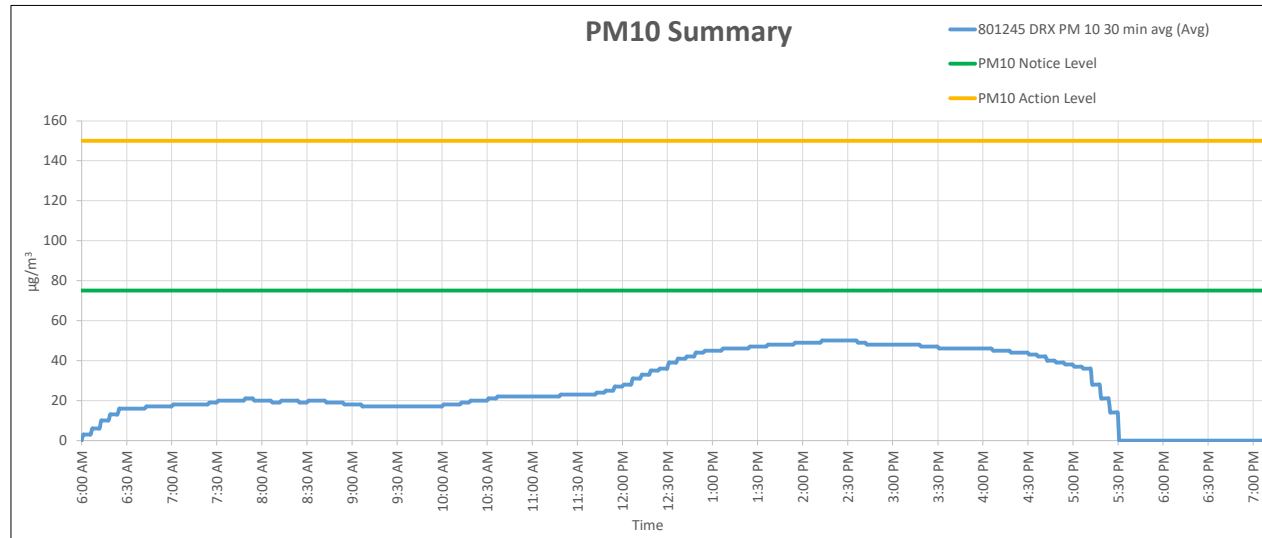
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	6:25 AM	5:30 PM	28.65	42.00	26.21	40.00

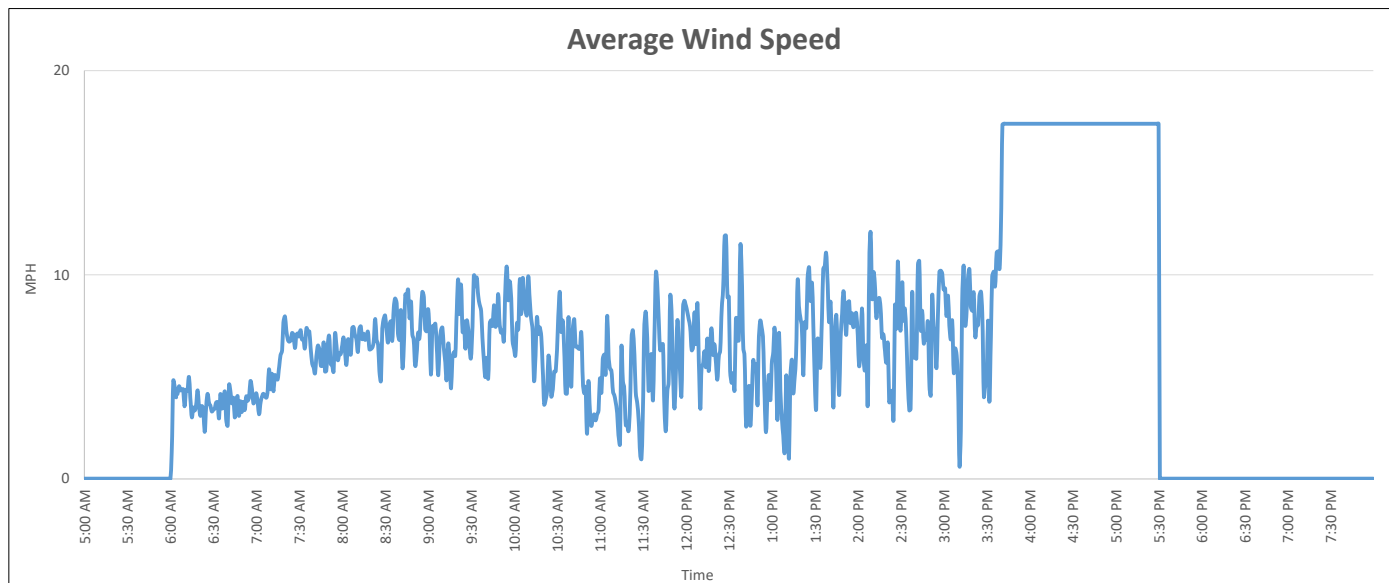
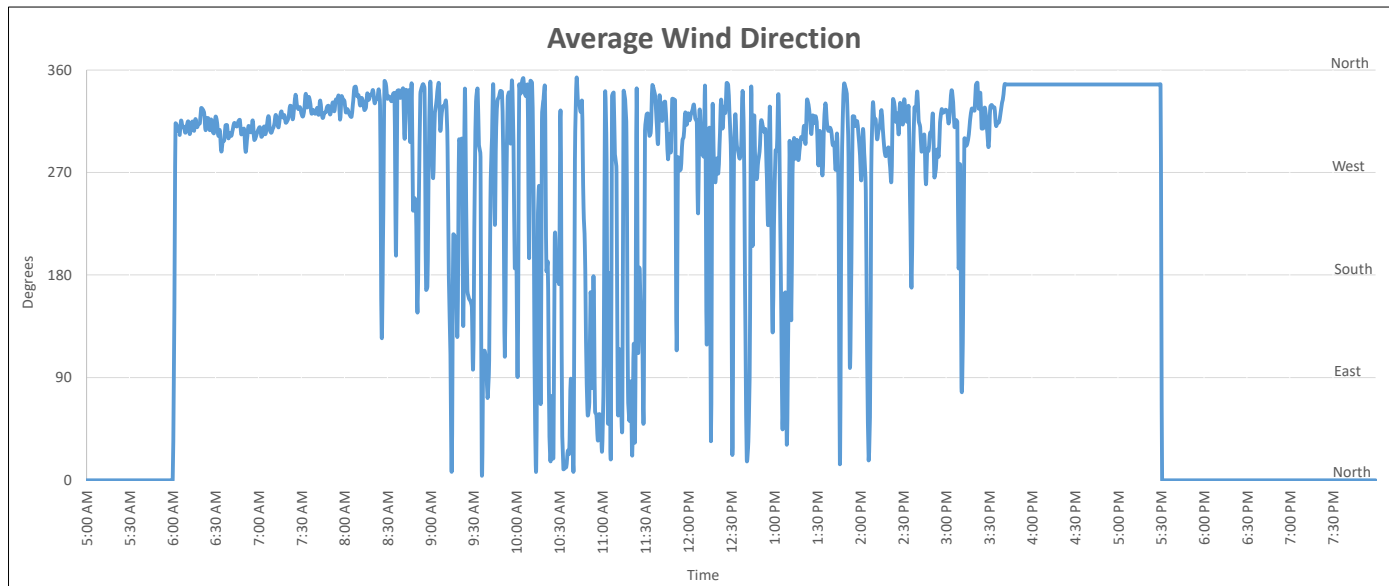


Union Pacific Railroad
Houston Wood Preserving Works Site
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Air Monitoring Values
Friday, August 9, 2024

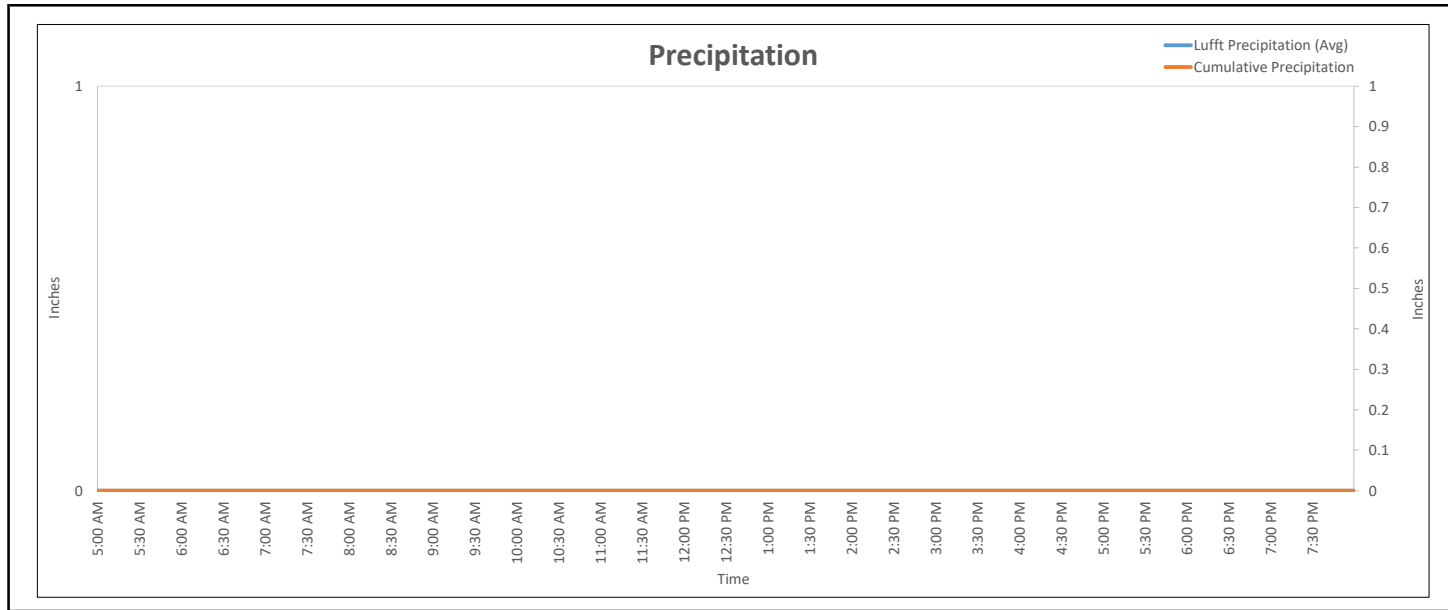
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	6:01 AM	5:30 PM	30.36	50.00	28.96	49.00



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Saturday, August 10, 2024

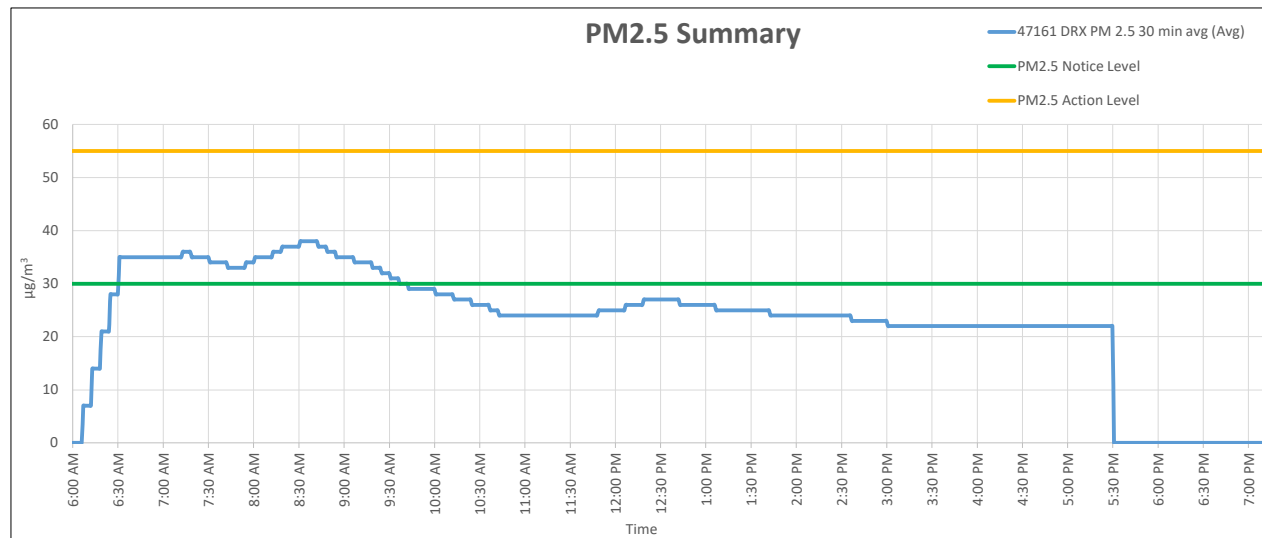
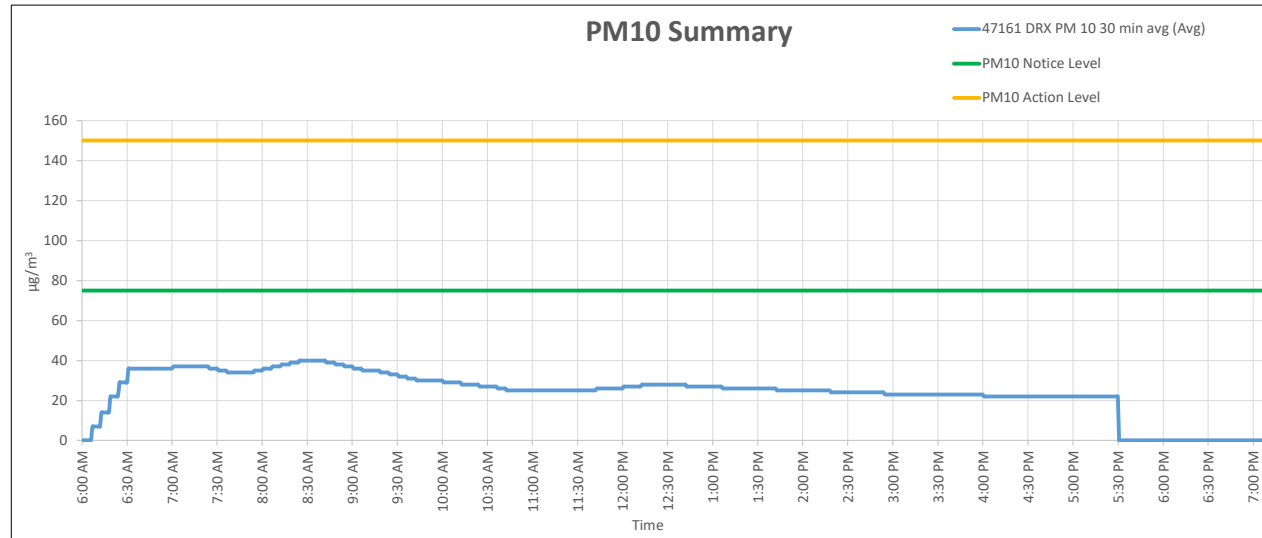


Union Pacific Railroad
Houston Wood Preserving Works Site
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Weather Daily Summary
Saturday, August 10, 2024



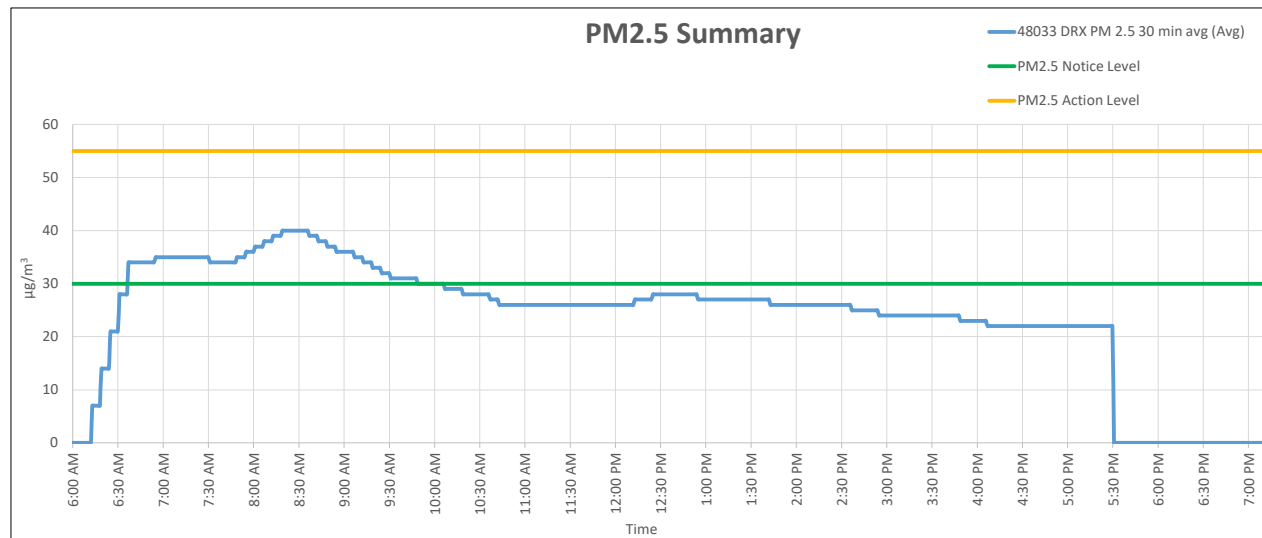
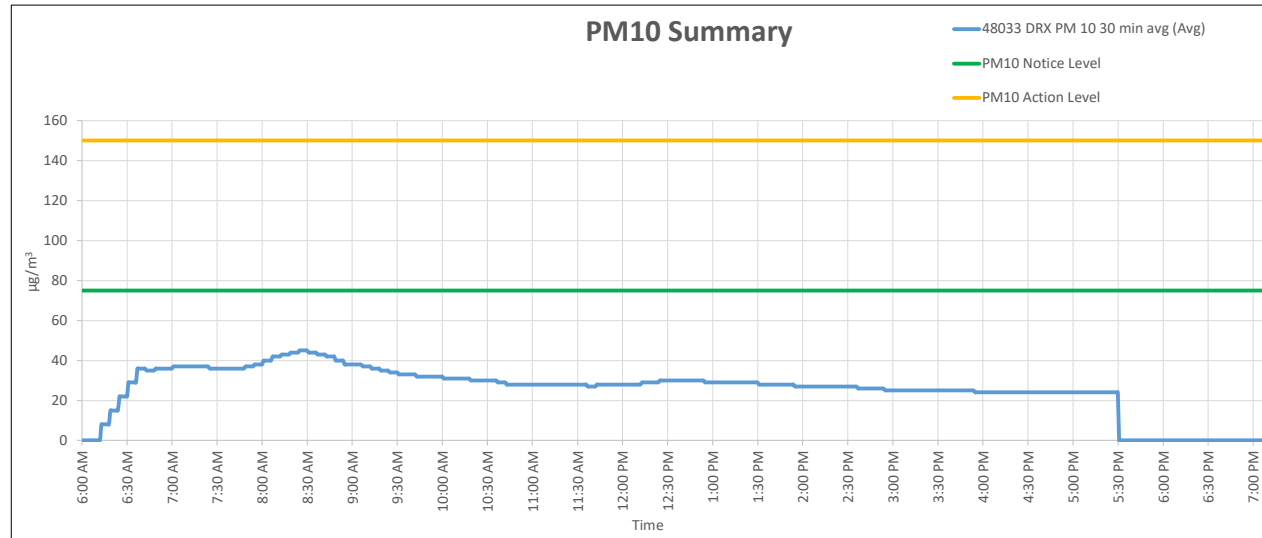
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Saturday, August 10, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	6:07 AM	5:30 PM	27.85	40.00	26.90	38.00



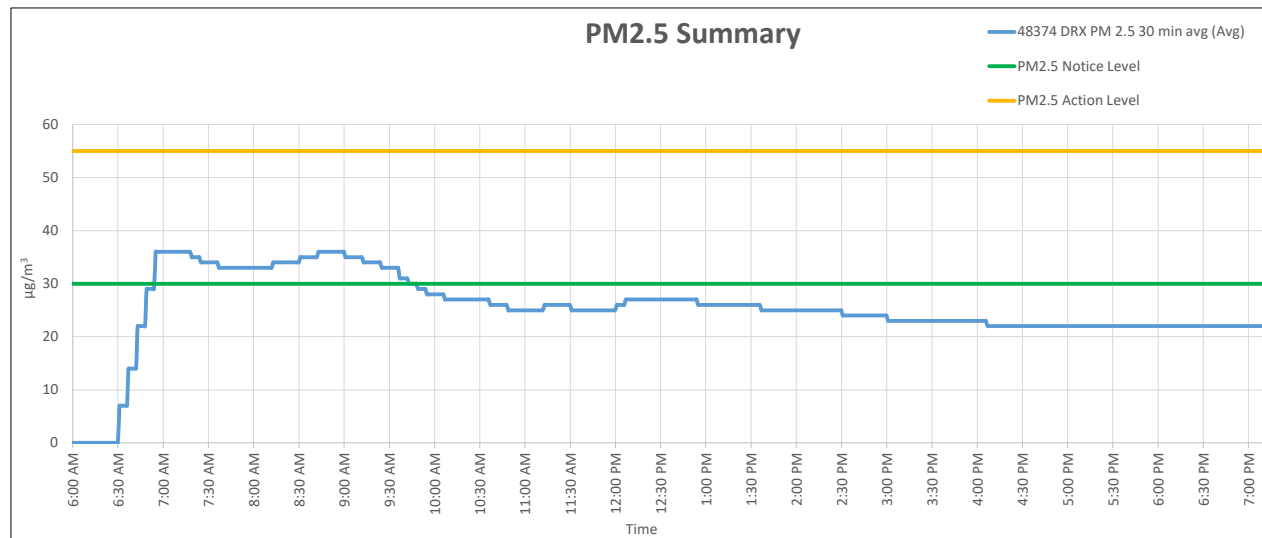
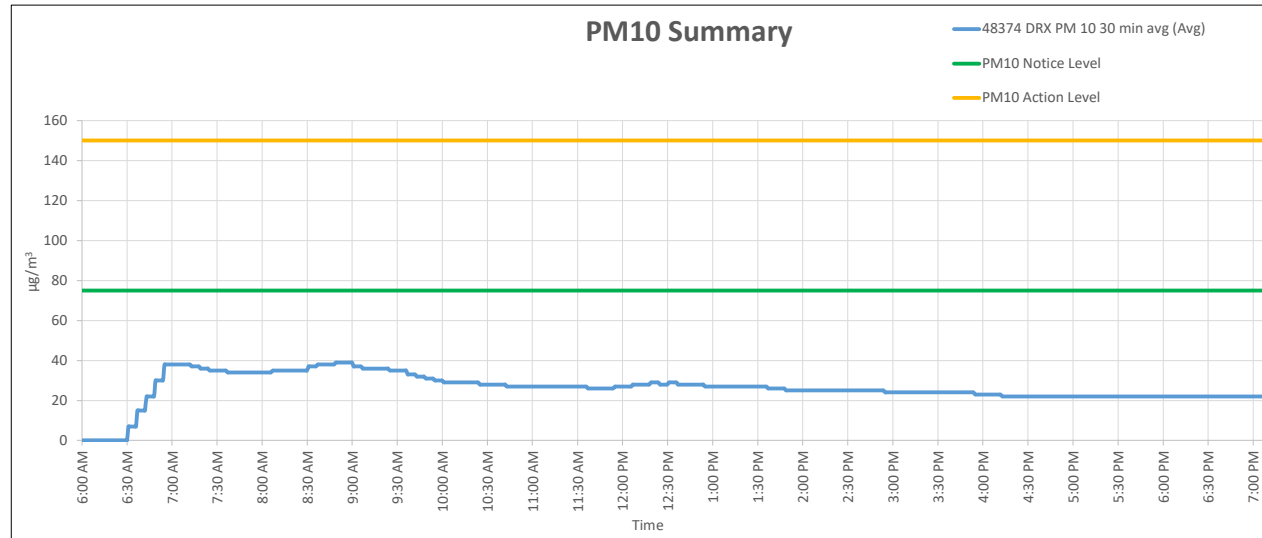
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	6:13 AM	5:30 PM	29.85	45.00	27.99	40.00



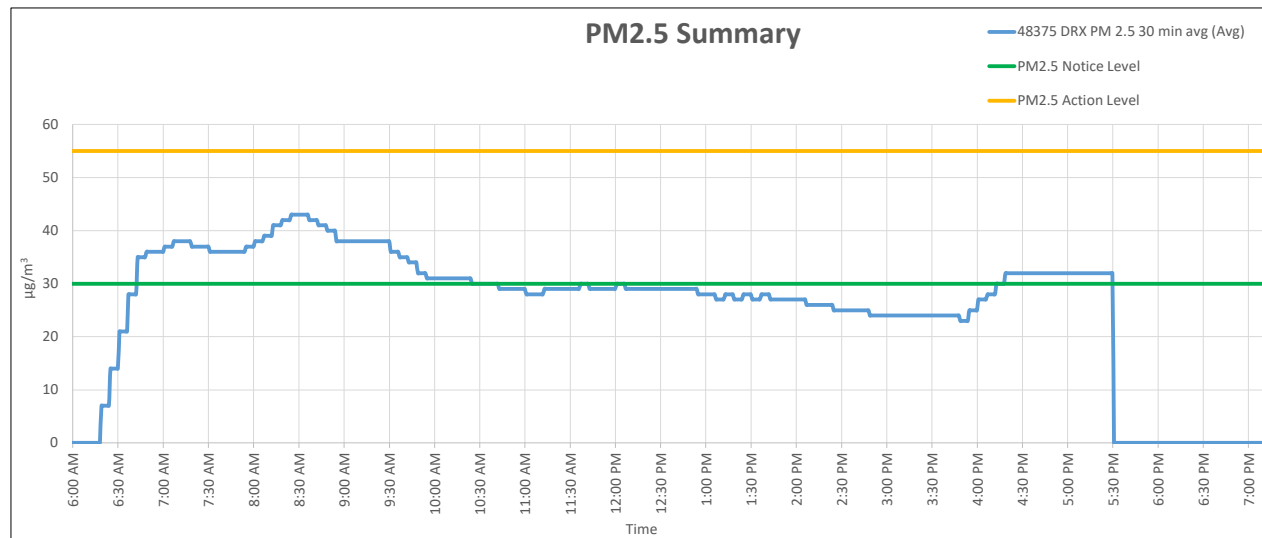
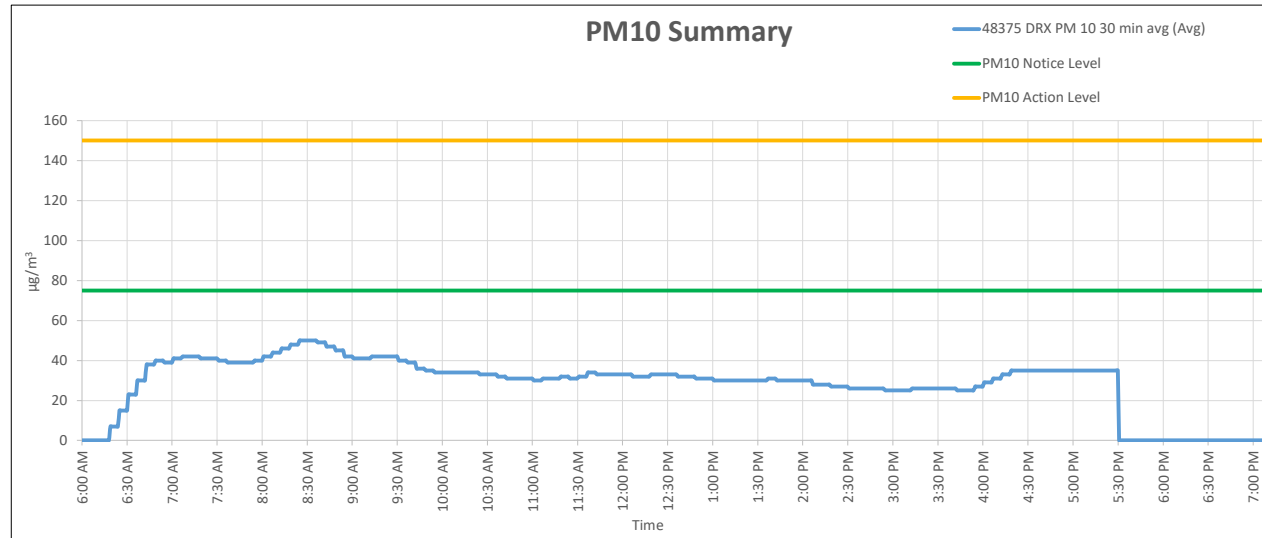
Union Pacific Railroad
Houston Wood Preserving Works Site
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Air Monitoring Values
Saturday, August 10, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:31 AM	11:59 PM	25.80	39.00	25.13	36.00



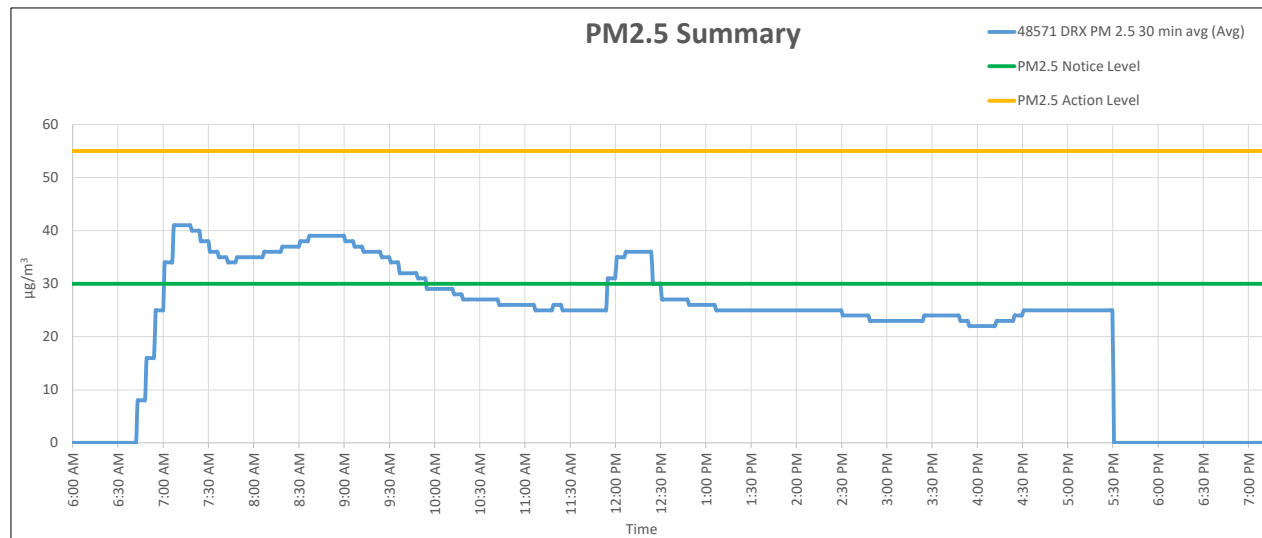
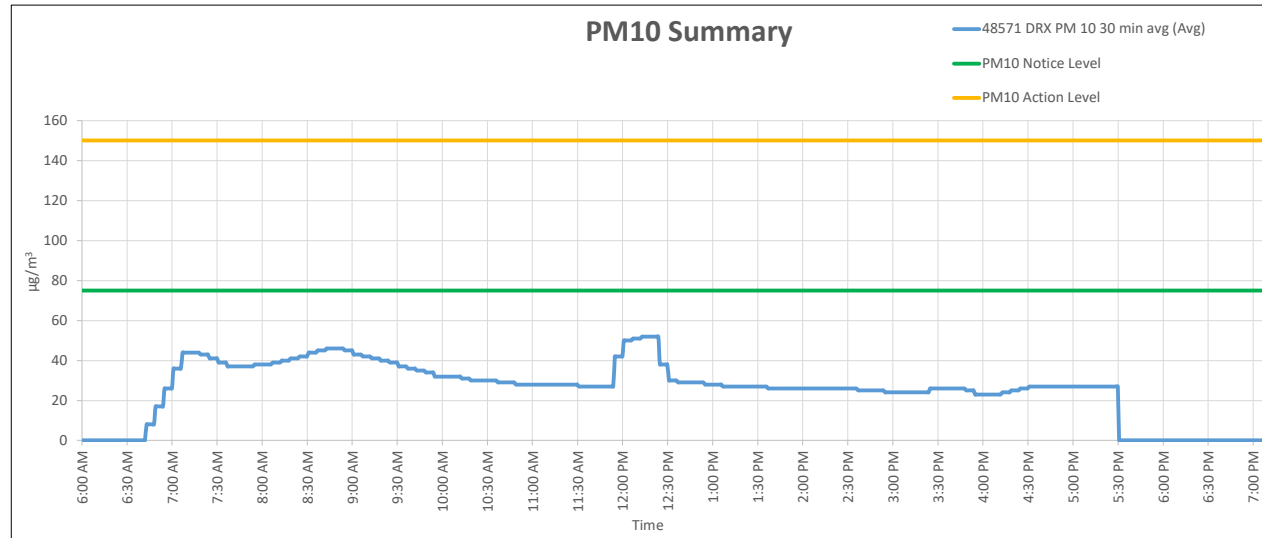
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Saturday, August 10, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	6:19 AM	5:30 PM	33.57	50.00	30.59	43.00



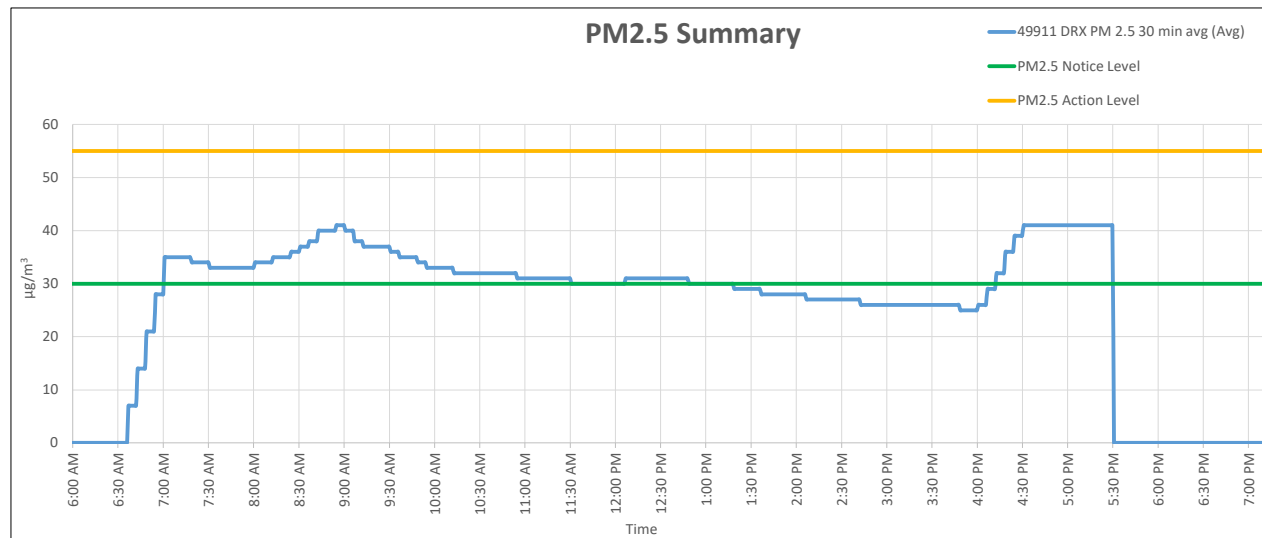
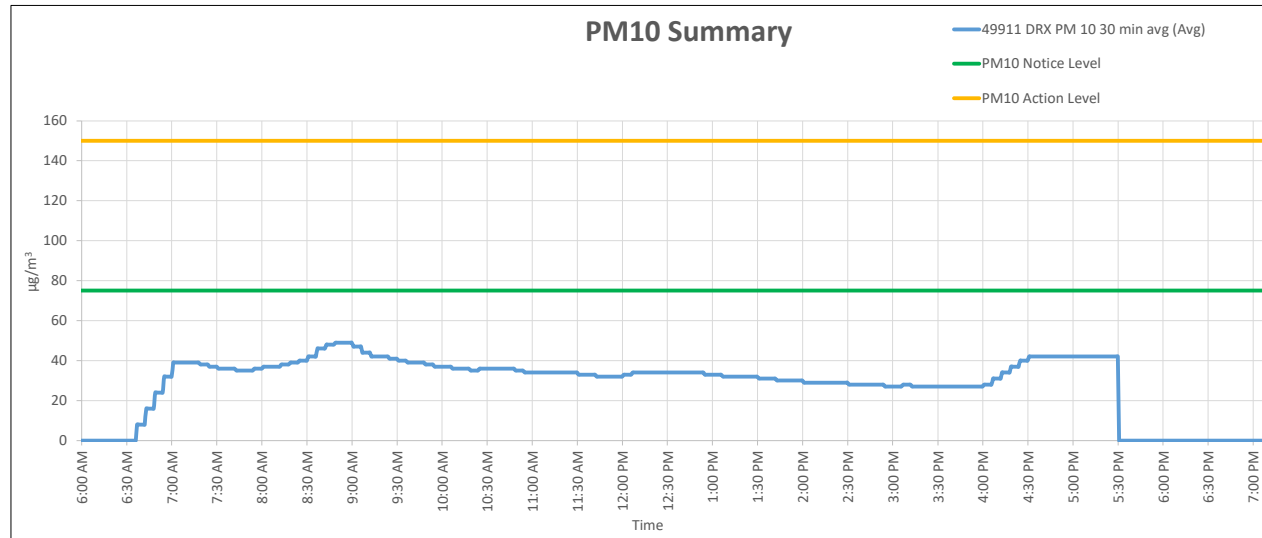
Union Pacific Railroad
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Houston Texas
Air Monitoring Values
Saturday, August 10, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	6:43 AM	5:30 PM	31.39	52.00	28.33	41.00



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Saturday, August 10, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	6:37 AM	5:30 PM	34.58	49.00	31.74	41.00



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Saturday, August 10, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	6:13 AM	5:30 PM	32.45	51.00	30.44	46.00

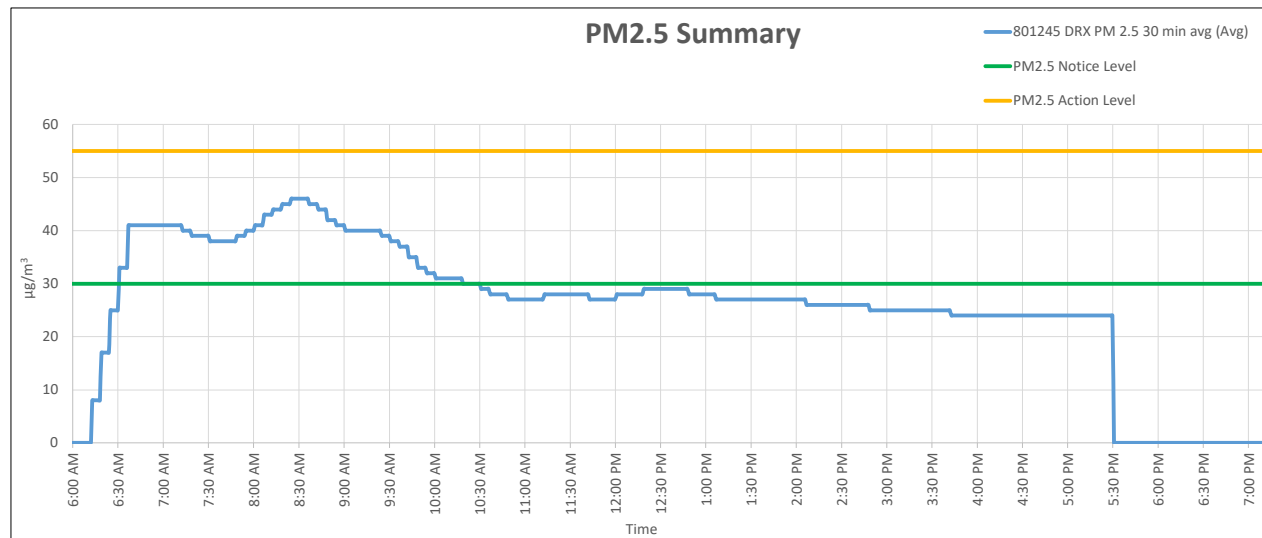
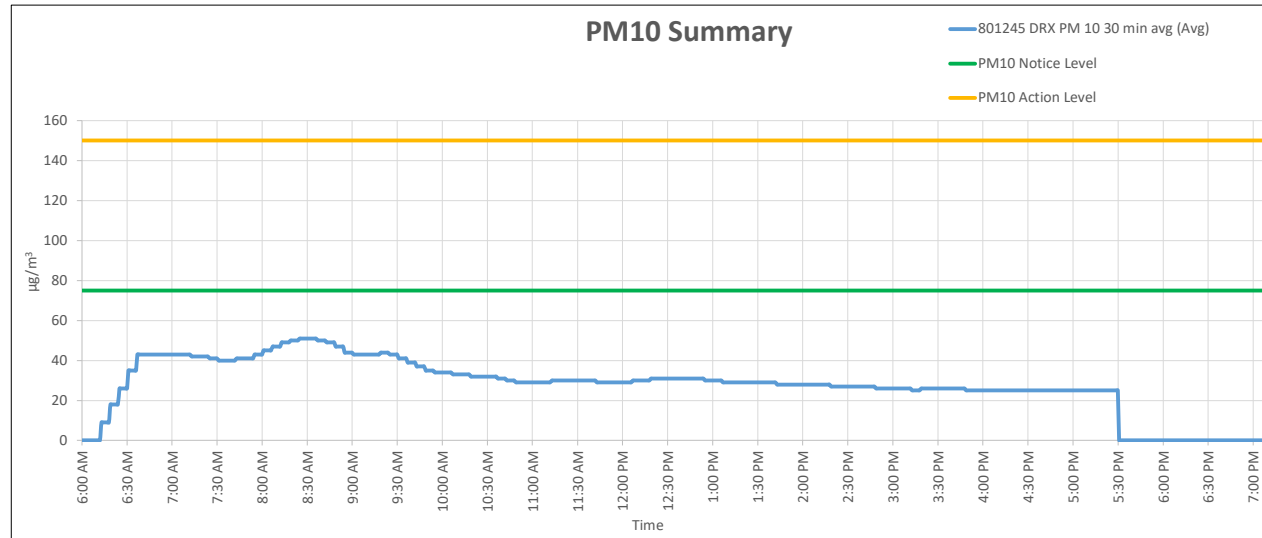
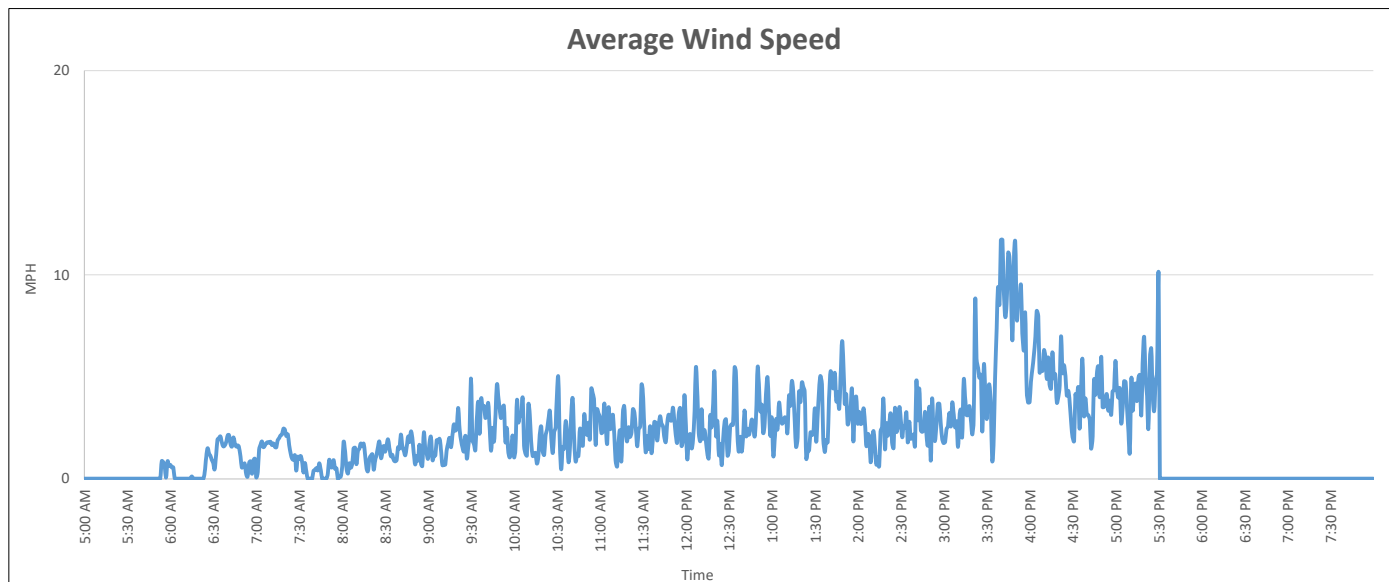
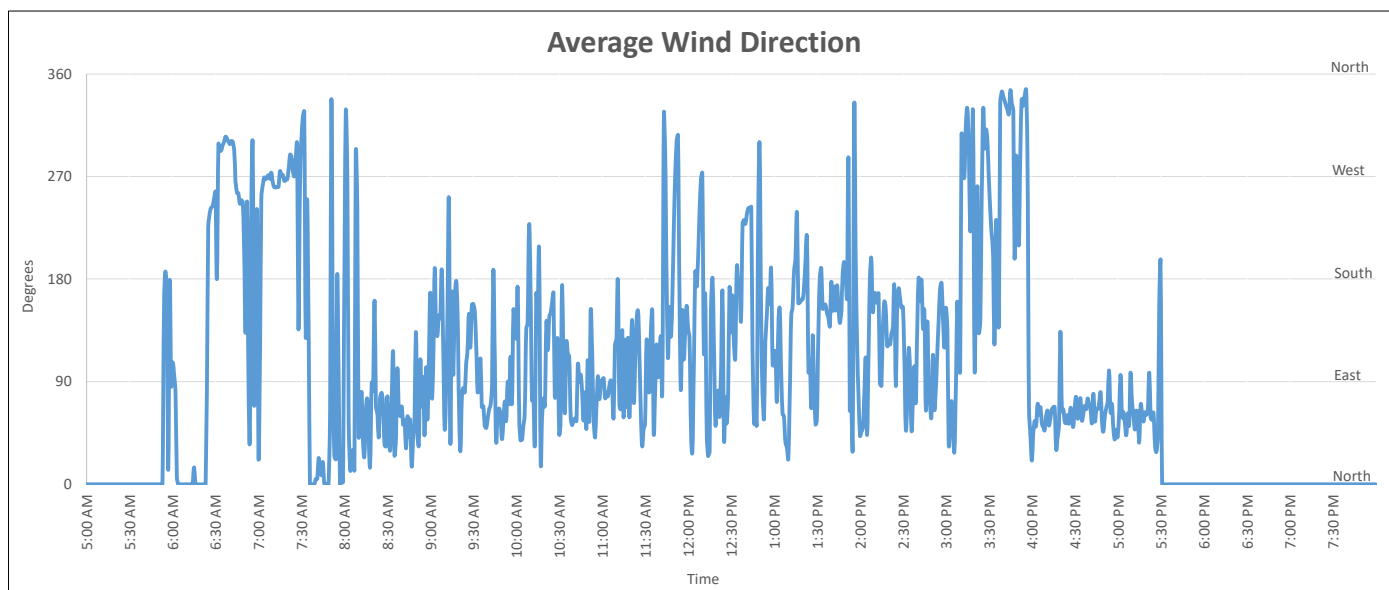
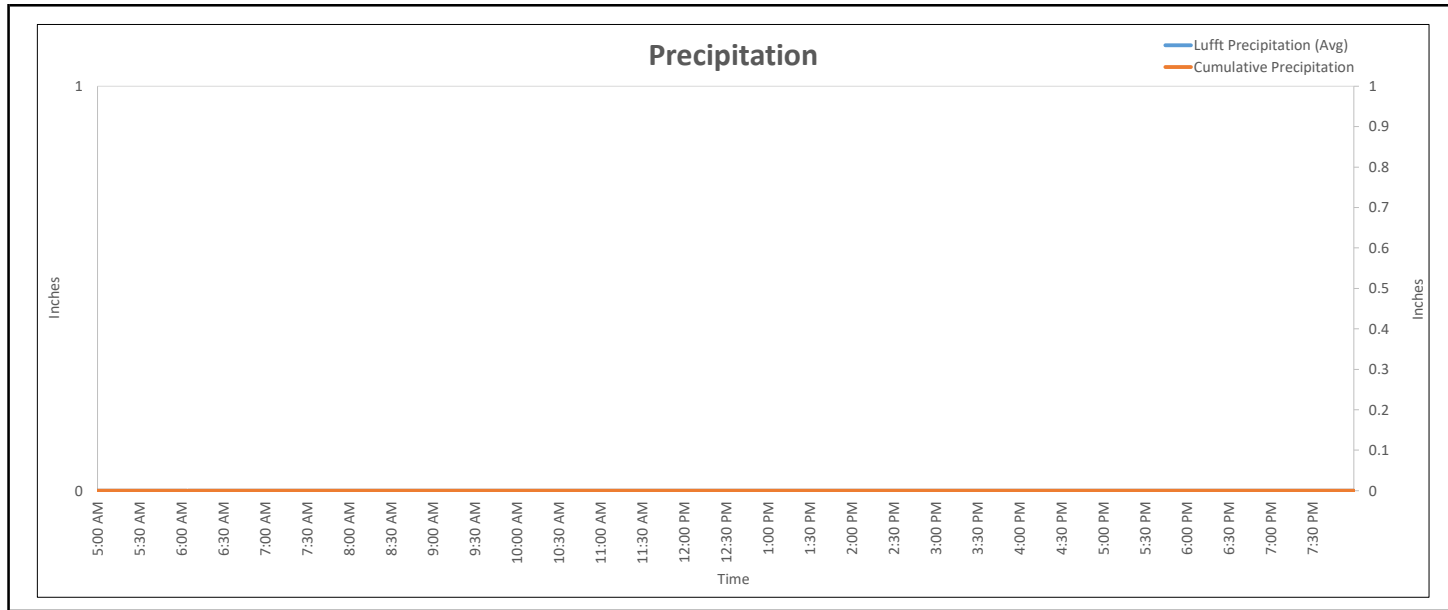


Table 5 – Direct Read Summary							
Union Pacific Houston Wood Preserving Works							
Houston, Texas							
Date	Modem #	PM ₁₀ Concentration (µg/m ³)			PM _{2.5} Concentration (µg/m ³)		
		Min	Max	Average	Min	Max	Average
Week 12							
8/12/2024	48374	0.000	47.000	21.974	0.000	43.000	20.853
	47161	2.000	44.000	21.549	2.000	42.000	20.736
	48033	2.000	52.000	24.286	2.000	43.000	22.277
	48571	2.000	56.000	24.429	2.000	48.000	22.415
	48375	3.000	60.000	25.059	3.000	52.000	23.584
	801245	3.000	67.000	27.476	3.000	57.000	25.350
	49911	2.000	27.000	17.883	2.000	24.000	16.596
8/13/2024	48374	2.000	19.000	12.113	1.000	19.000	11.535
	47161	1.000	19.000	11.536	1.000	19.000	11.164
	48033	2.000	32.000	14.046	1.000	31.000	13.089
	48571	1.000	29.000	14.105	1.000	25.000	12.818
	48375	3.000	31.000	16.229	2.000	30.000	15.469
	801245	2.000	40.000	16.085	1.000	39.000	15.182
	49911	1.000	21.000	14.598	1.000	18.000	13.381
8/14/2024	48374	1.000	21.000	10.262	1.000	19.000	9.691
	47161	1.000	22.000	9.385	1.000	21.000	9.085
	48033	1.000	38.000	13.579	1.000	31.000	12.197
	48571	1.000	40.000	12.245	1.000	31.000	10.890
	48375	2.000	40.000	14.058	2.000	33.000	12.865
	801245	2.000	46.000	14.114	2.000	39.000	12.700
	49911	2.000	29.000	12.801	1.000	24.000	11.621
8/15/2024	48374	1.00	59.00	11.21	1.00	58.00	10.57
	47161	1.00	56.00	10.11	1.00	56.00	9.57
	48033	1.00	54.00	13.07	1.00	52.00	11.85
	48571	2.00	58.00	12.70	1.00	55.00	11.23
	48375	1.00	48.00	14.08	1.00	46.00	12.99
	801245	1.00	63.00	14.75	1.00	61.00	13.72
	49911	1.00	62.00	13.38	1.00	58.00	11.98
8/16/2024	48374	2.00	15.00	10.21	2.00	13.00	9.69
	47161	2.00	16.00	9.34	2.00	15.00	8.63
	48033	3.00	18.00	11.84	2.00	15.00	10.80
	48571	2.00	20.00	11.58	2.00	16.00	10.03
	48375	2.00	17.00	11.86	2.00	15.00	11.09
	801245	2.00	19.00	11.50	2.00	17.00	10.63
	49911	2.00	19.00	13.43	2.00	15.00	11.41
Note:							
1. Values shown in GREEN are above the Notice Level Threshold.							
2. Values shown in ORANGE are above the Action Level Threshold.							
3. Values shown in RED are above the Stop-Work Level Threshold.							

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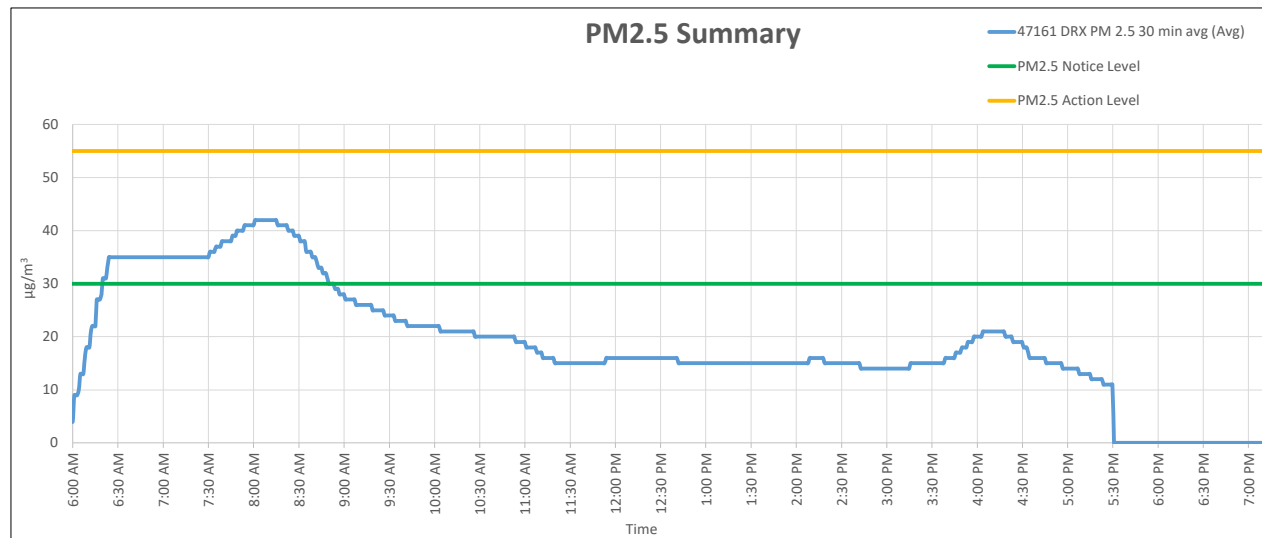
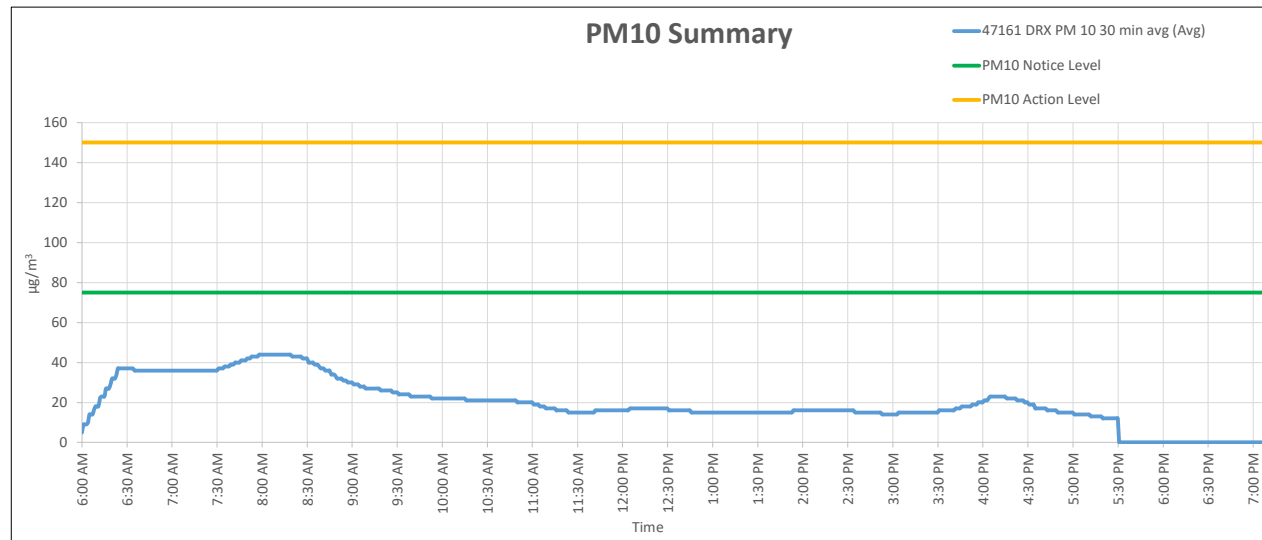


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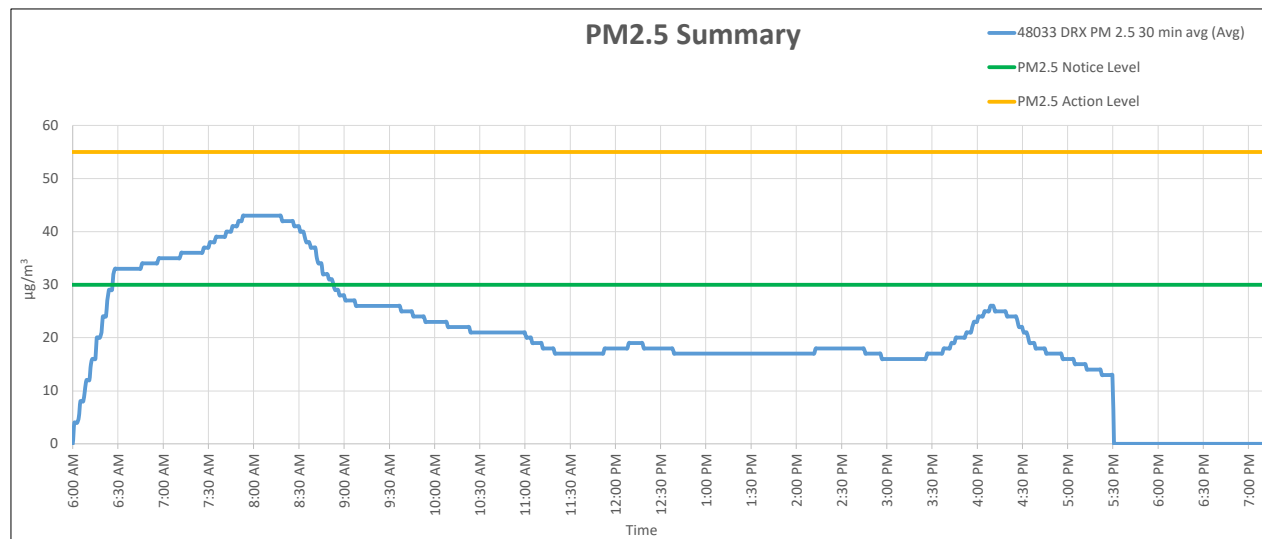
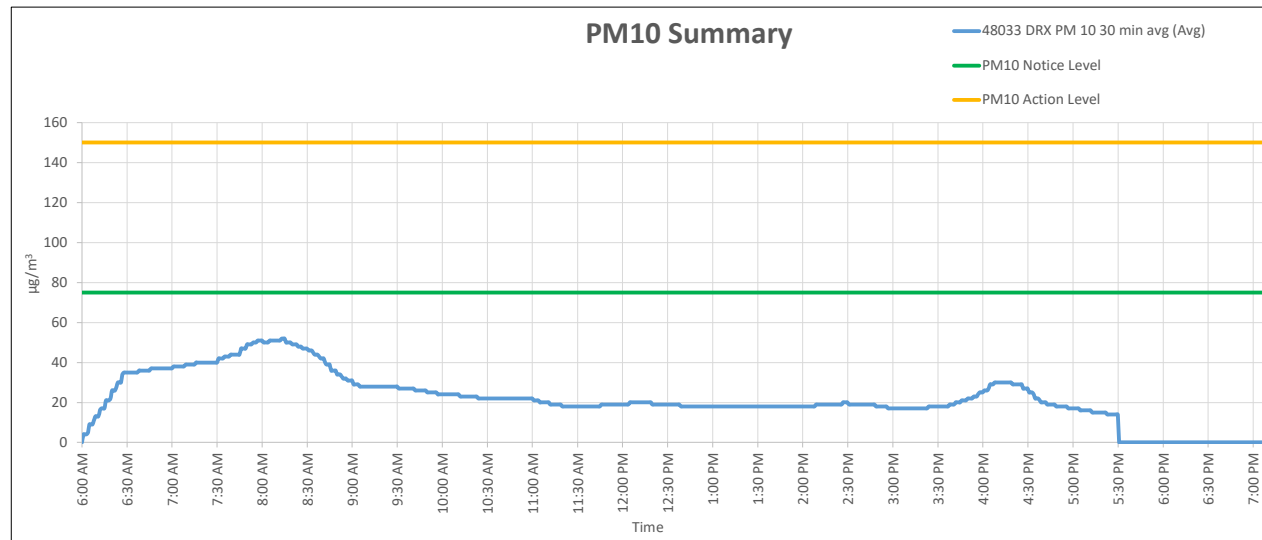
Union Pacific Railroad
Houston Wood Preserving Works Site
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Monday, August 12, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	5:57 AM	5:30 PM	22.38	44.00	21.53	42.00



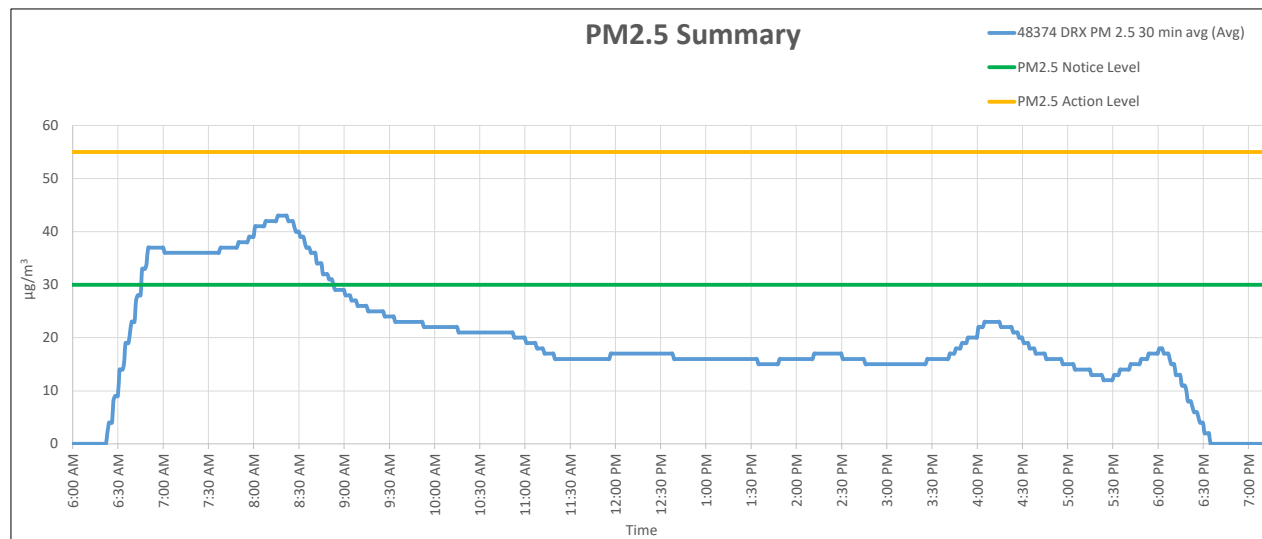
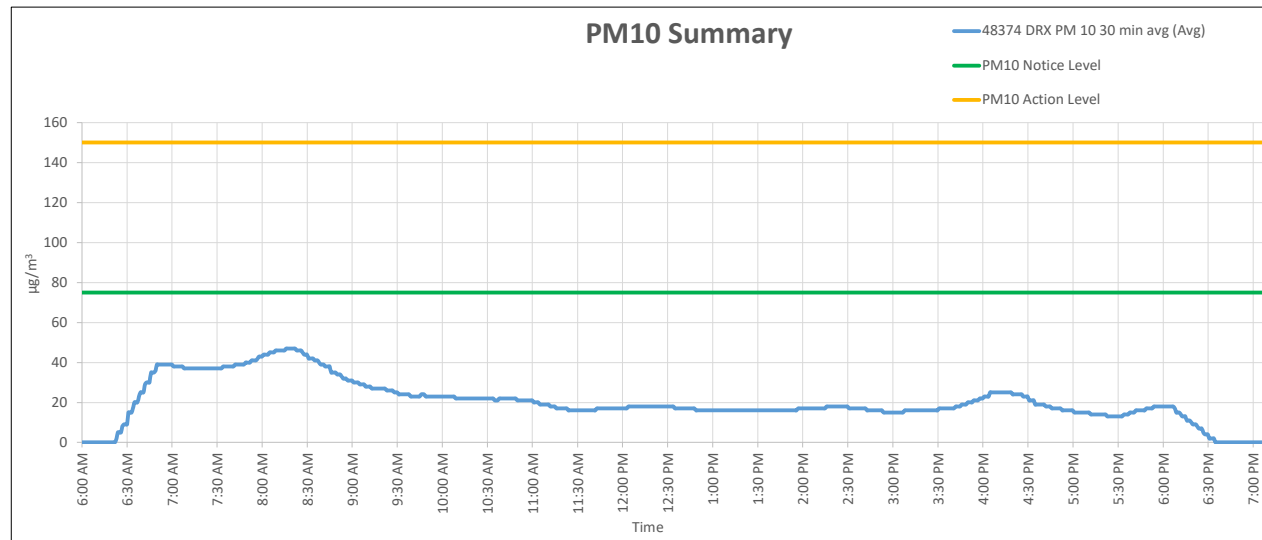
Union Pacific Railroad
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48033	6:01 AM	5:30 PM	25.15	52.00	23.05	43.00



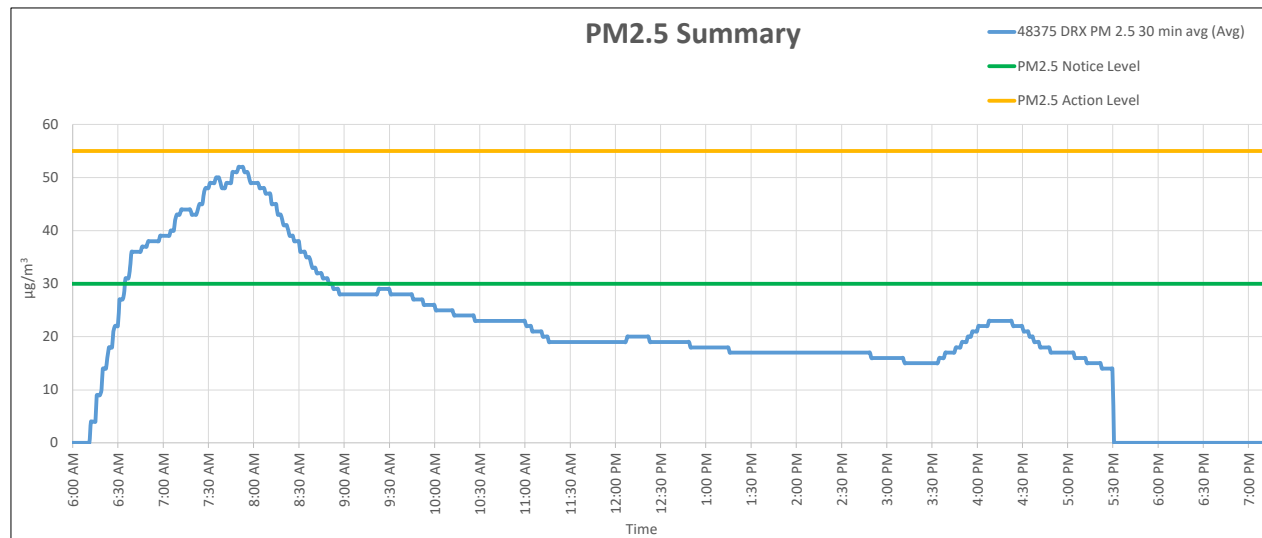
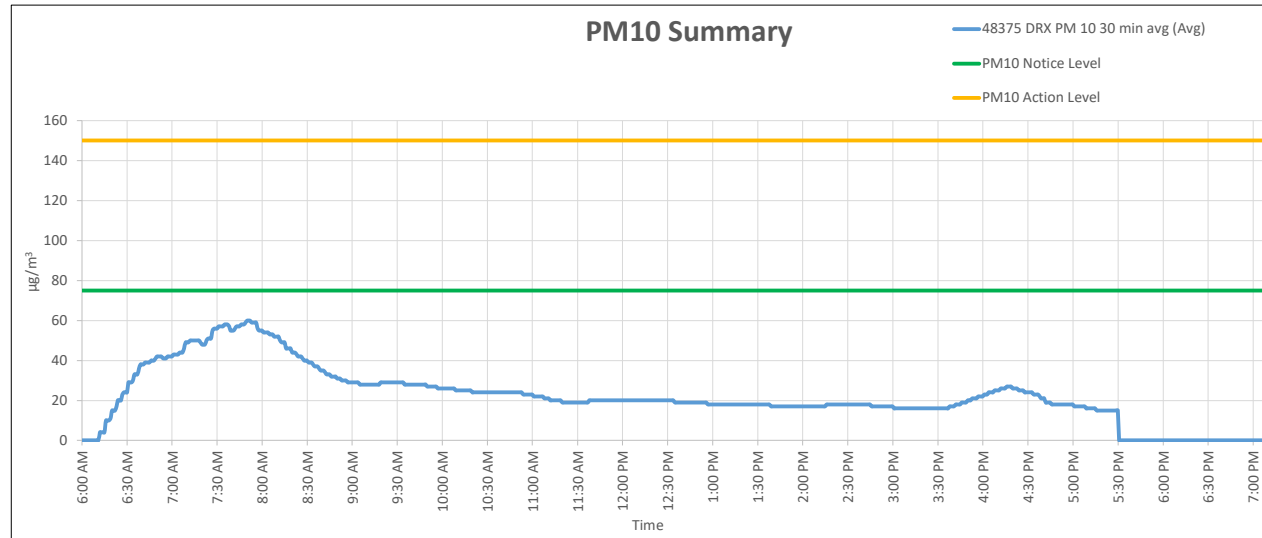
Union Pacific Railroad
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48374	6:23 AM	6:34 PM	22.09	47.00	20.97	43.00



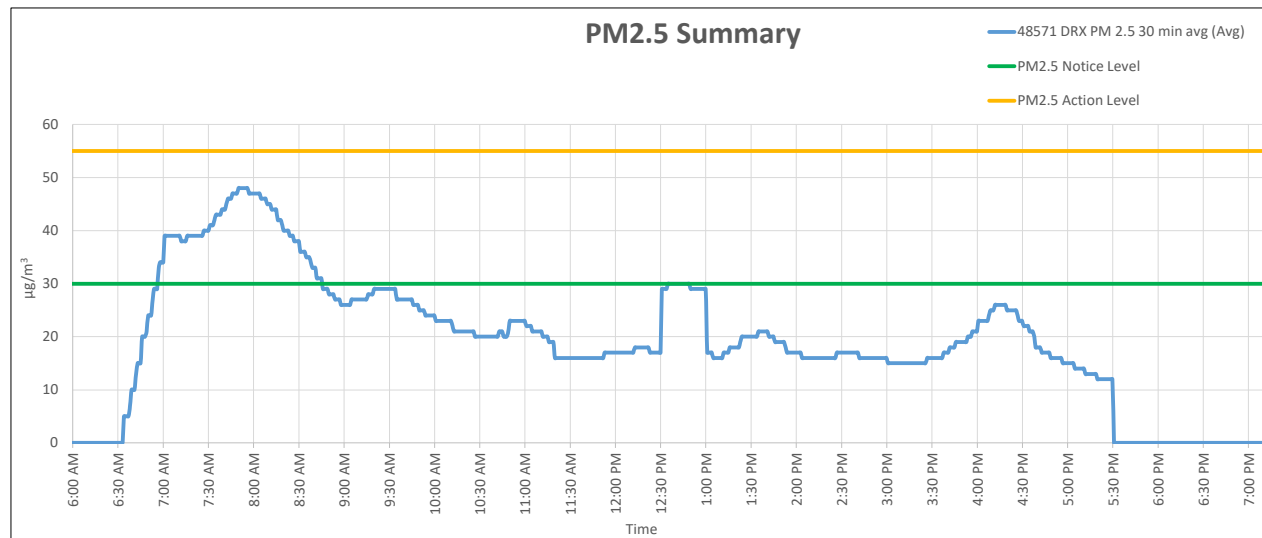
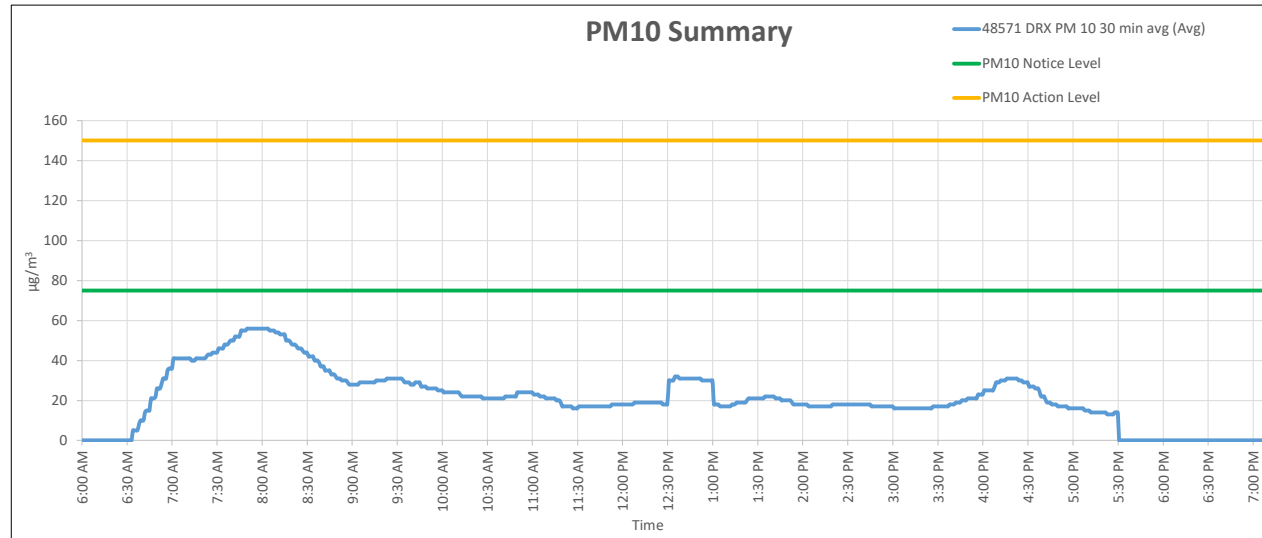
Union Pacific Railroad
Houston Wood Preserving Works Site
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Monday, August 12, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	6:12 AM	5:30 PM	25.79	60.00	24.28	52.00



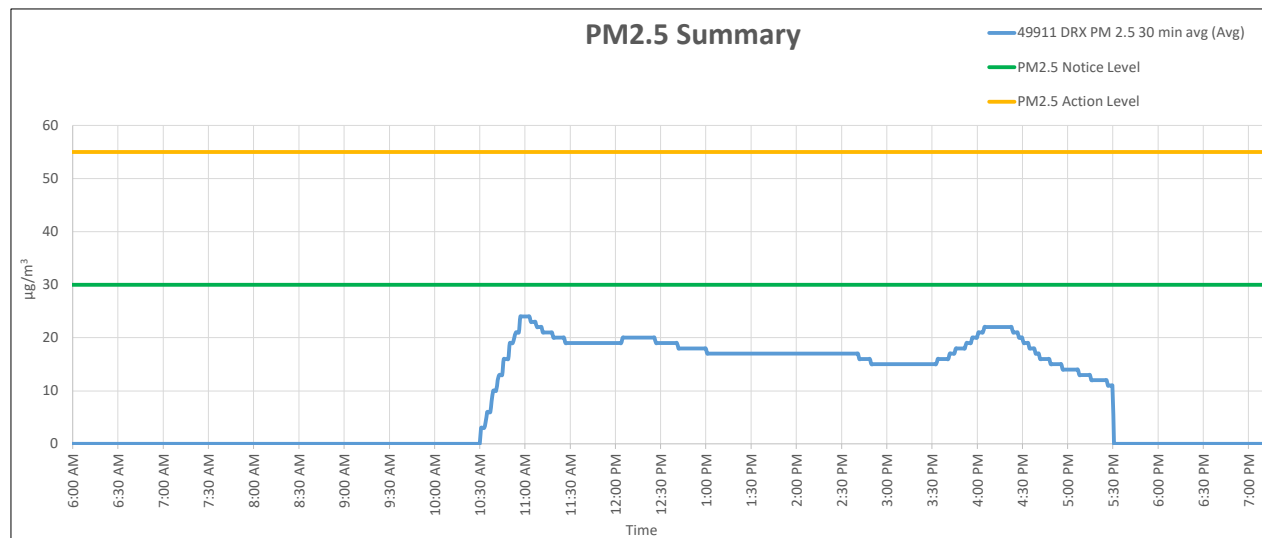
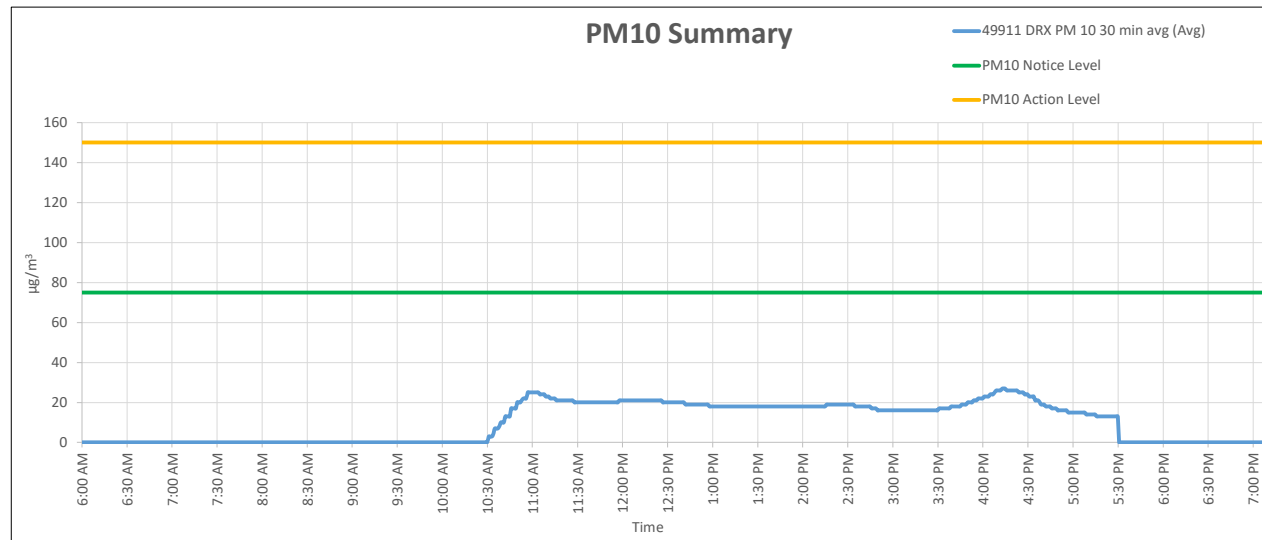
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48571	6:34 AM	5:30 PM	25.52	56.00	23.39	48.00



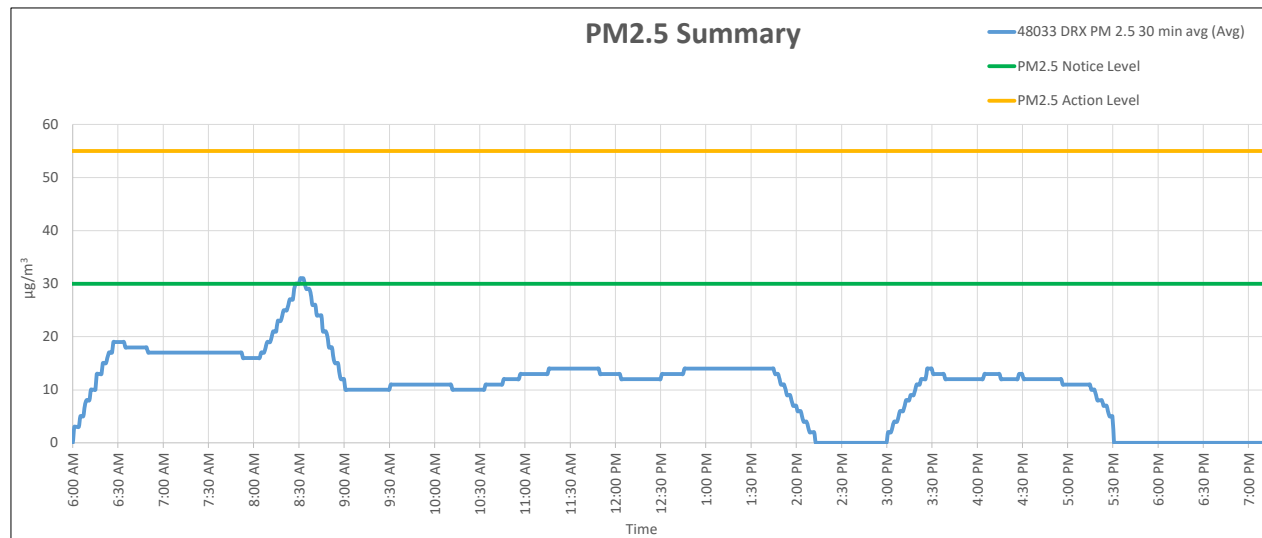
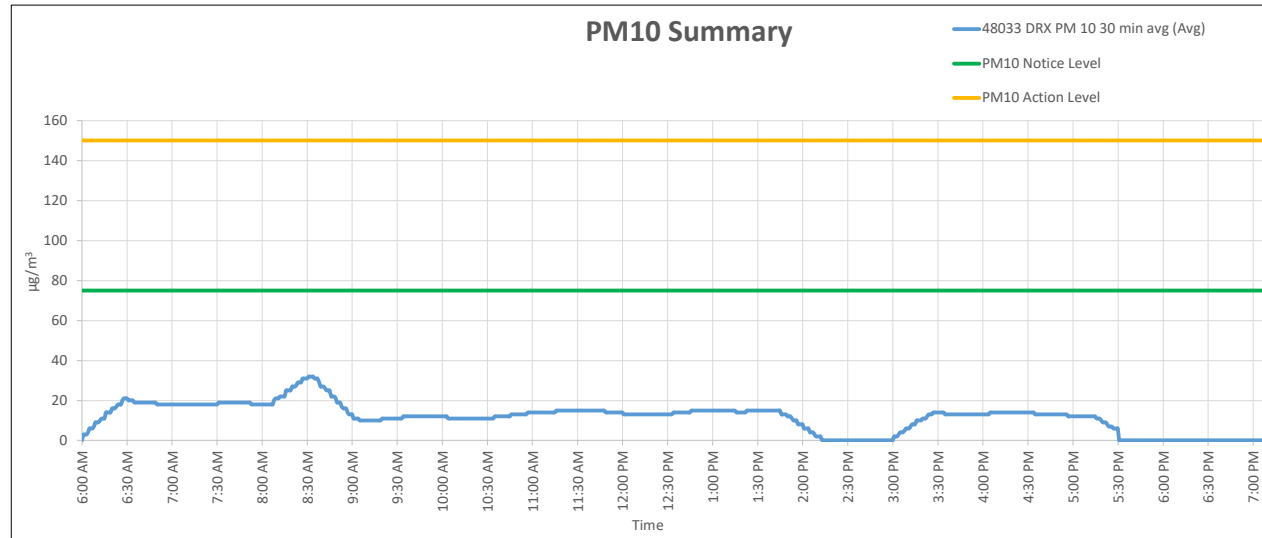
Union Pacific Railroad
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49911	10:31 AM	5:30 PM	18.63	27.00	17.29	24.00



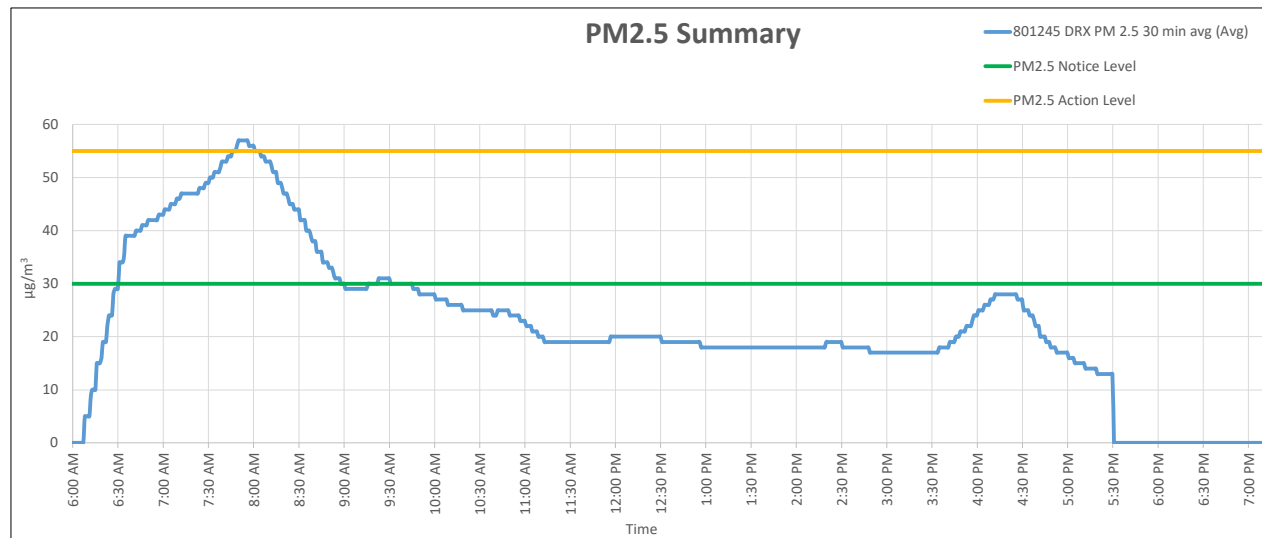
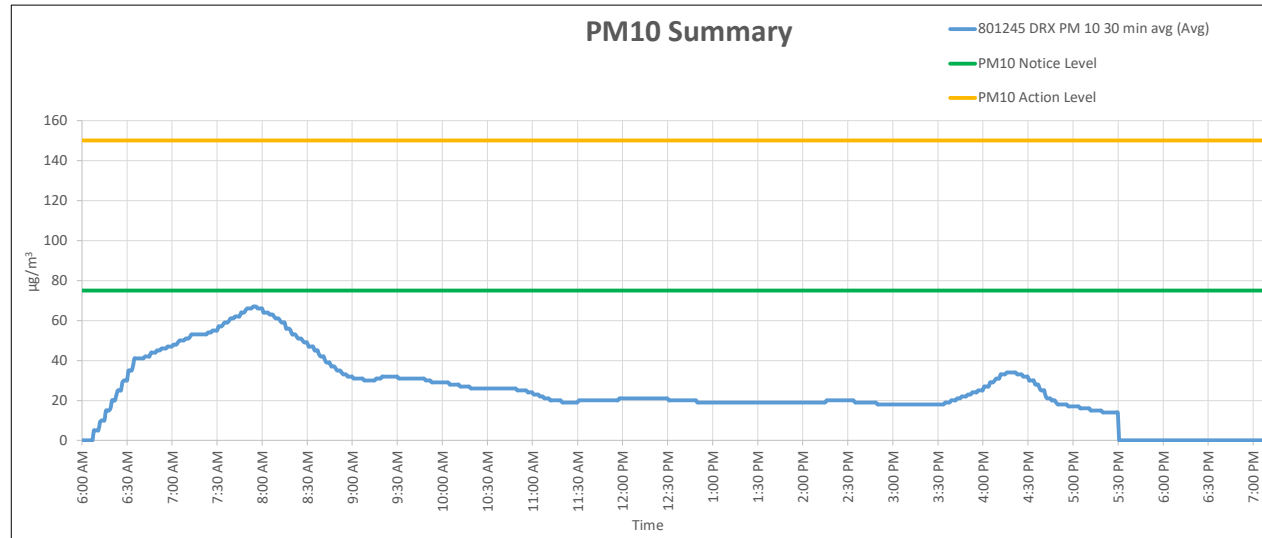
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	6:01 AM	5:30 PM	14.25	32.00	13.29	31.00

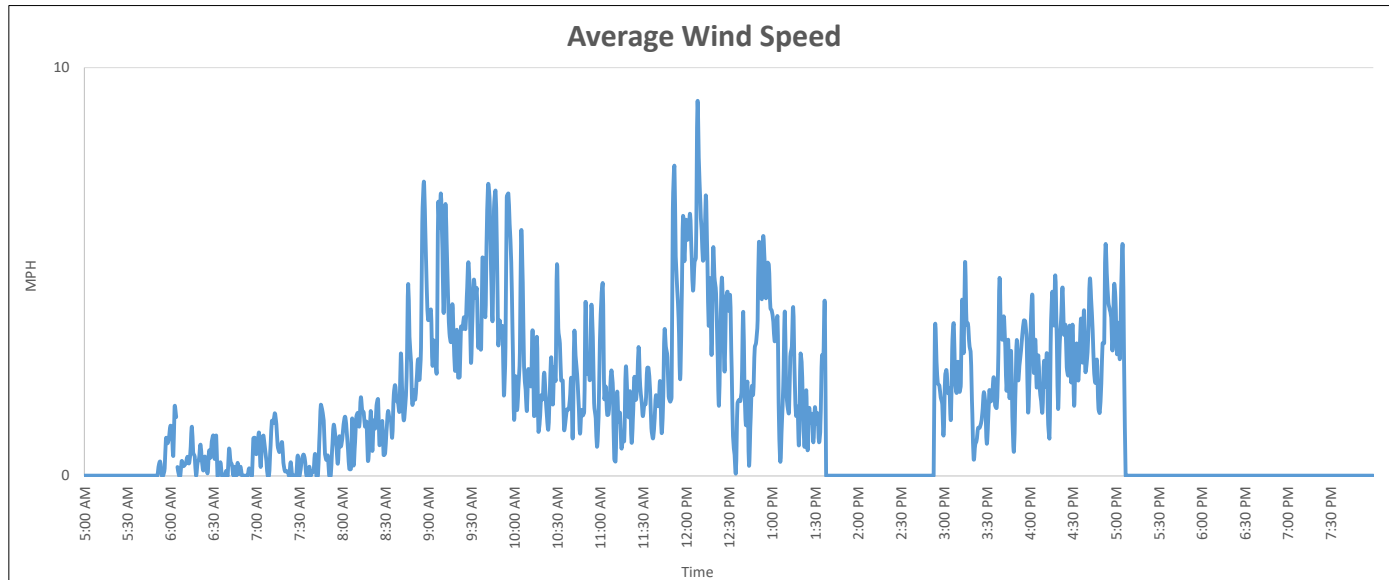
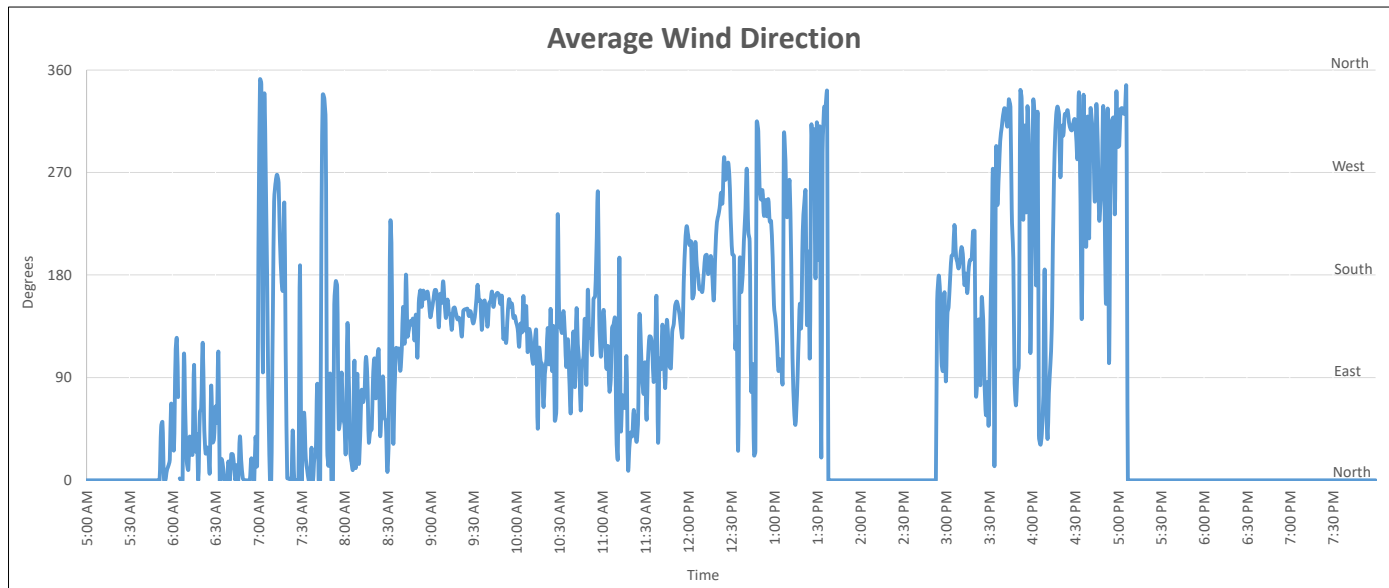


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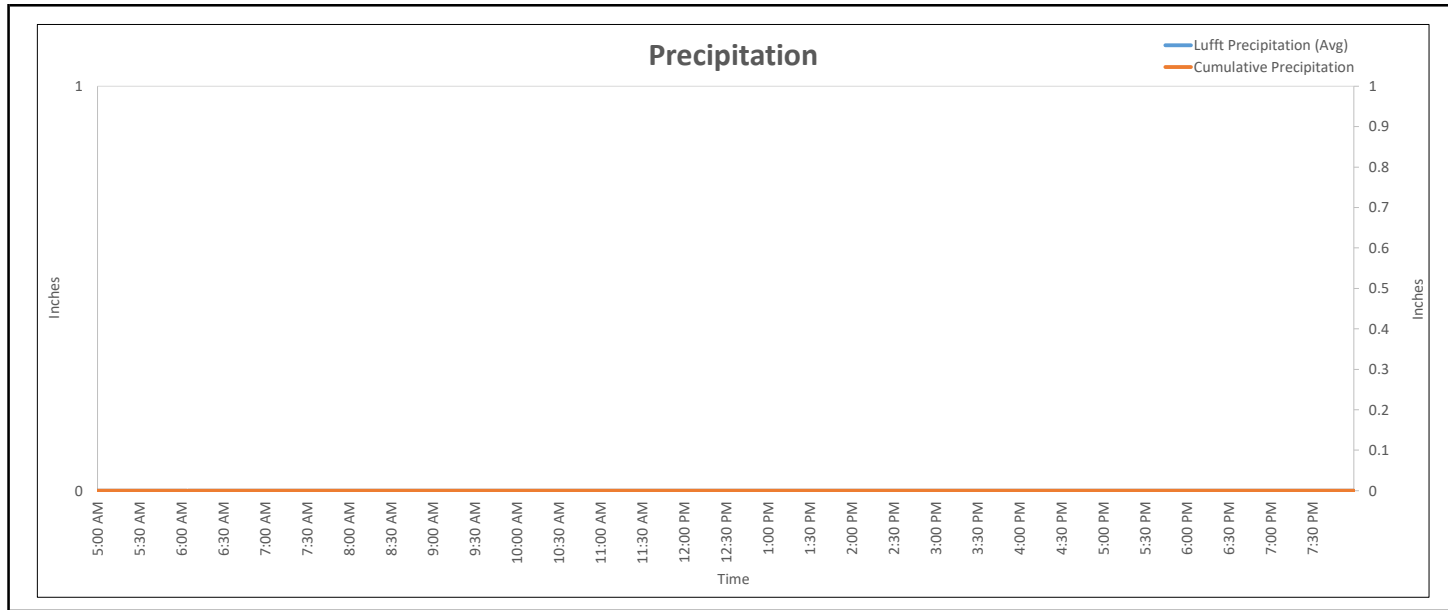
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	6:08 AM	5:30 PM	28.39	67.00	26.18	57.00



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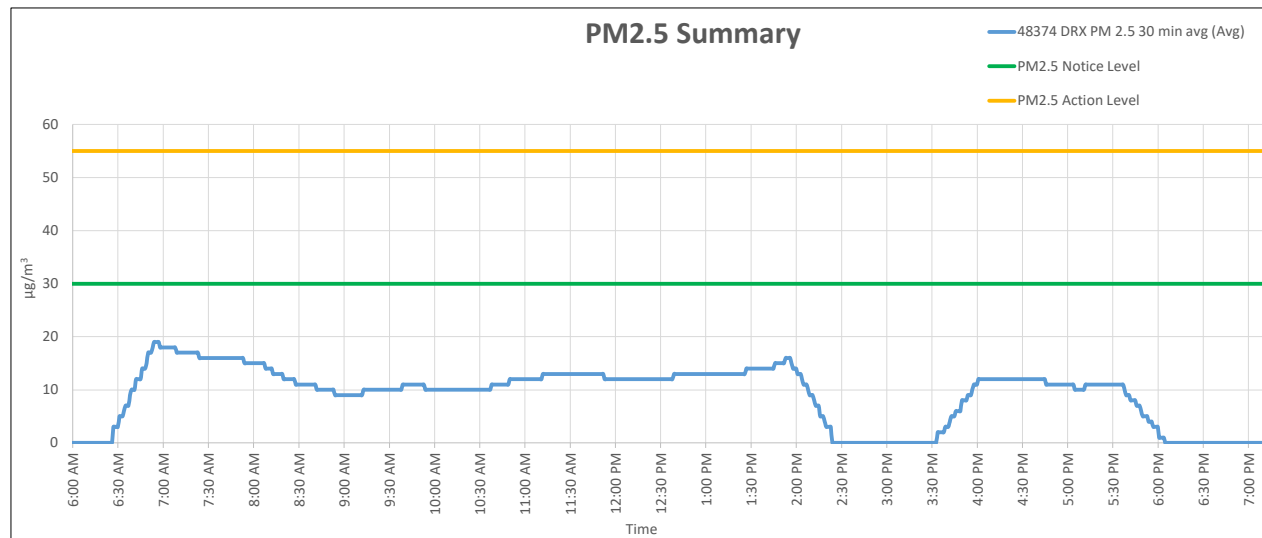
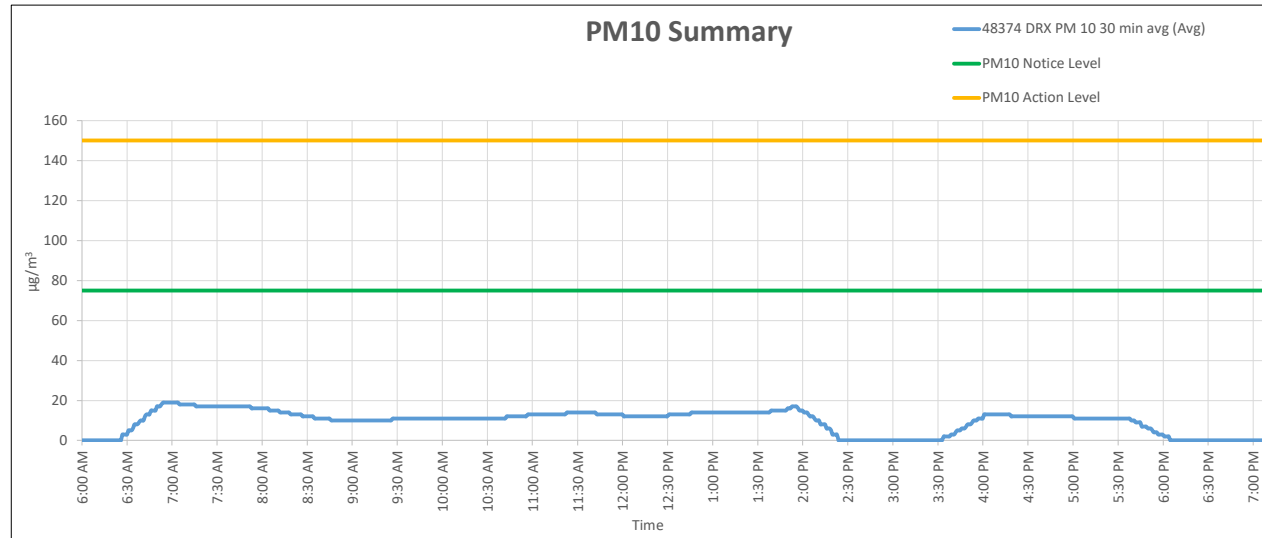


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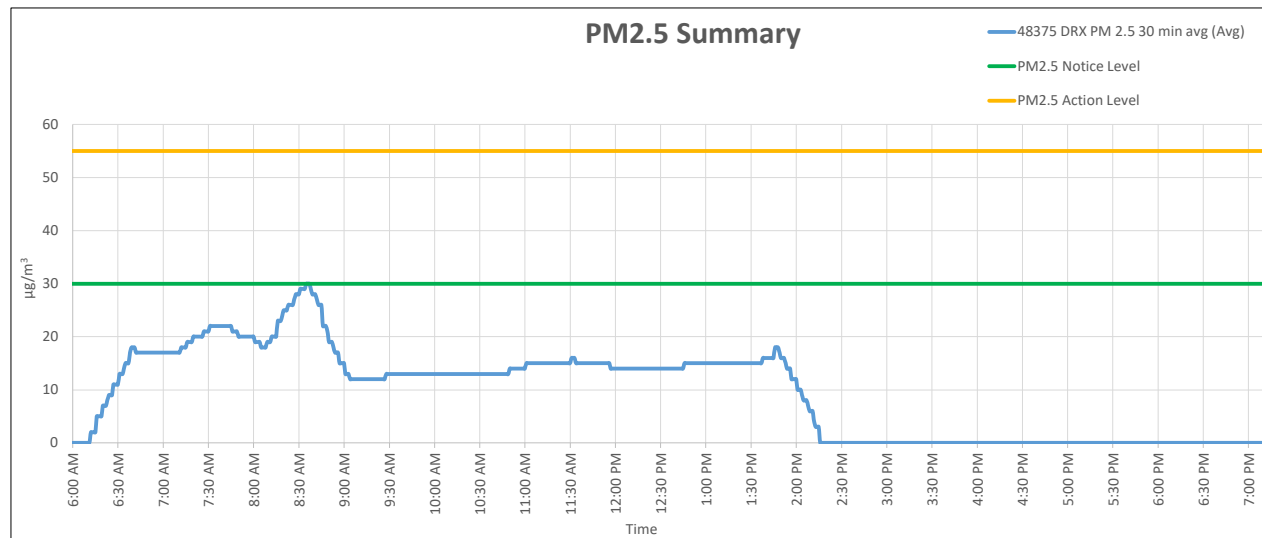
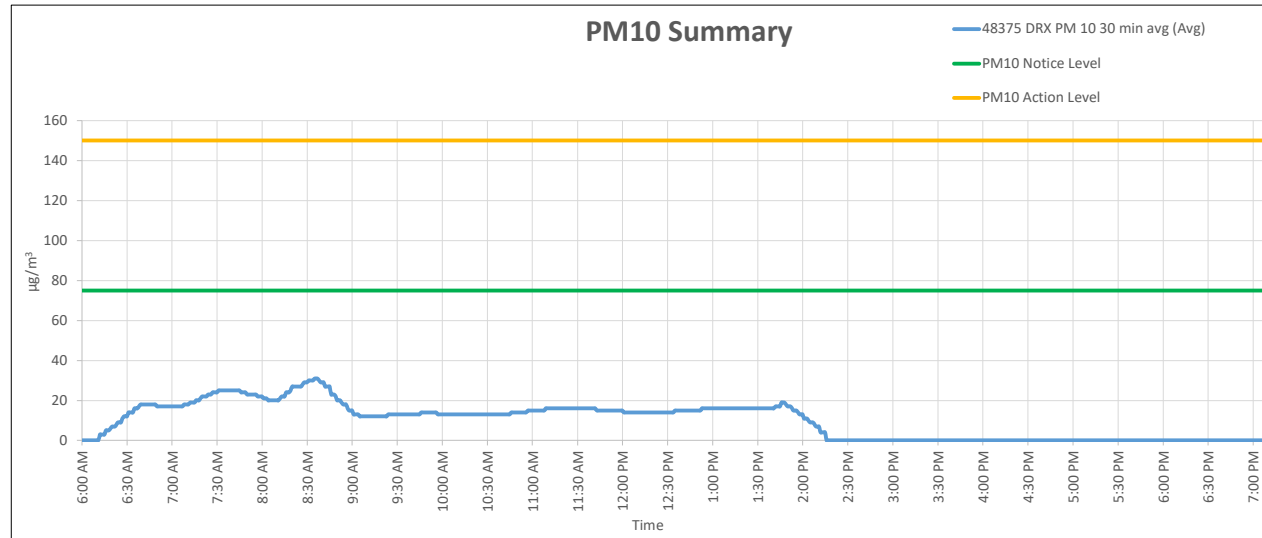
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48374	6:27 AM	6:04 PM	12.11	19.00	11.54	19.00



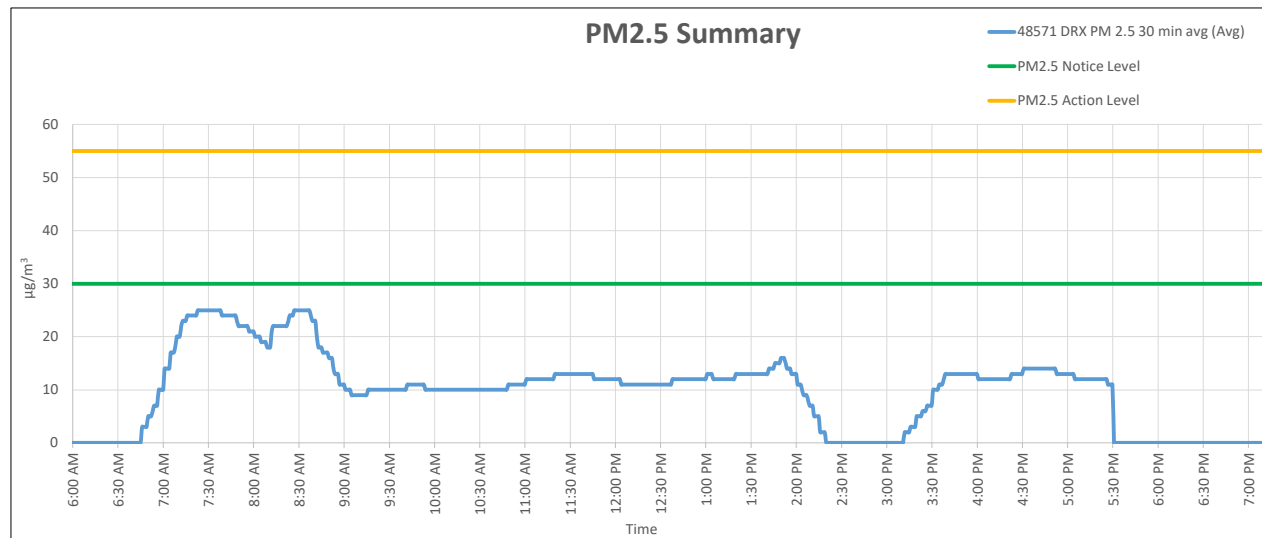
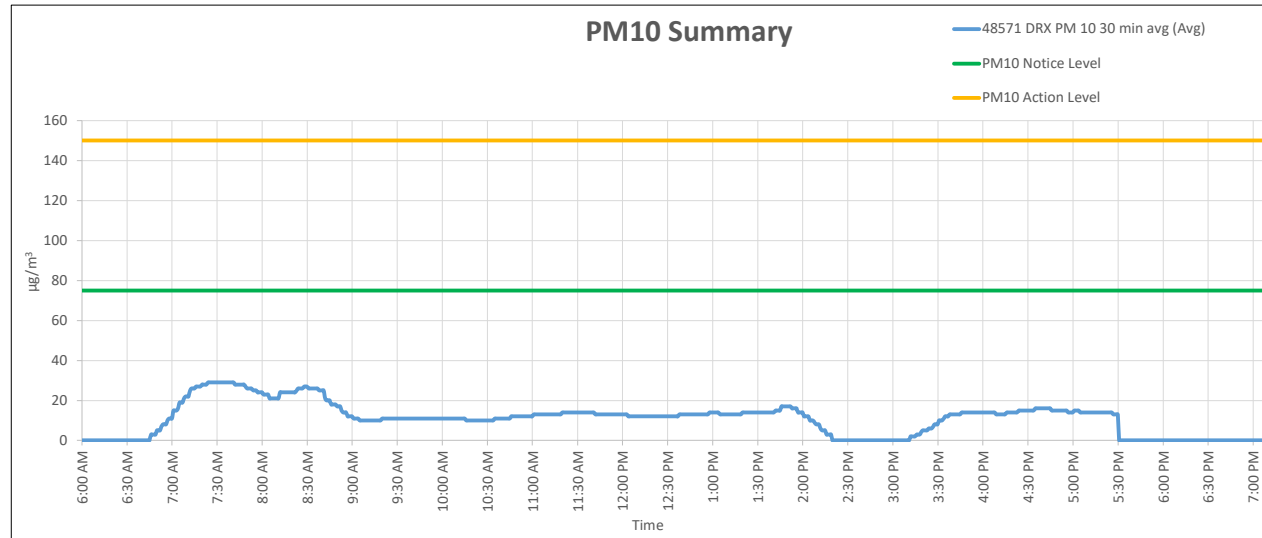
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48375	6:12 AM	2:15 PM	16.23	31.00	15.47	30.00



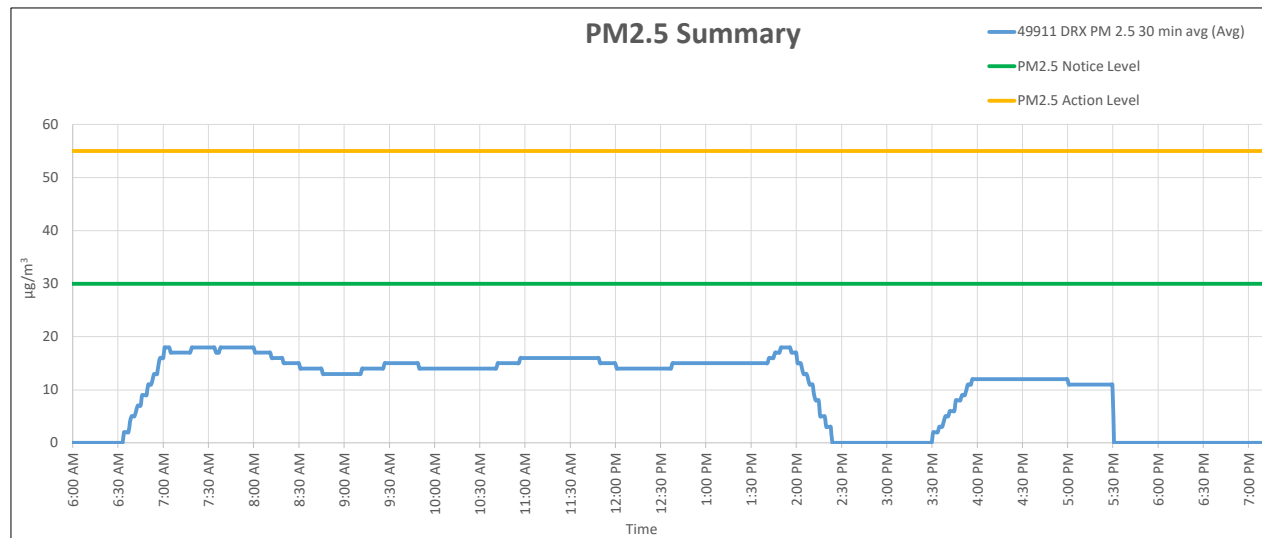
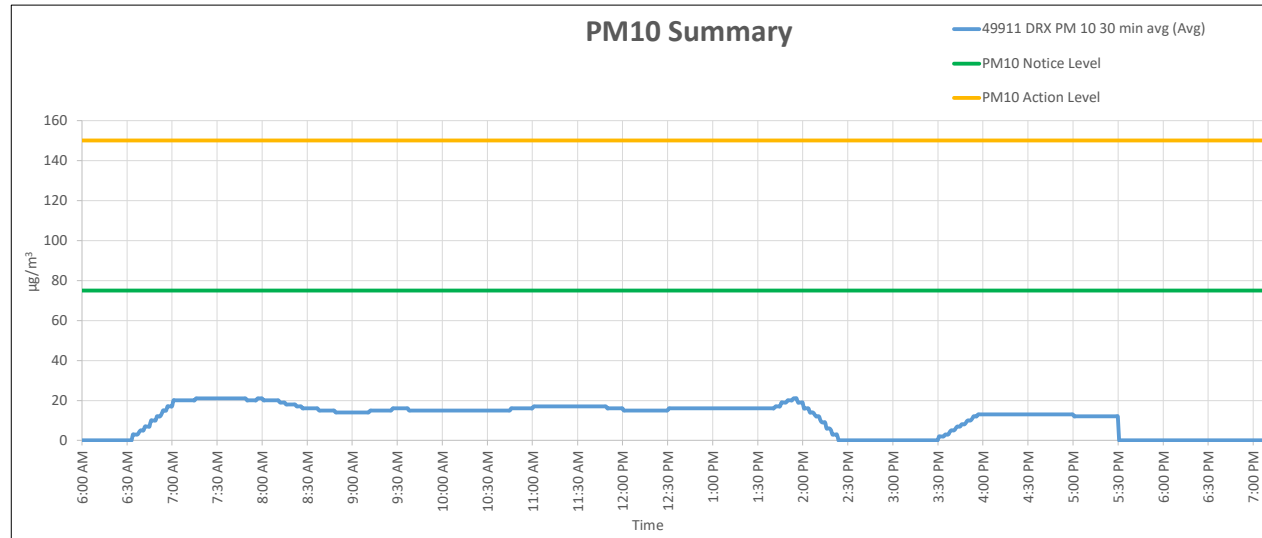
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48571	6:46 AM	5:30 PM	14.48	29.00	13.15	25.00



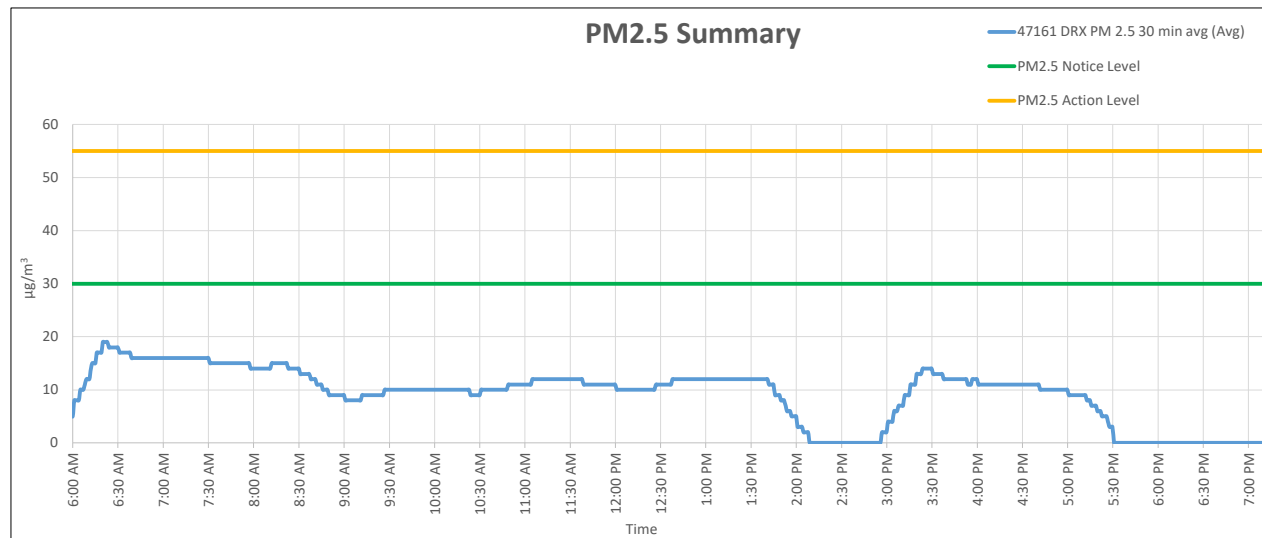
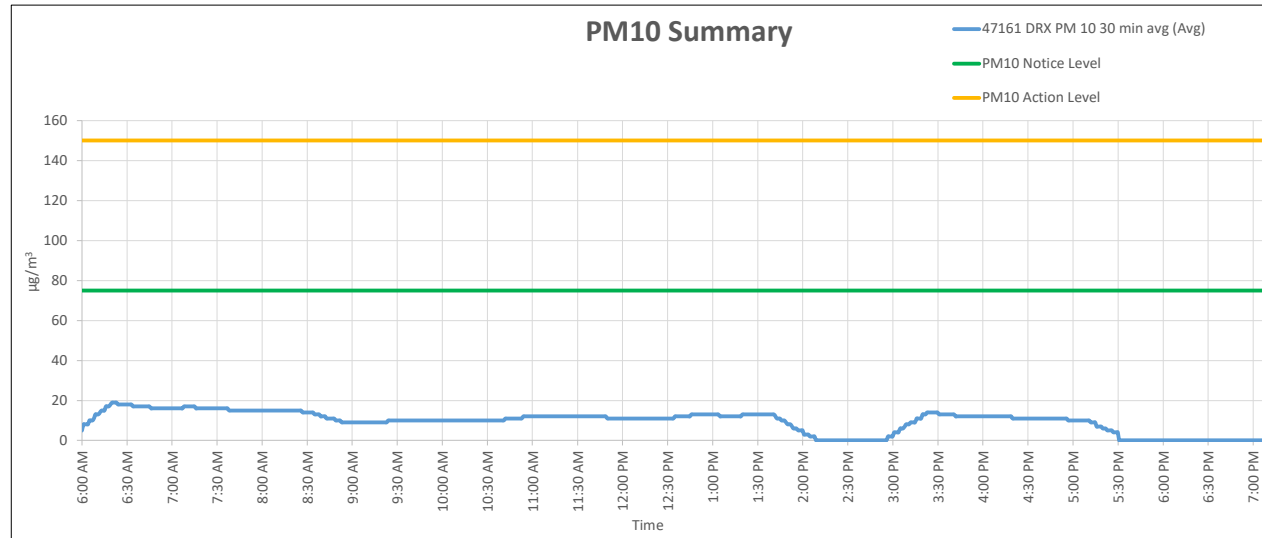
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	6:34 AM	5:30 PM	15.02	21.00	13.76	18.00



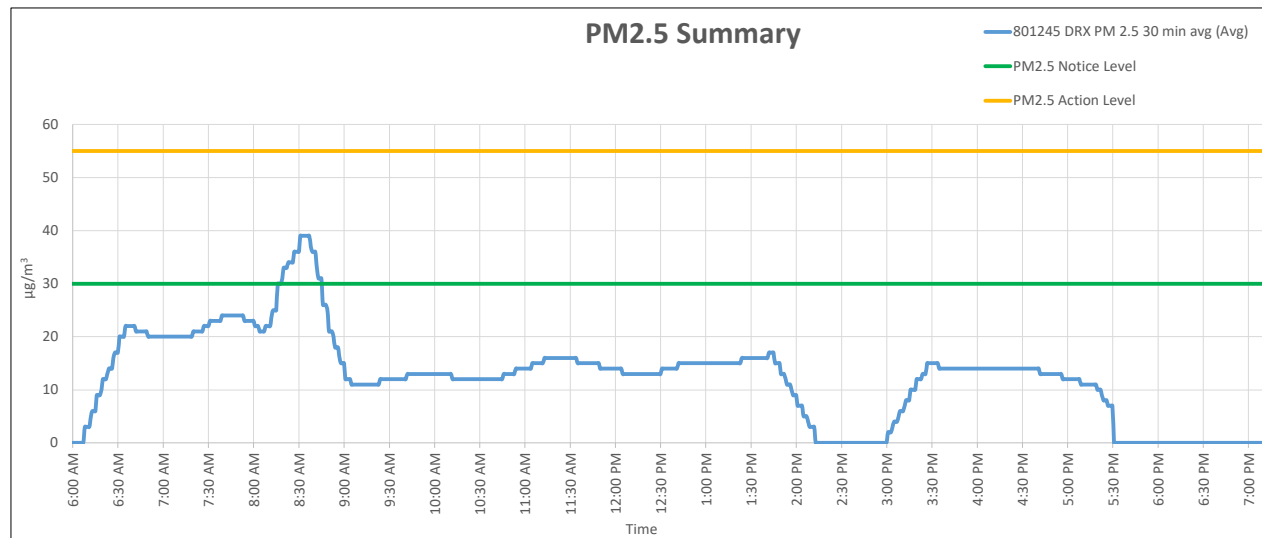
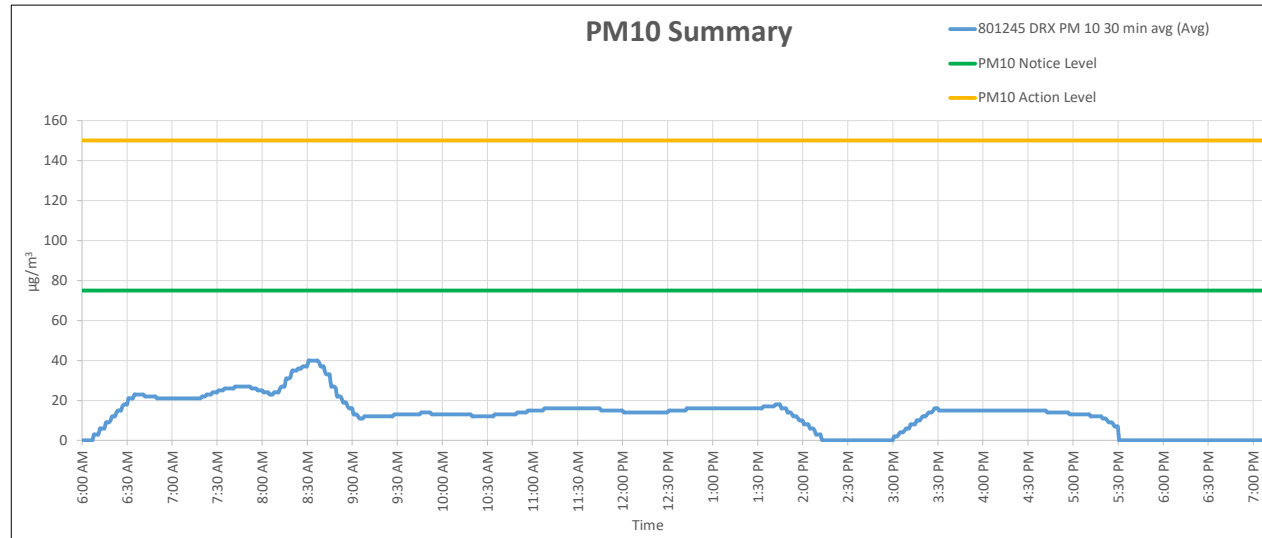
Union Pacific Railroad
Houston Wood Preserving Works Site
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	5:53 AM	5:30 PM	11.66	19.00	11.28	19.00

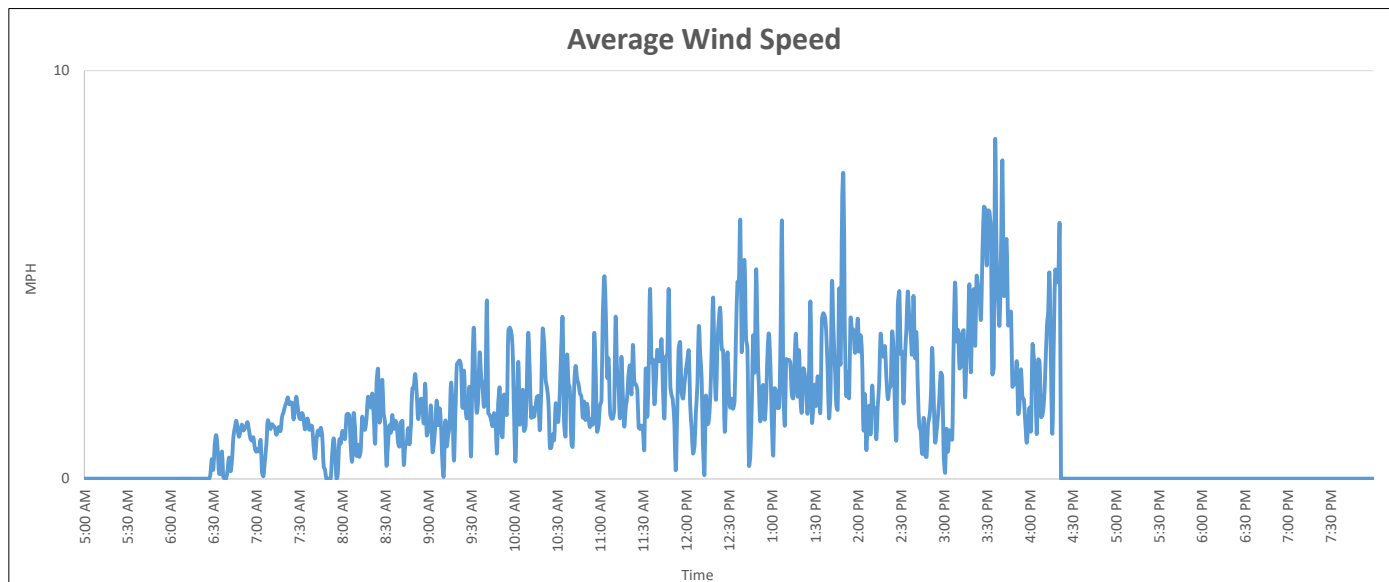
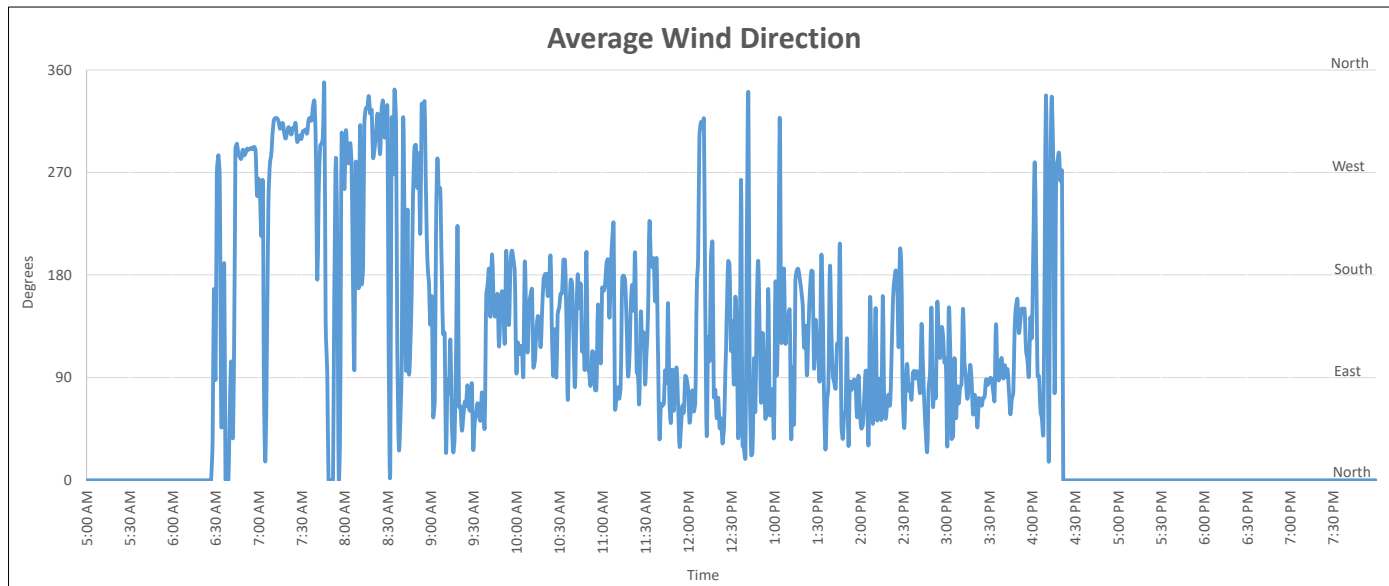


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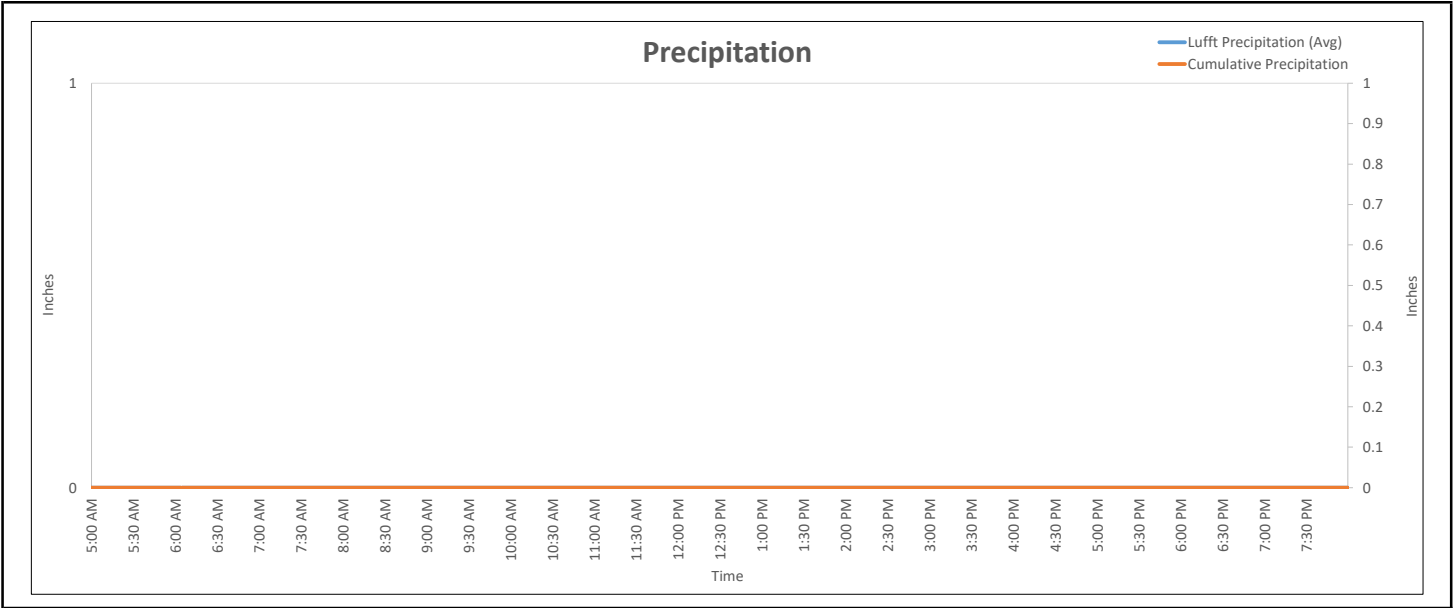
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	6:08 AM	5:30 PM	16.37	40.00	15.46	39.00



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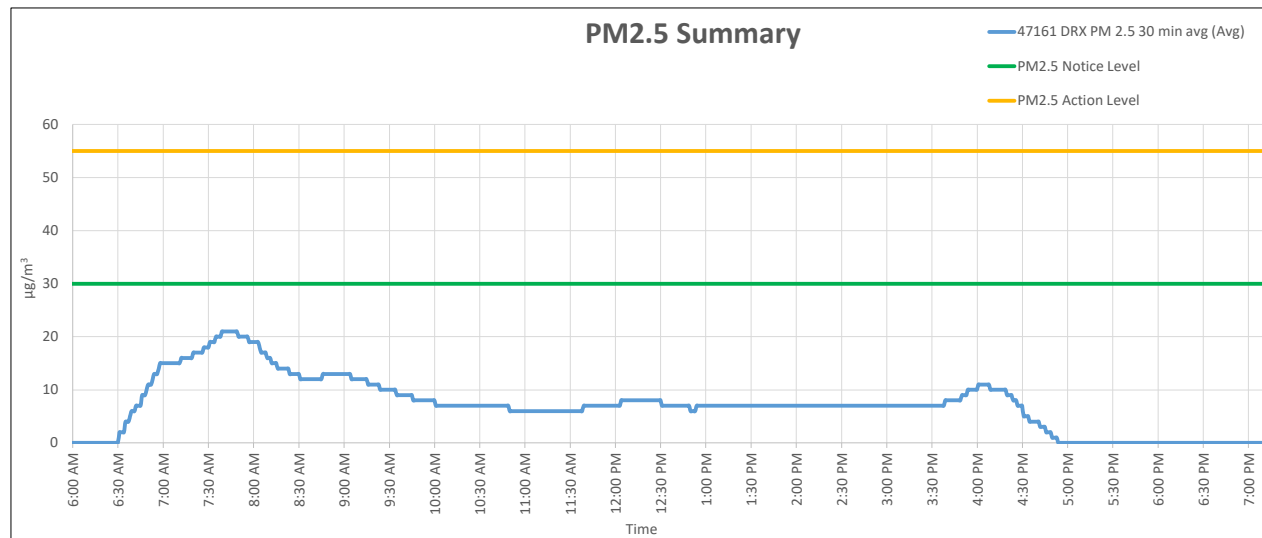
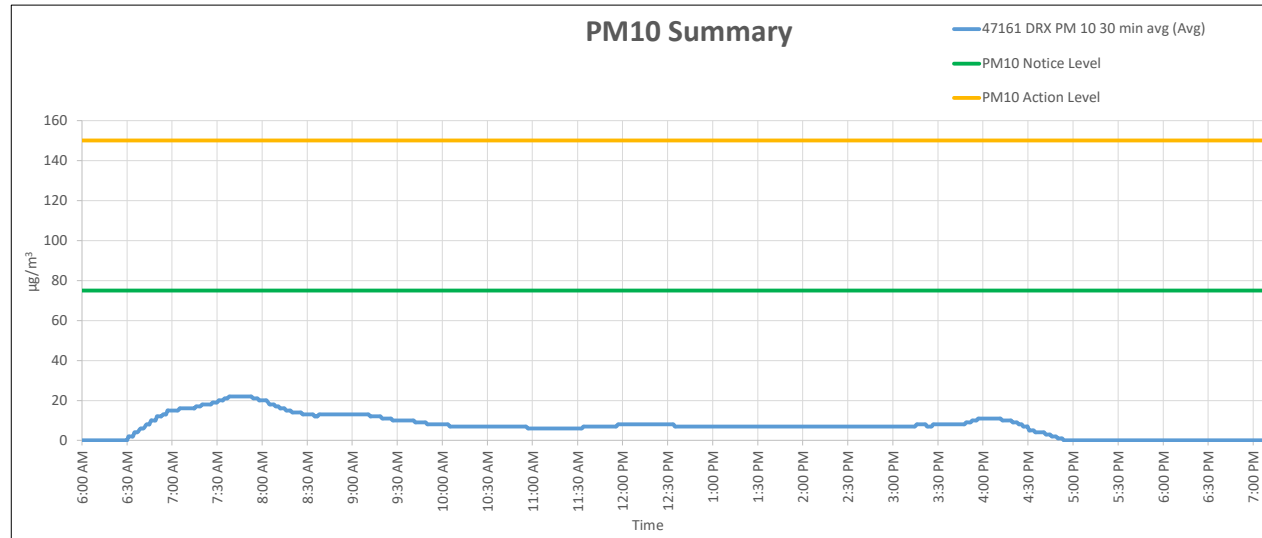


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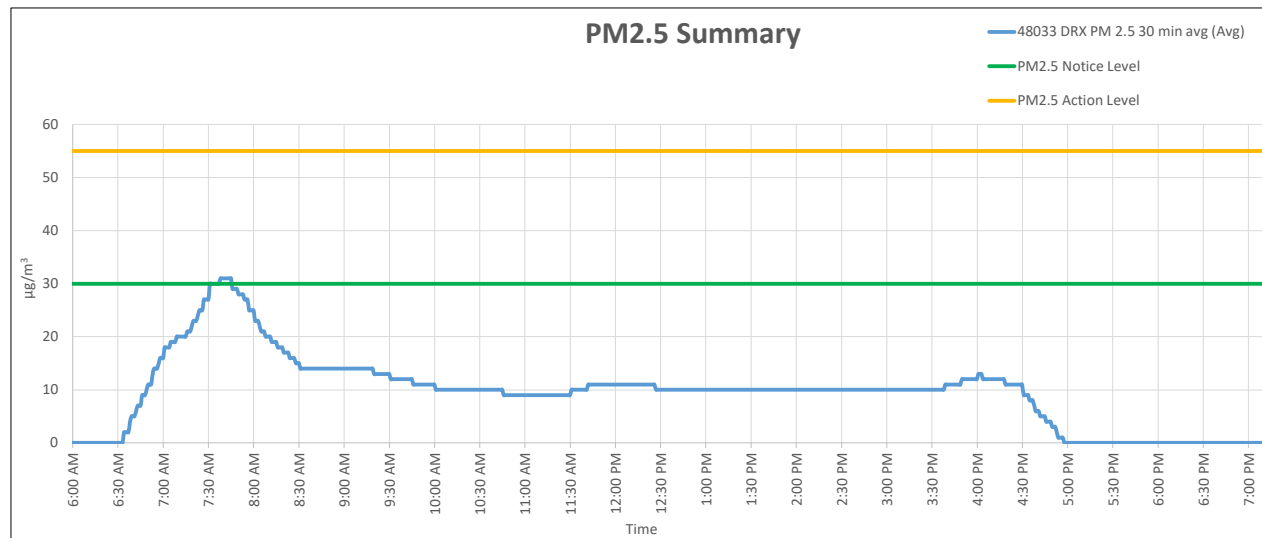
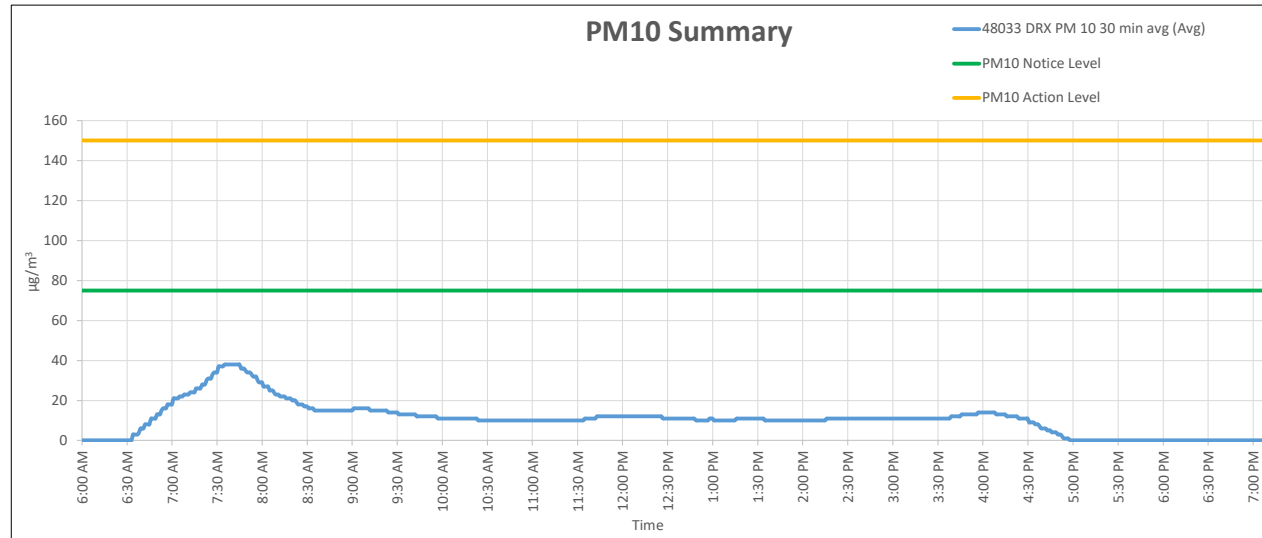
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
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Wednesday, August 14, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	6:31 AM	4:49 PM	9.39	22.00	9.09	21.00



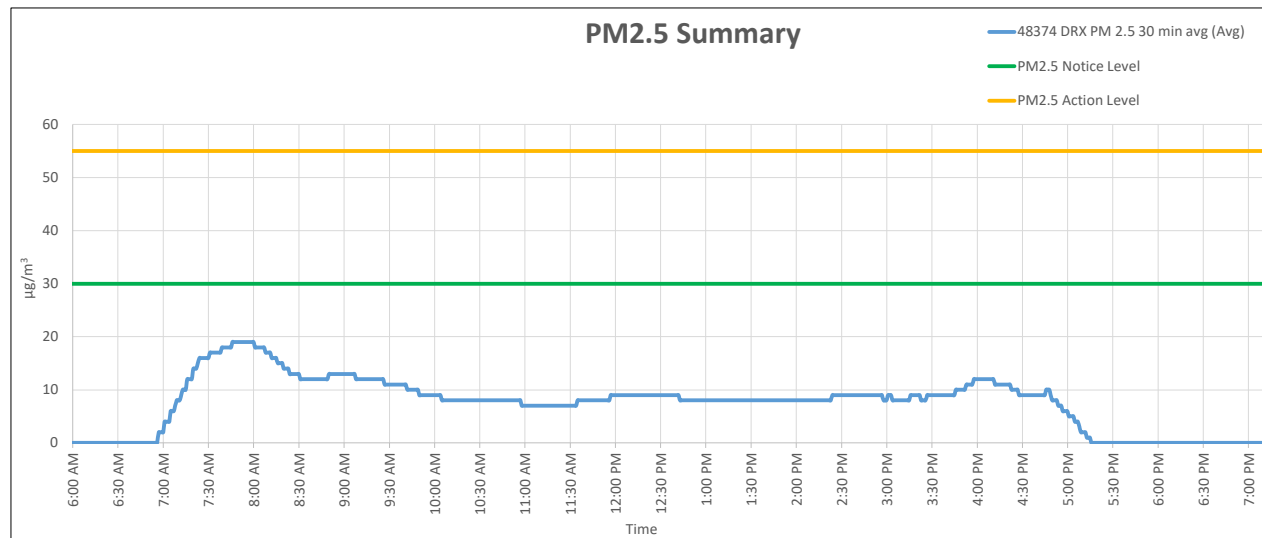
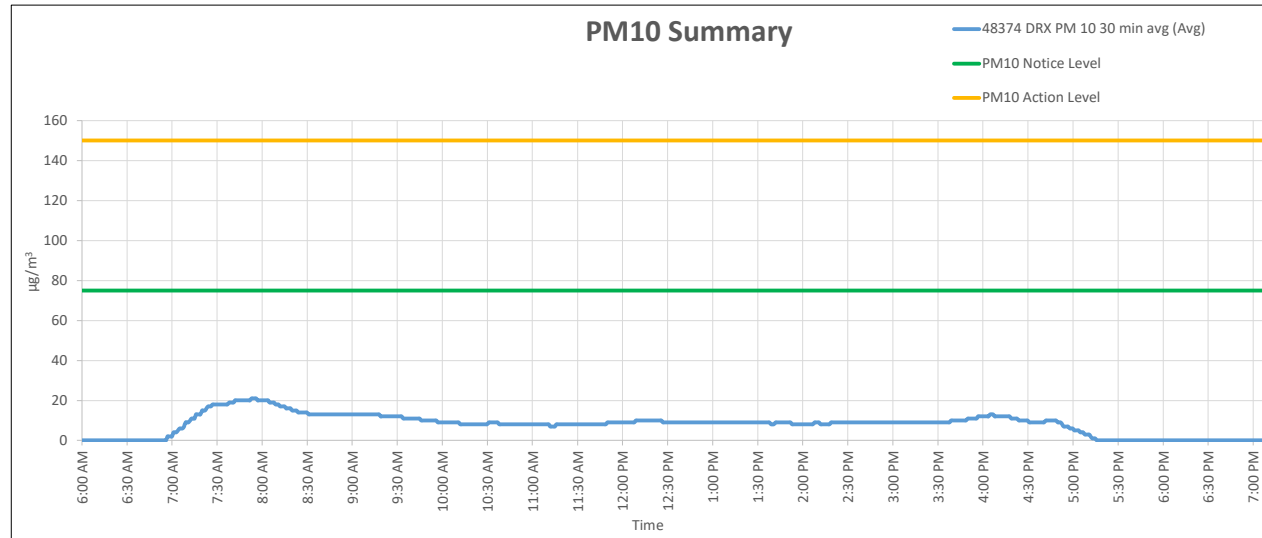
Union Pacific Railroad
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Wednesday, August 14, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	6:34 AM	4:53 PM	13.58	38.00	12.20	31.00



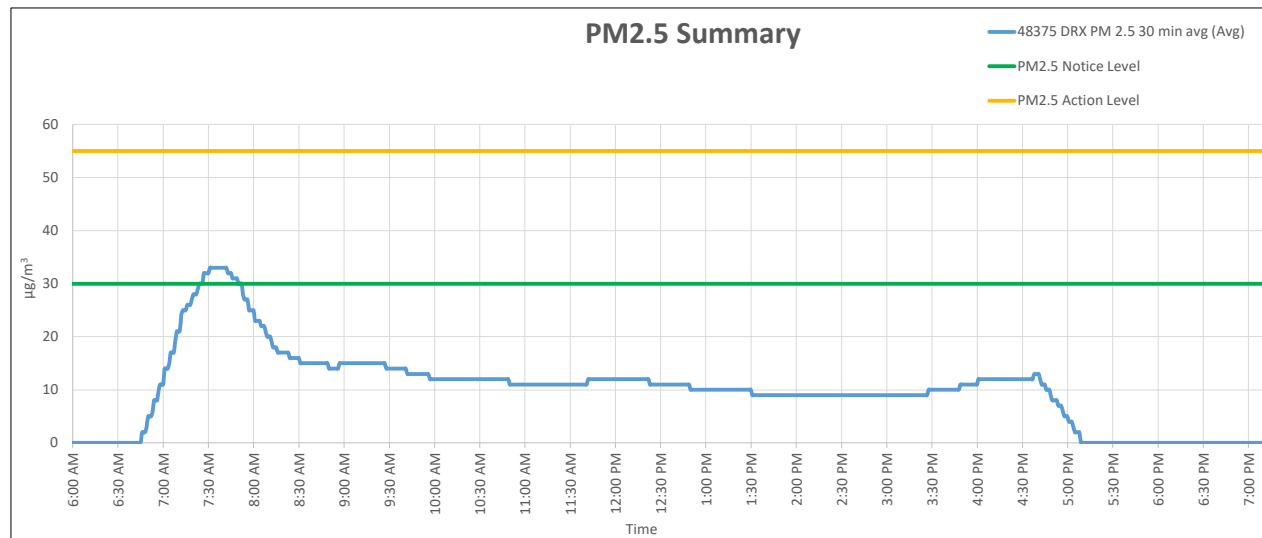
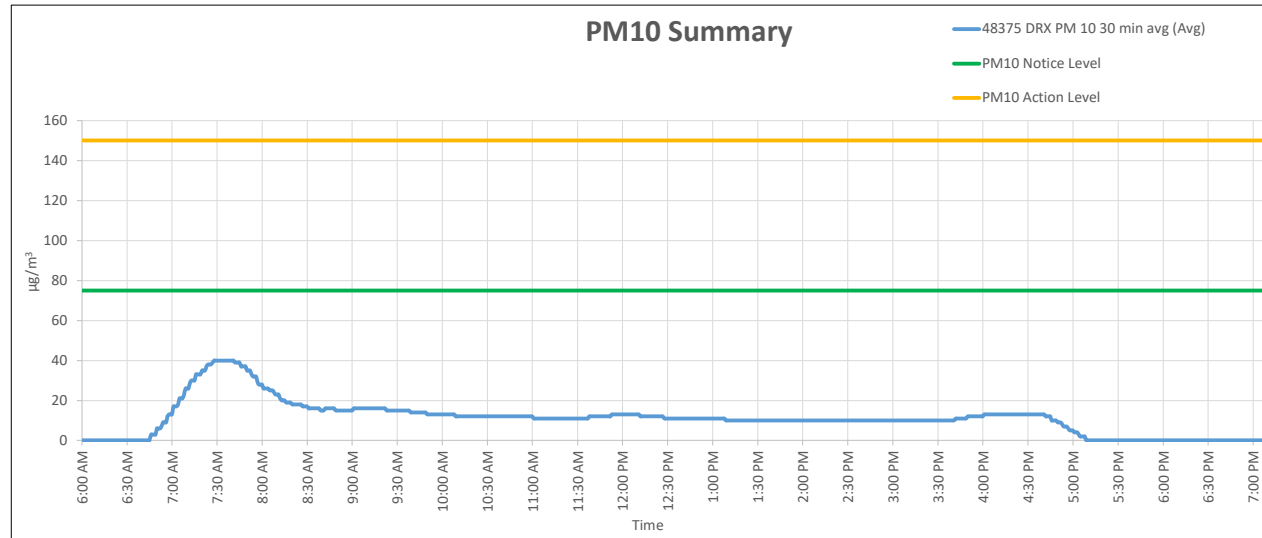
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:57 AM	5:12 PM	10.26	21.00	9.69	19.00



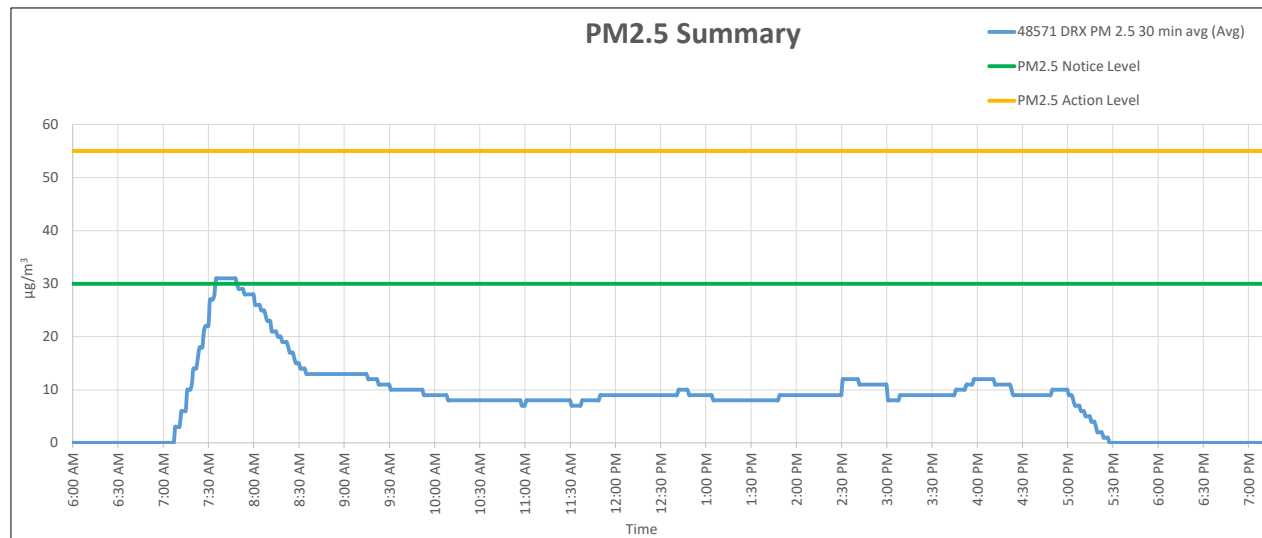
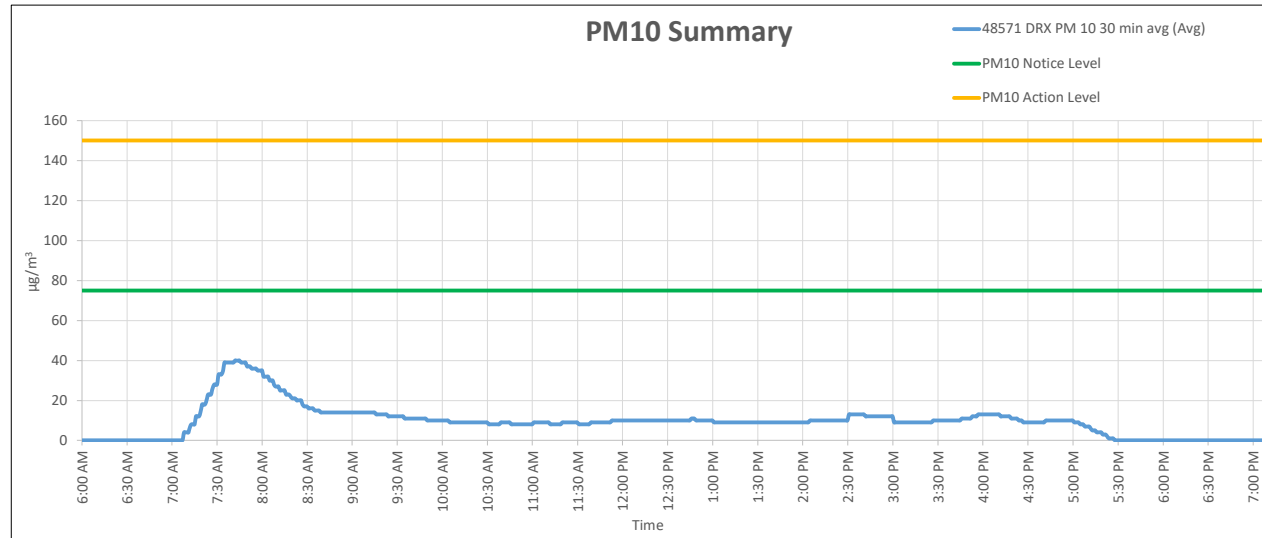
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	6:46 AM	5:08 PM	14.06	40.00	12.87	33.00



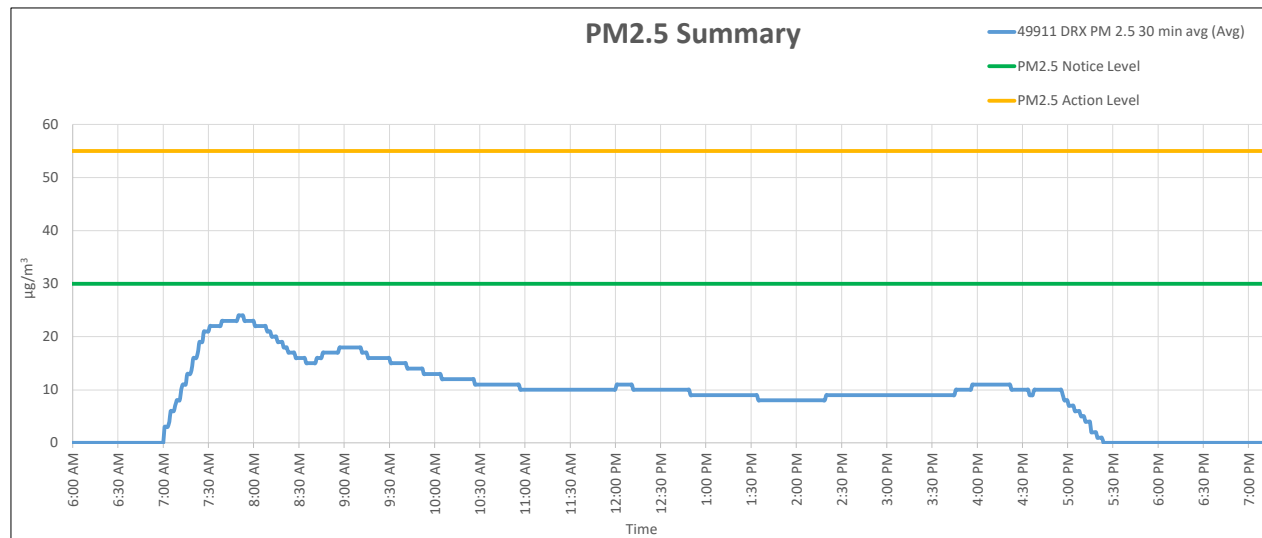
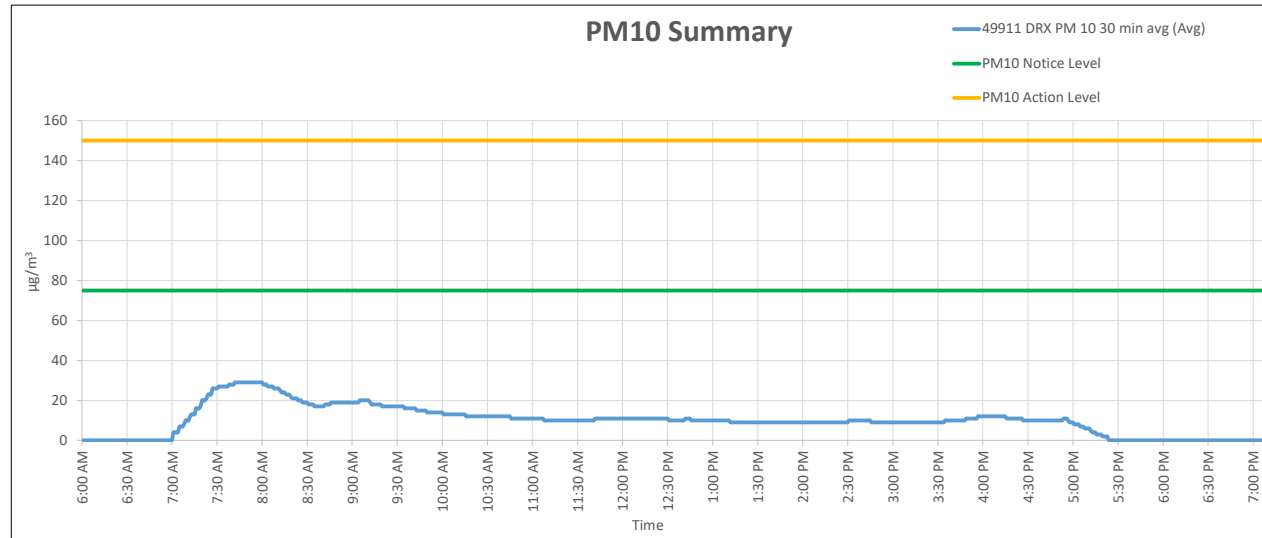
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	7:08 AM	5:23 PM	12.25	40.00	10.89	31.00



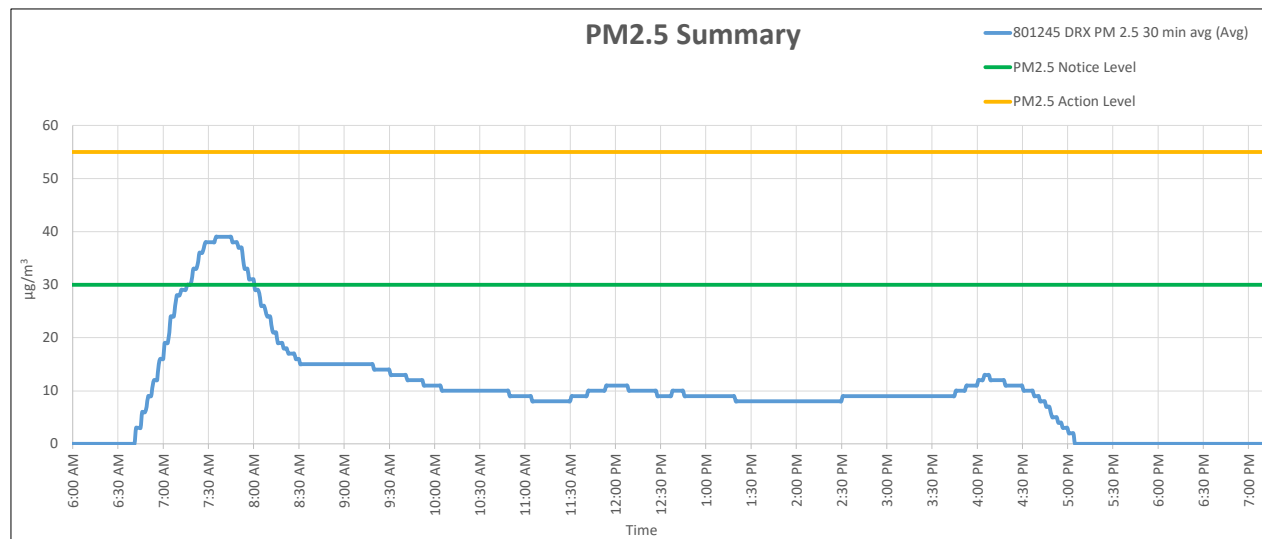
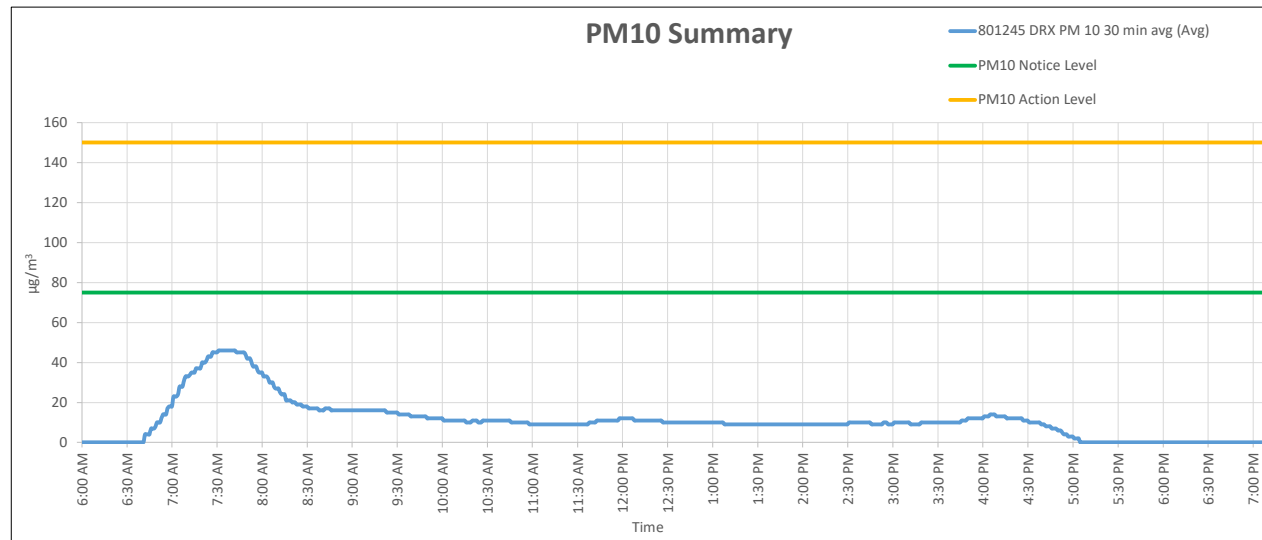
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	7:01 AM	5:23 PM	12.80	29.00	11.62	24.00

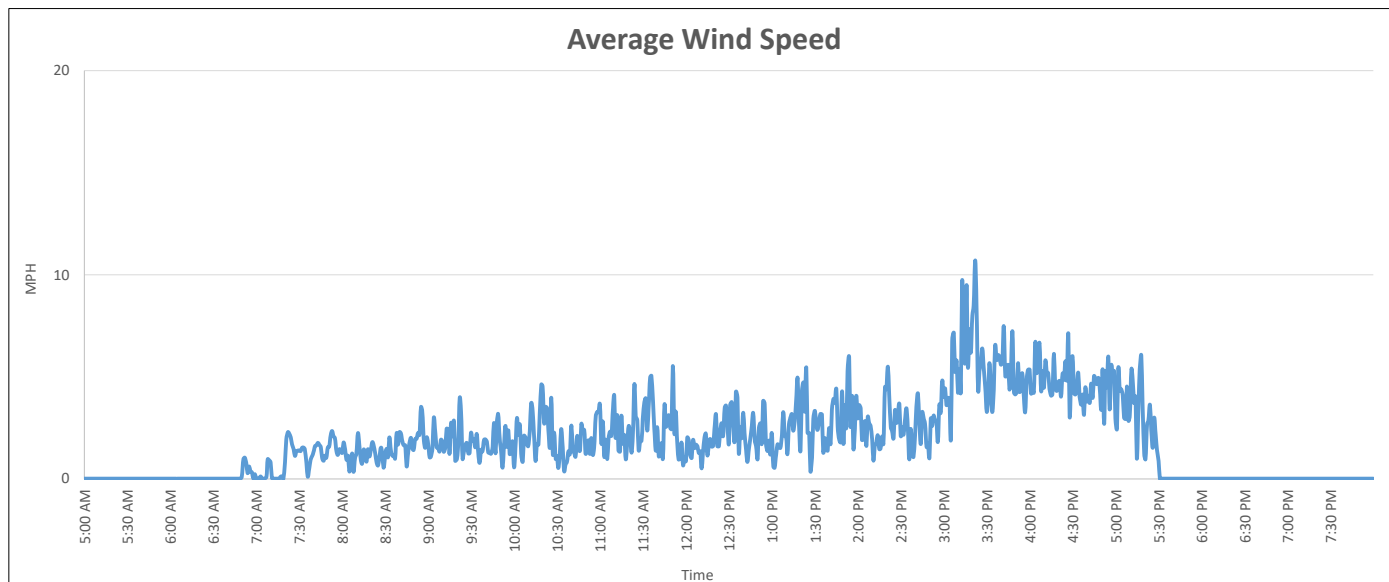
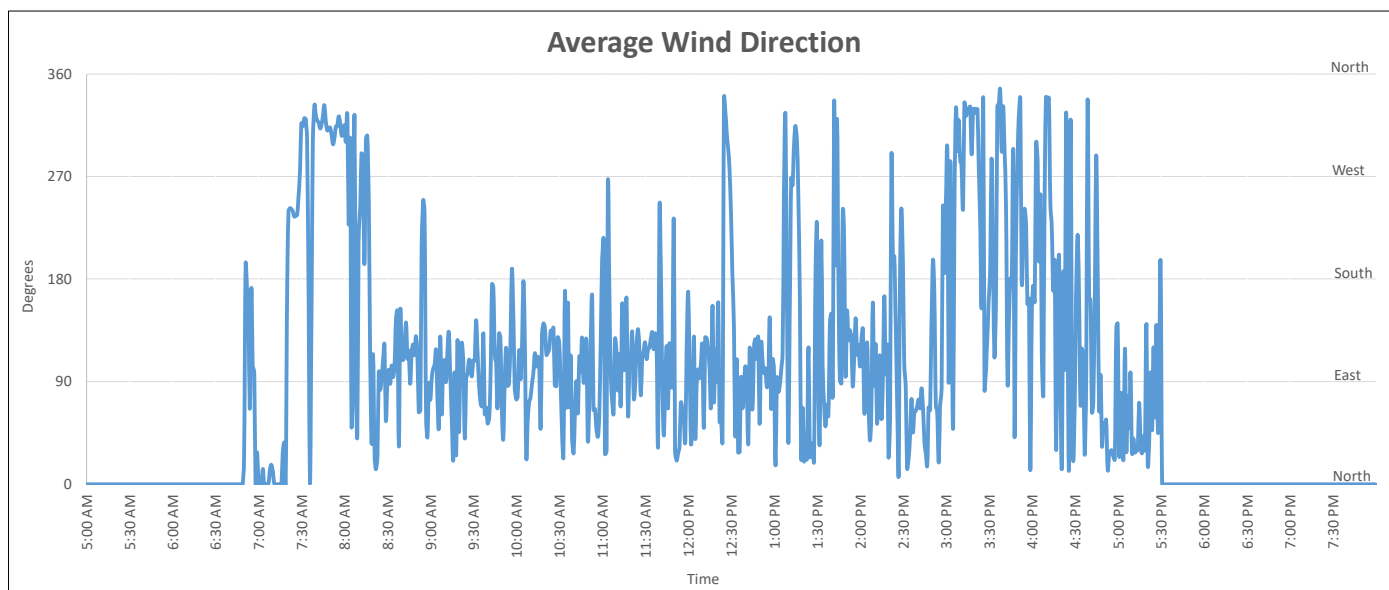


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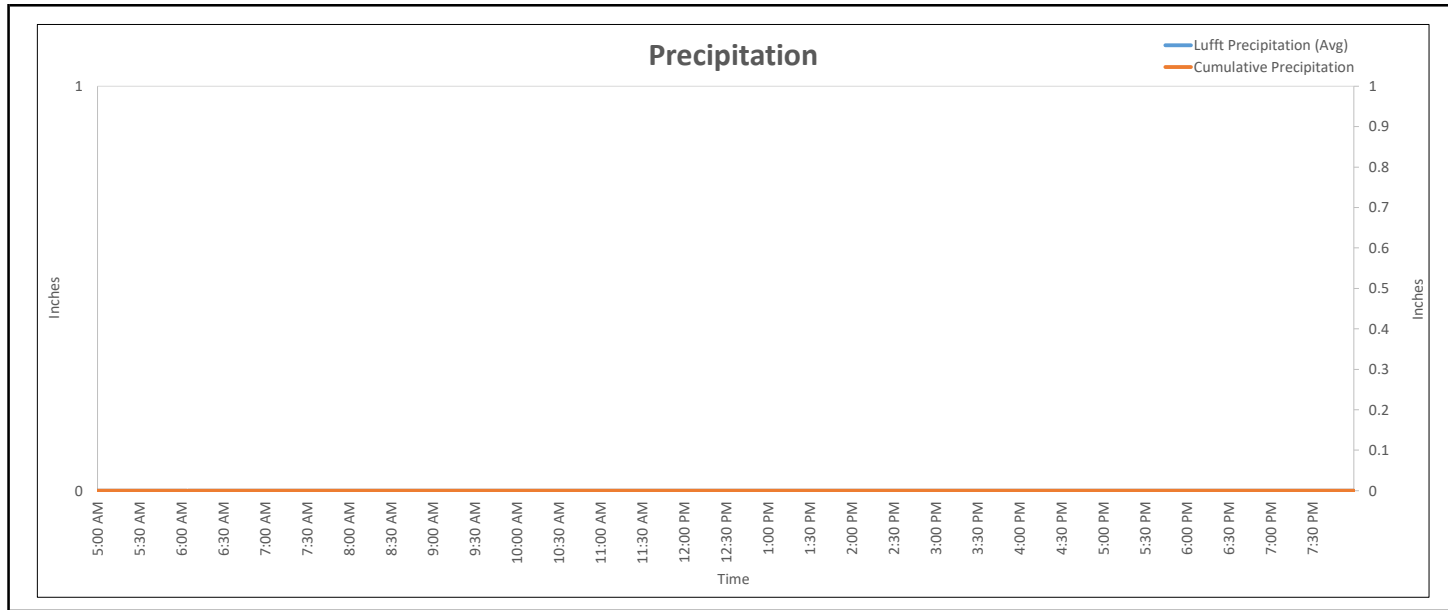
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	6:42 AM	5:04 PM	14.11	46.00	12.70	39.00



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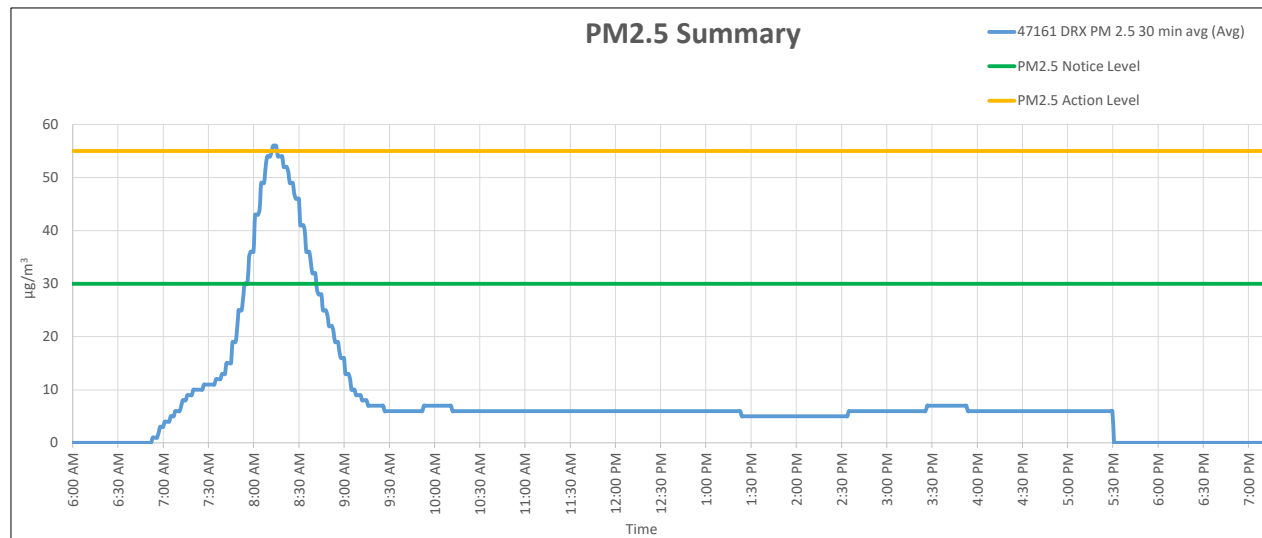
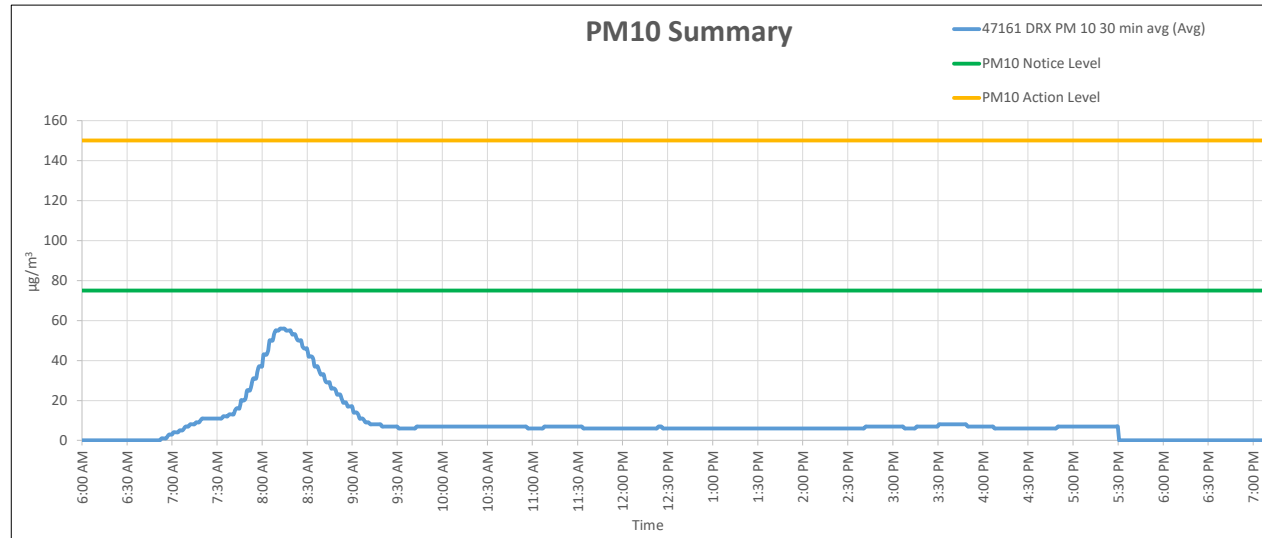


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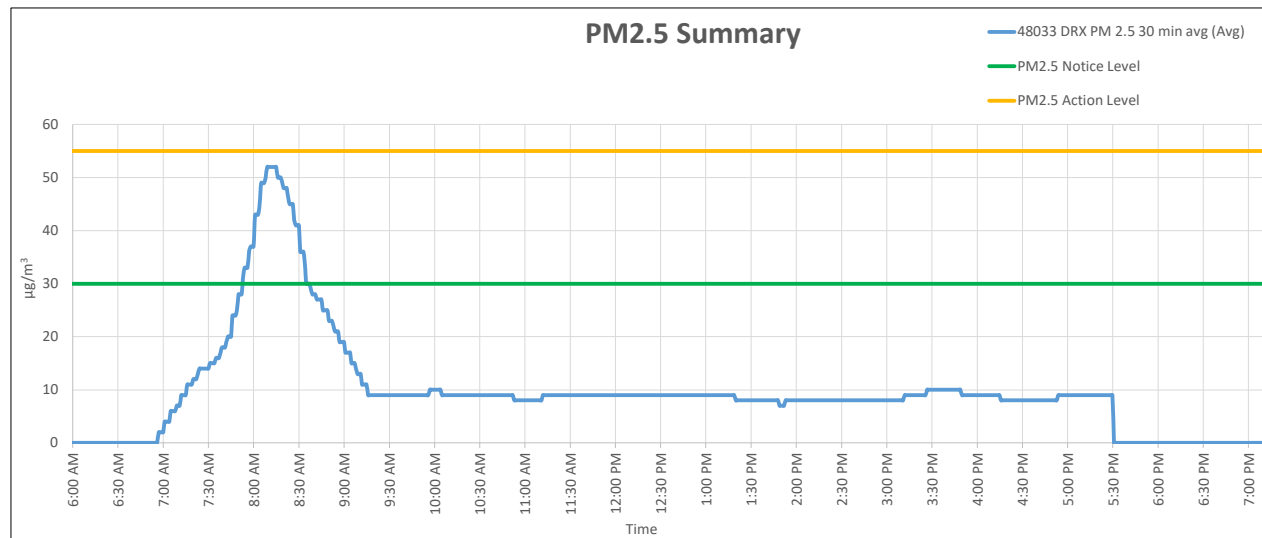
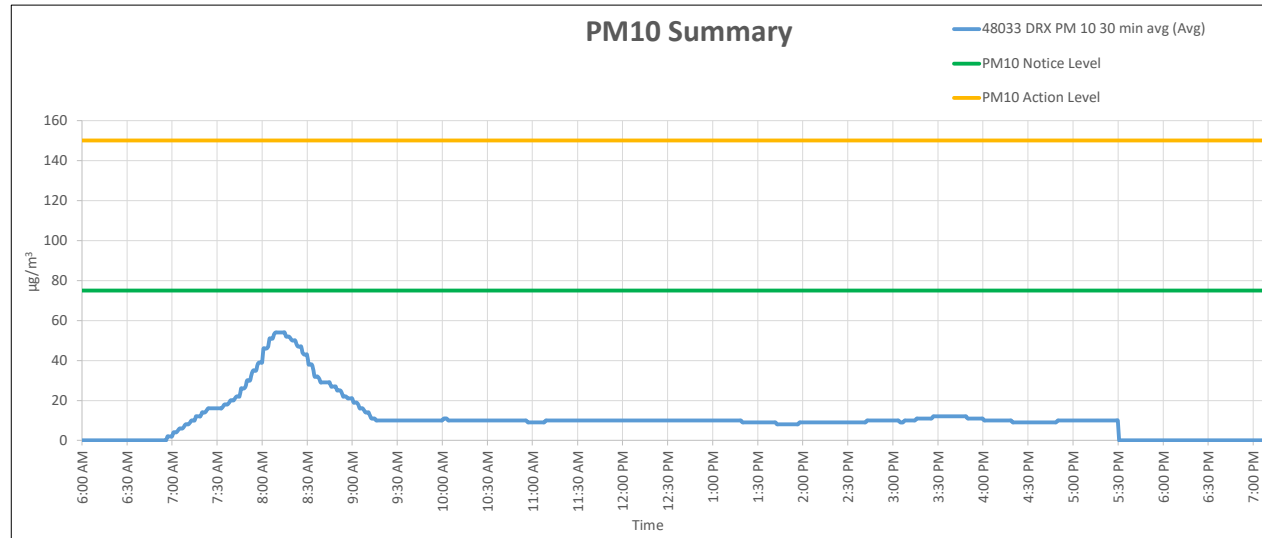
Union Pacific Railroad
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Thursday, August 15, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	6:53 AM	5:30 PM	10.42	56.00	9.87	56.00



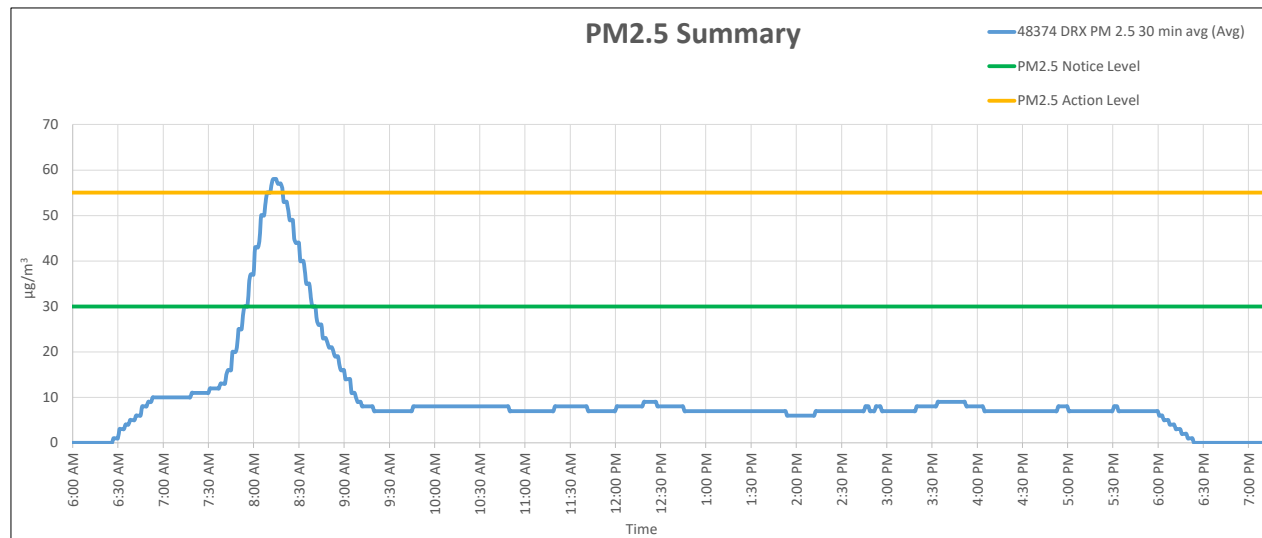
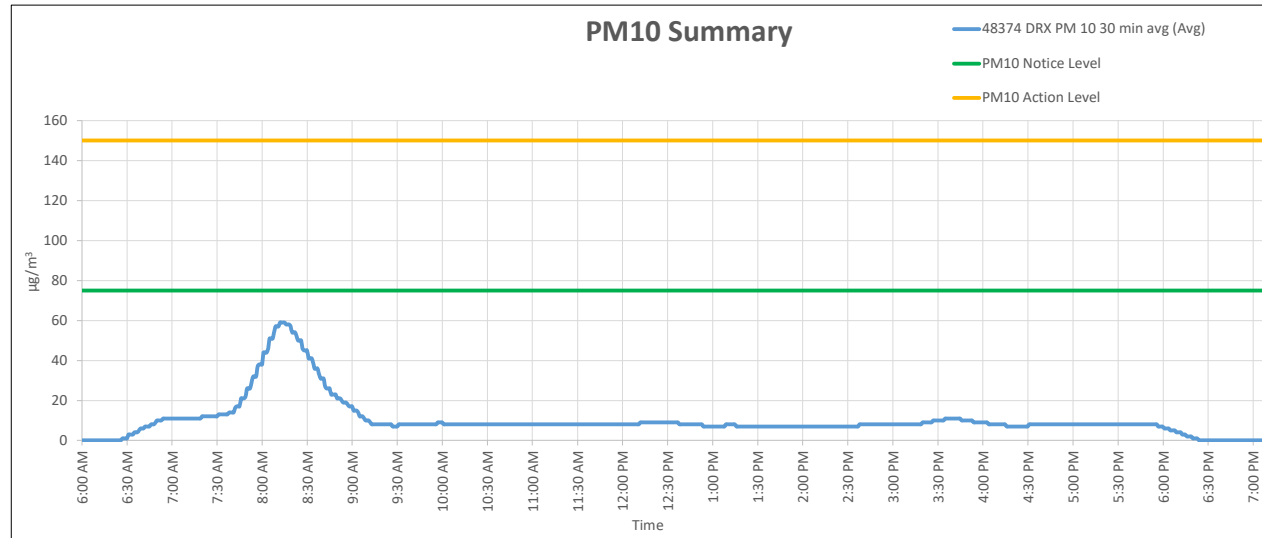
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	6:57 AM	5:30 PM	13.46	54.00	12.21	52.00



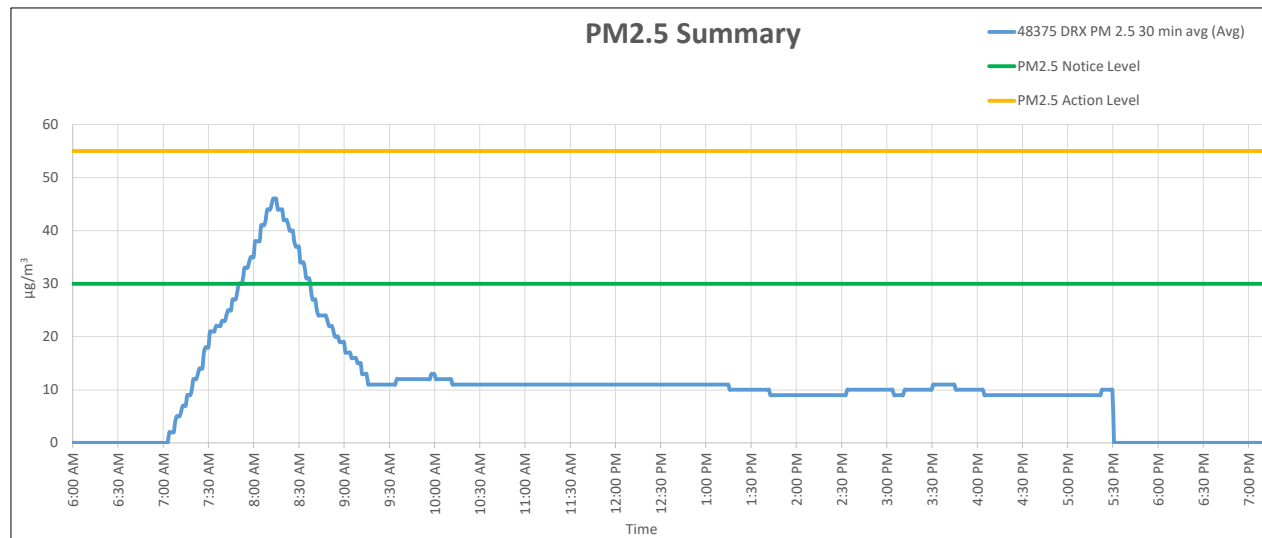
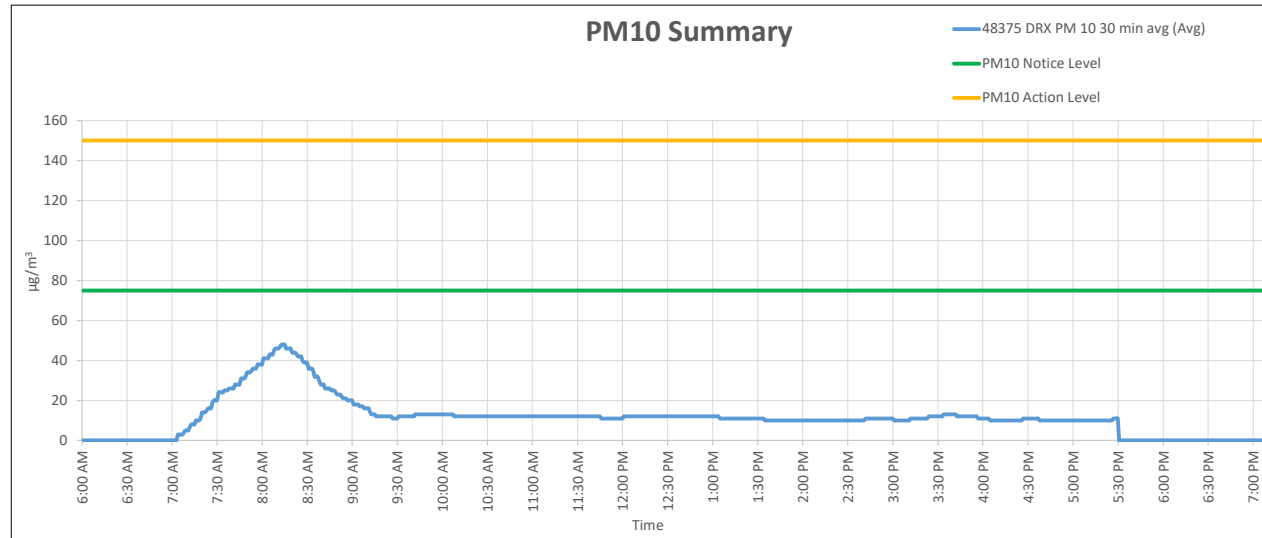
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:27 AM	6:19 PM	11.21	59.00	10.57	58.00



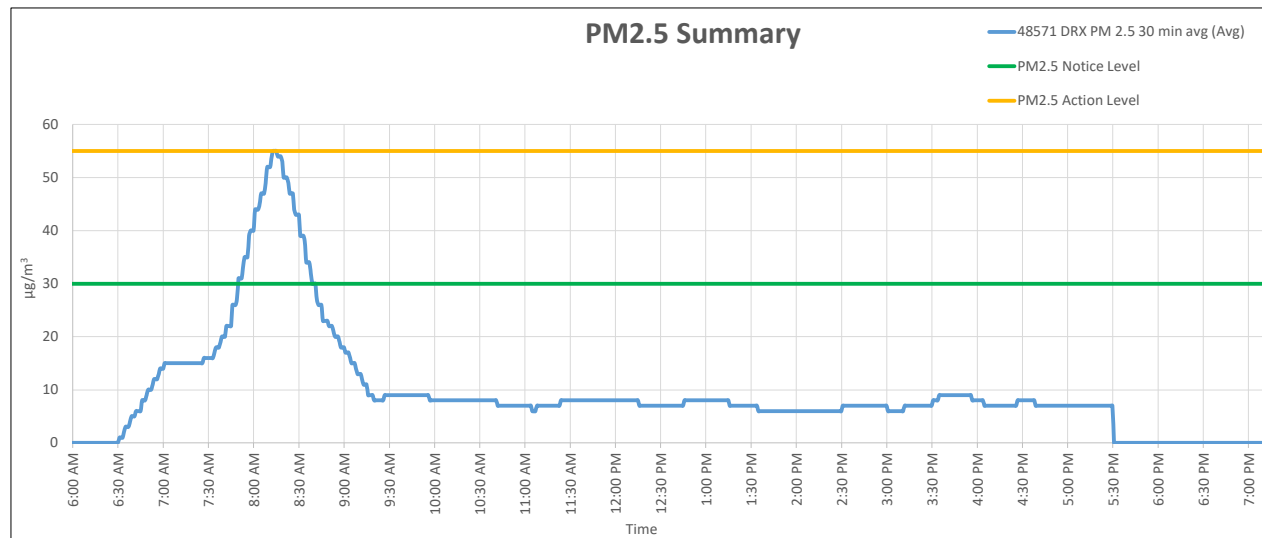
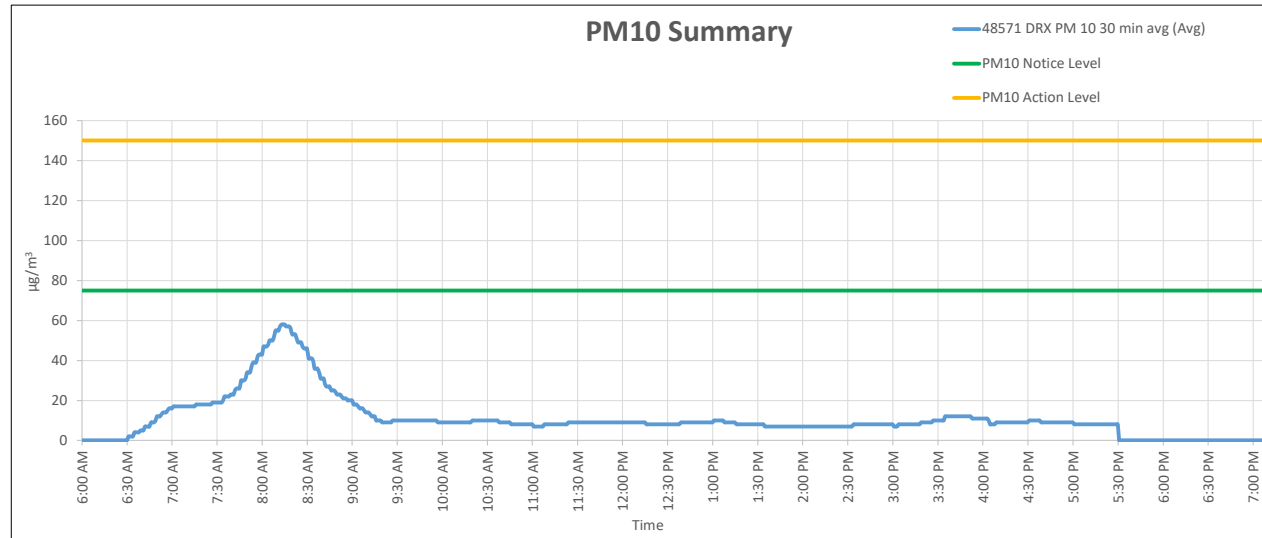
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	7:04 AM	5:30 PM	14.53	48.00	13.39	46.00



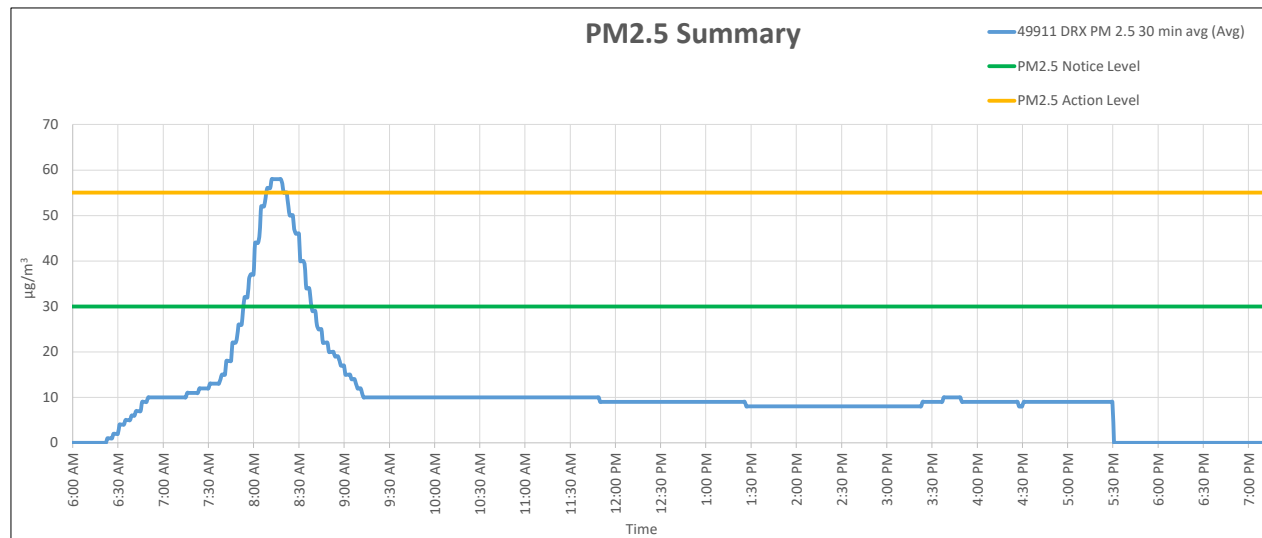
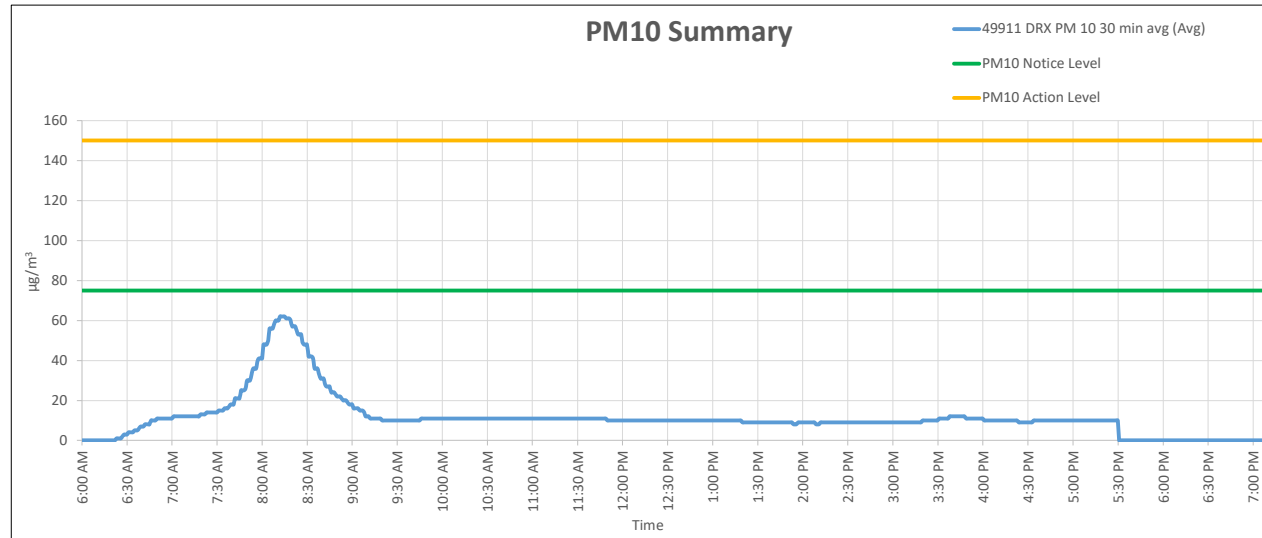
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	6:31 AM	5:30 PM	13.05	58.00	11.51	55.00



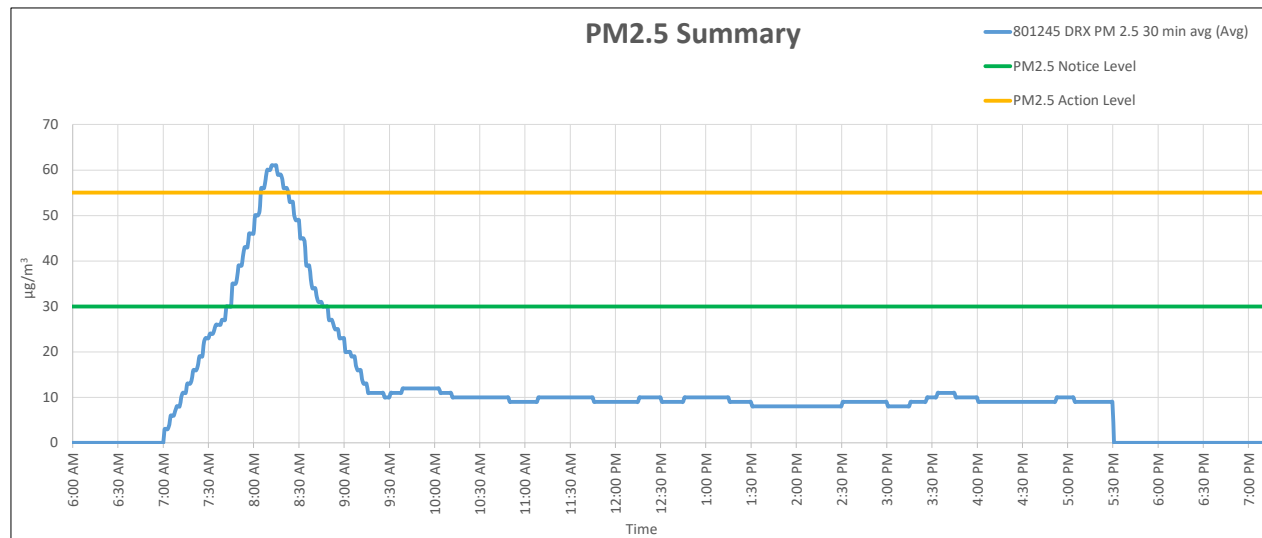
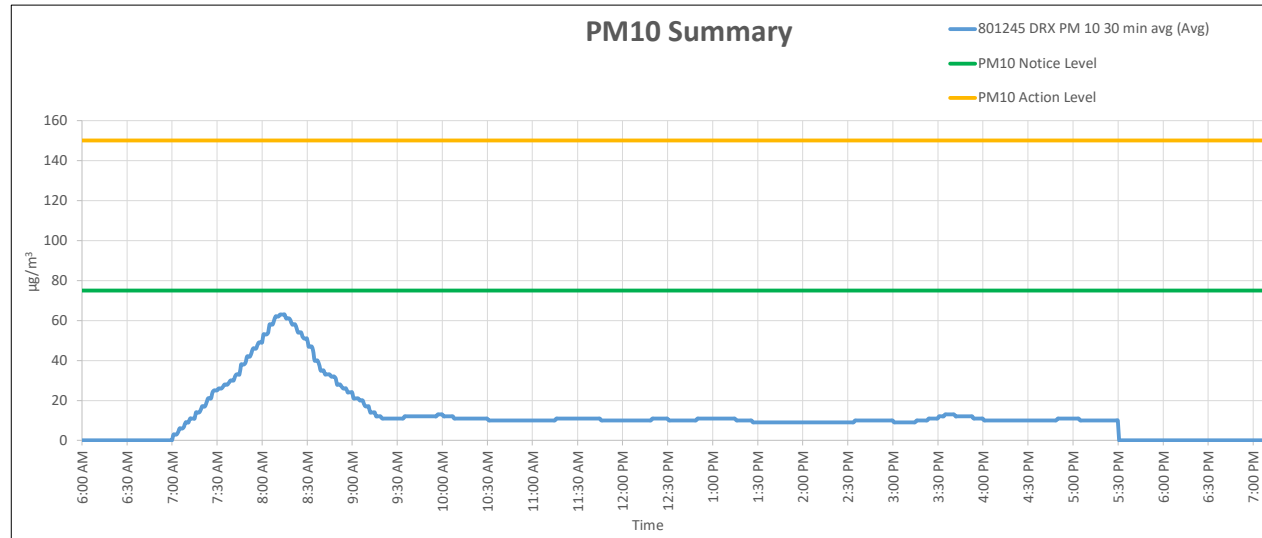
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	6:23 AM	5:30 PM	13.60	62.00	12.37	58.00

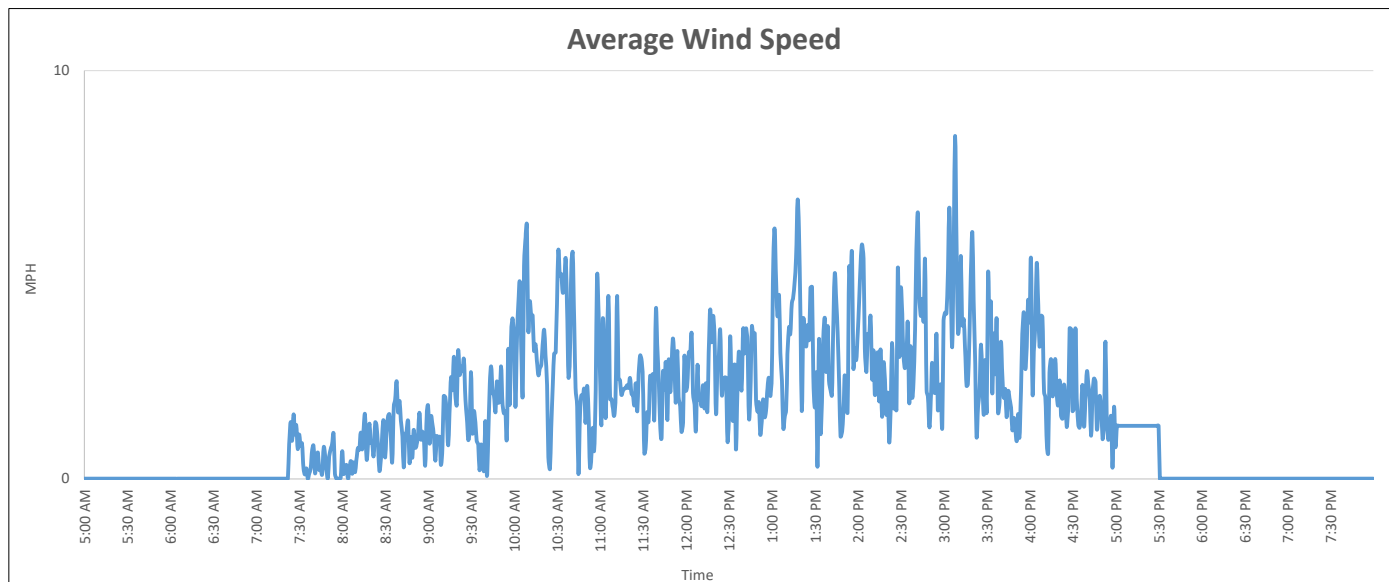
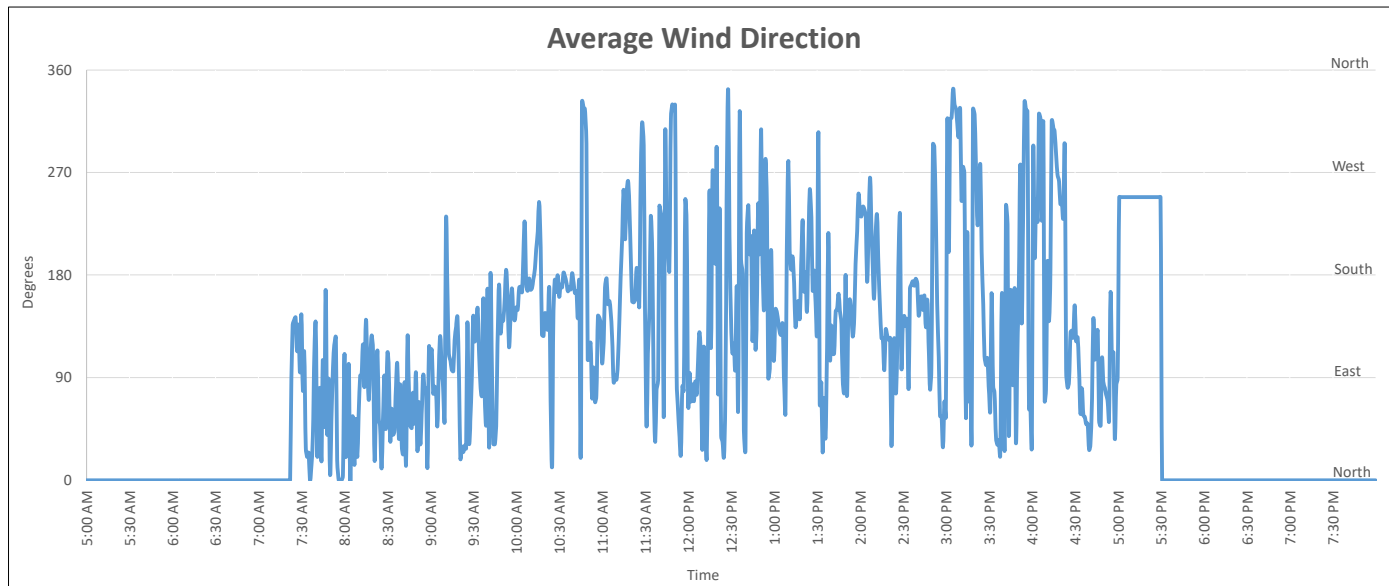


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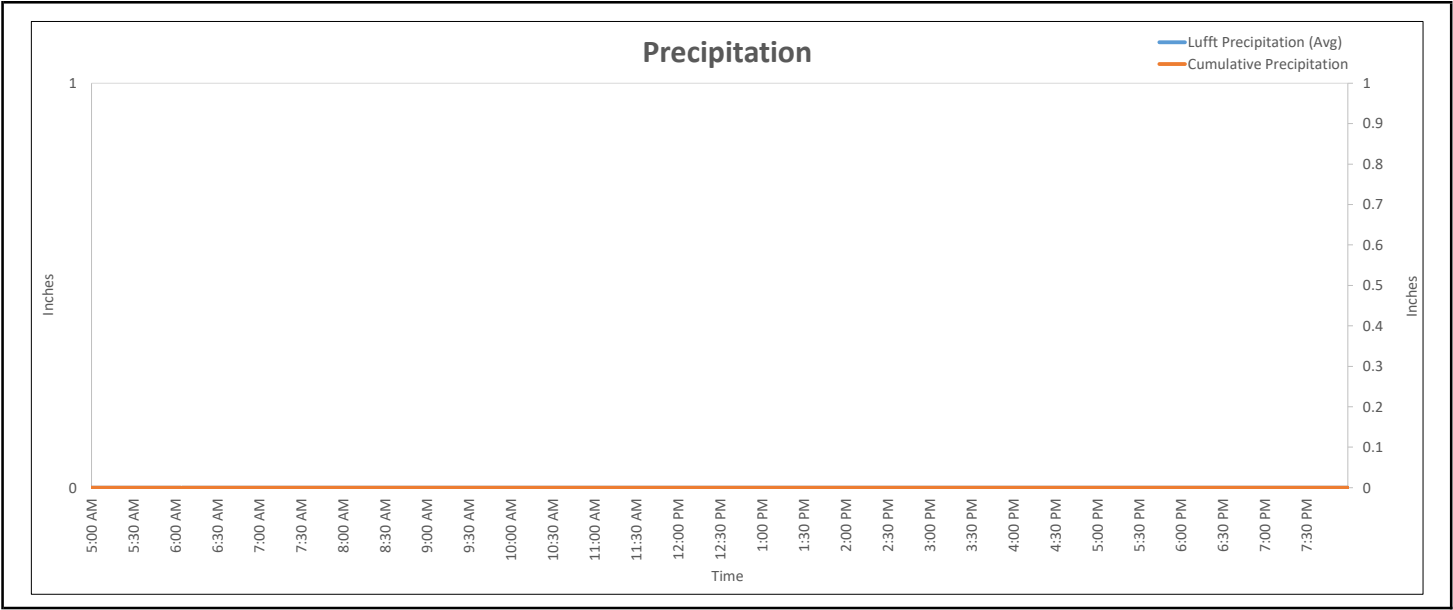
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	7:01 AM	5:30 PM	15.26	63.00	14.20	61.00



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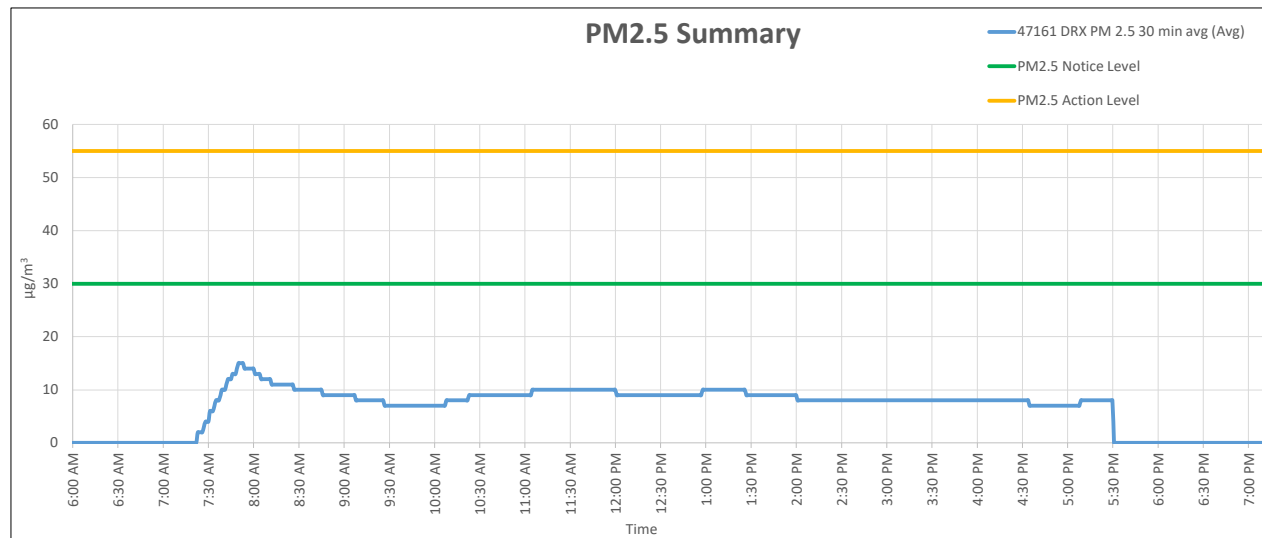
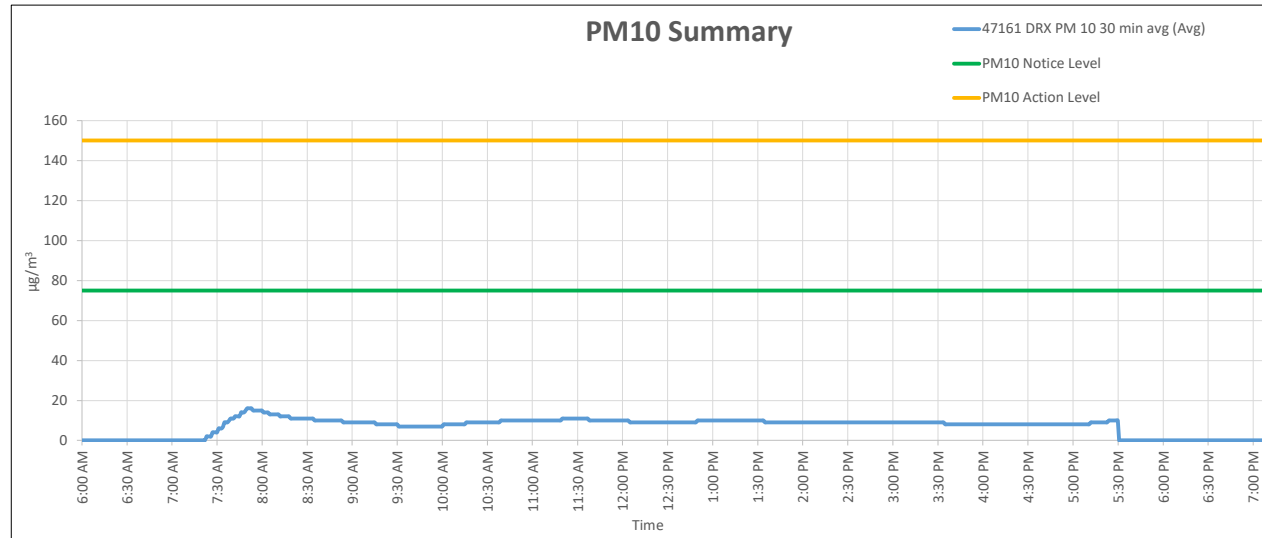


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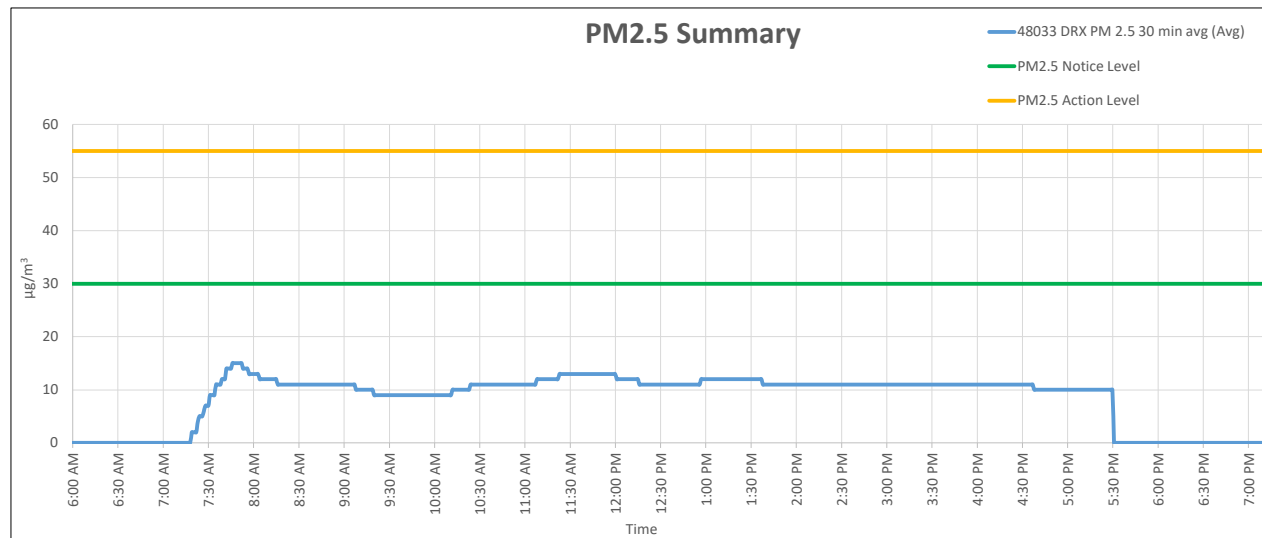
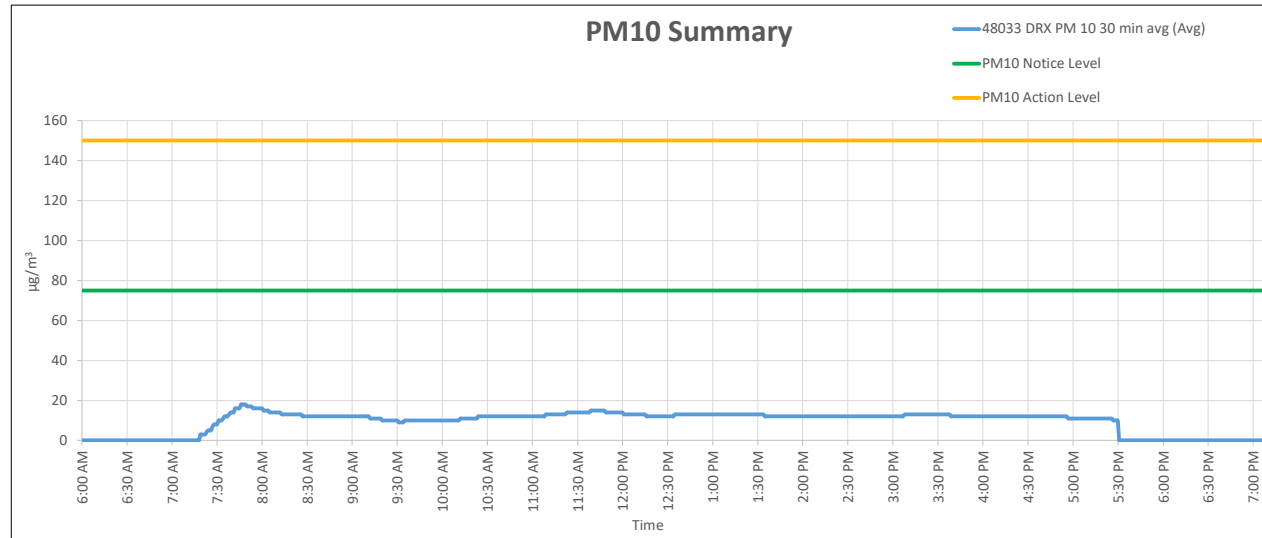
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	7:23 AM	5:30 PM	9.23	16.00	8.73	15.00



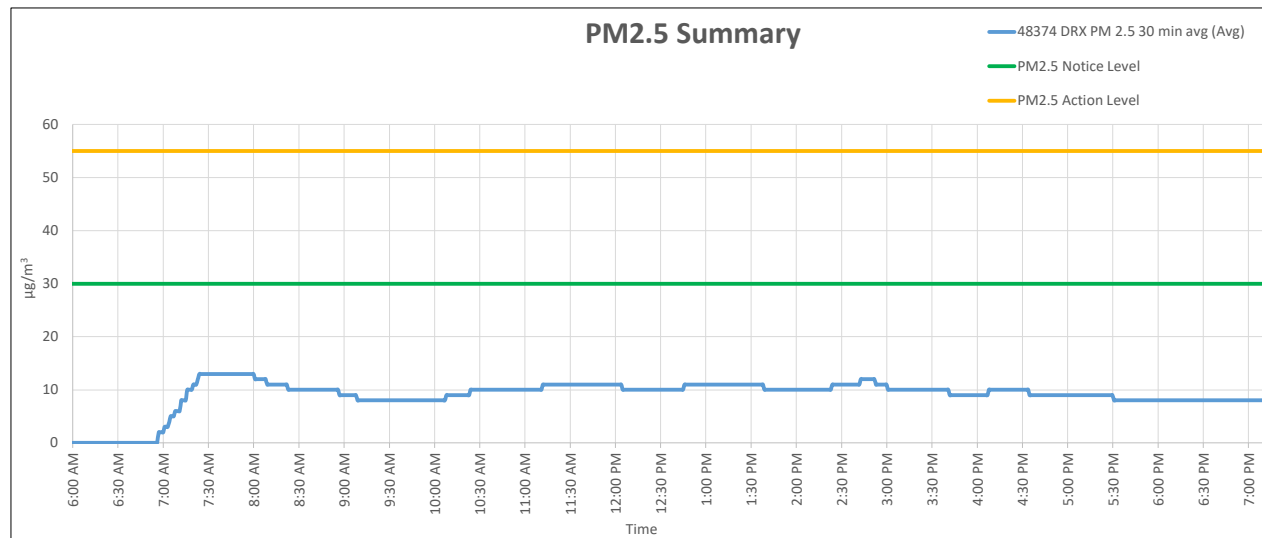
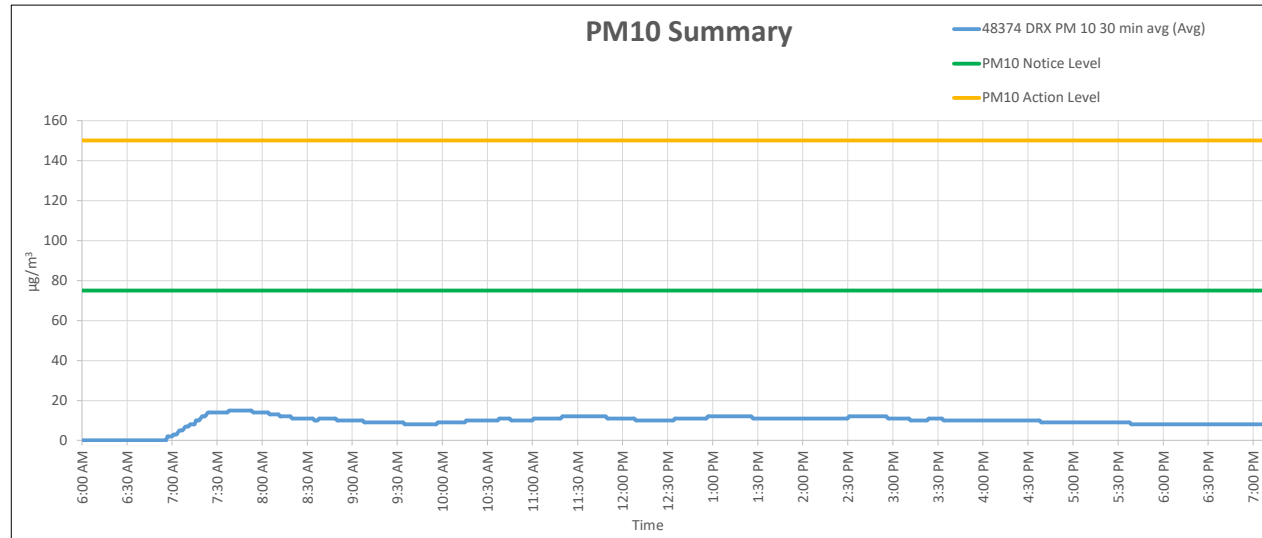
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	7:19 AM	5:30 PM	12.14	18.00	10.94	15.00



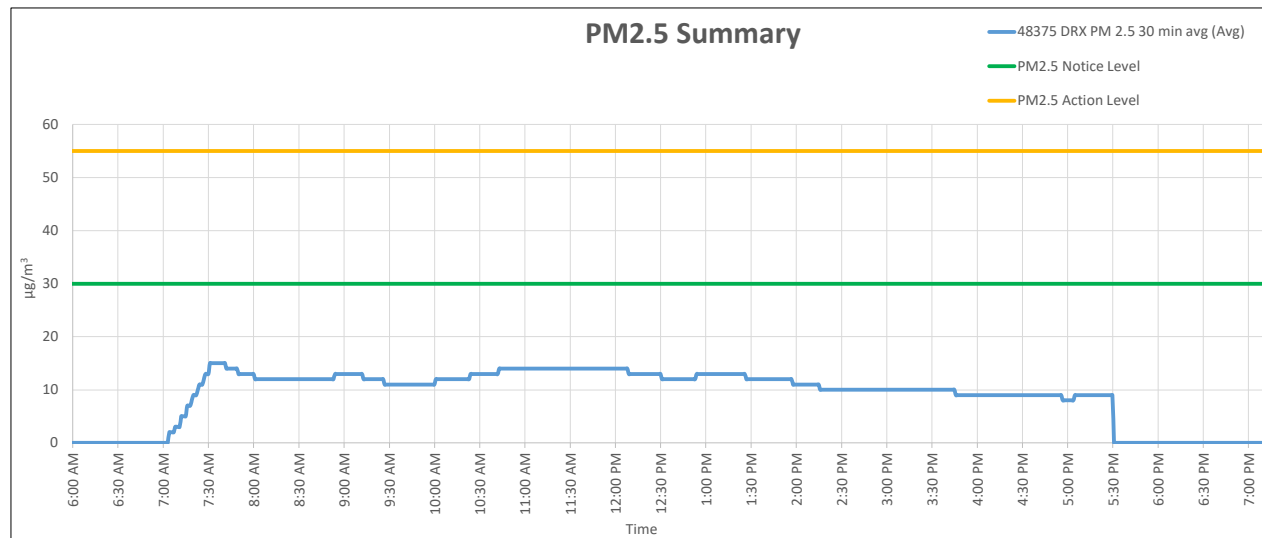
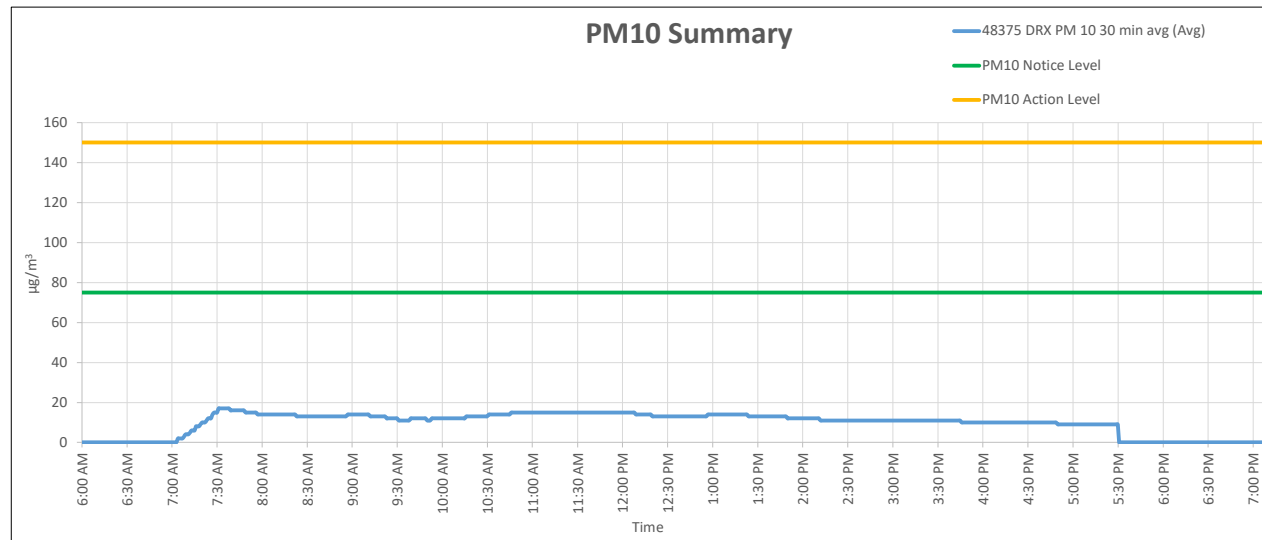
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:57 AM	11:59 PM	9.59	15.00	9.21	13.00



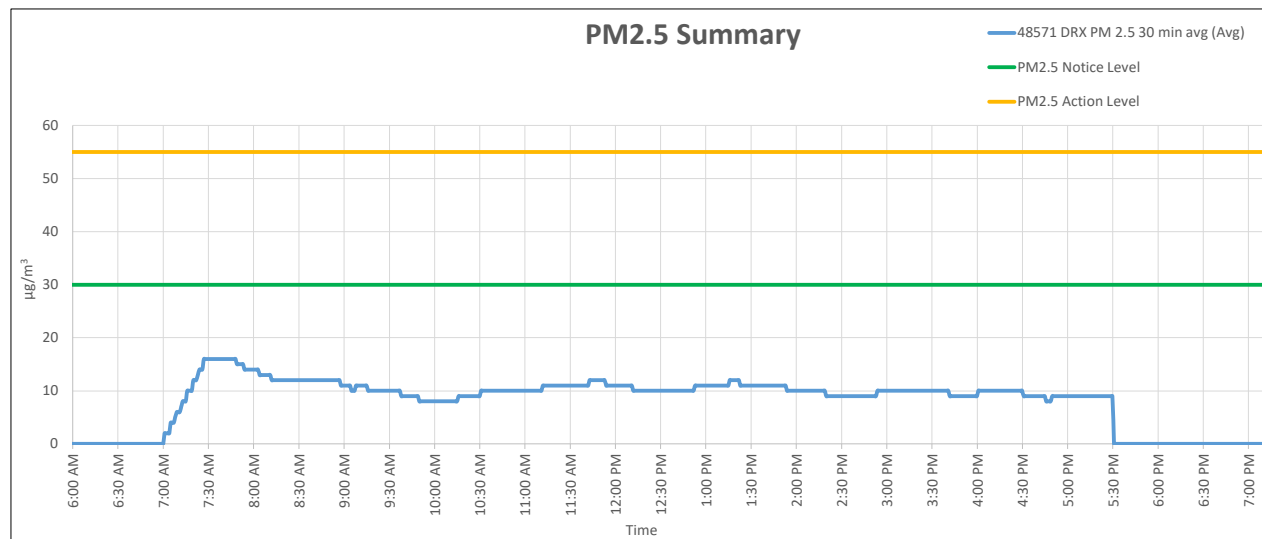
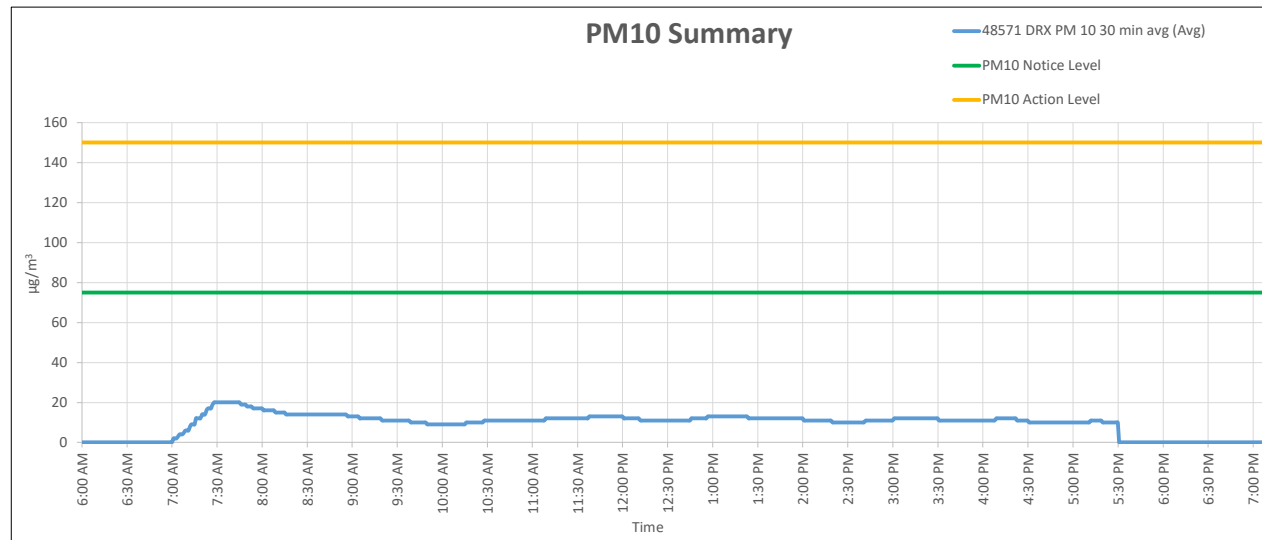
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	7:04 AM	5:30 PM	12.32	17.00	11.42	15.00



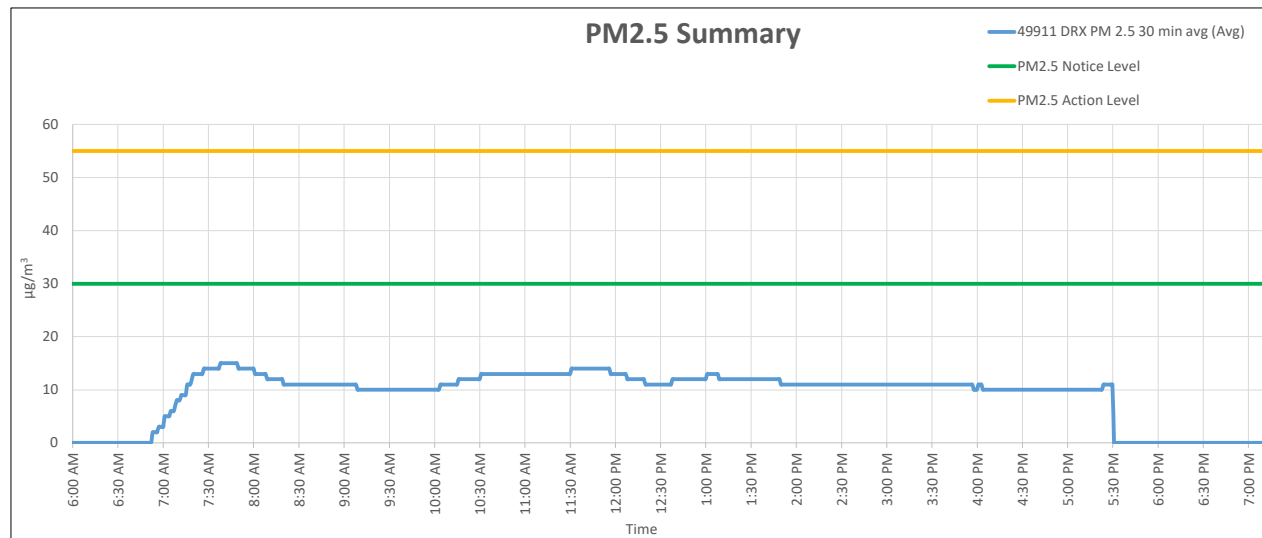
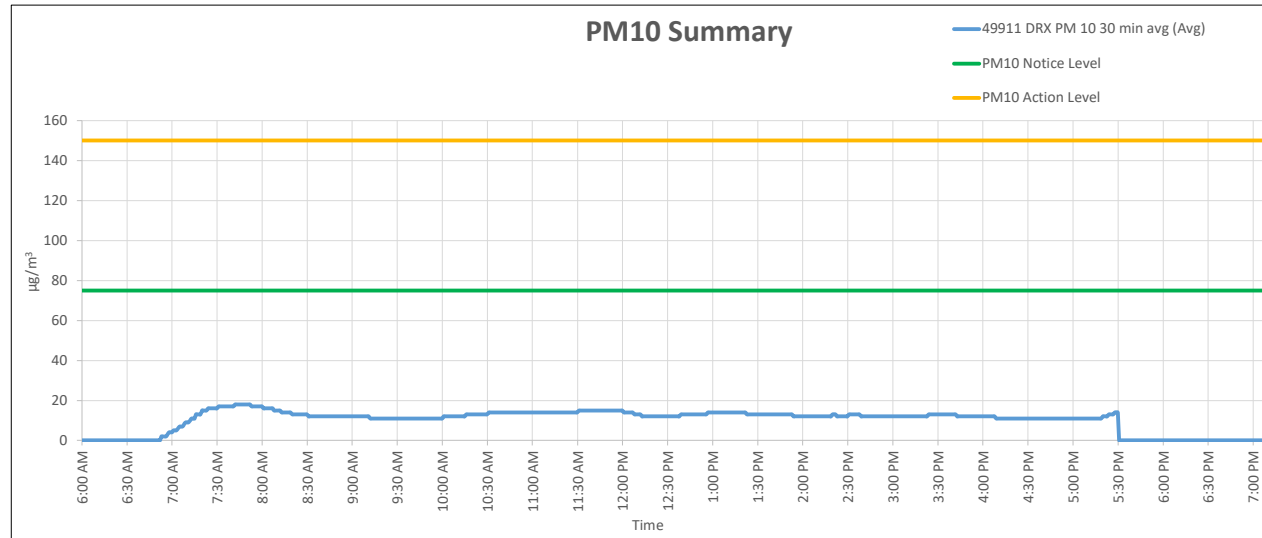
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	7:01 AM	5:30 PM	11.84	20.00	10.34	16.00



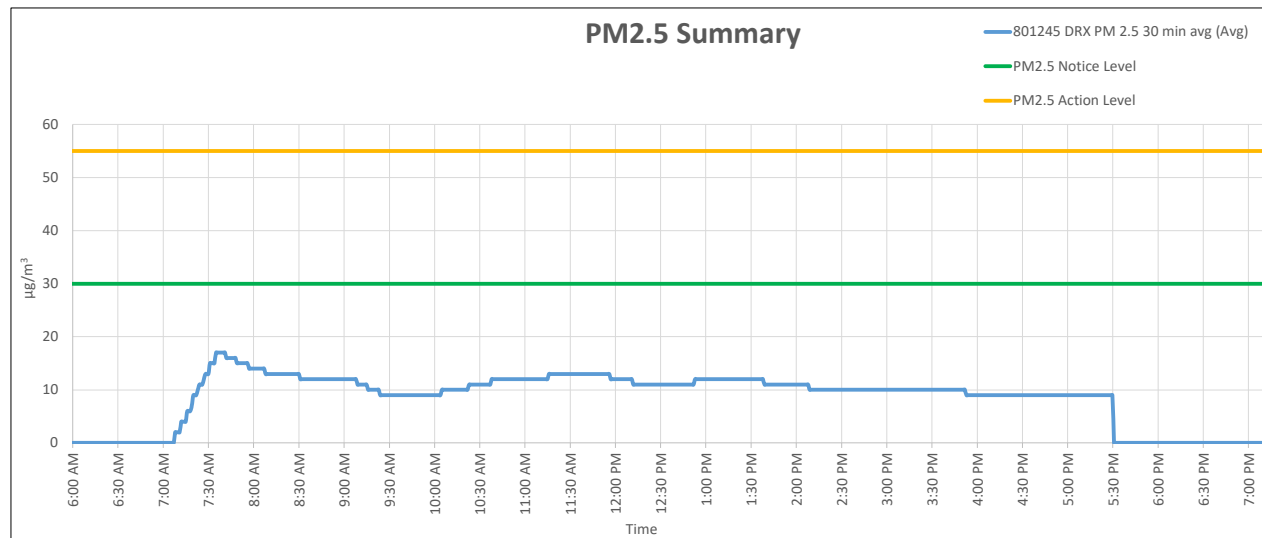
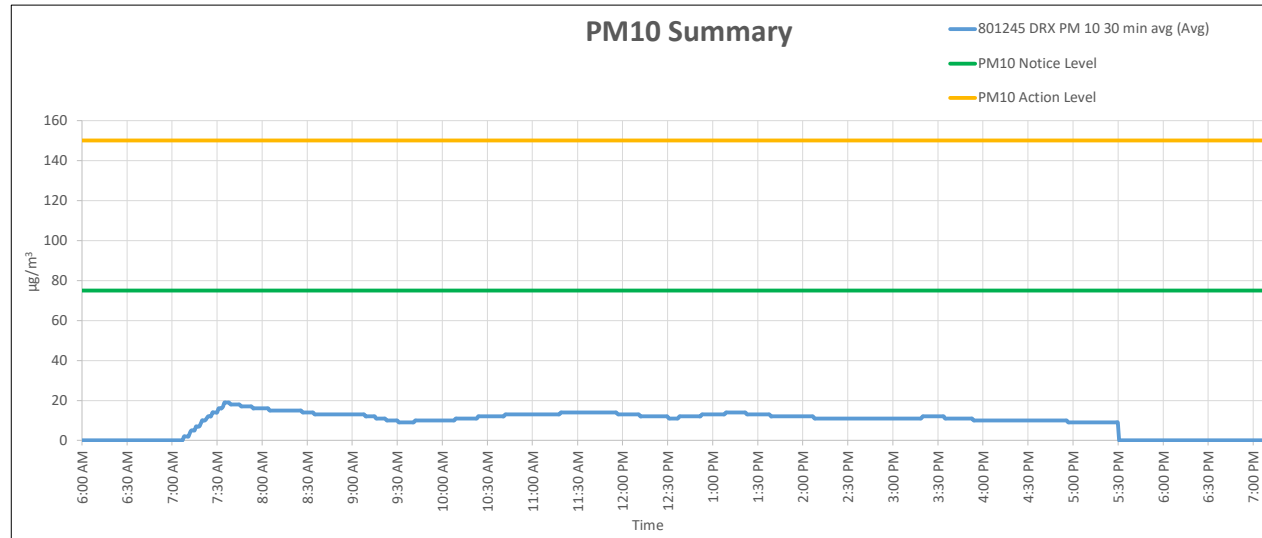
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	6:53 AM	5:30 PM	12.63	18.00	11.34	15.00

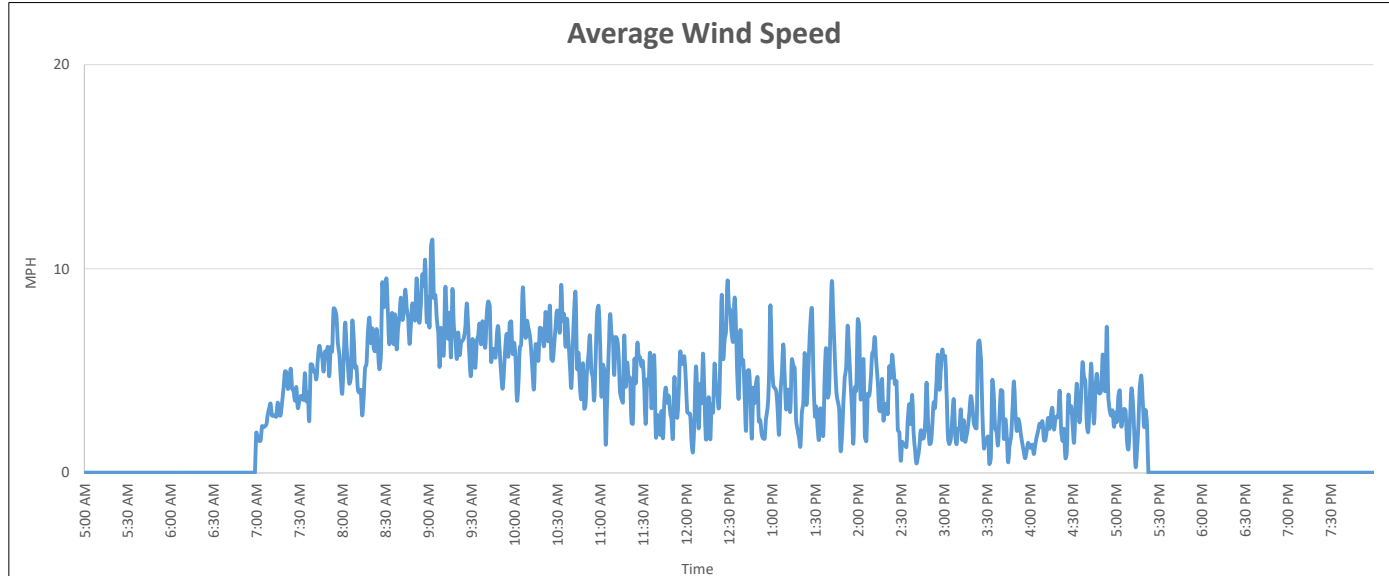
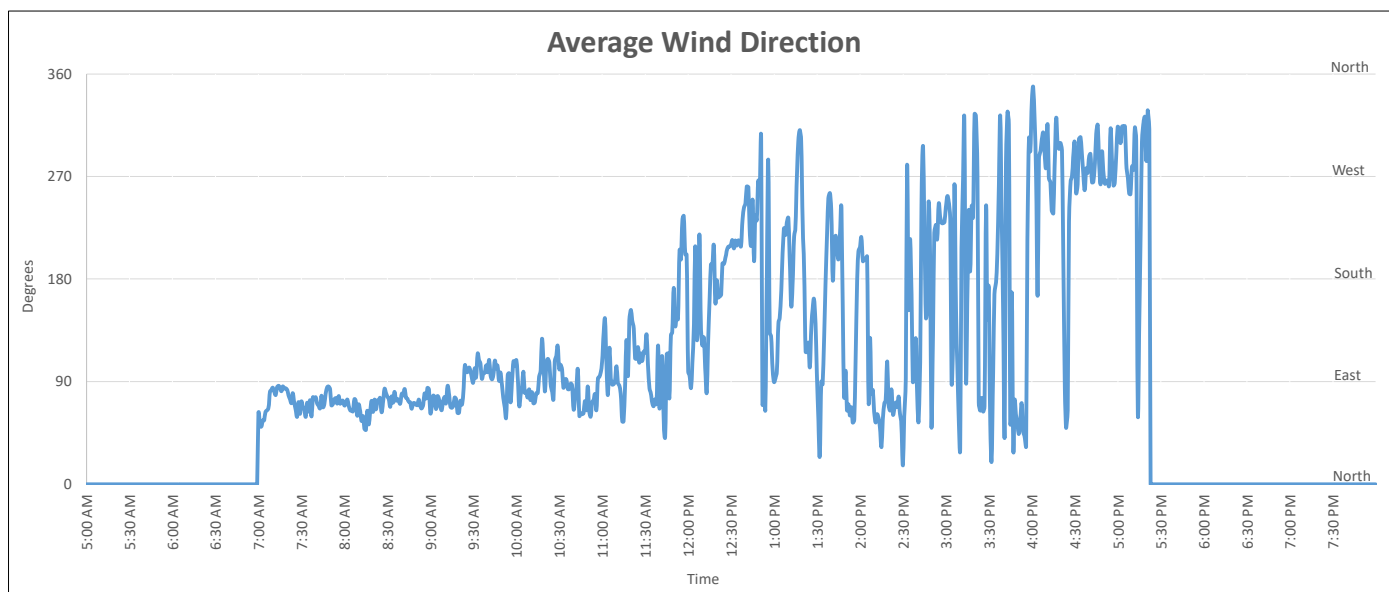


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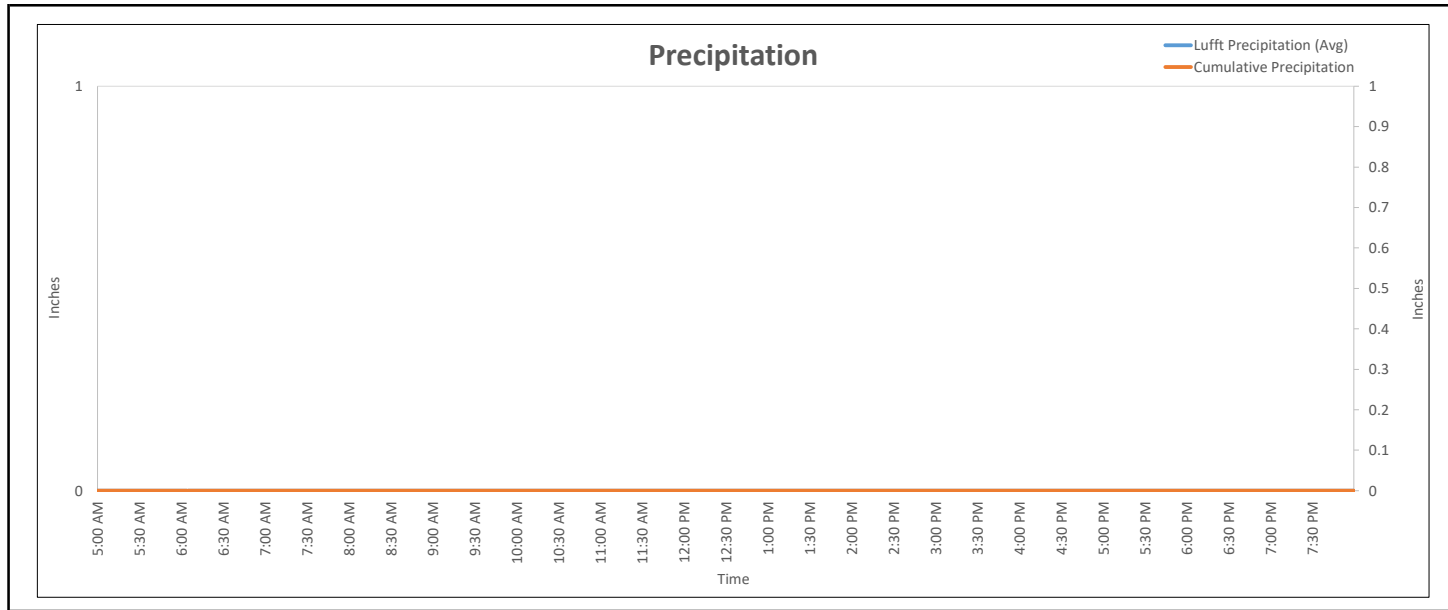
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	7:08 AM	5:30 PM	11.90	19.00	10.89	17.00



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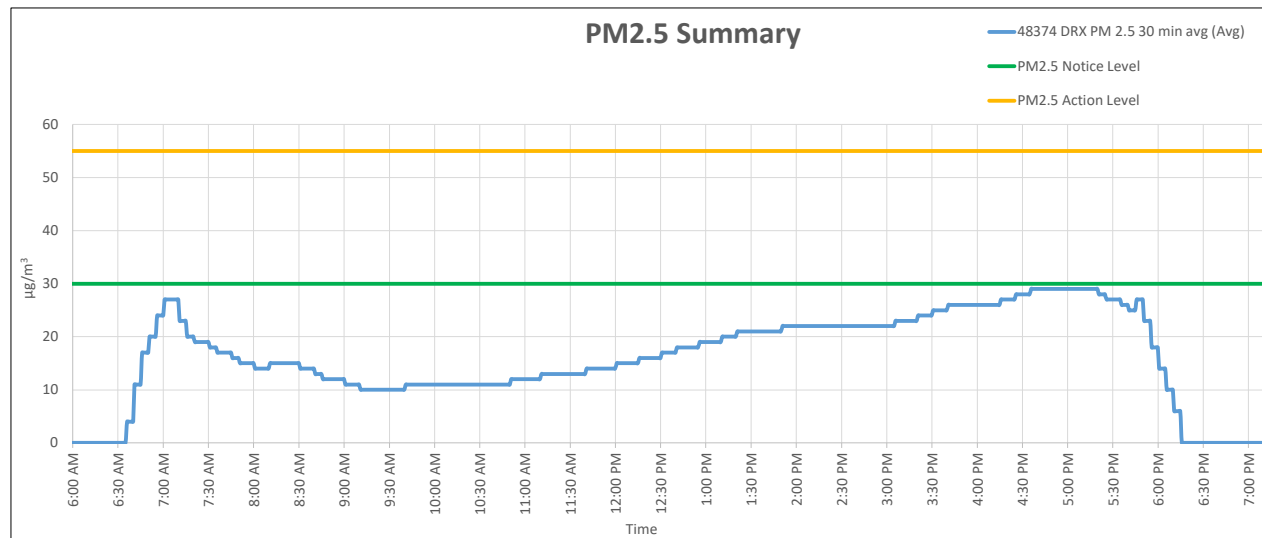
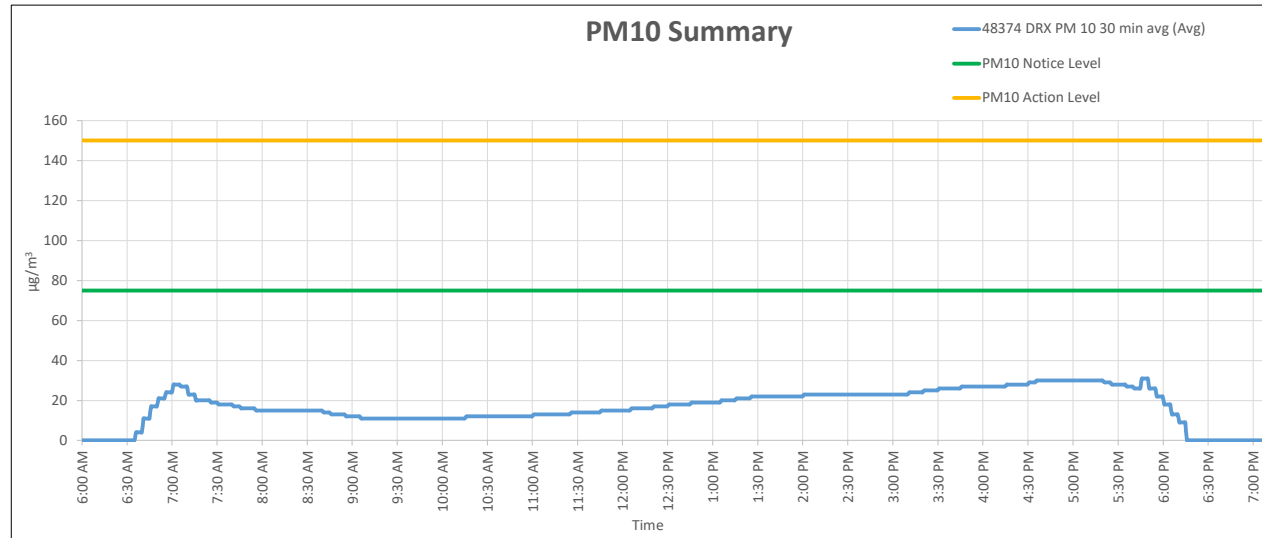


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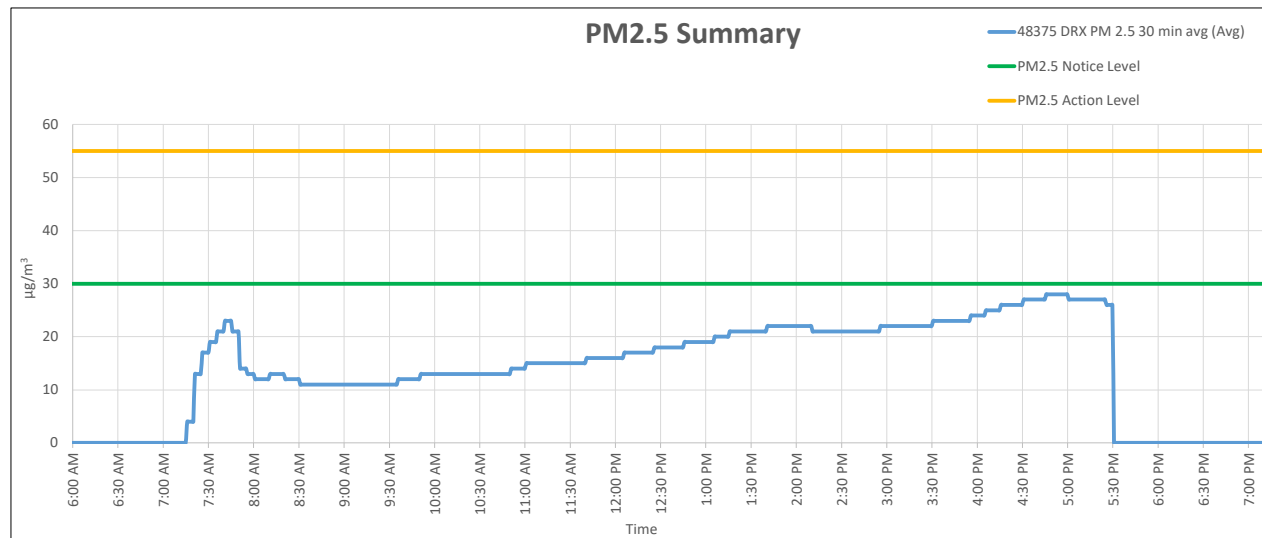
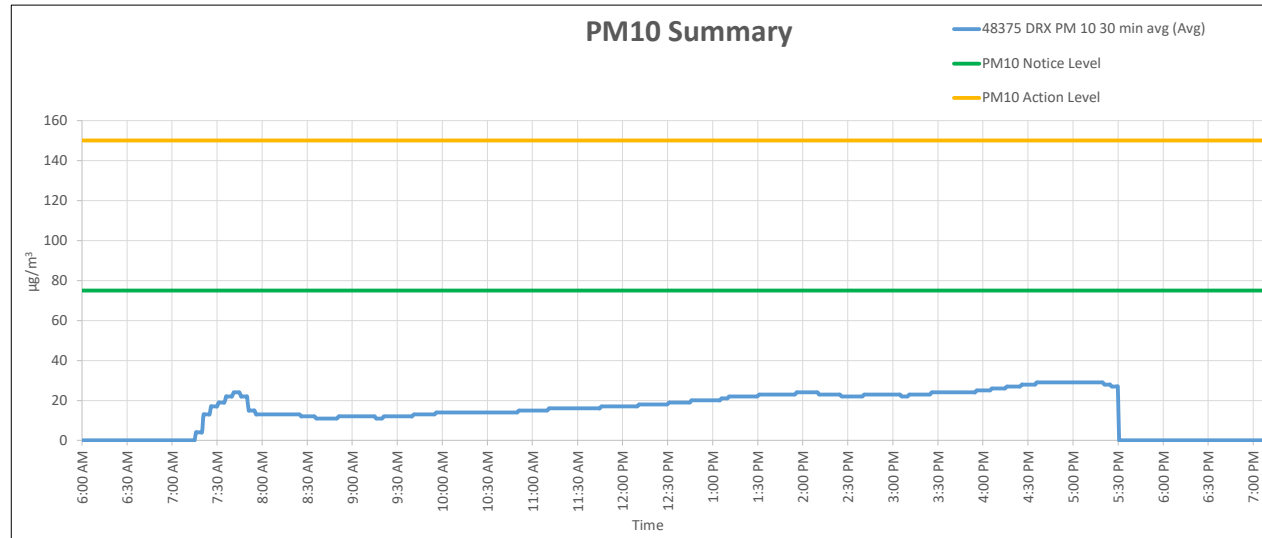
Union Pacific Railroad
Houston Wood Preserving Works Site
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Air Monitoring Values
Monday, August 19, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:36 AM	6:15 PM	19.21	31.00	18.41	29.00



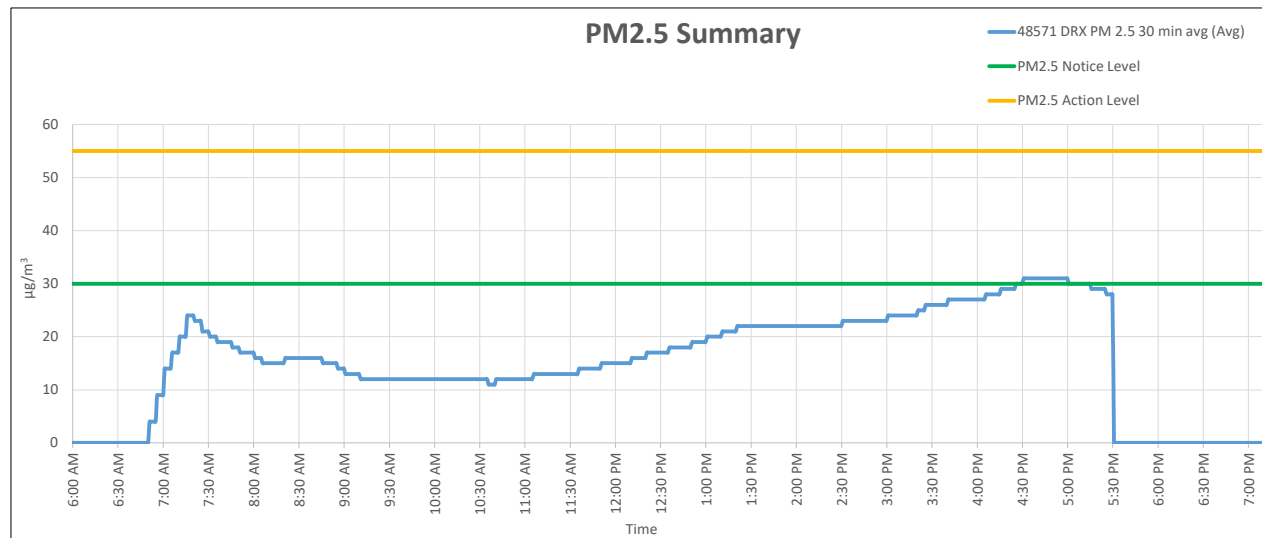
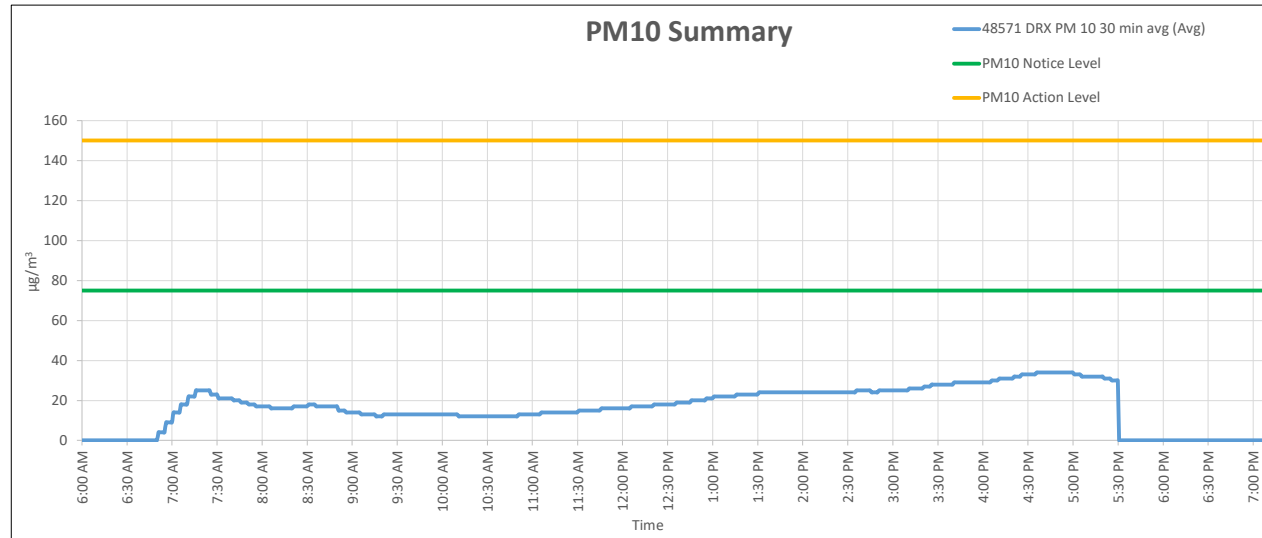
Union Pacific Railroad
Houston Wood Preserving Works Site
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Monday, August 19, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	7:16 AM	5:30 PM	19.17	29.00	18.17	28.00



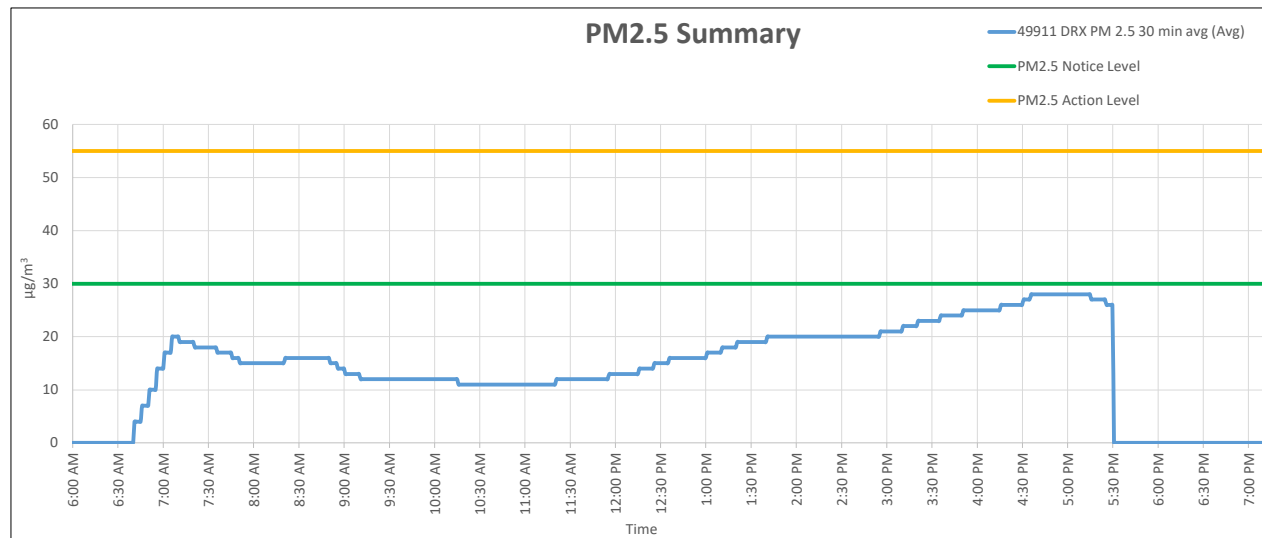
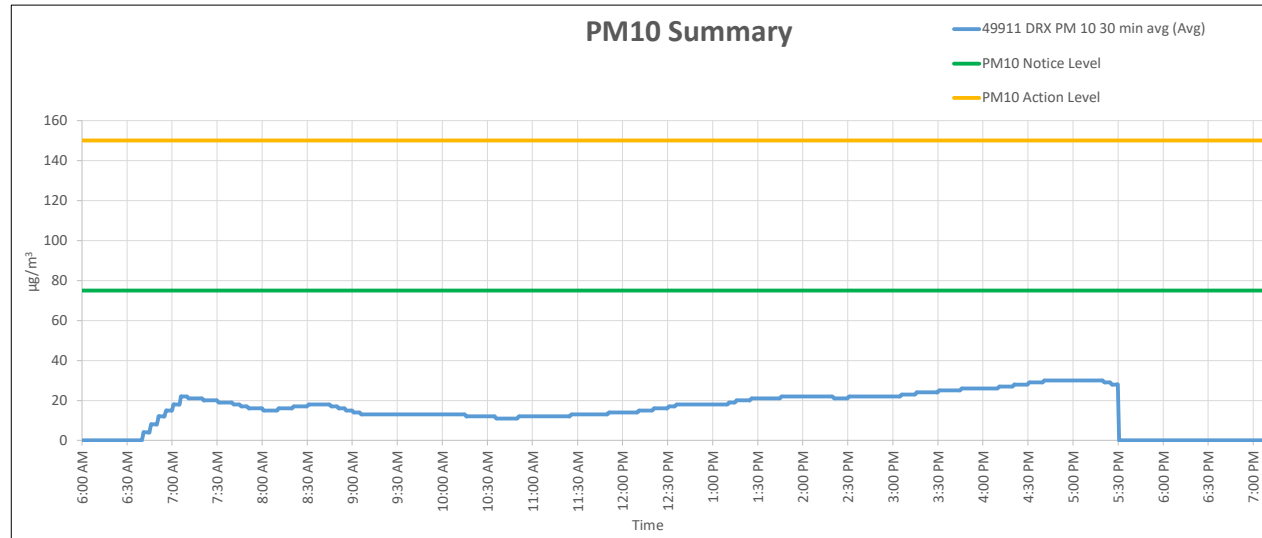
Union Pacific Railroad
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Monday, August 19, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	6:51 AM	5:30 PM	20.56	34.00	19.15	31.00



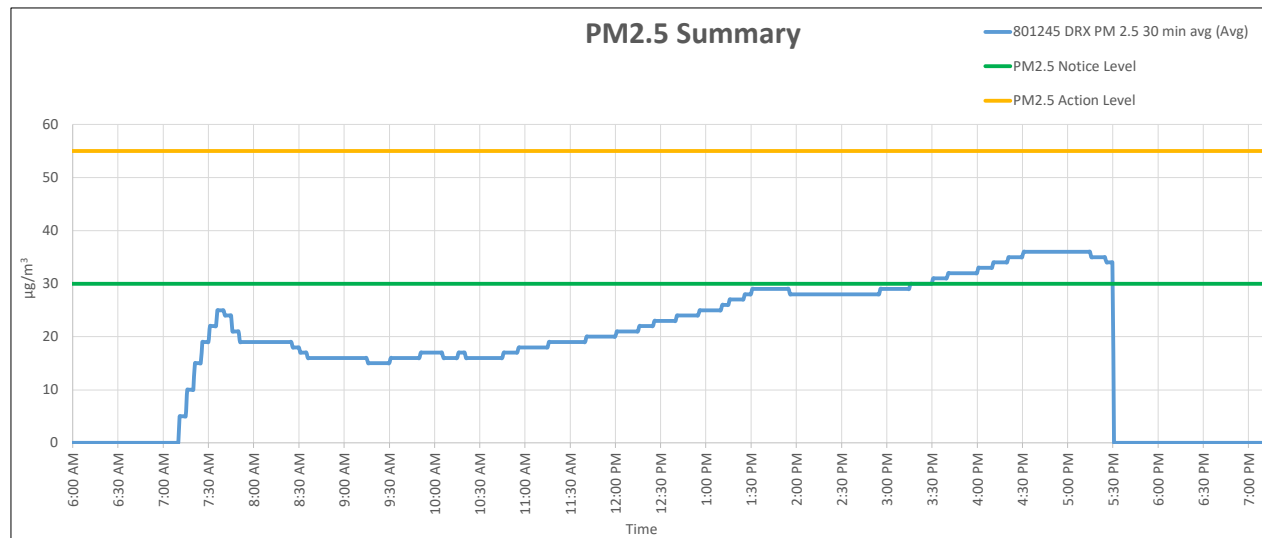
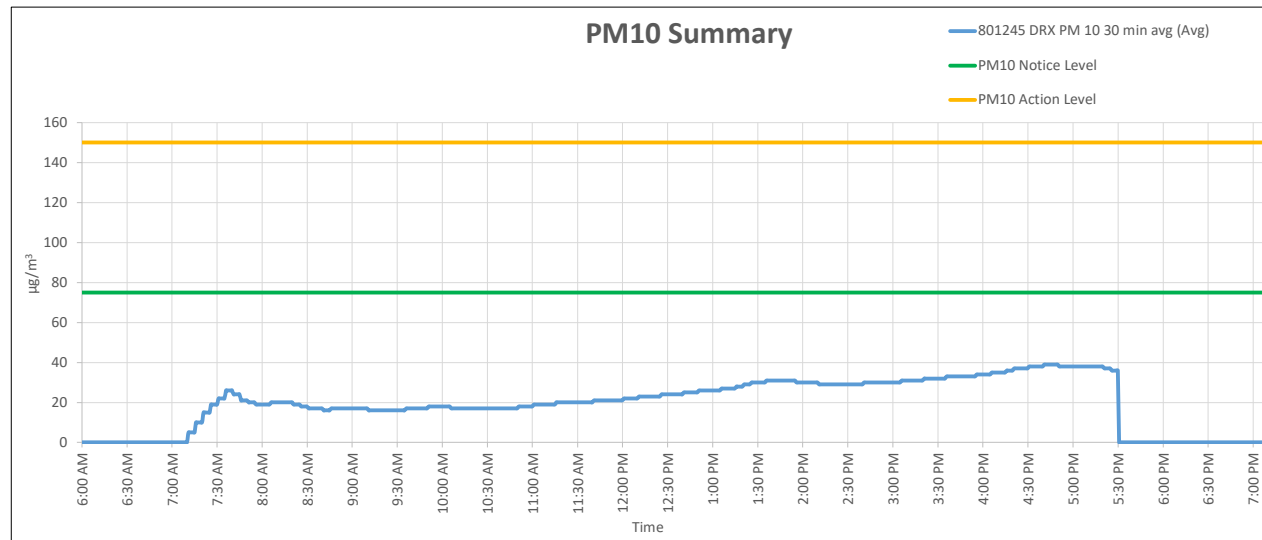
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	6:41 AM	5:30 PM	18.71	30.00	17.35	28.00



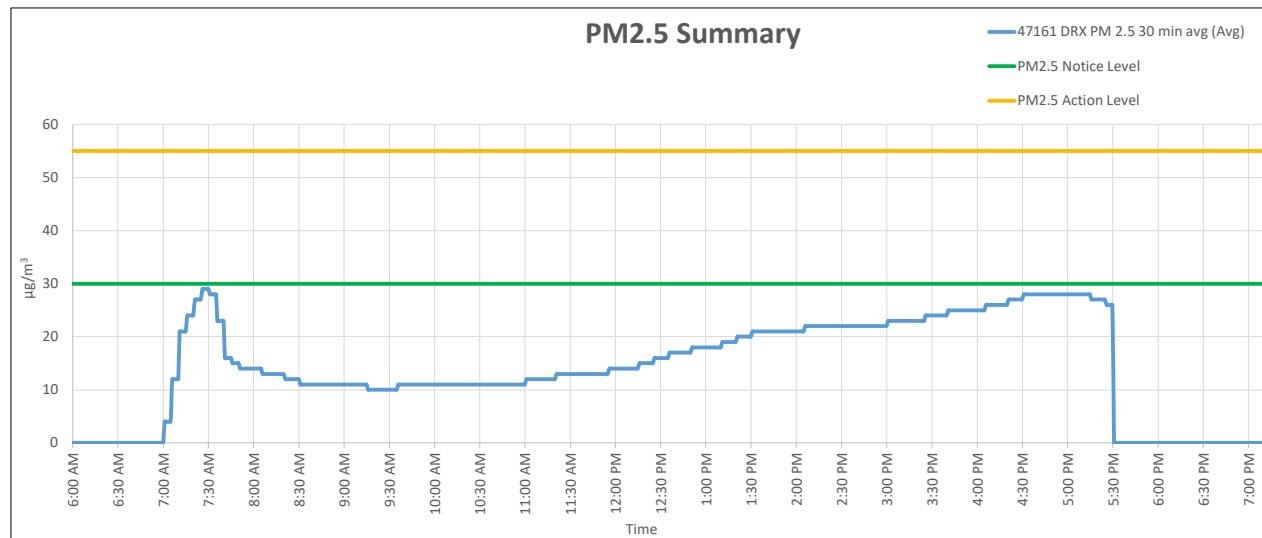
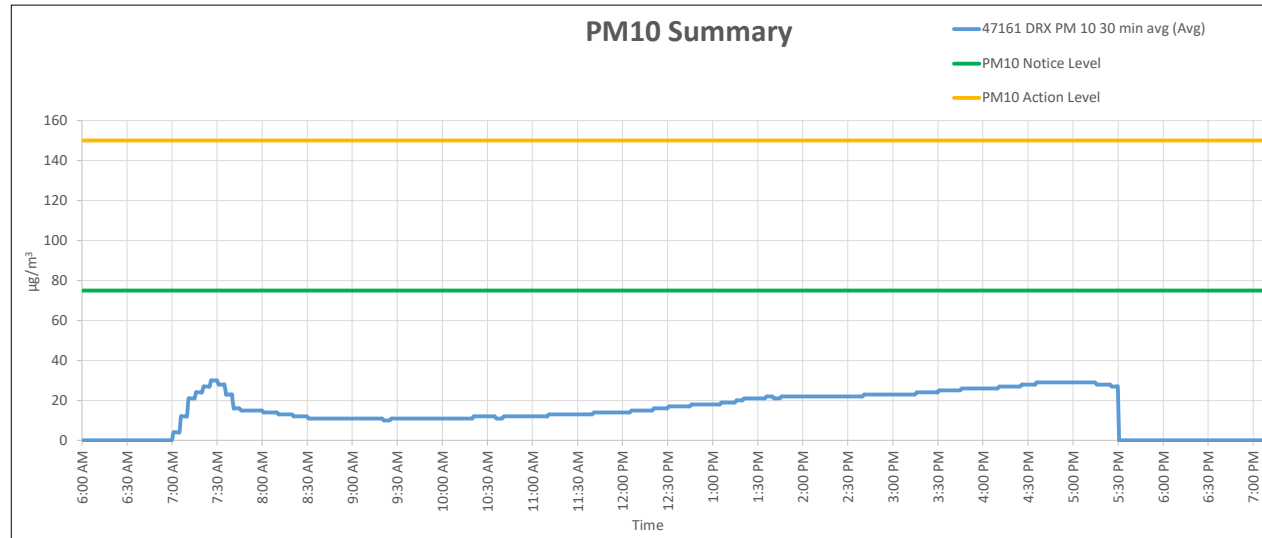
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
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Monday, August 19, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	7:11 AM	5:30 PM	24.94	39.00	23.77	36.00



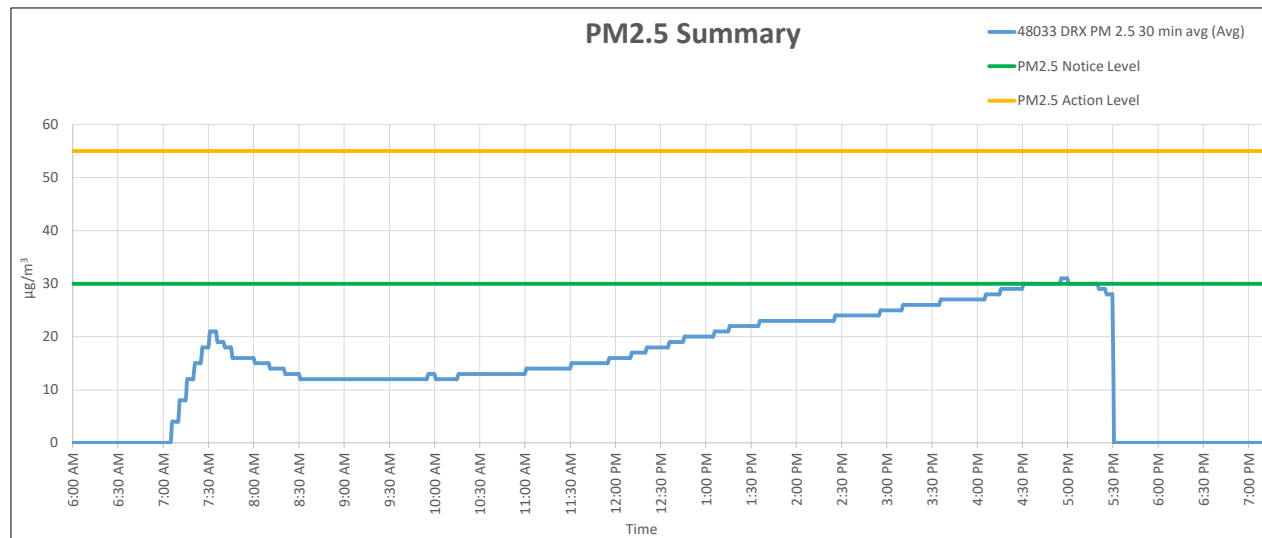
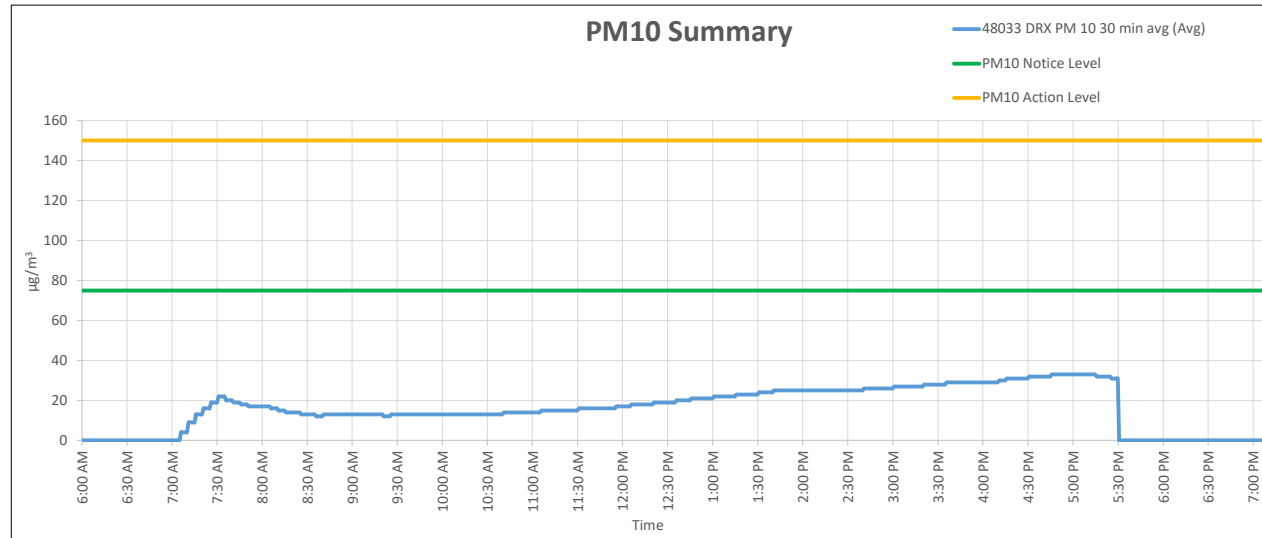
Union Pacific Railroad
Houston Wood Preserving Works Site
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	7:01 AM	5:30 PM	18.35	30.00	17.88	29.00

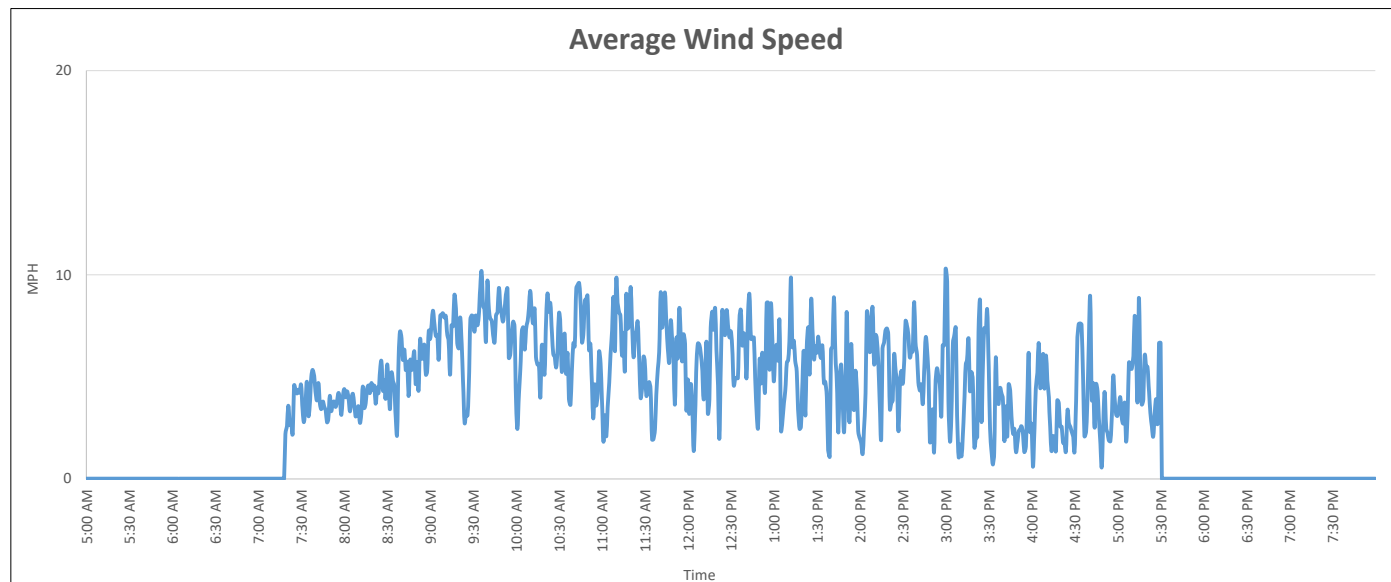
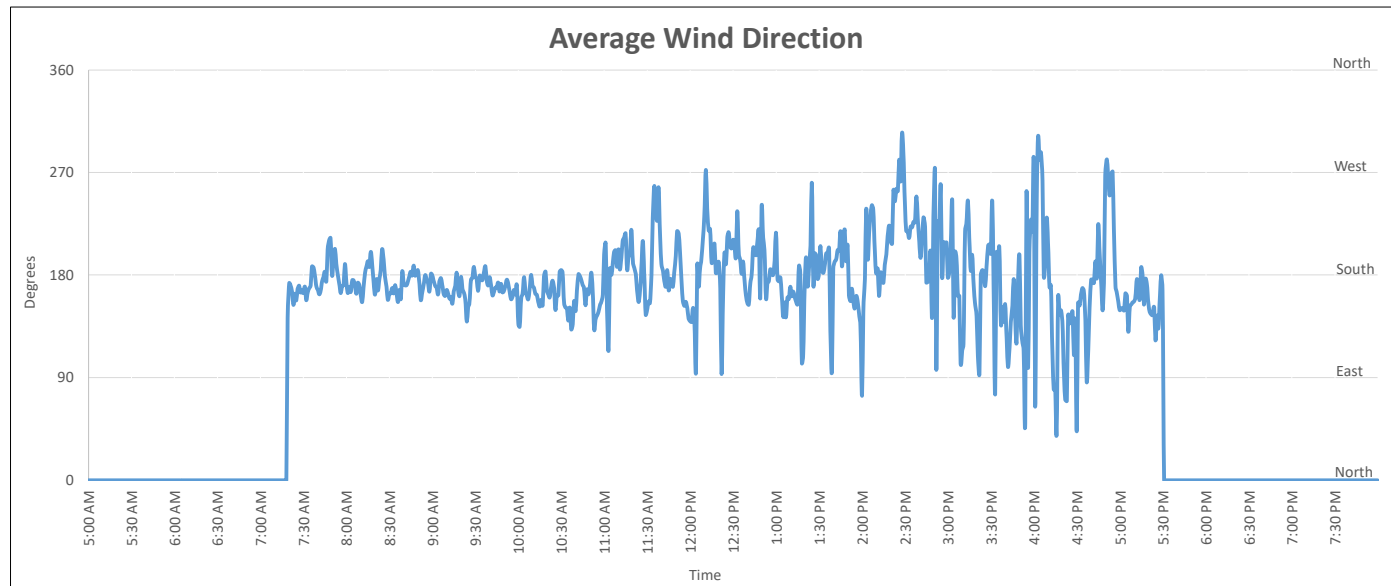


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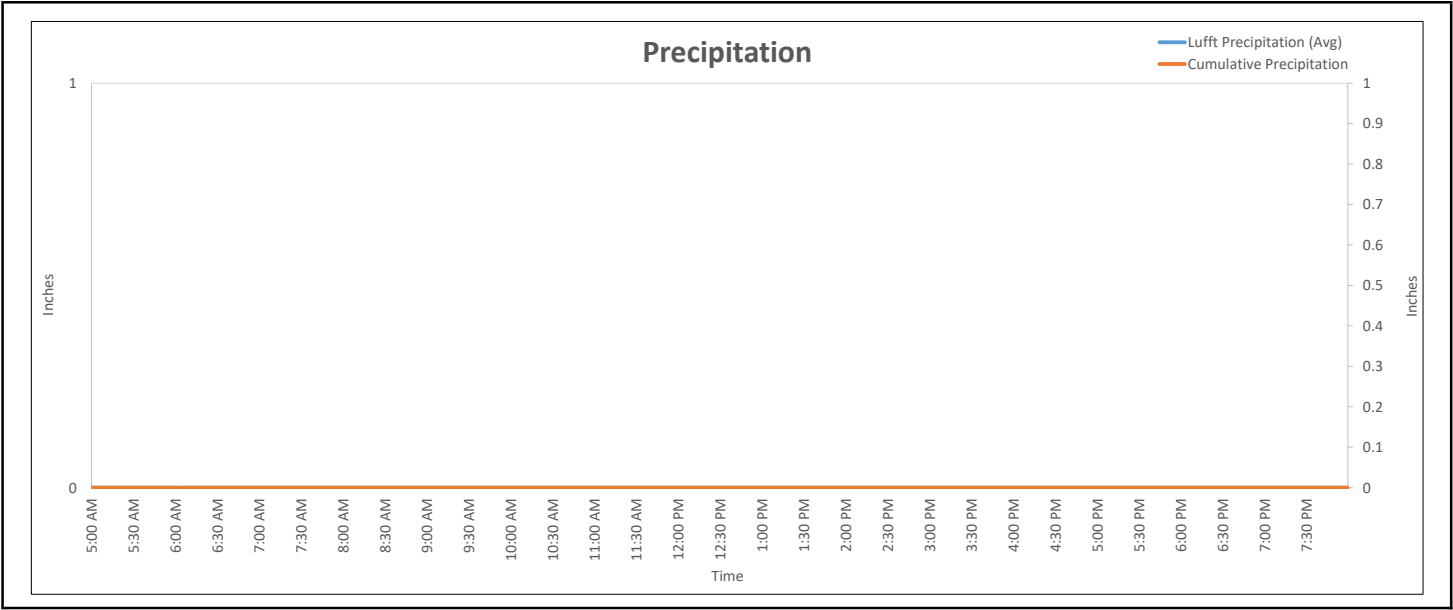
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	7:06 AM	5:30 PM	20.53	33.00	19.22	31.00



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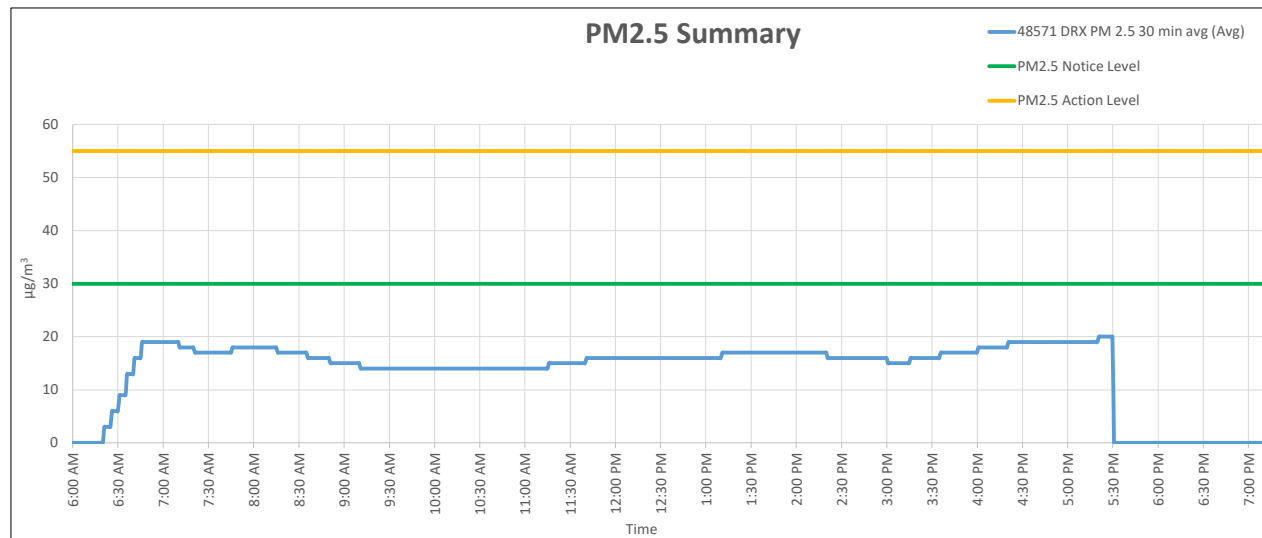
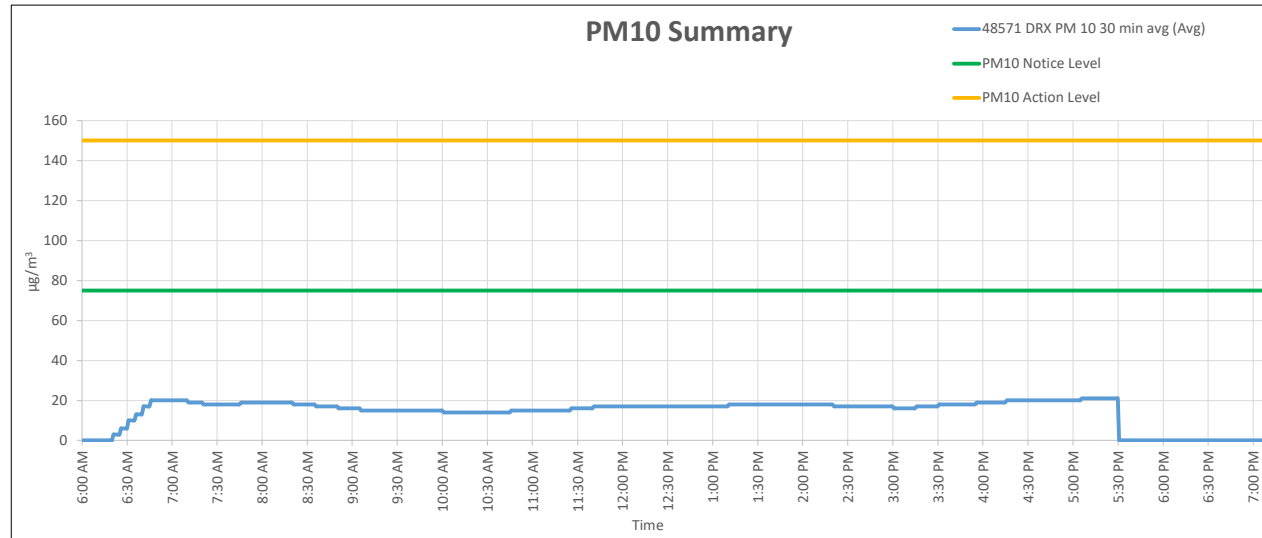


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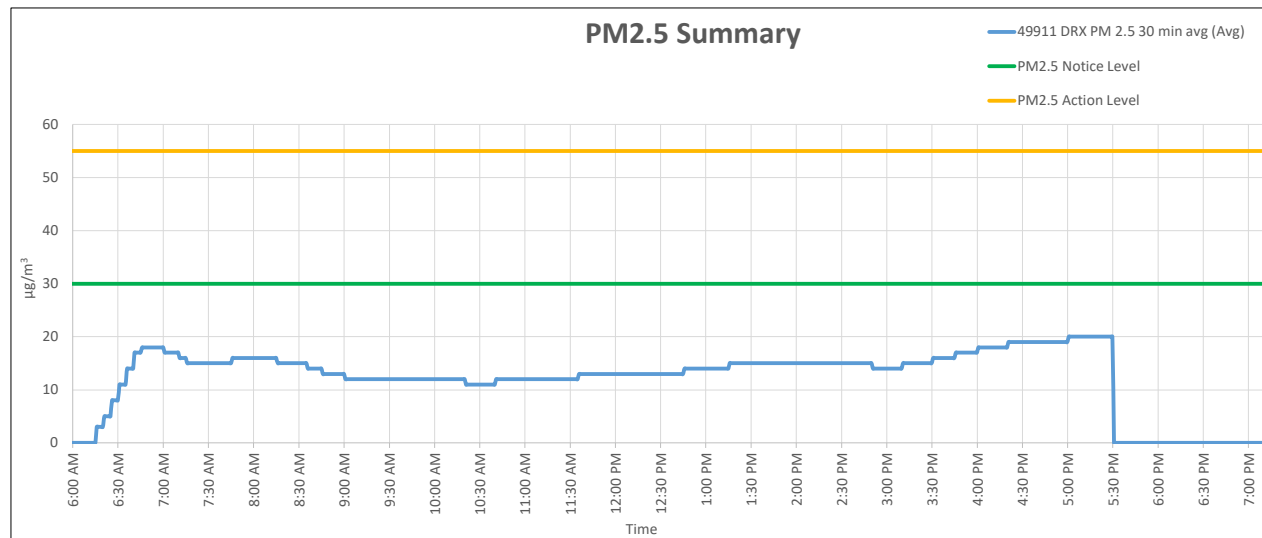
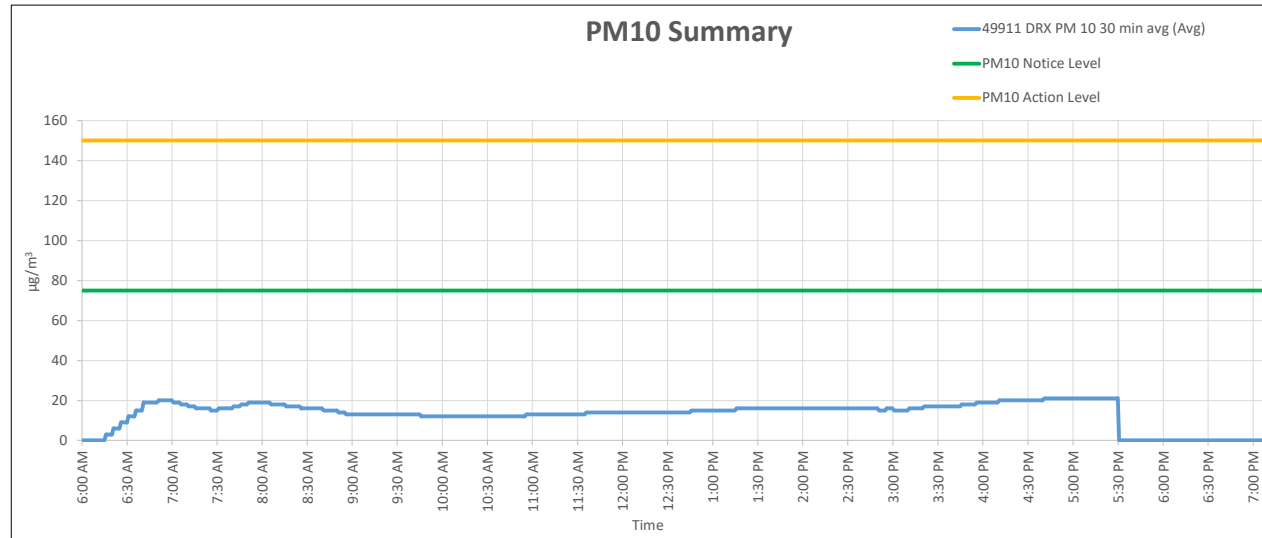
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
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Tuesday, August 20, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	6:21 AM	5:30 PM	17.06	21.00	16.12	20.00



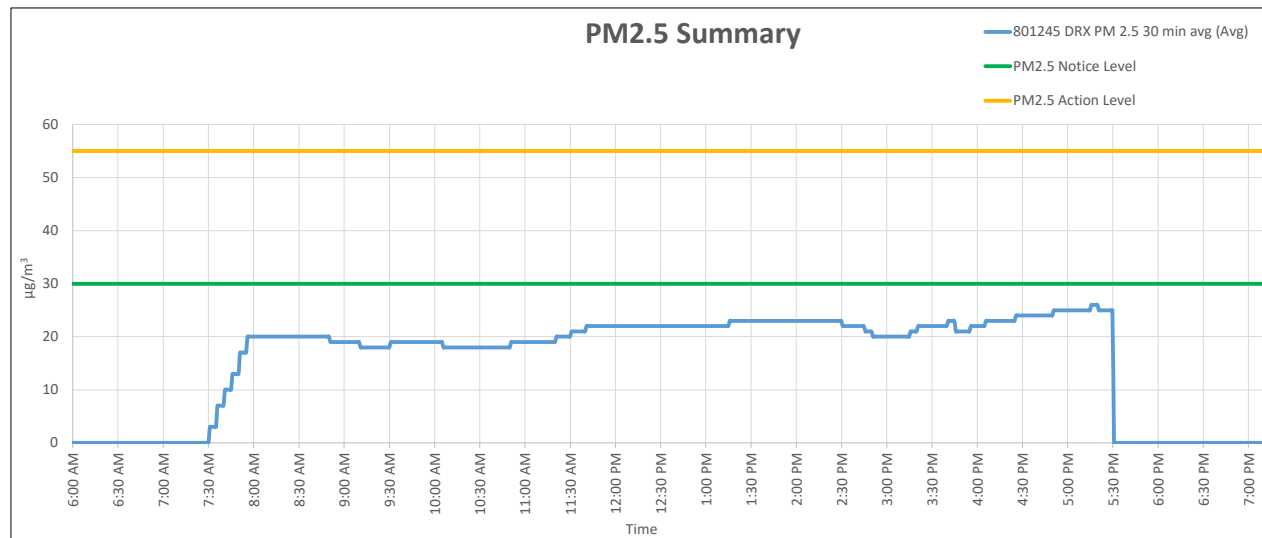
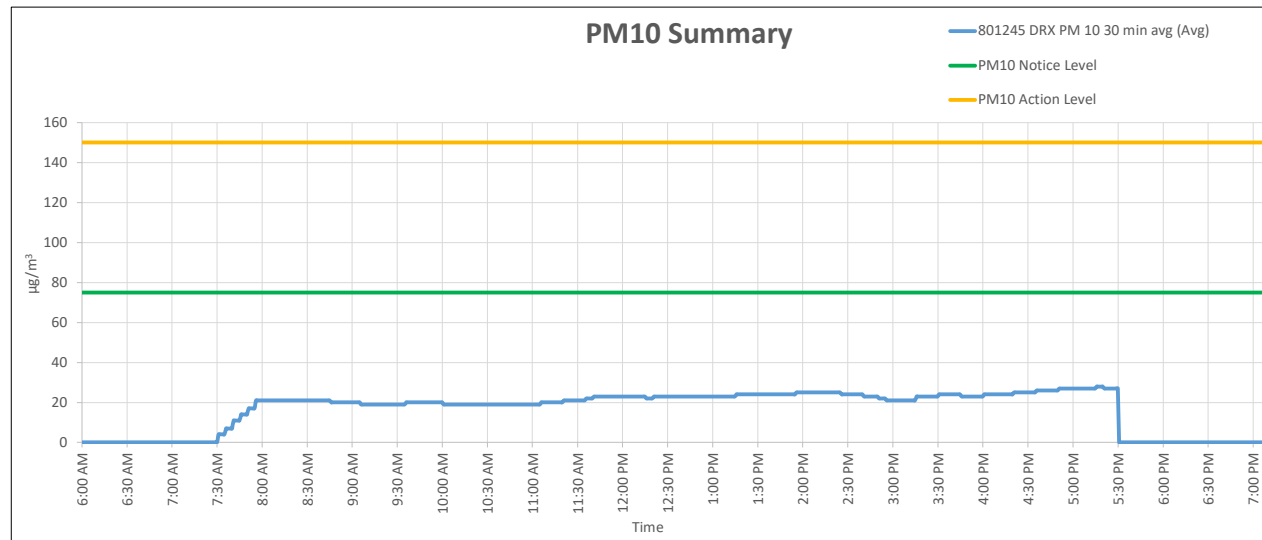
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	6:16 AM	5:30 PM	15.58	21.00	14.47	20.00



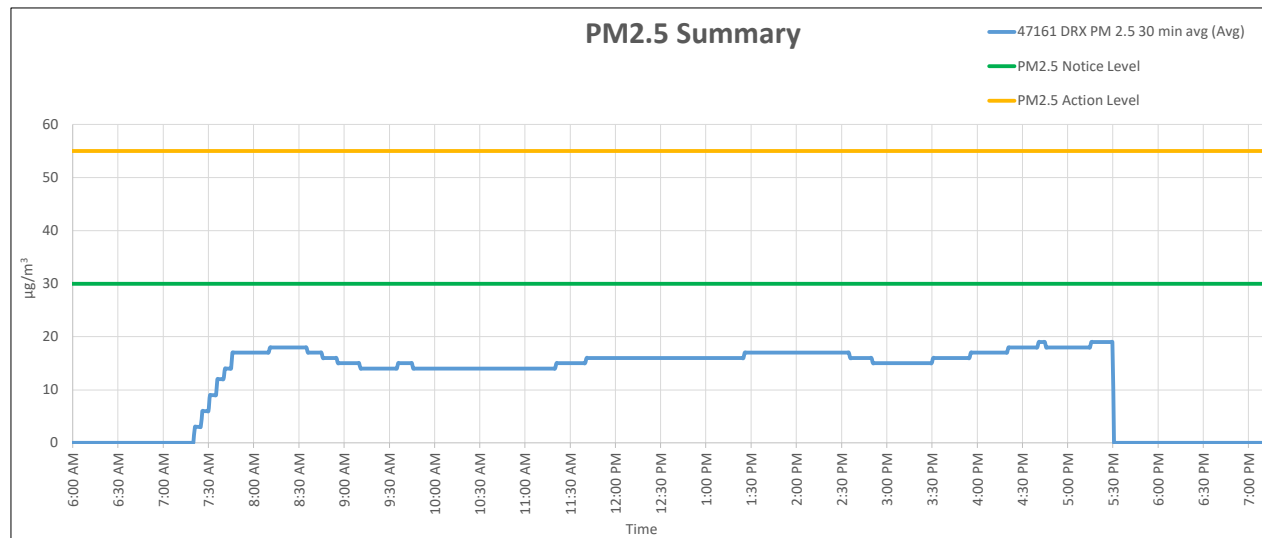
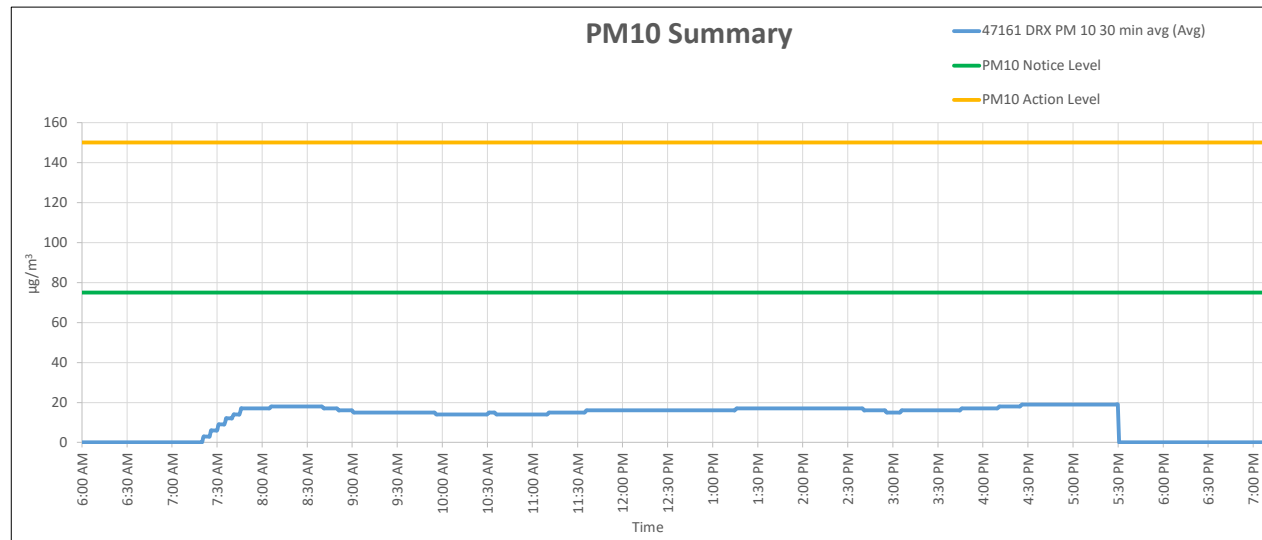
Union Pacific Railroad
Houston Wood Preserving Works Site
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	7:31 AM	5:30 PM	21.89	28.00	20.75	26.00



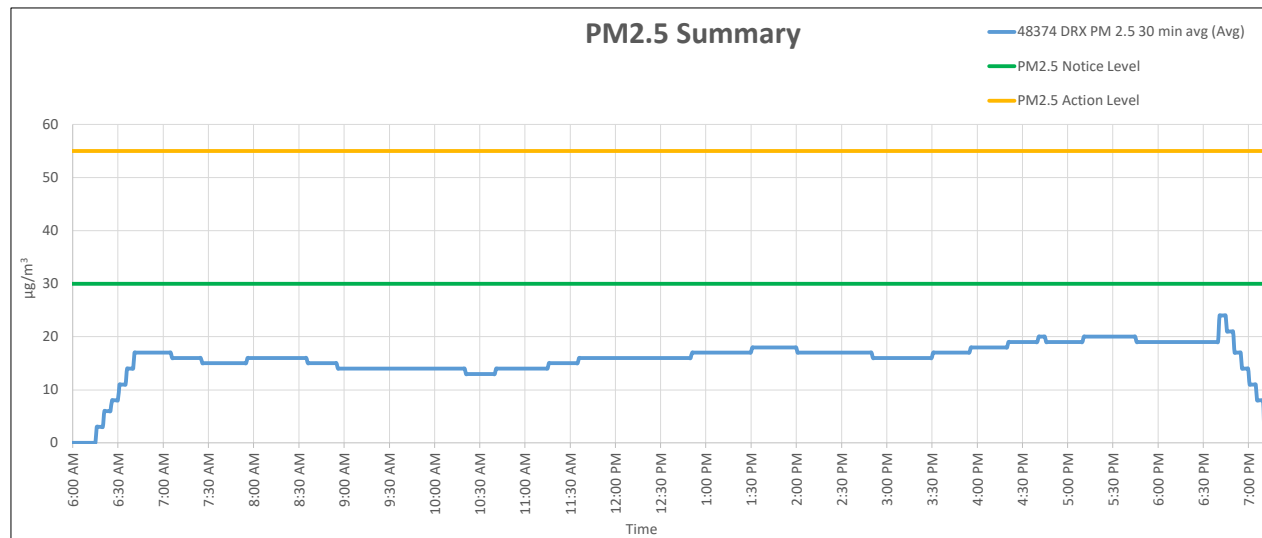
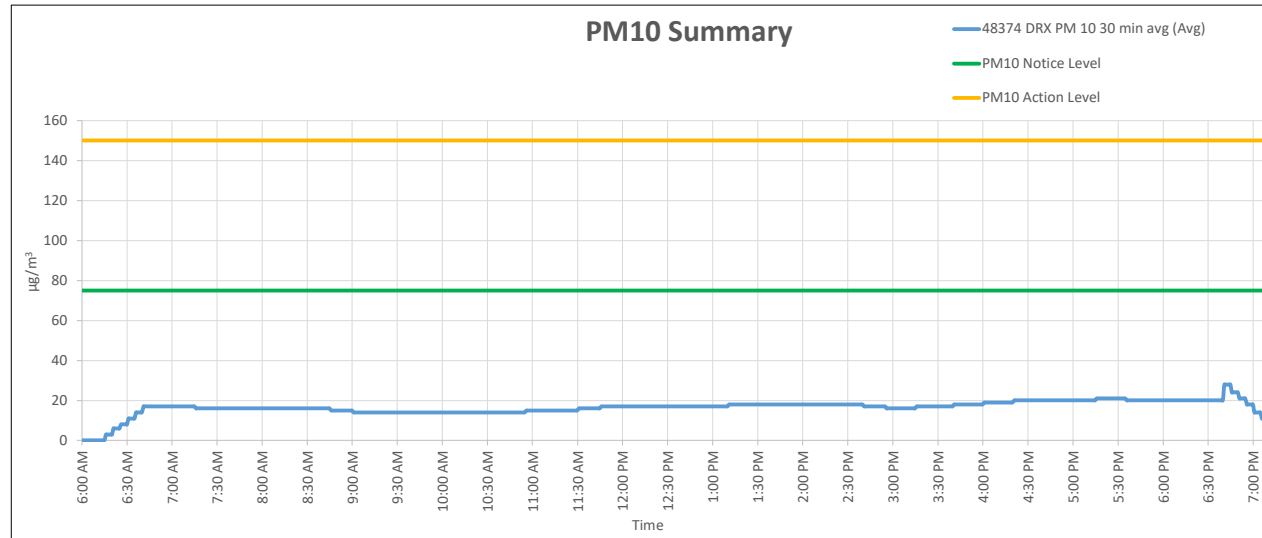
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	7:21 AM	5:30 PM	16.03	19.00	15.73	19.00



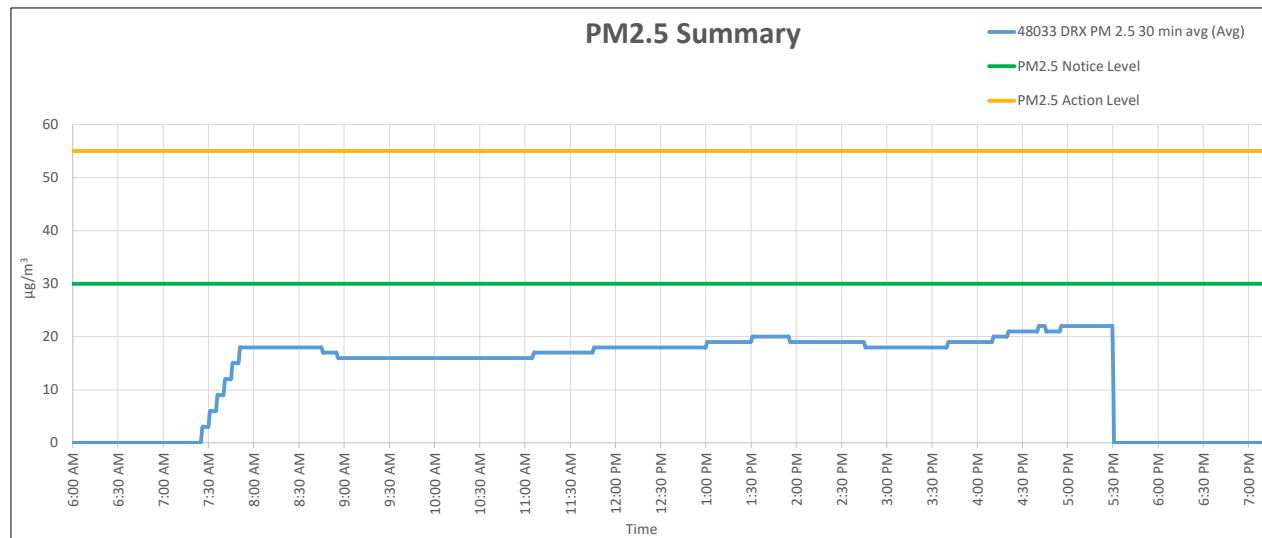
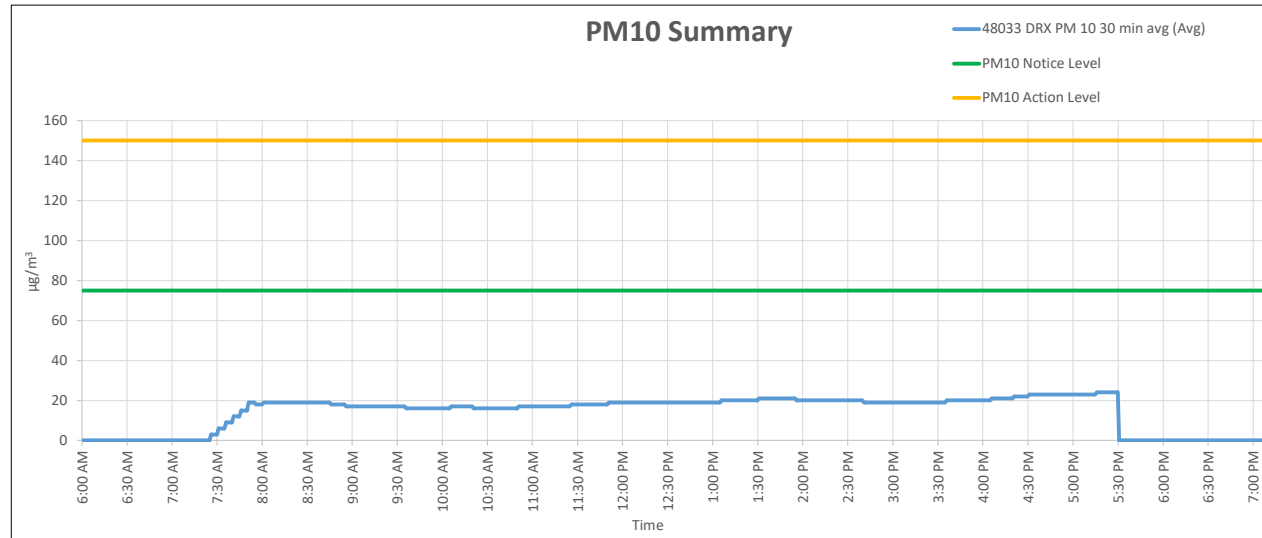
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:16 AM	7:10 PM	16.84	28.00	16.19	24.00



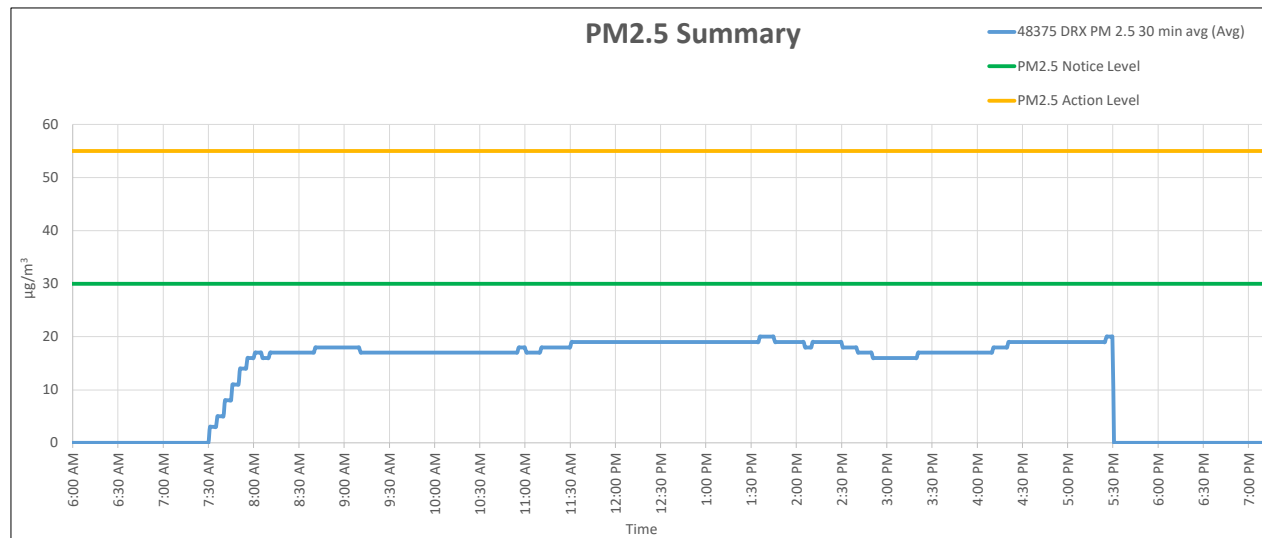
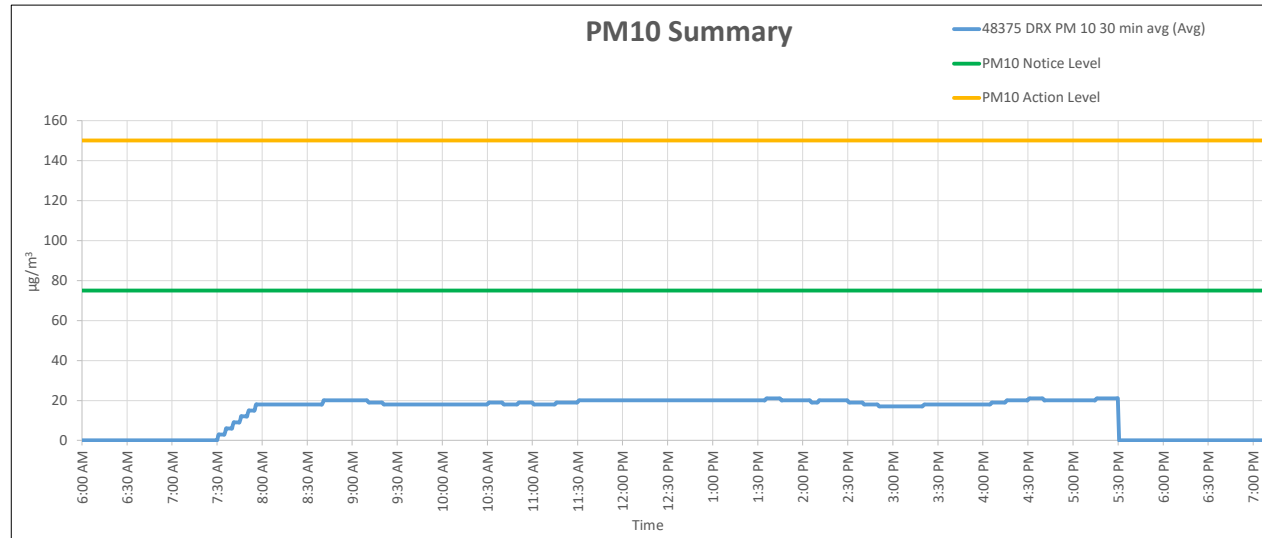
Union Pacific Railroad
Houston Wood Preserving Works Site
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	7:26 AM	5:30 PM	18.69	24.00	17.83	22.00

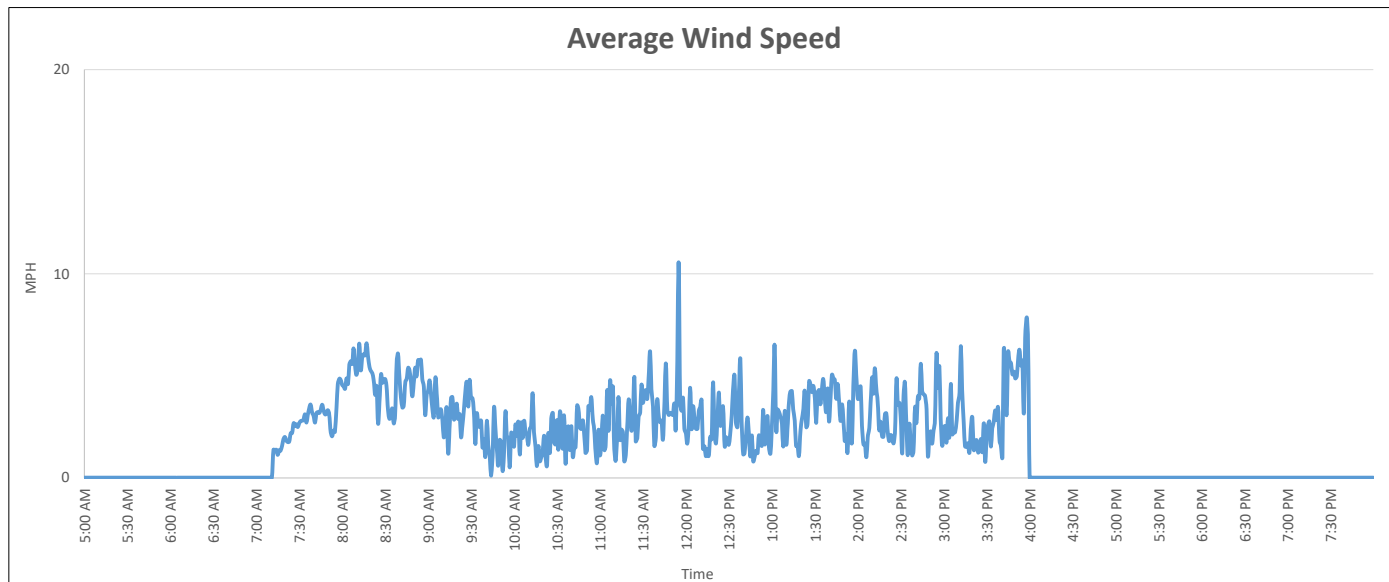
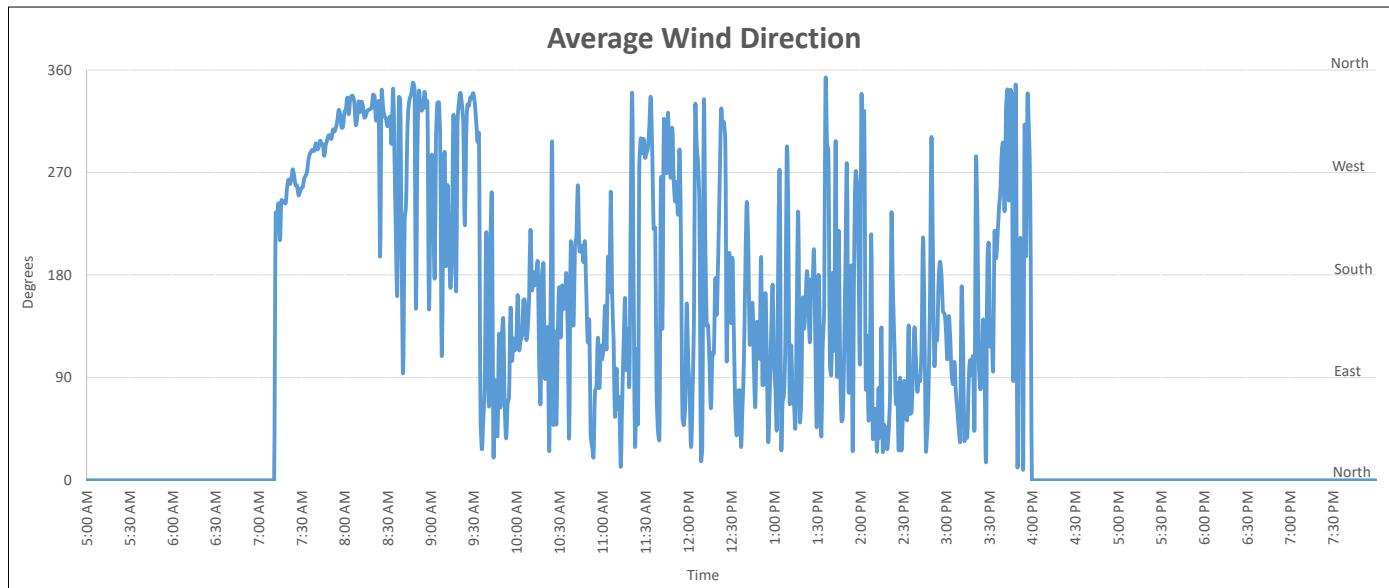


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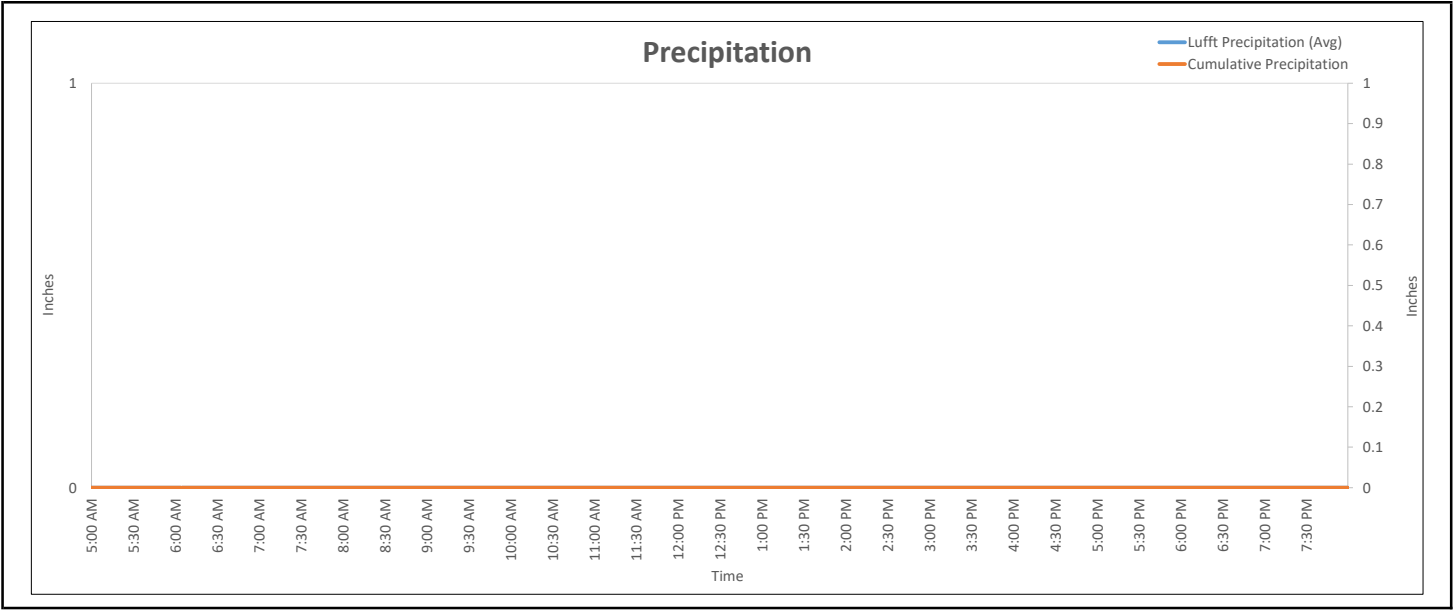
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	7:31 AM	5:30 PM	18.68	21.00	17.54	20.00



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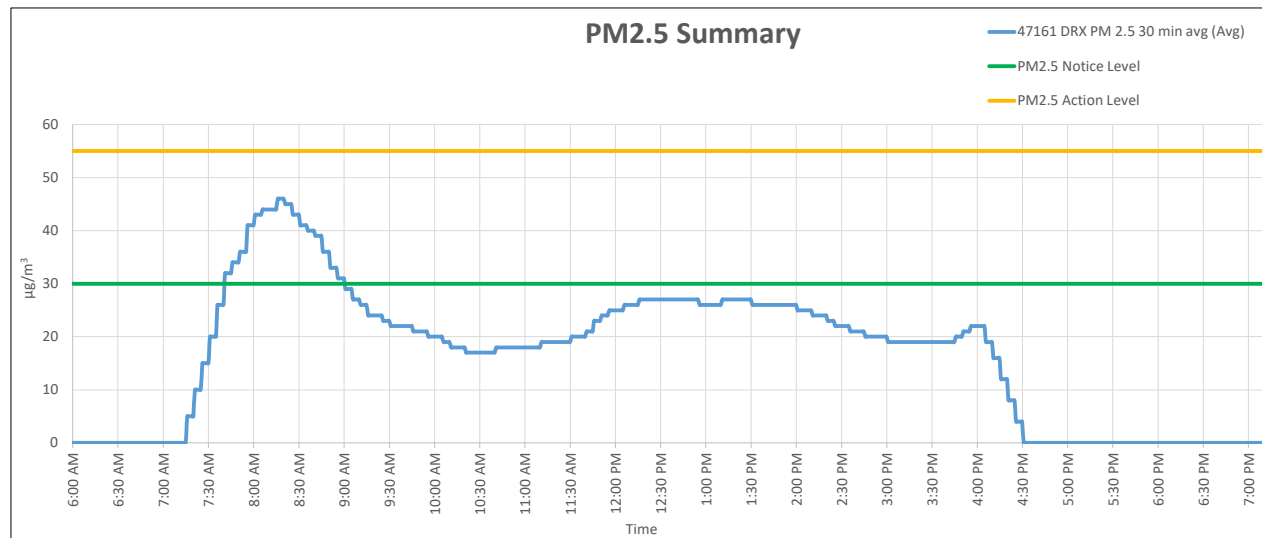
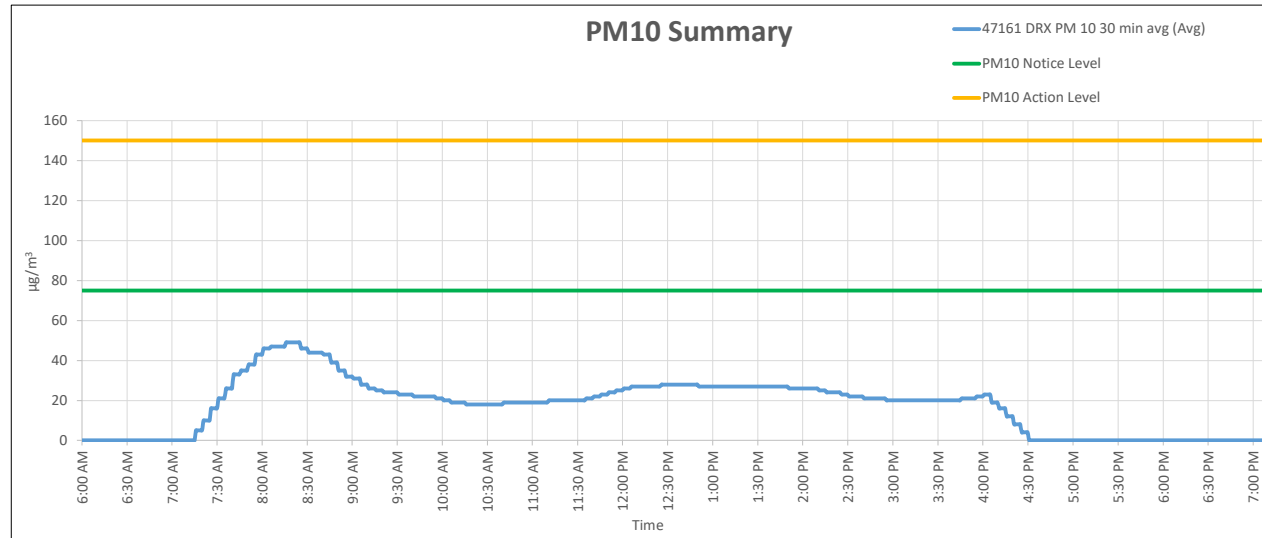


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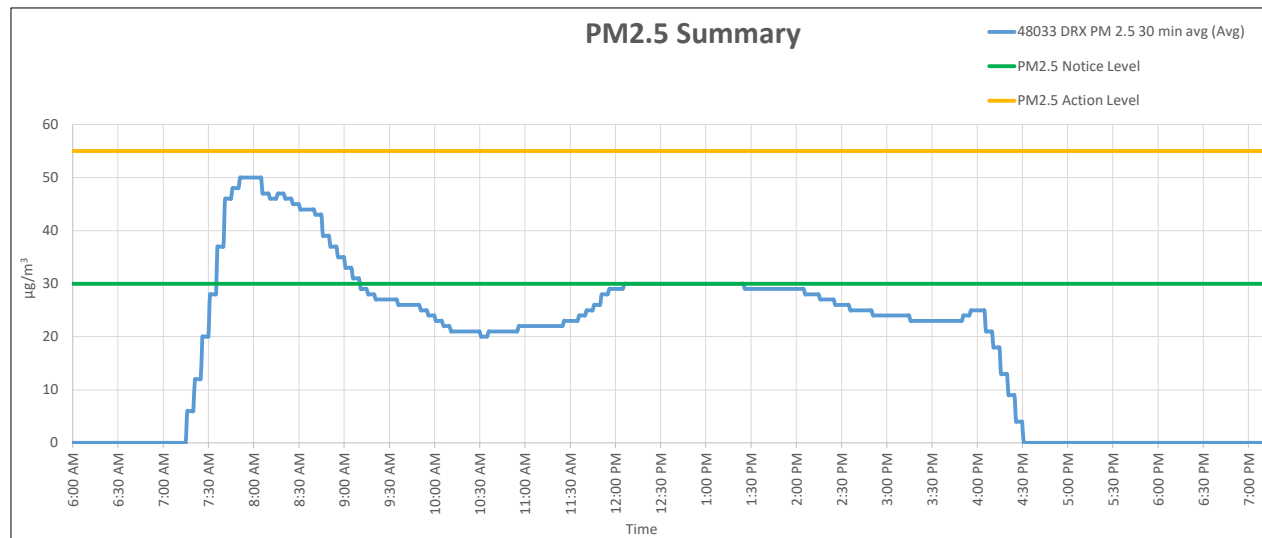
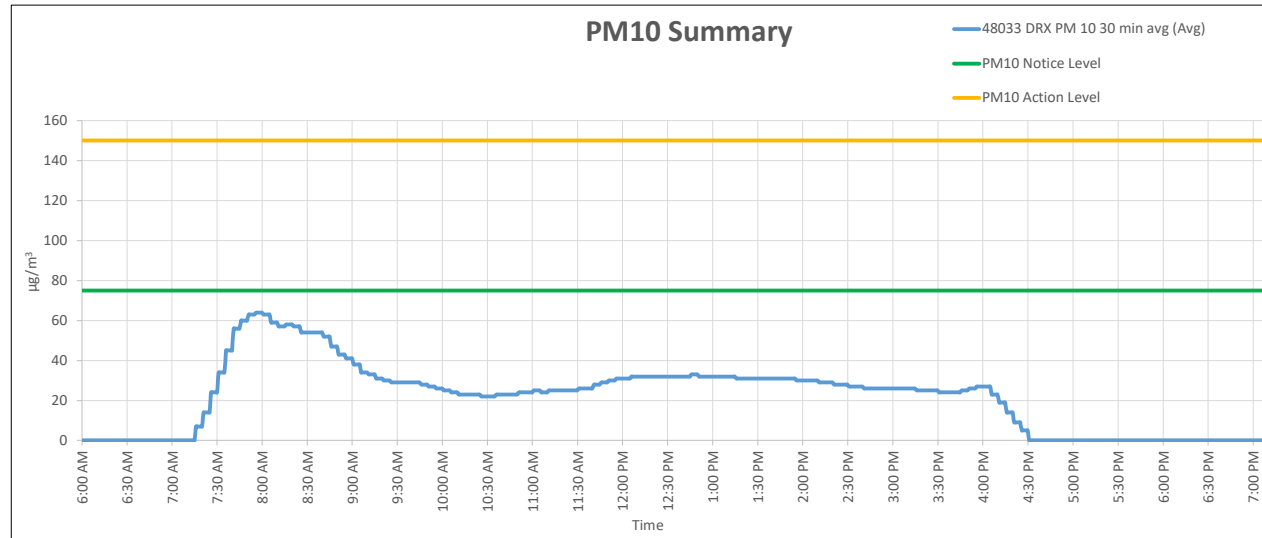
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	7:16 AM	4:30 PM	24.93	49.00	23.98	46.00



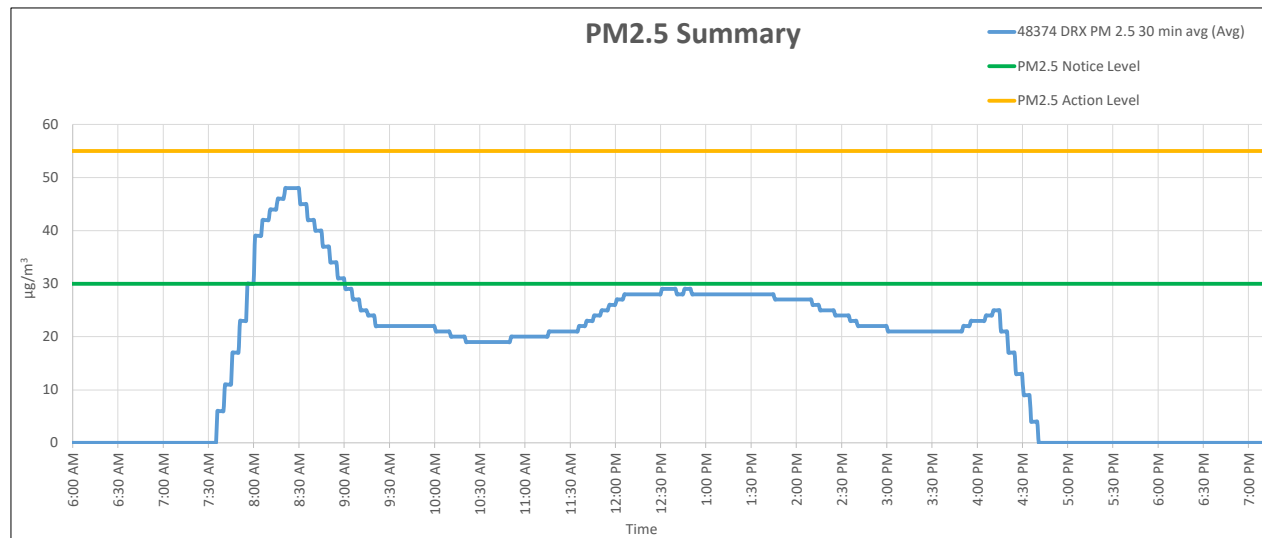
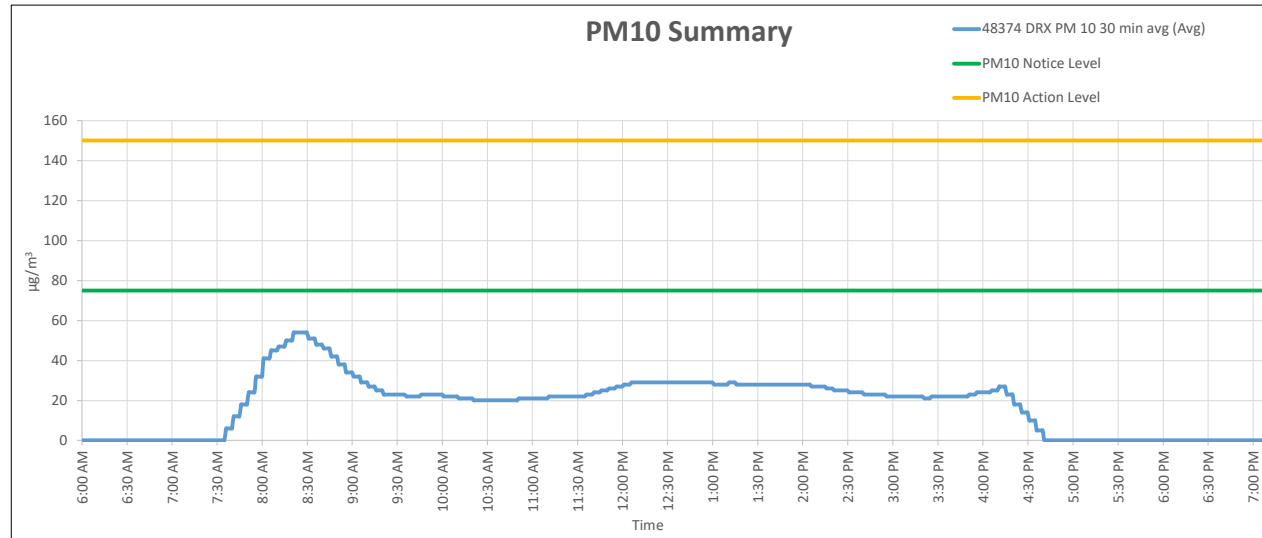
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	7:16 AM	4:30 PM	31.14	64.00	27.84	50.00



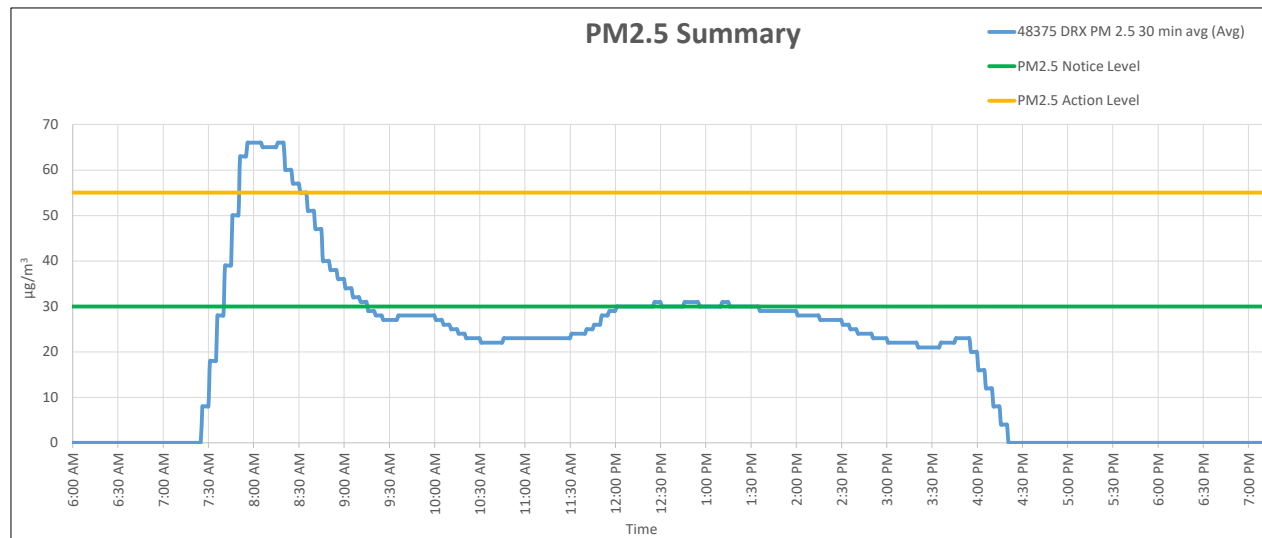
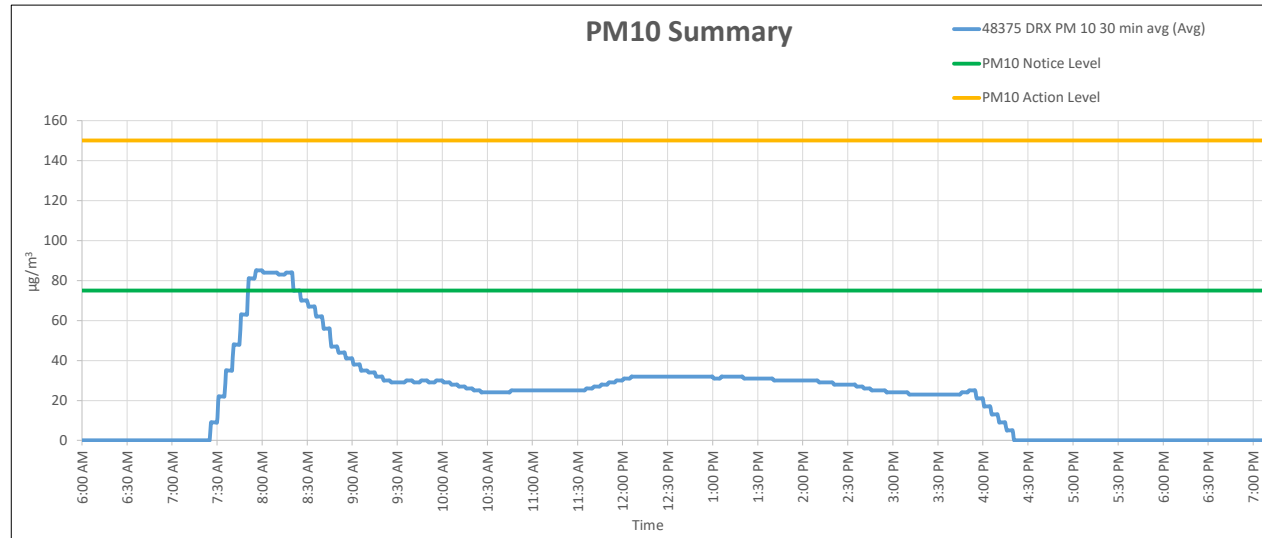
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	7:36 AM	4:40 PM	26.19	54.00	24.91	48.00



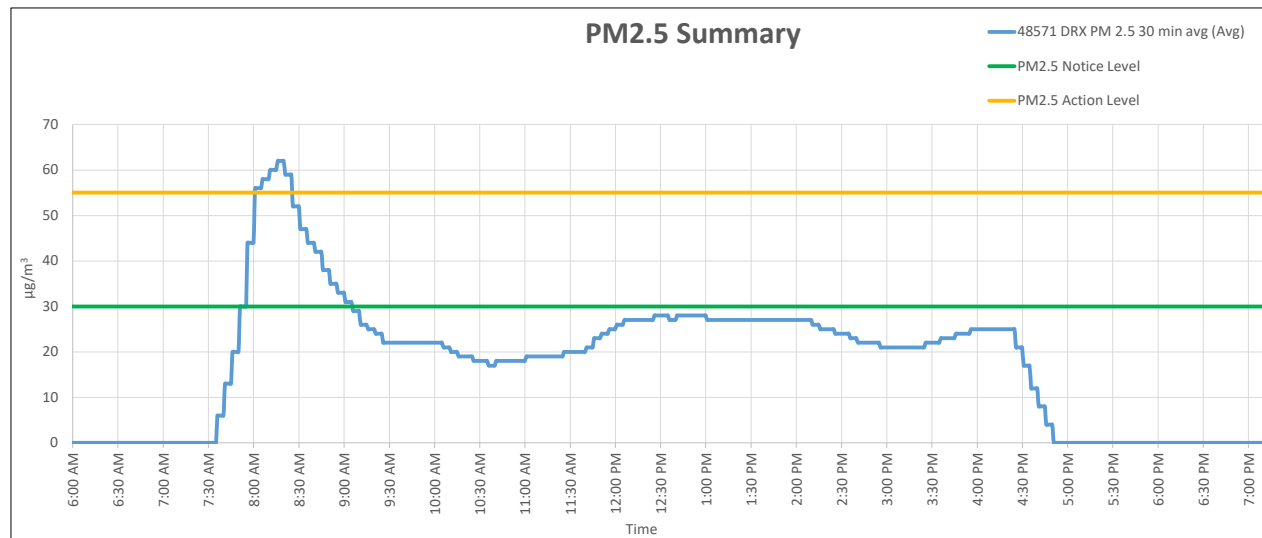
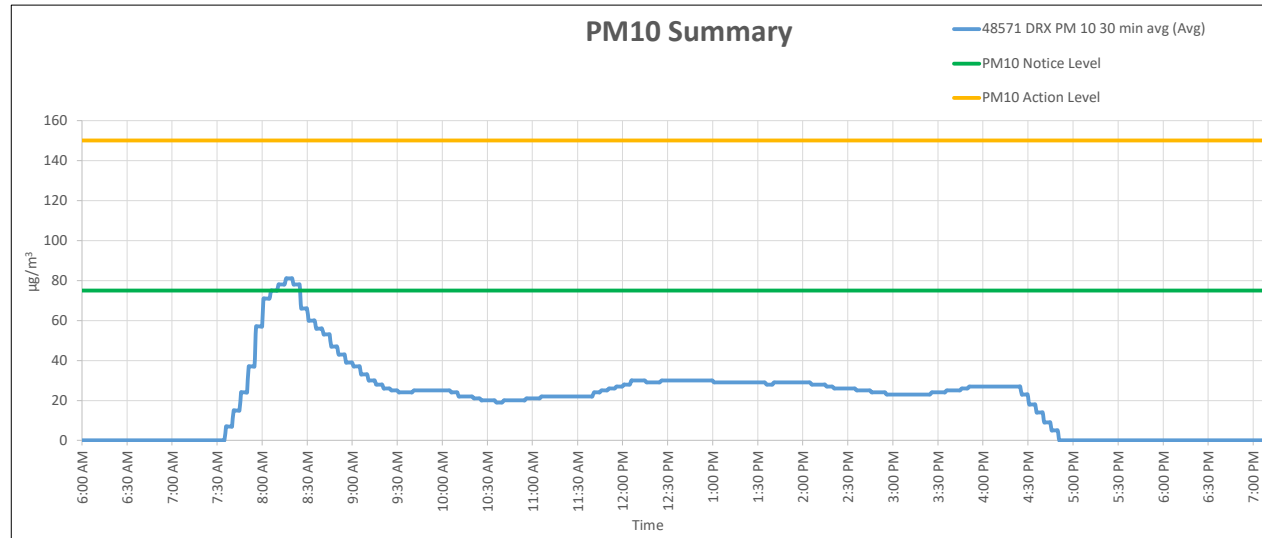
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	7:26 AM	4:20 PM	33.10	85.00	29.65	66.00



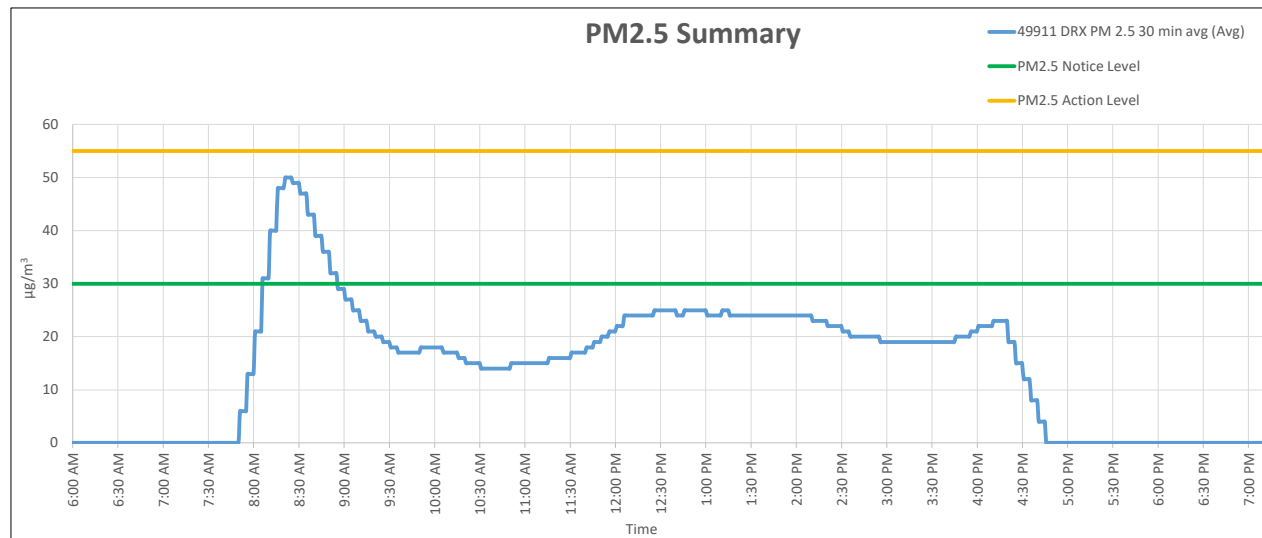
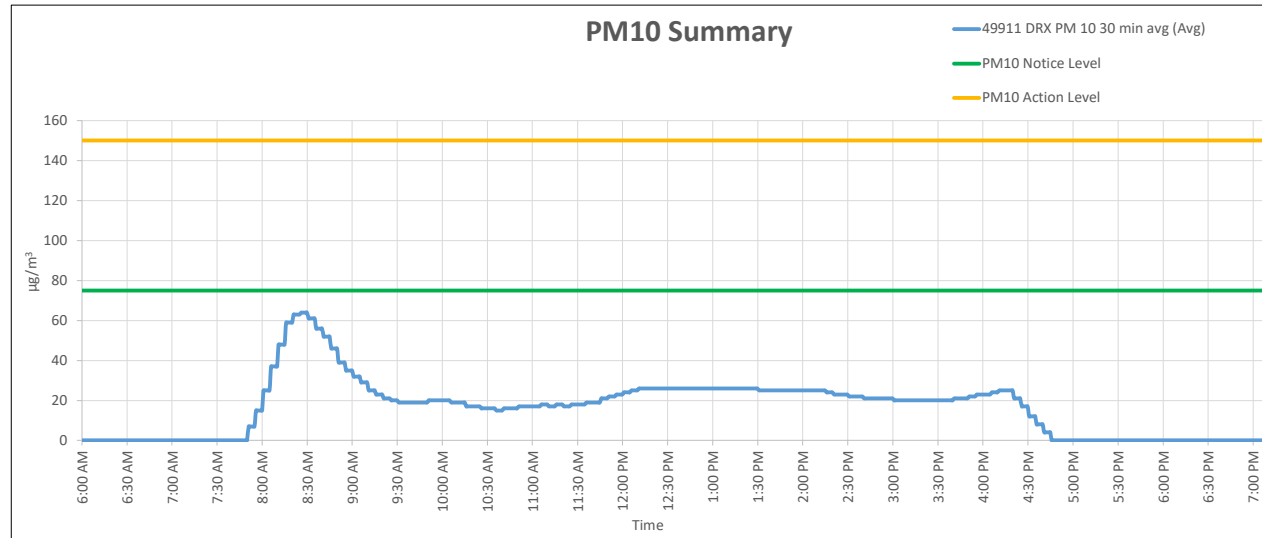
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	7:36 AM	4:50 PM	29.33	81.00	25.75	62.00



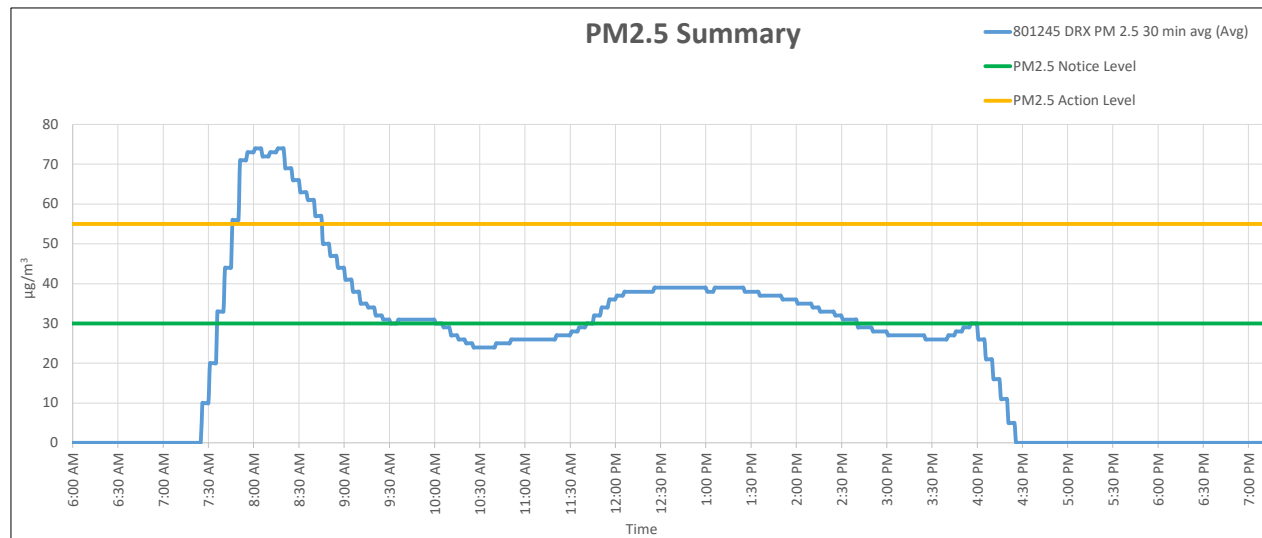
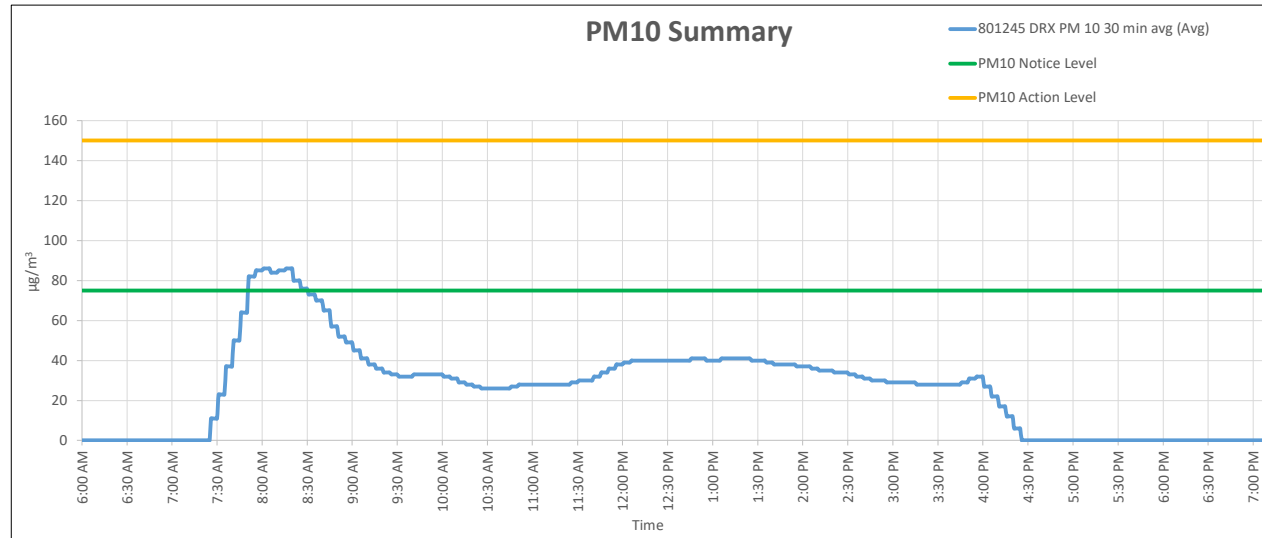
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	7:51 AM	4:45 PM	24.29	64.00	21.79	50.00

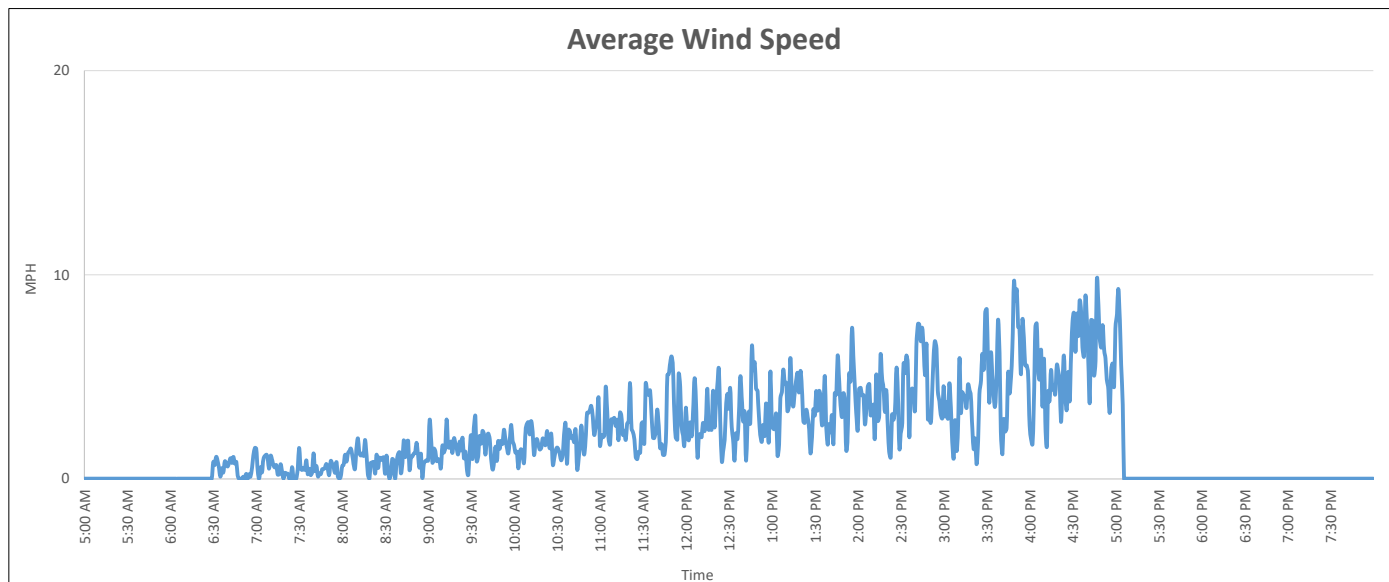
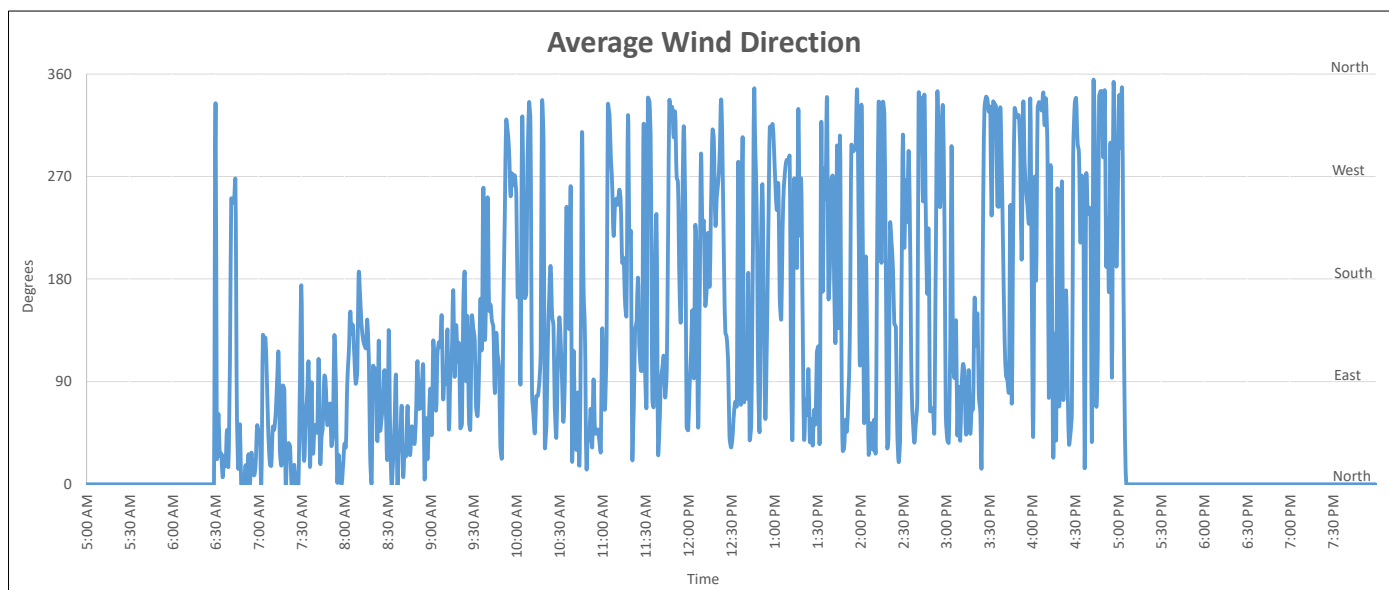


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Air Monitoring Values
Wednesday, August 21, 2024

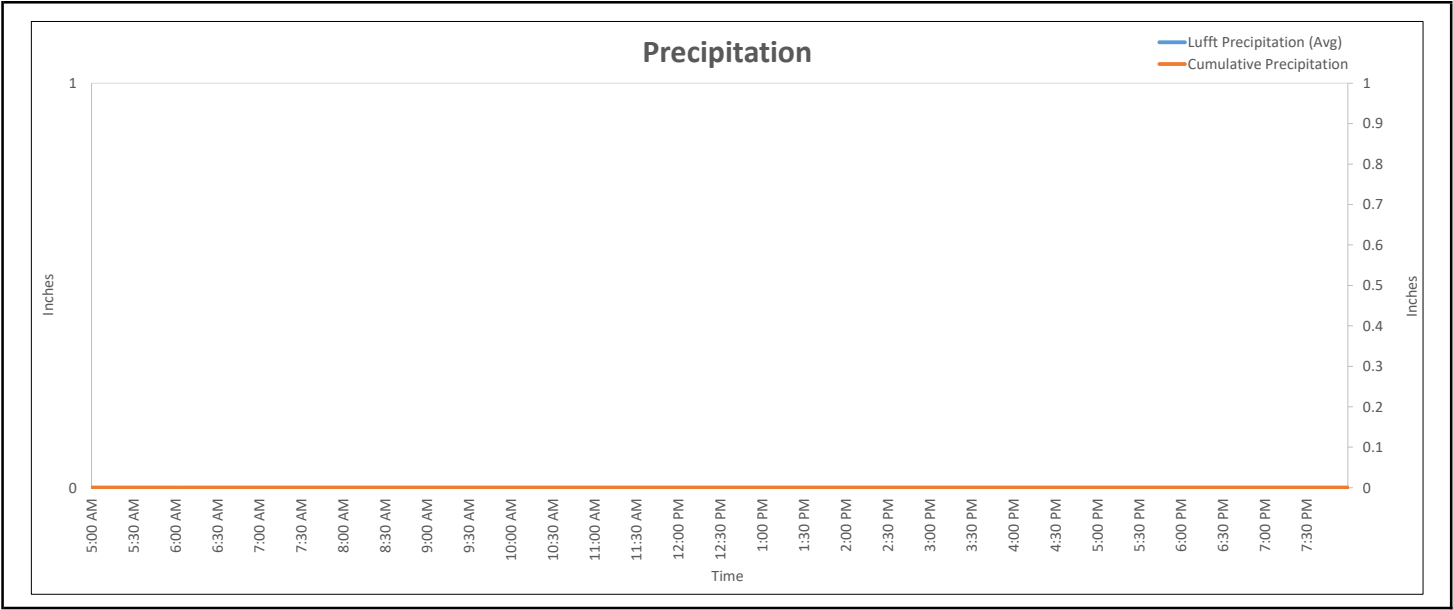
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	7:26 AM	4:25 PM	38.18	86.00	35.28	74.00



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Thursday, August 22, 2024

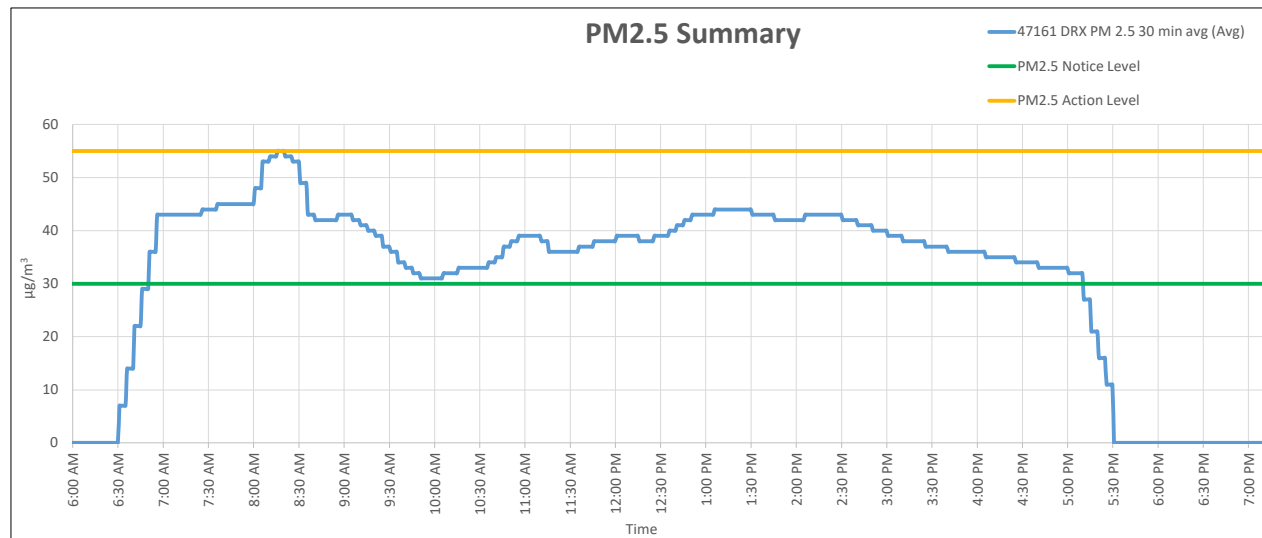
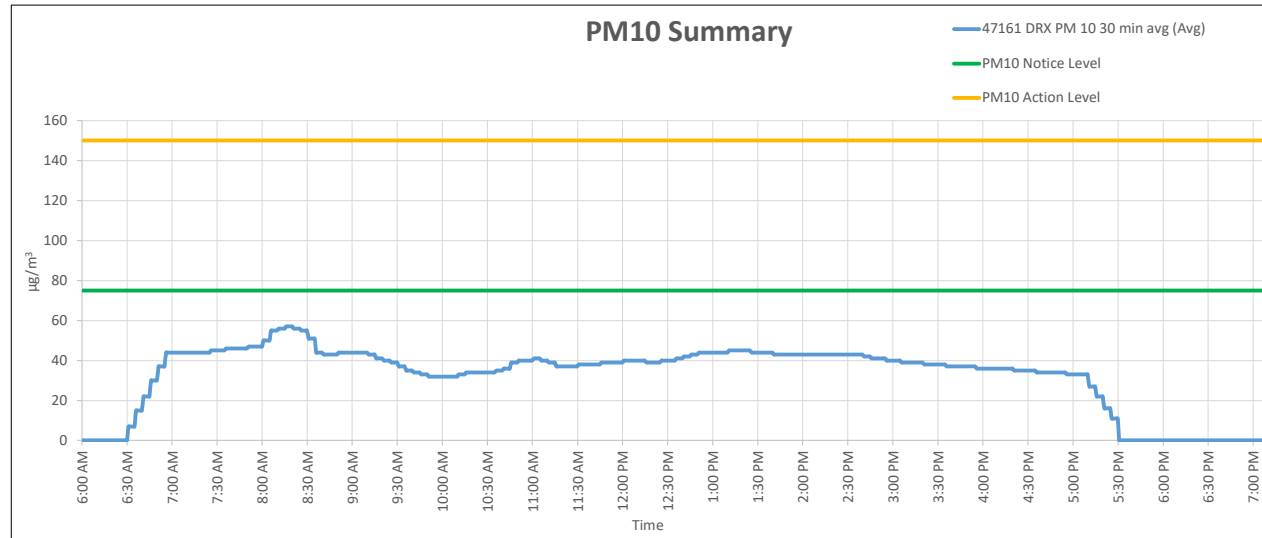


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Thursday, August 22, 2024



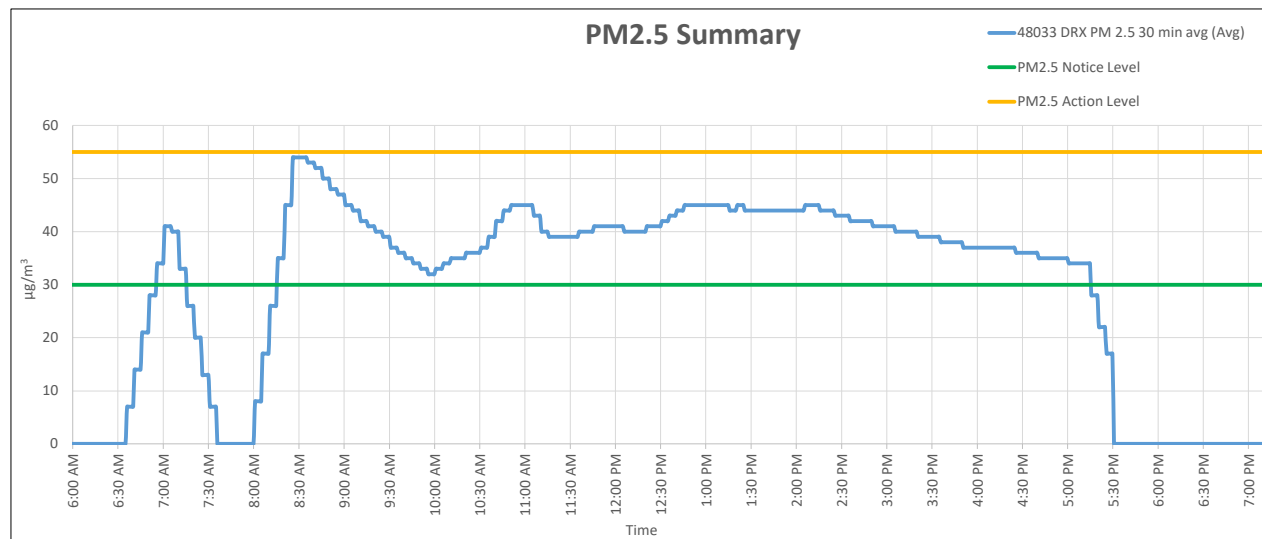
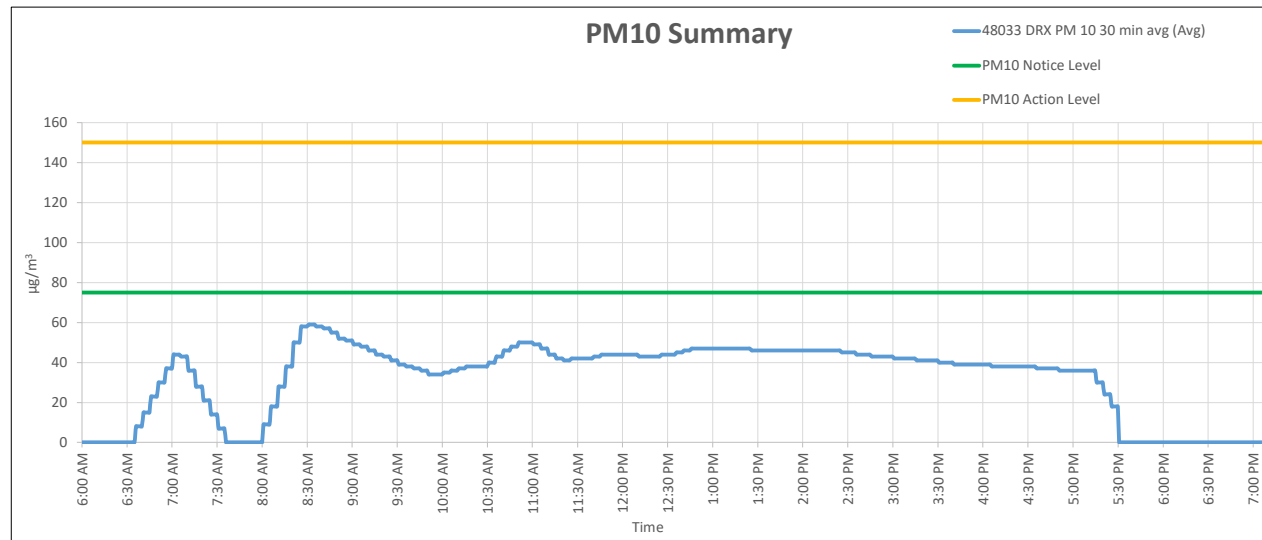
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 22, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	6:31 AM	5:30 PM	39.21	57.00	38.27	55.00



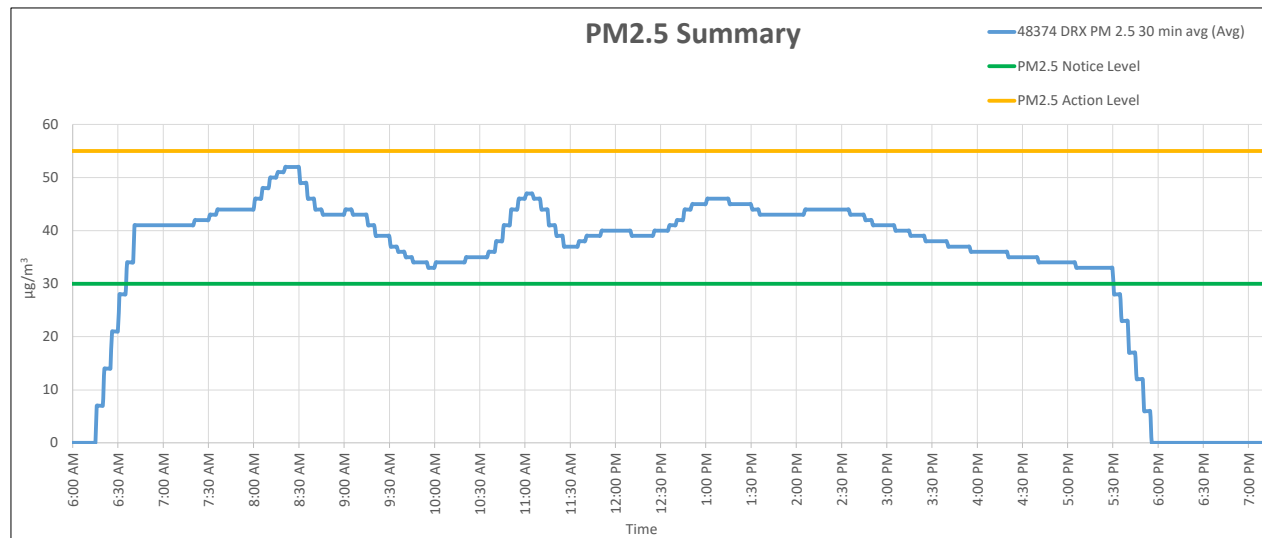
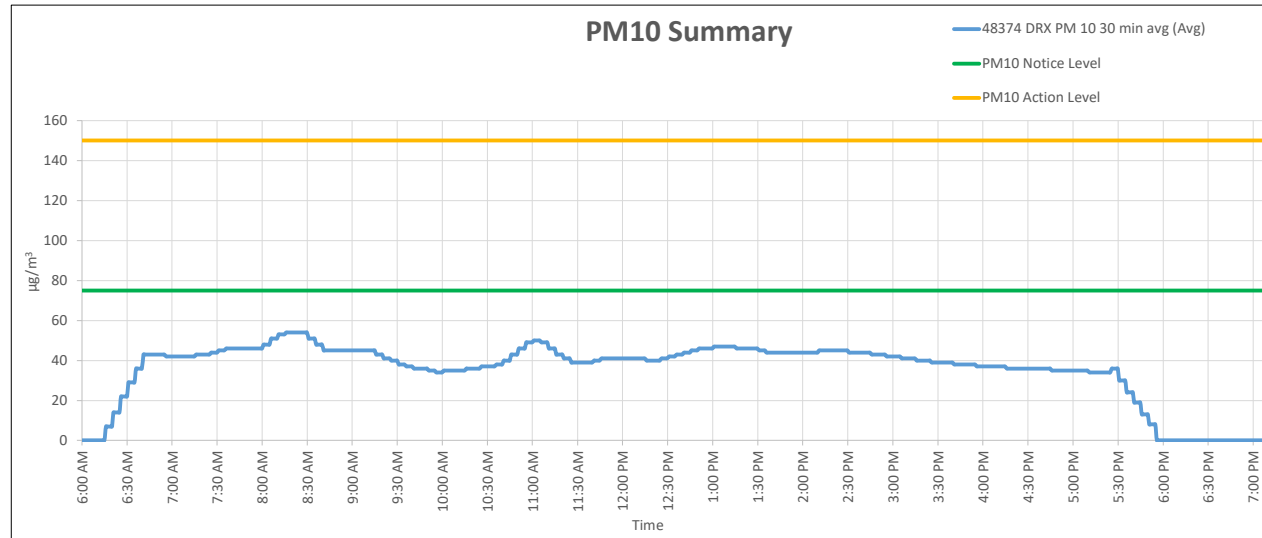
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 22, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	6:36 AM	5:30 PM	40.45	59.00	38.11	54.00



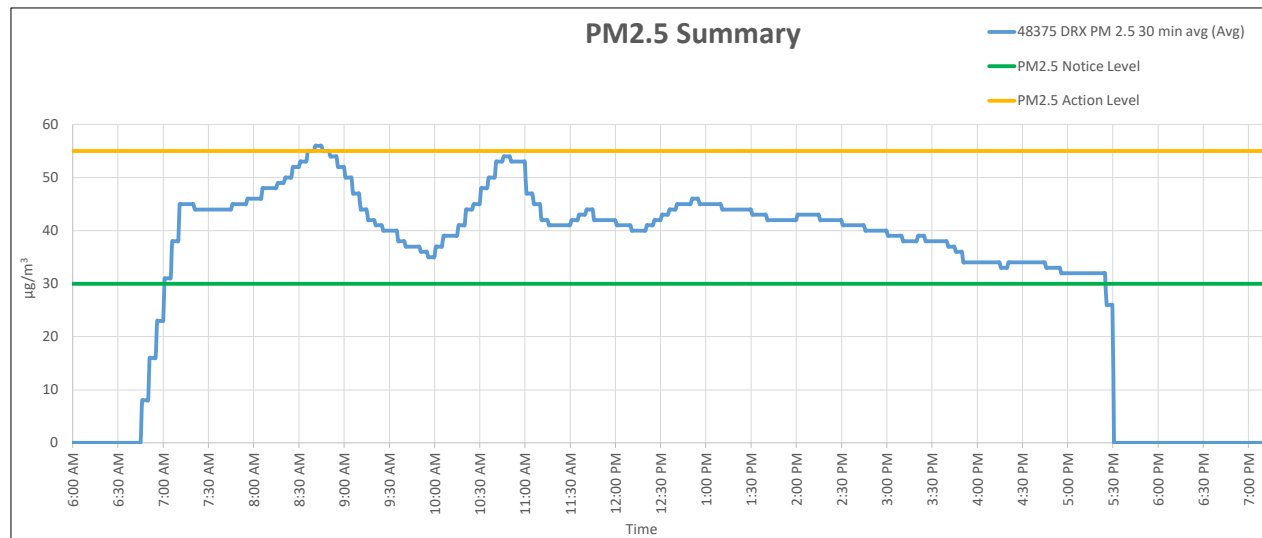
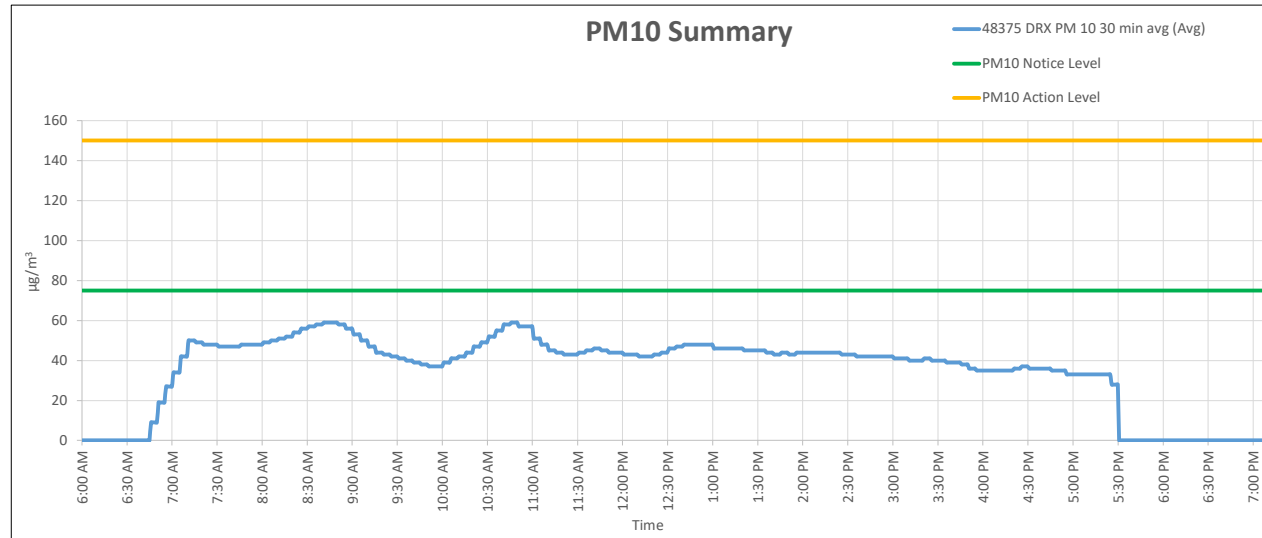
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 22, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:16 AM	5:55 PM	40.30	54.00	38.89	52.00



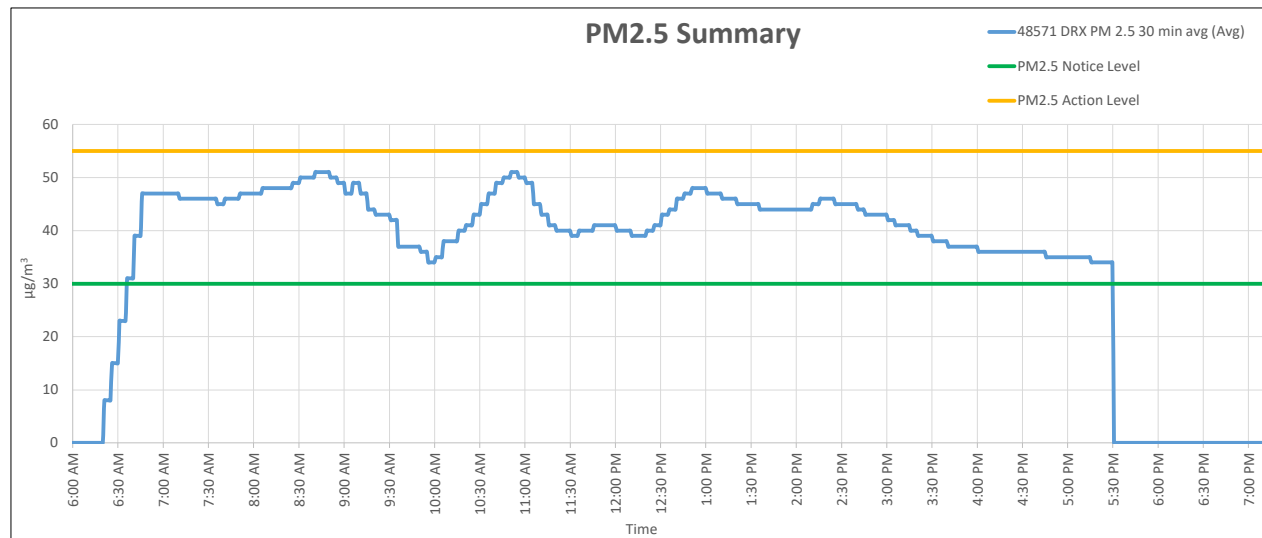
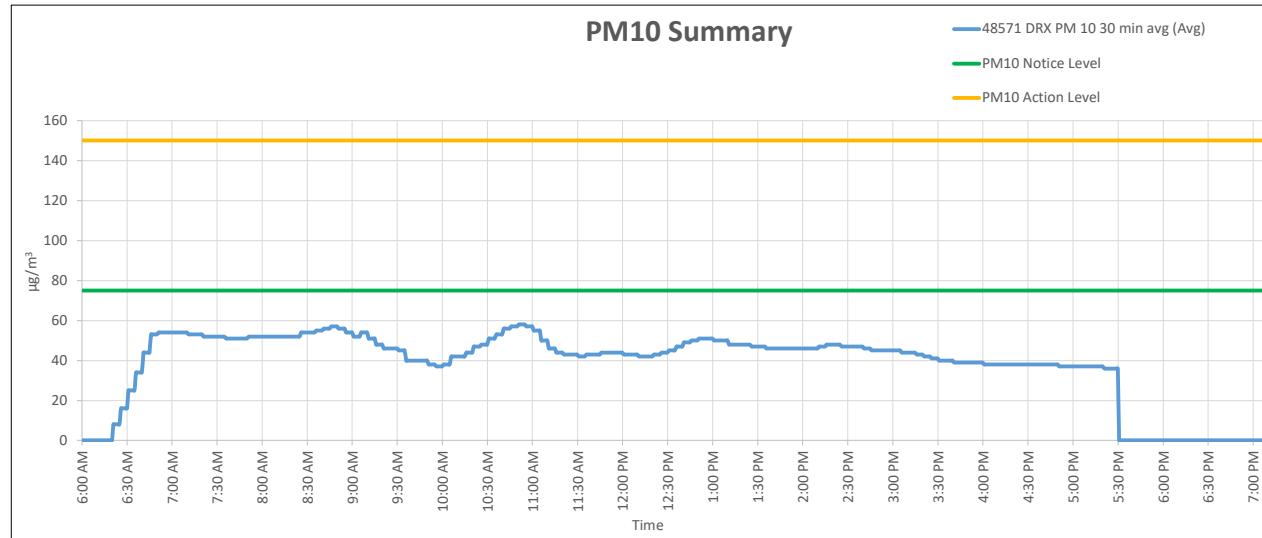
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 22, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	6:46 AM	5:30 PM	43.45	59.00	41.11	56.00



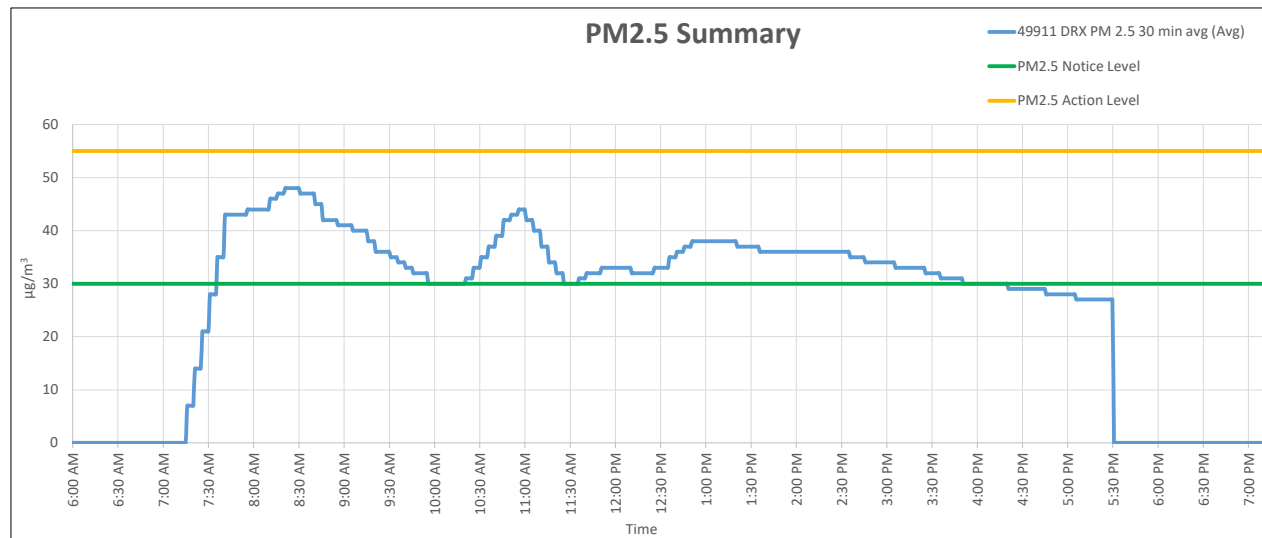
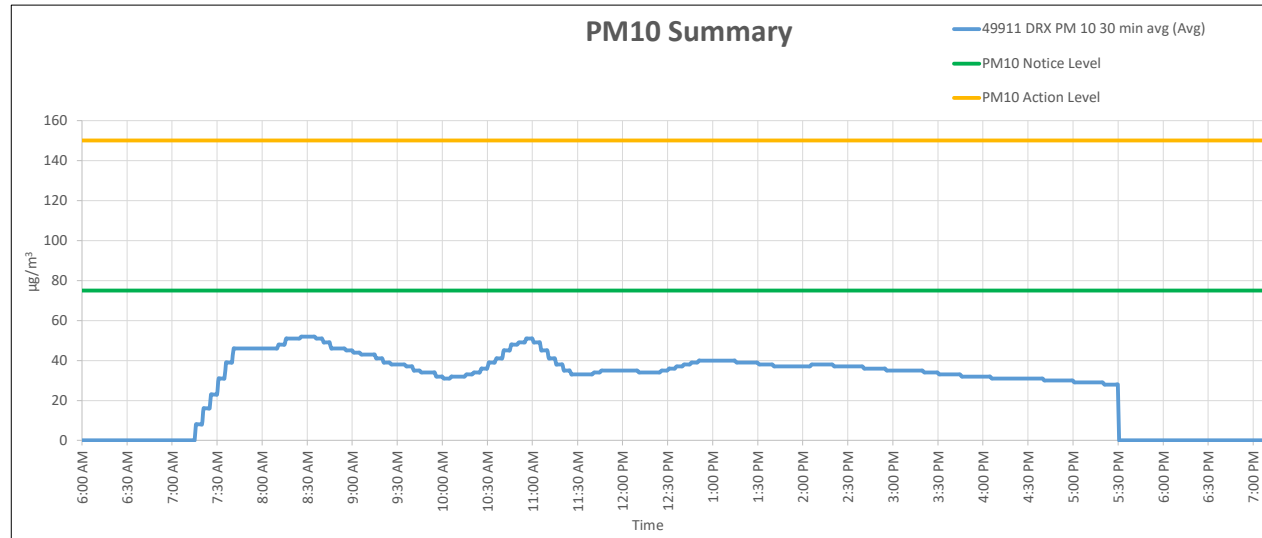
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 22, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	6:21 AM	5:30 PM	45.34	58.00	41.90	51.00



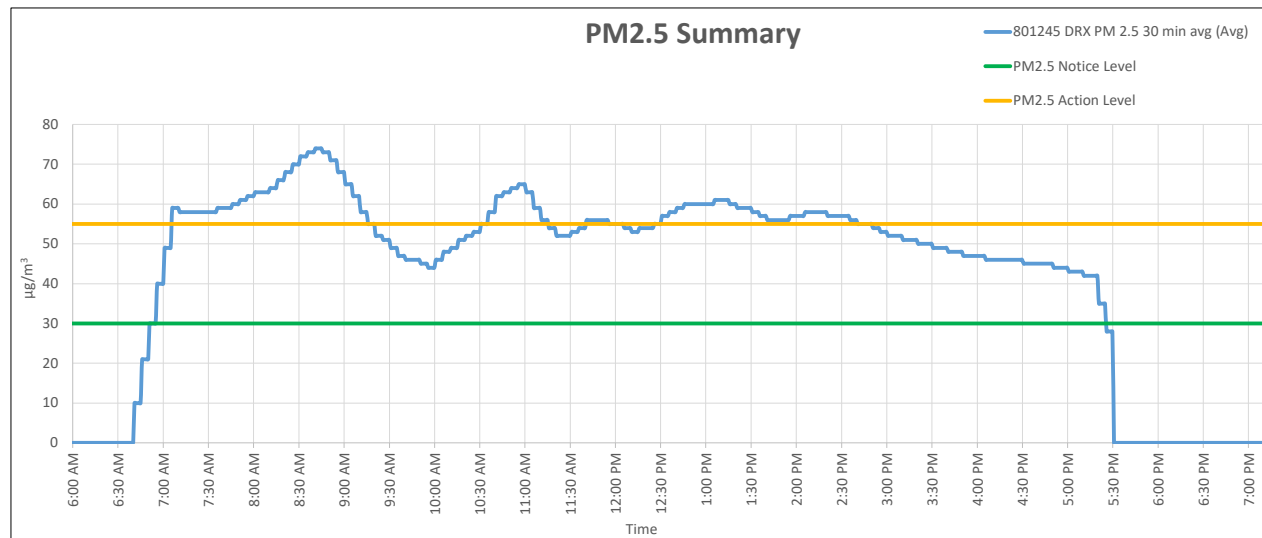
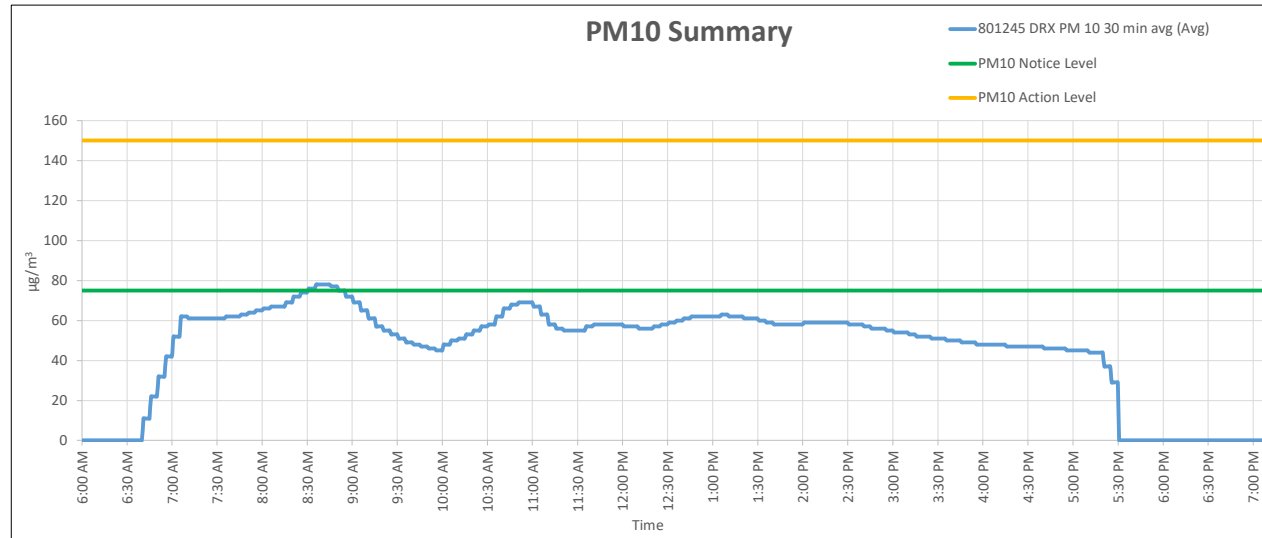
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 22, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	7:16 AM	5:30 PM	36.93	52.00	34.55	48.00



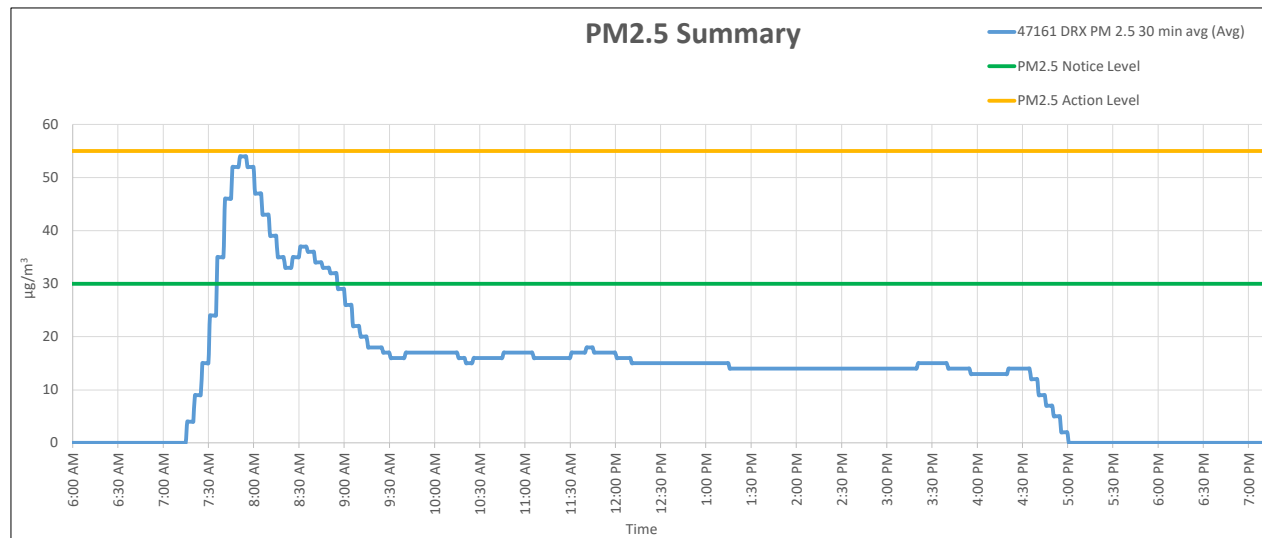
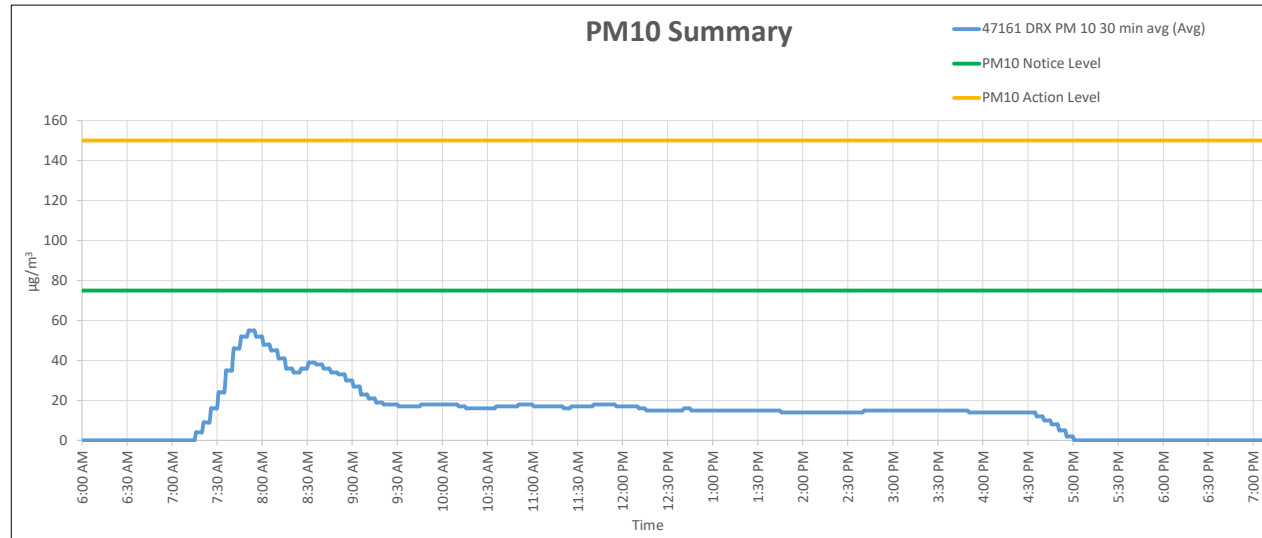
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 22, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	6:41 AM	5:30 PM	56.19	78.00	53.87	74.00



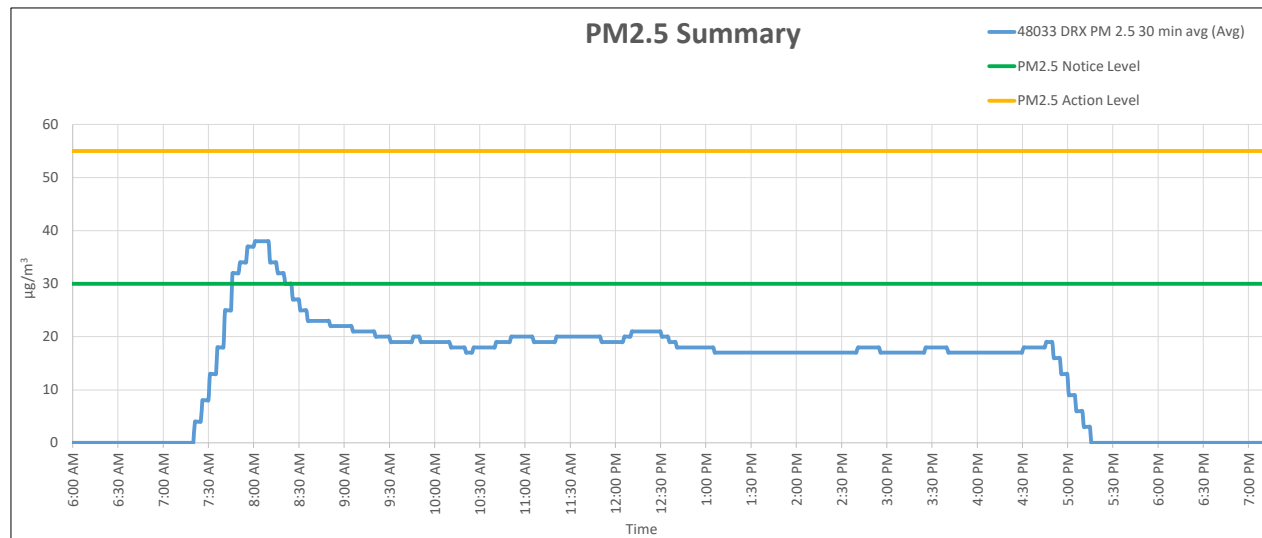
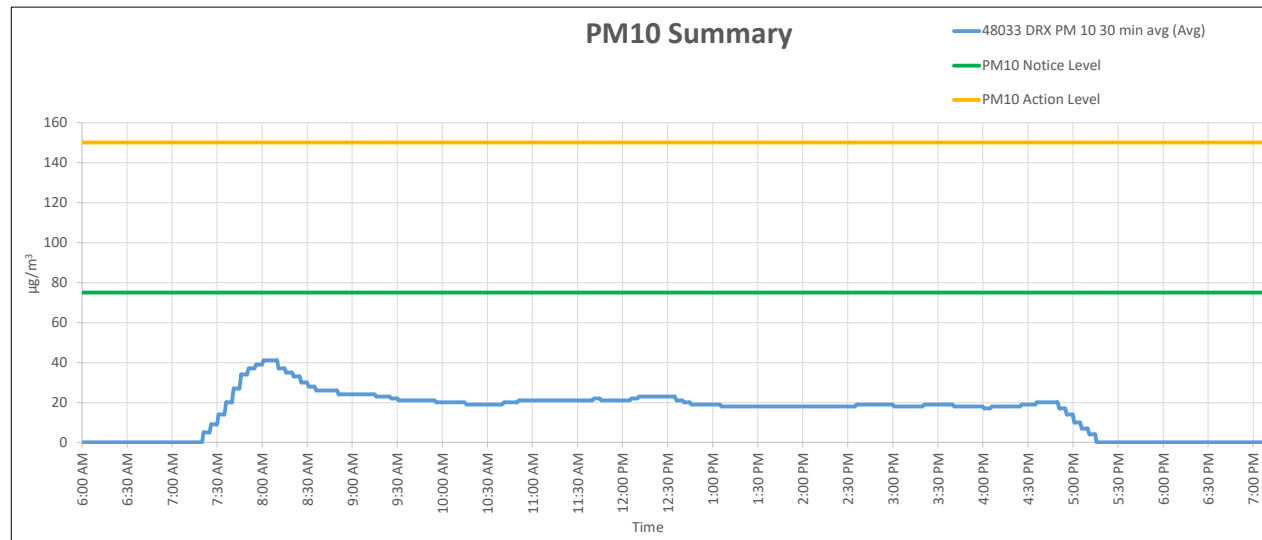
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, August 23, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	7:16 AM	5:00 PM	19.08	55.00	18.49	54.00

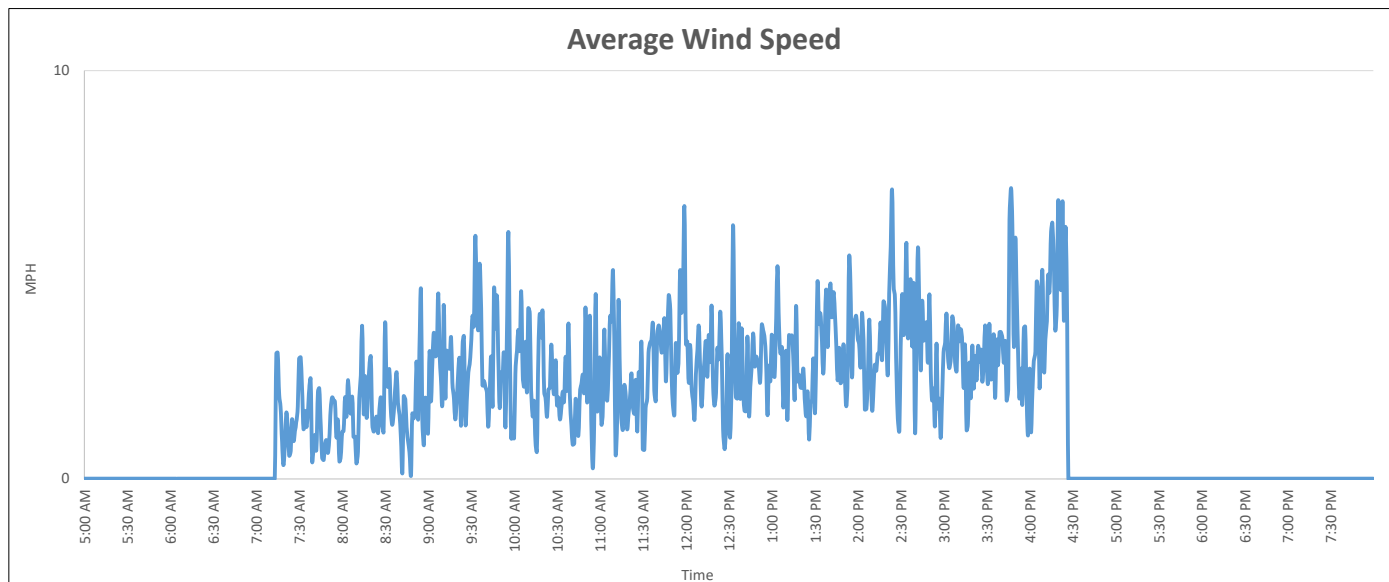
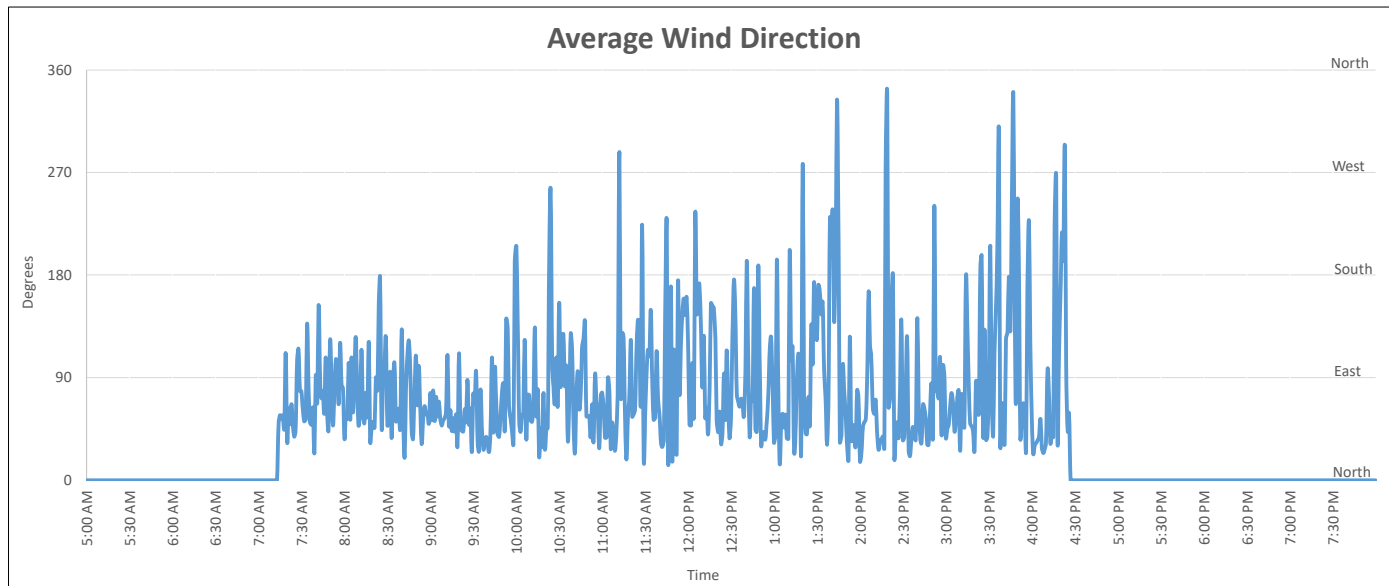


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, August 23, 2024

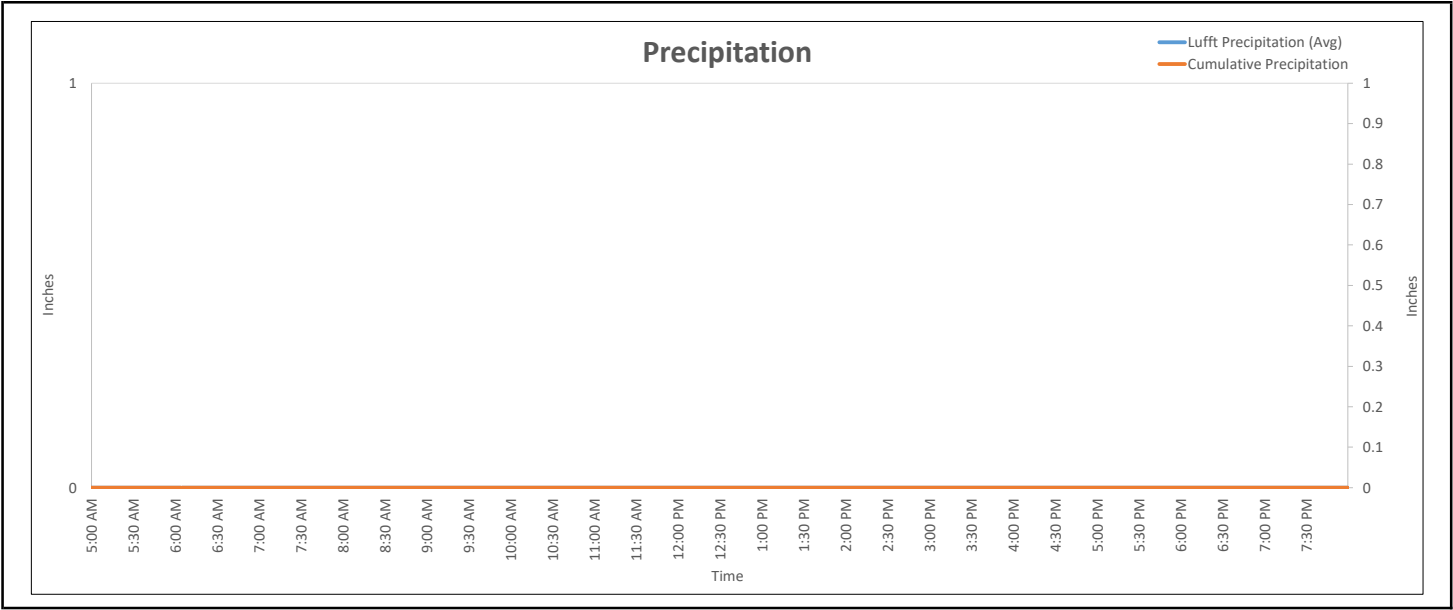
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	7:21 AM	5:15 PM	20.71	41.00	19.17	38.00



Union Pacific Railroad
Houston Wood Preserving Works Site
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Weather Daily Summary
Friday, August 23, 2024

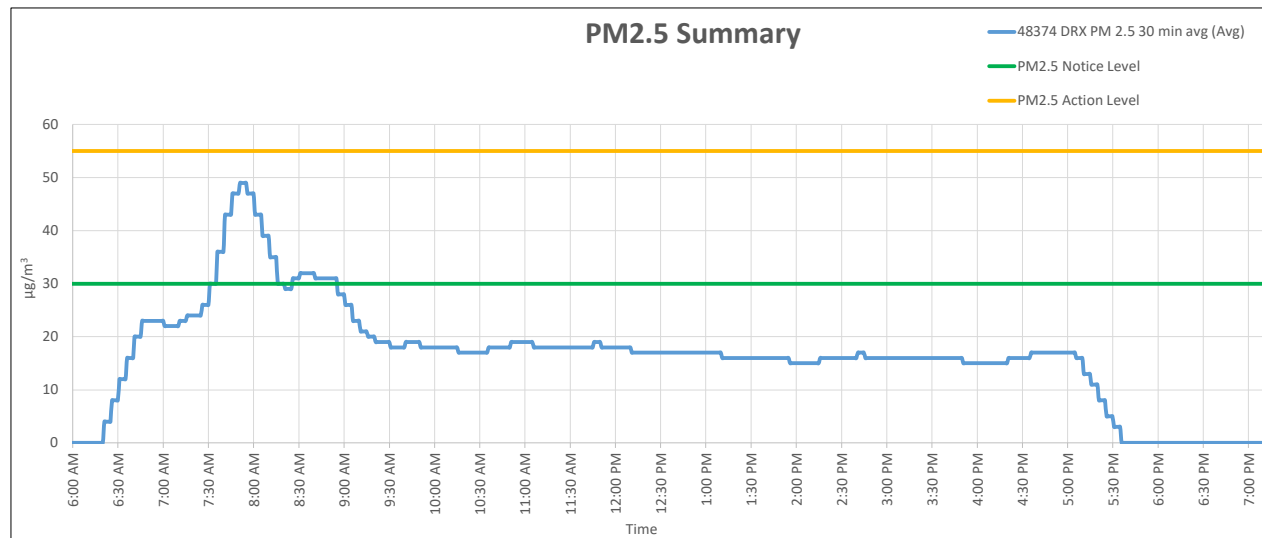
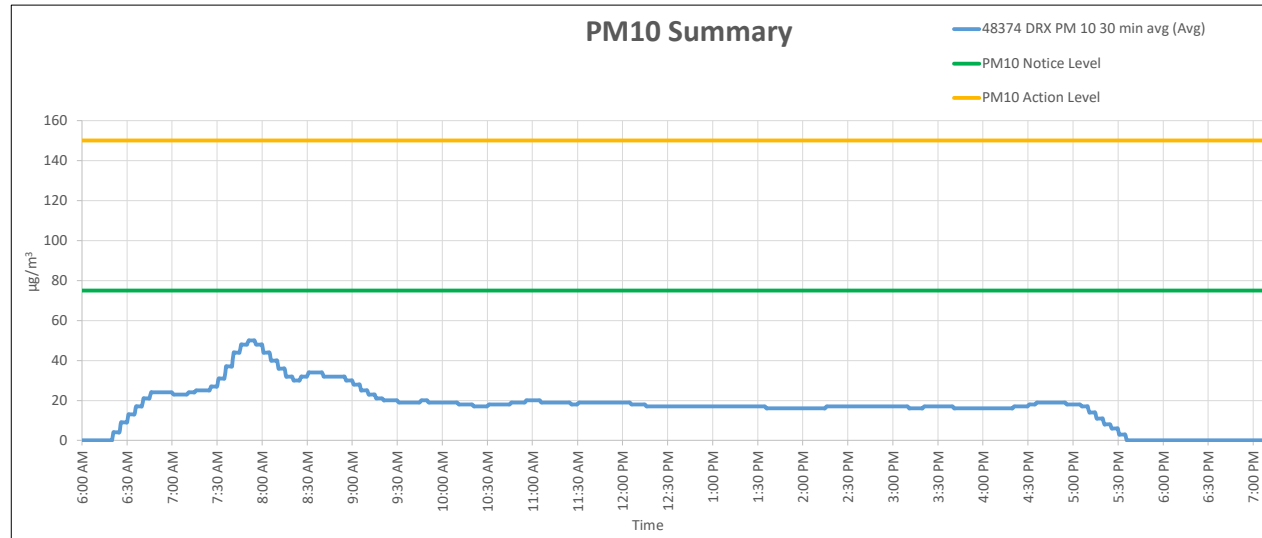


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Friday, August 23, 2024



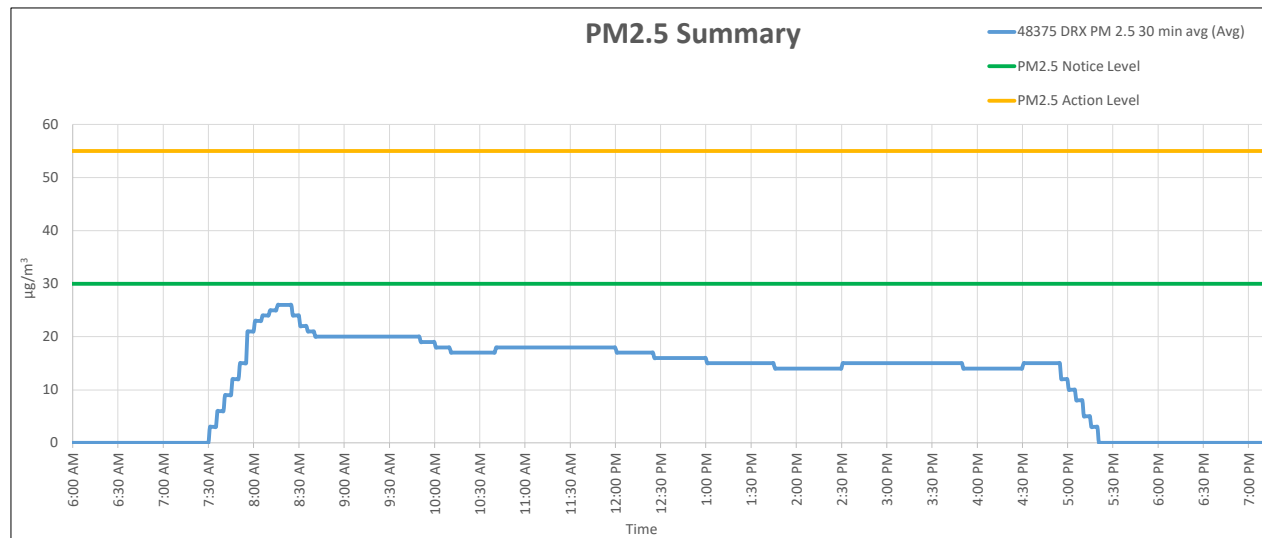
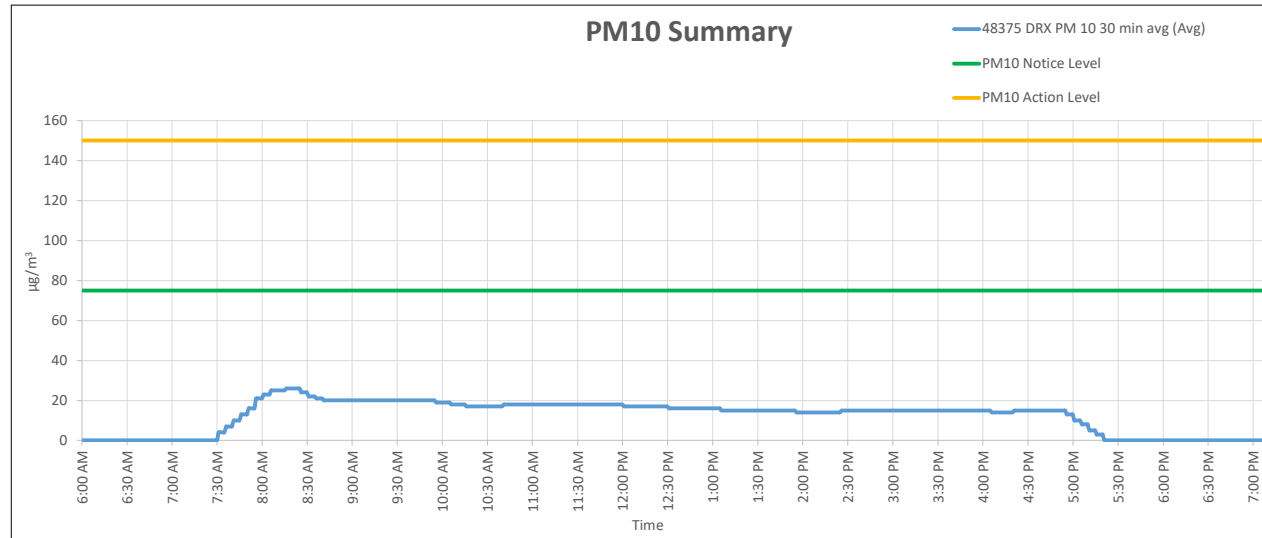
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, August 23, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:21 AM	5:35 PM	20.31	50.00	19.47	49.00



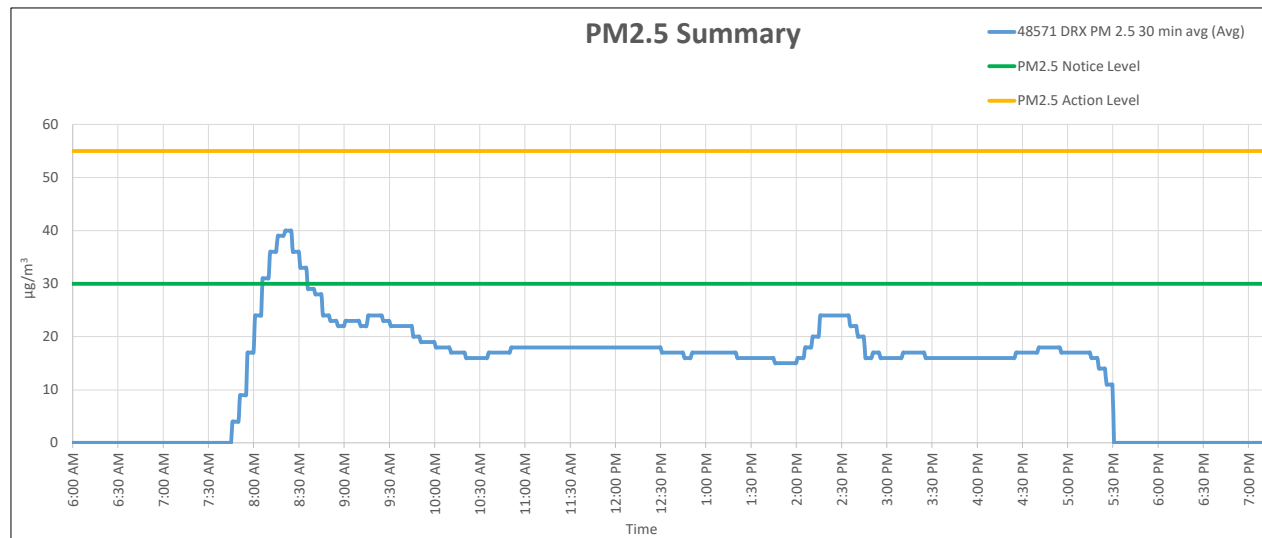
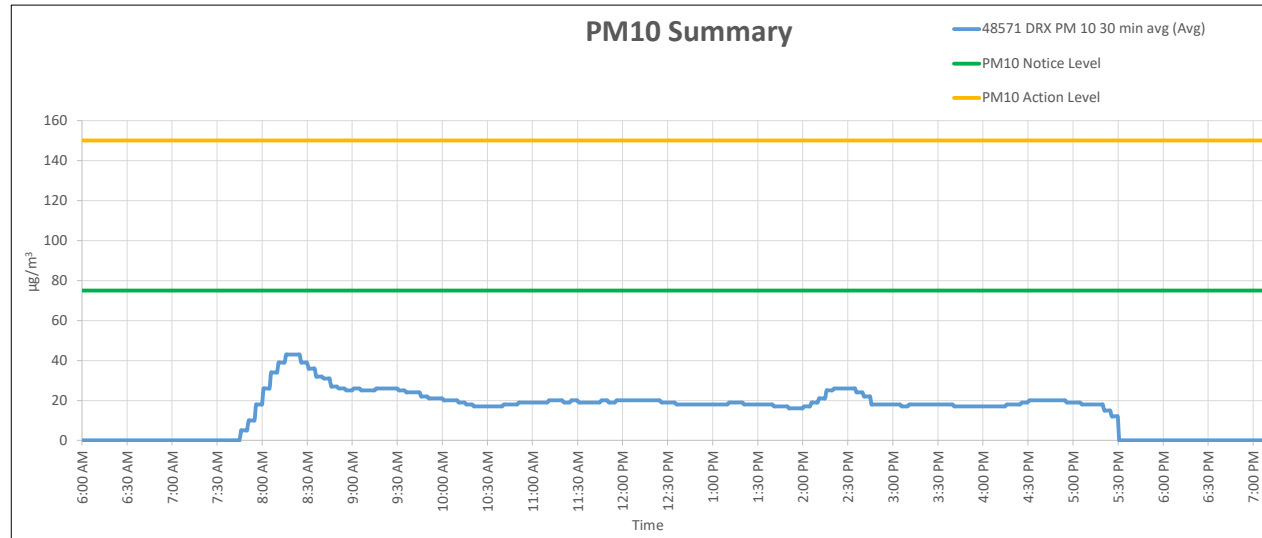
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, August 23, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	7:31 AM	5:20 PM	16.47	26.00	16.31	26.00



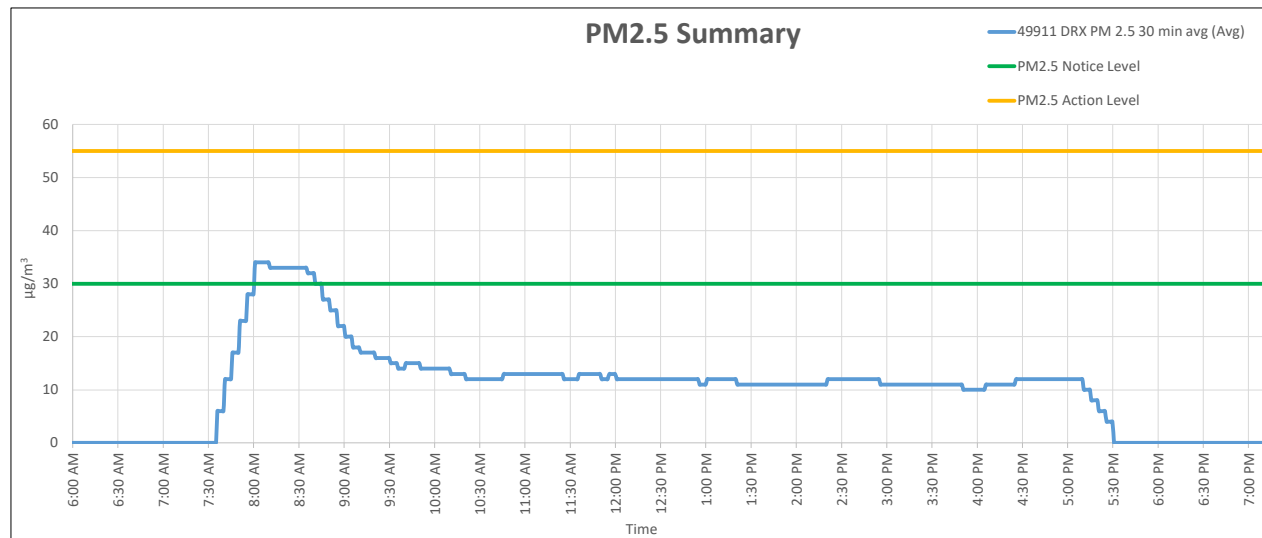
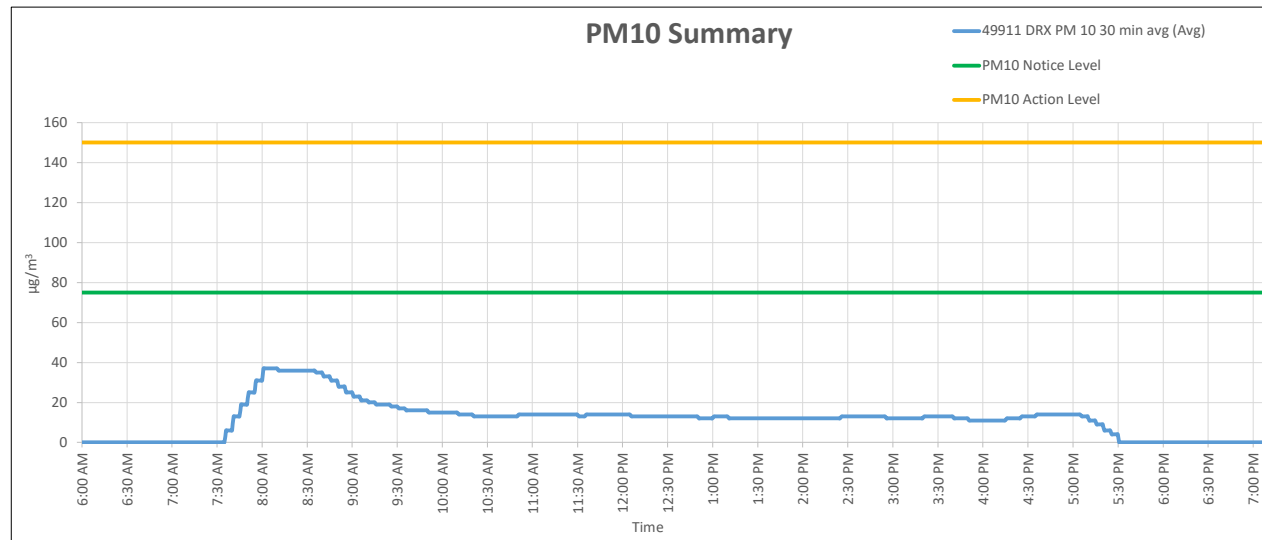
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, August 23, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	7:46 AM	5:30 PM	20.62	43.00	18.90	40.00



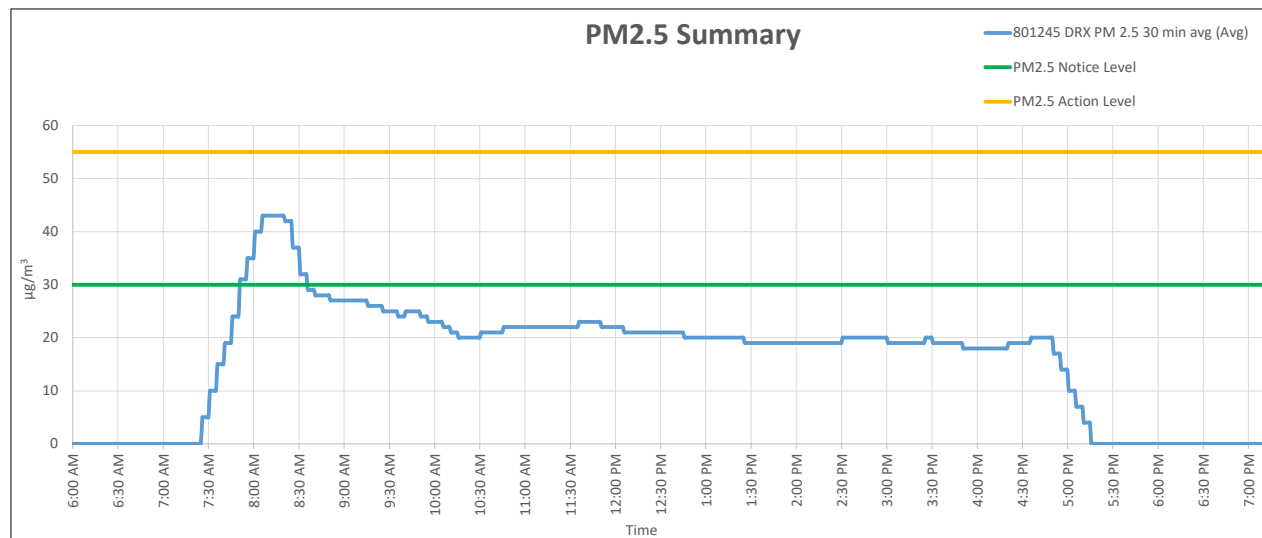
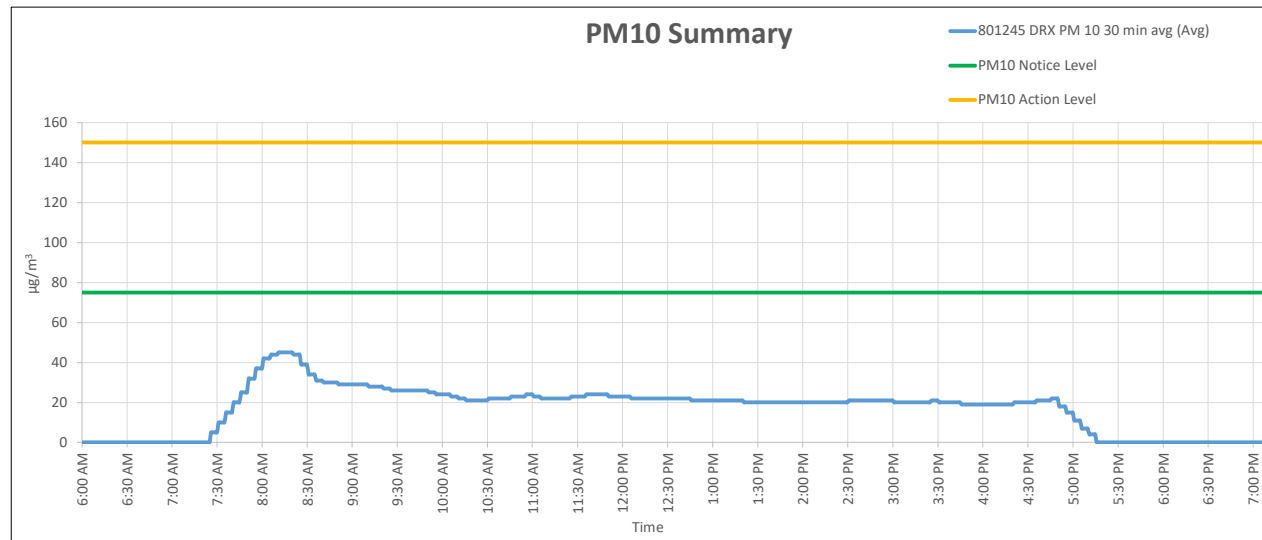
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, August 23, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	7:36 AM	5:30 PM	15.57	37.00	14.20	34.00

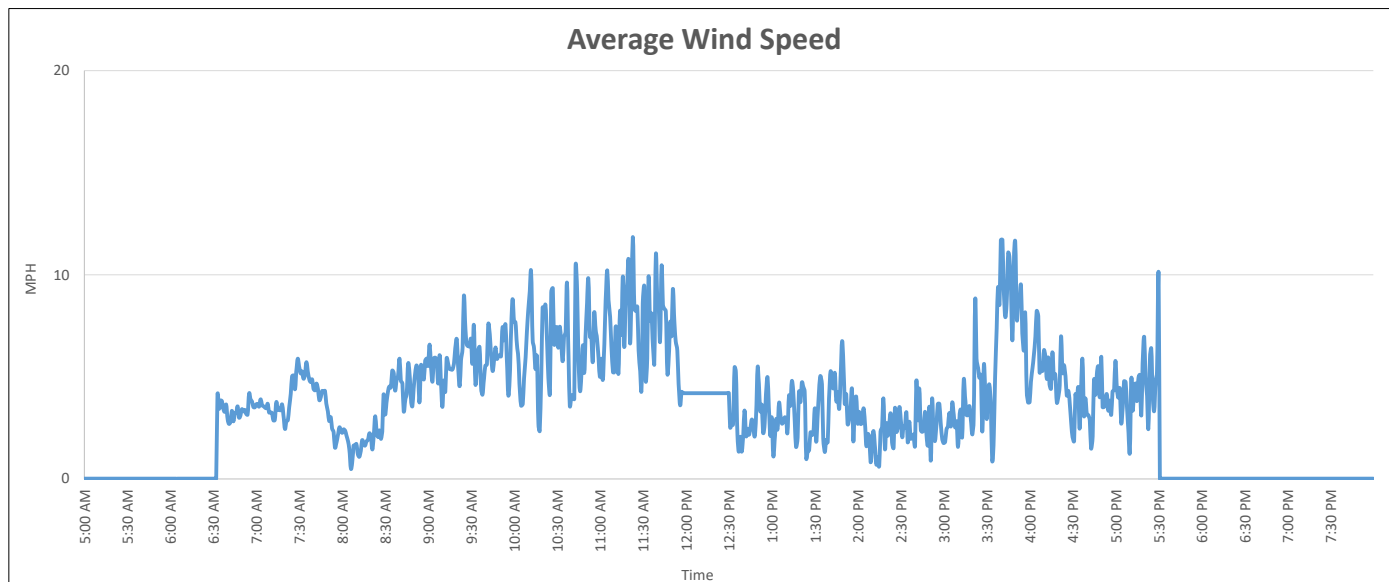
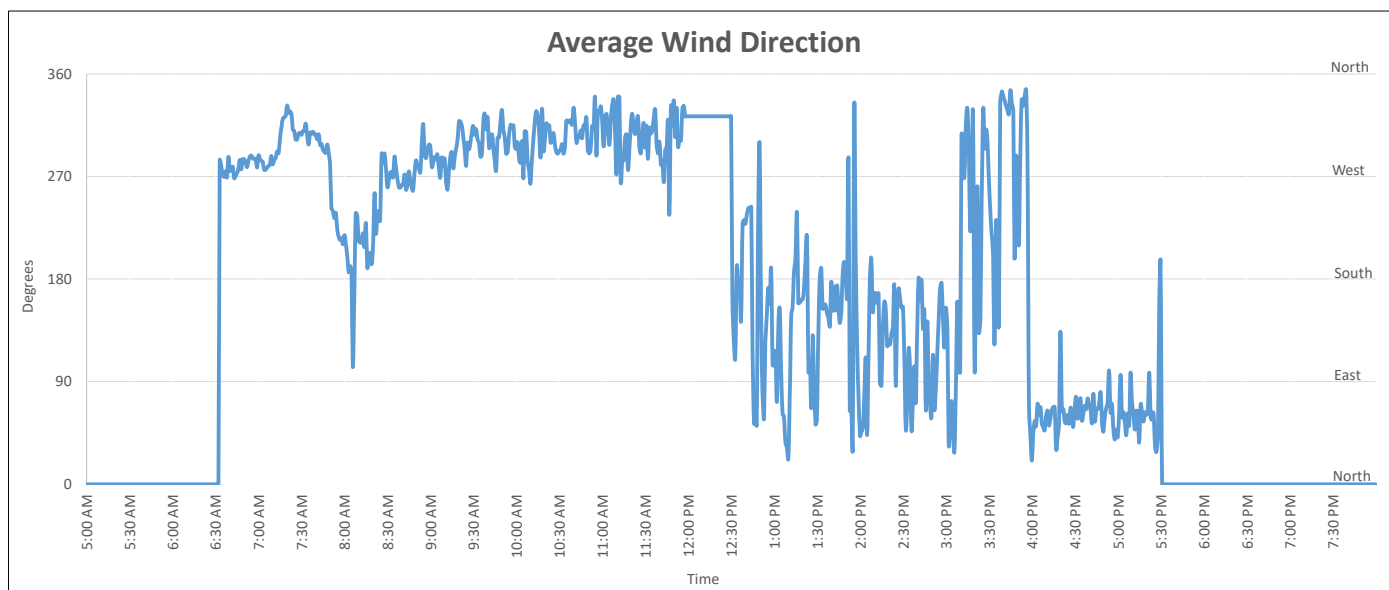


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, August 23, 2024

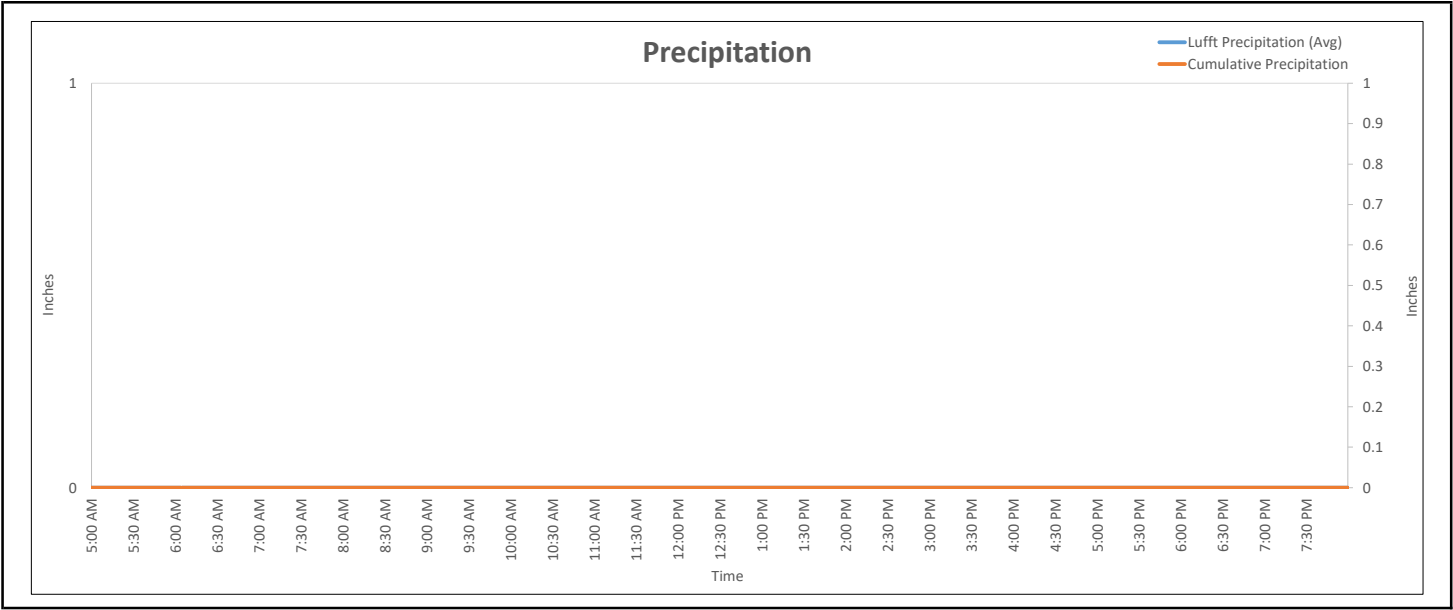
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	7:26 AM	5:15 PM	22.83	45.00	21.77	43.00



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Saturday, August 24, 2024

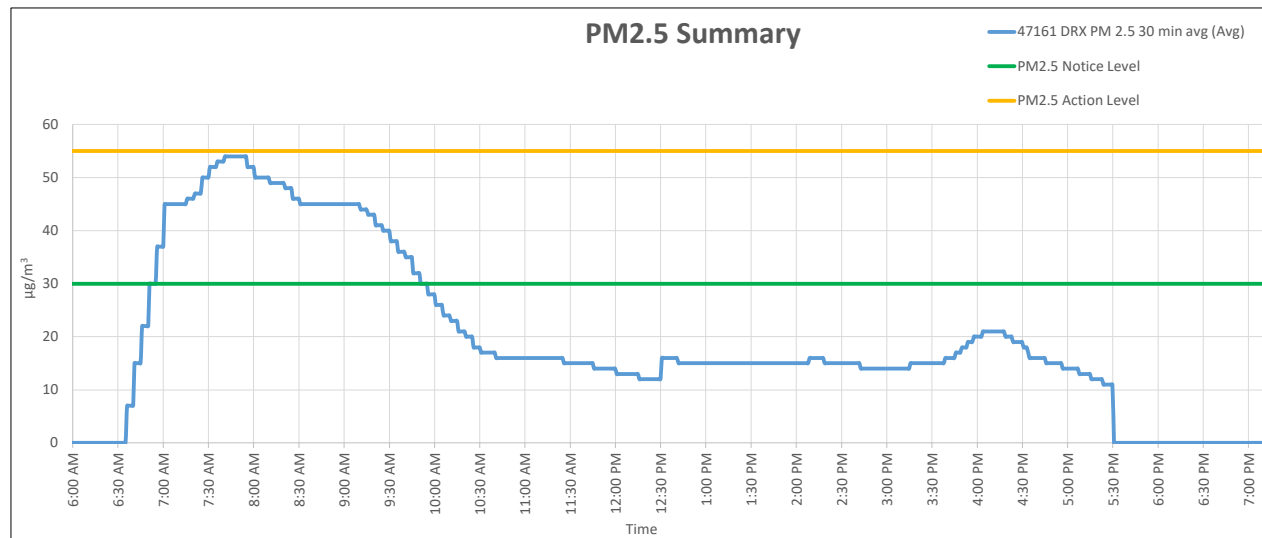
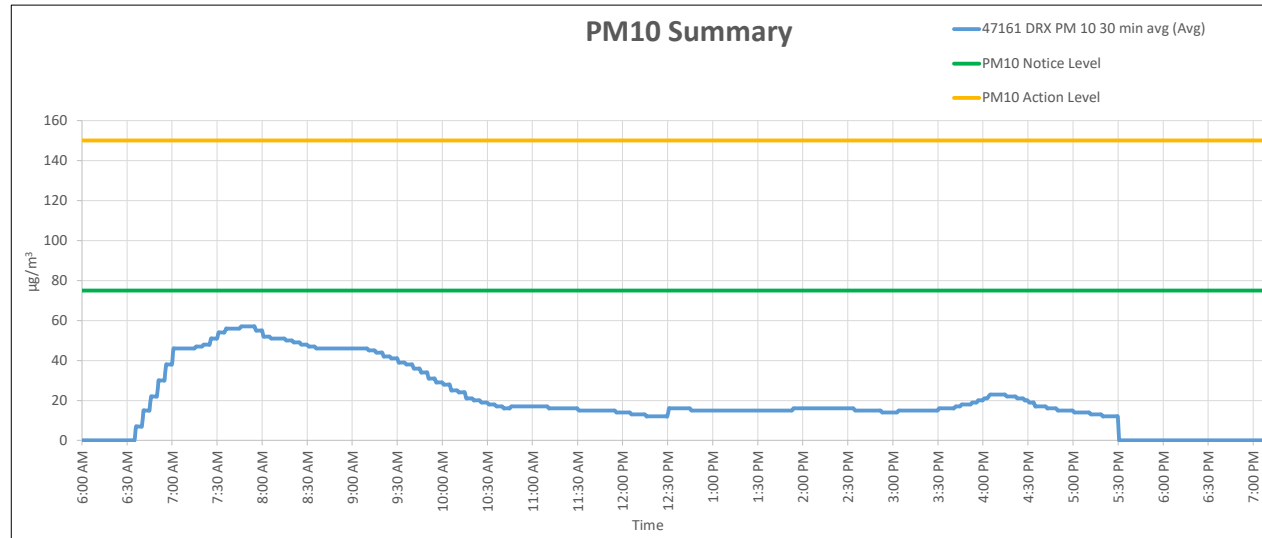


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Saturday, August 24, 2024



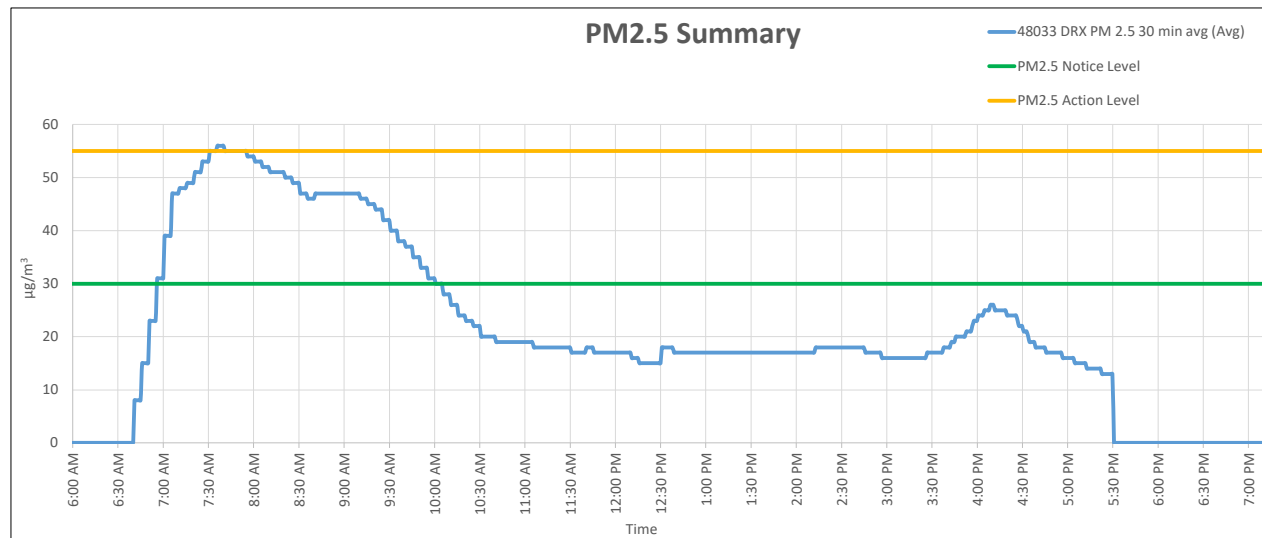
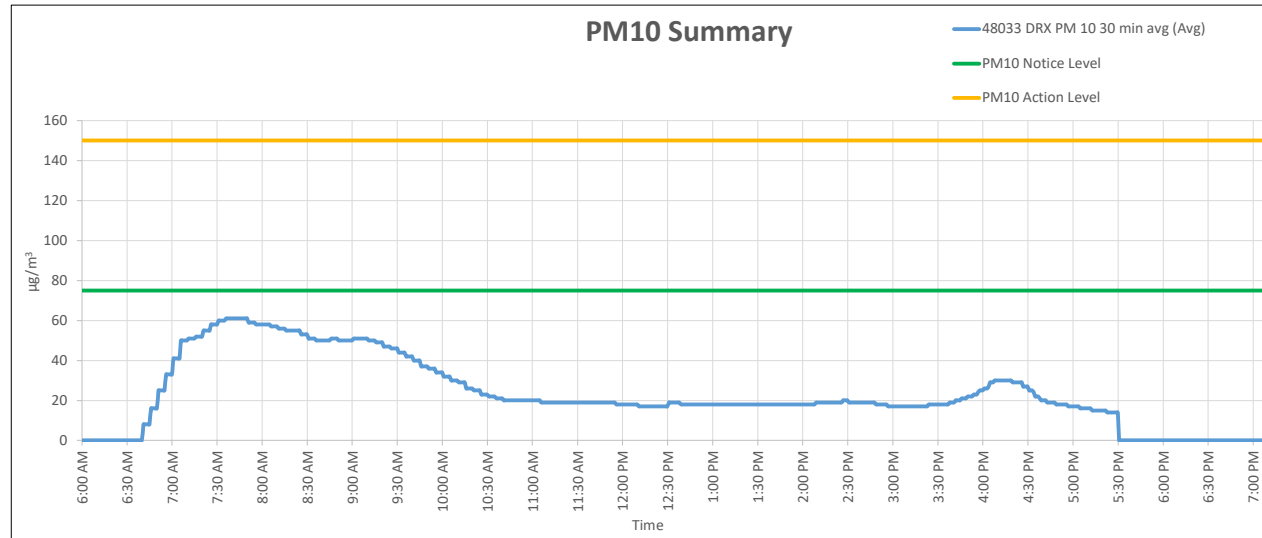
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Saturday, August 24, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	6:36 AM	5:30 PM	24.76	57.00	24.00	54.00



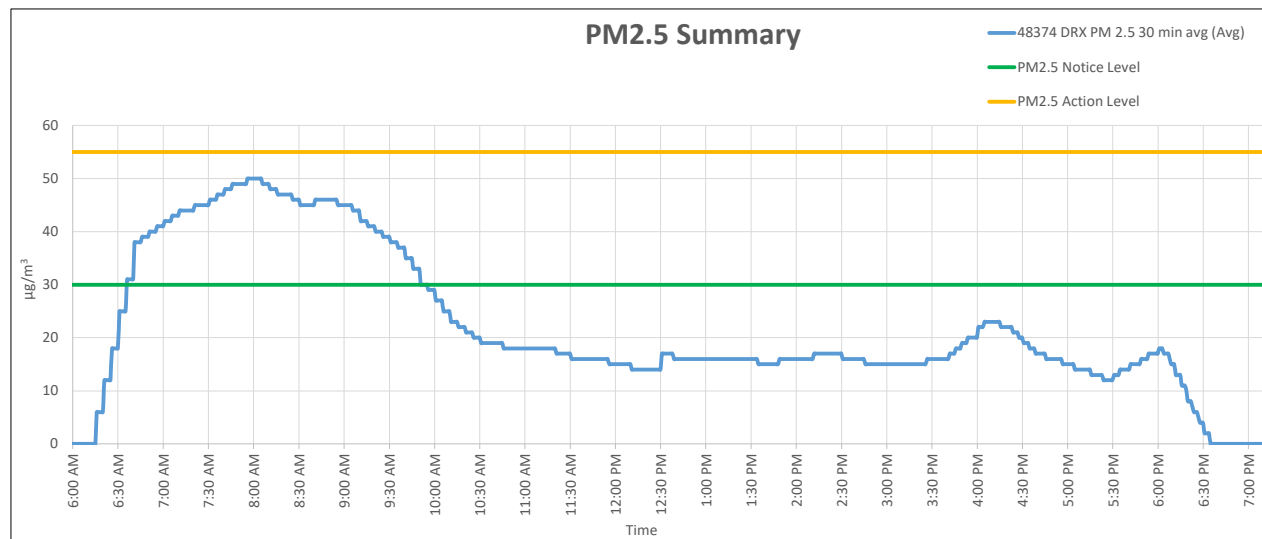
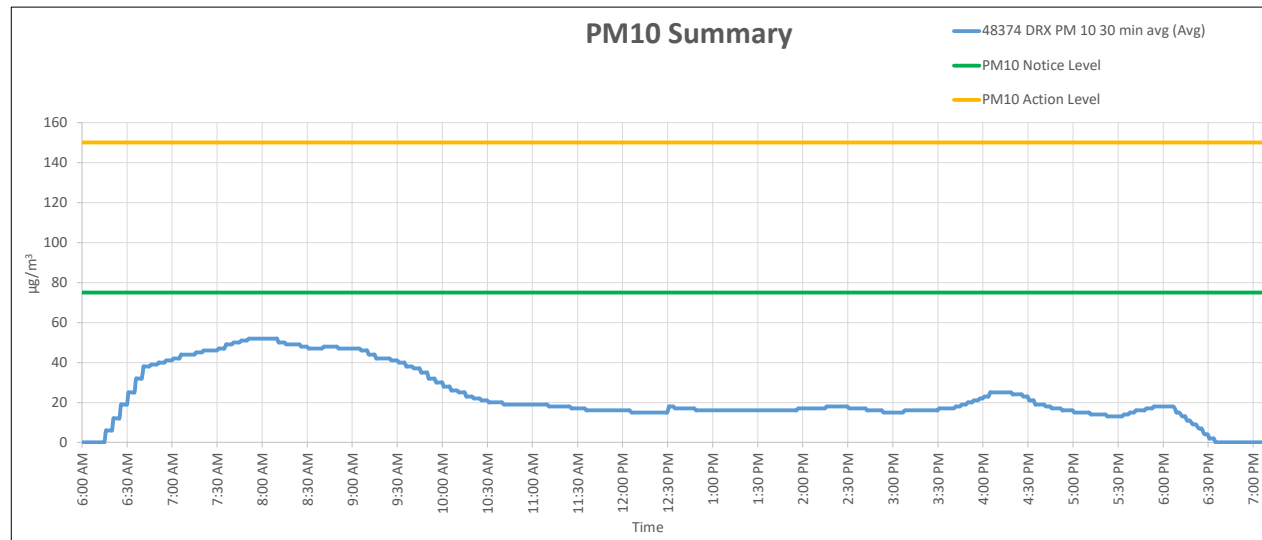
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Saturday, August 24, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	6:41 AM	5:30 PM	28.40	61.00	26.24	56.00



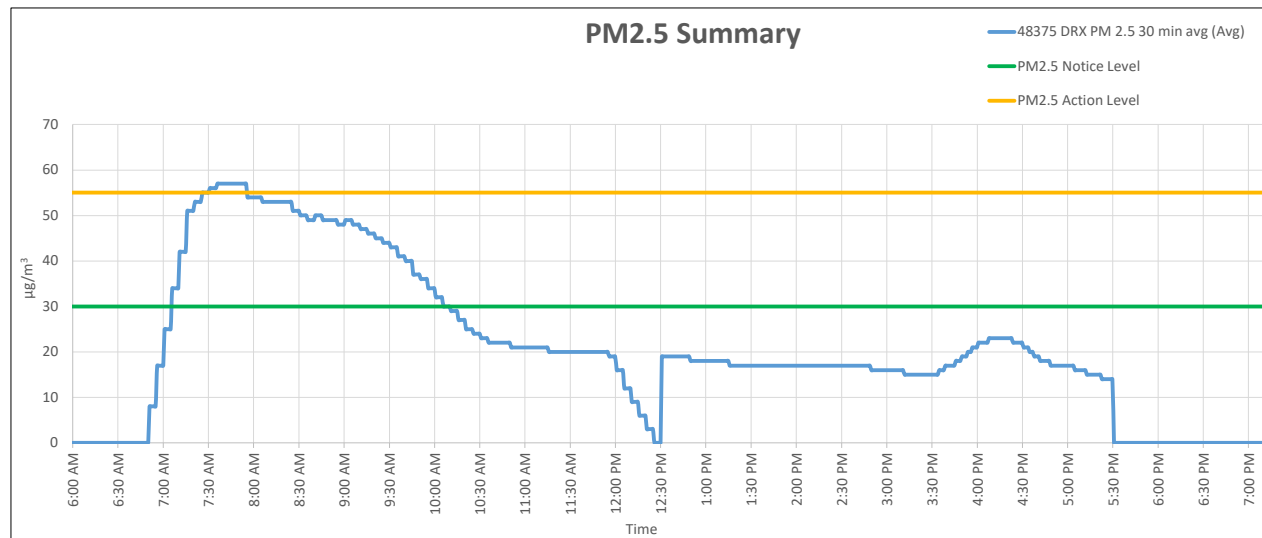
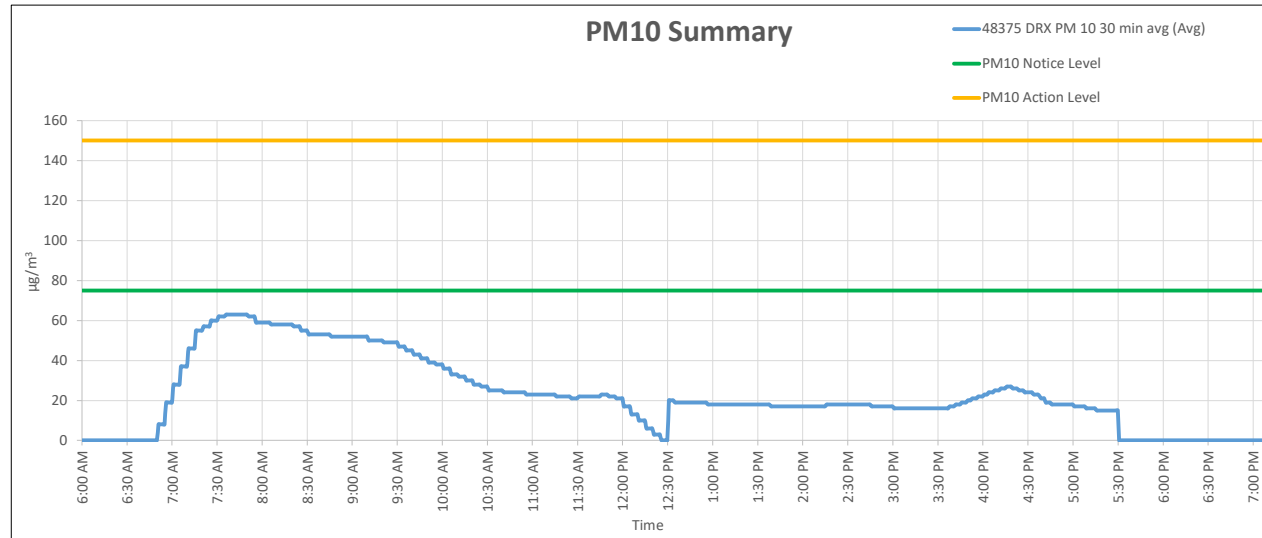
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Saturday, August 24, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	6:16 AM	6:34 PM	24.66	52.00	23.70	50.00



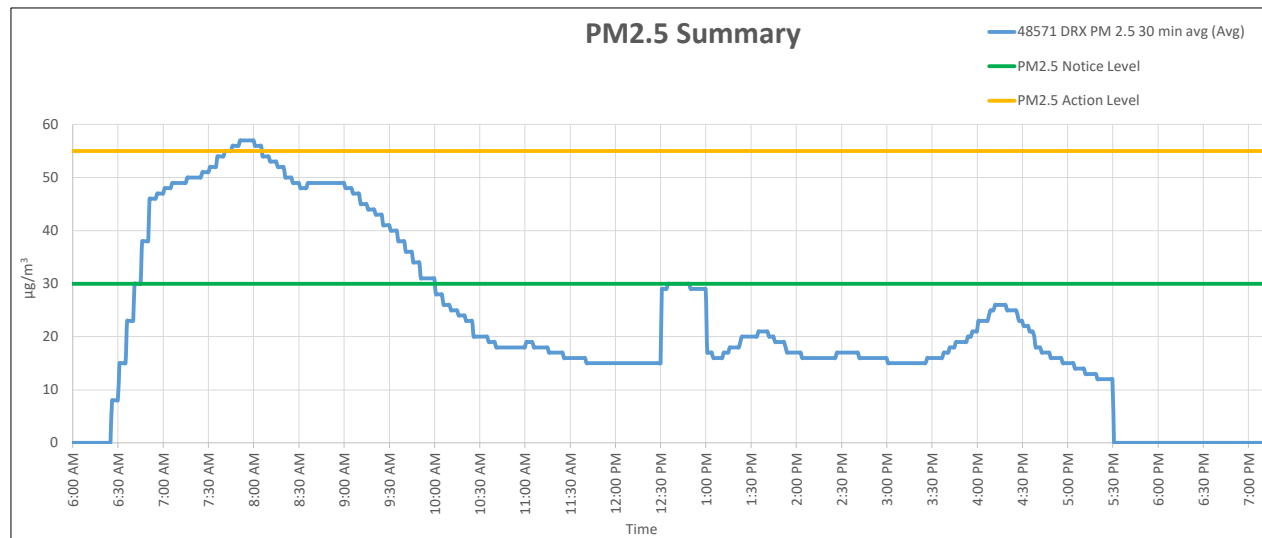
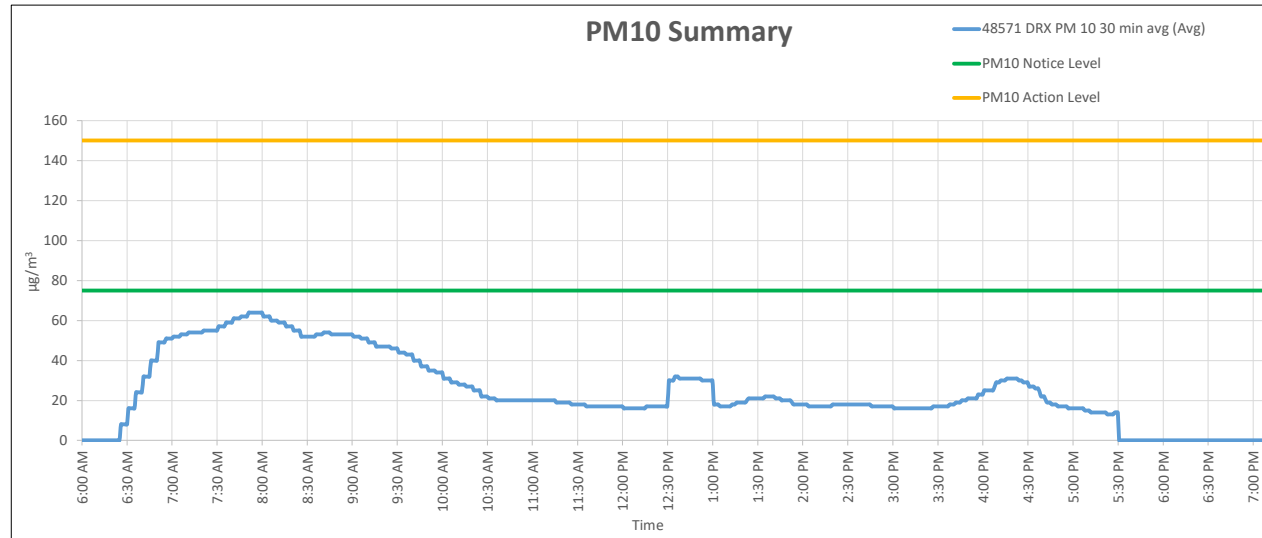
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Saturday, August 24, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	6:51 AM	5:30 PM	28.75	63.00	26.67	57.00



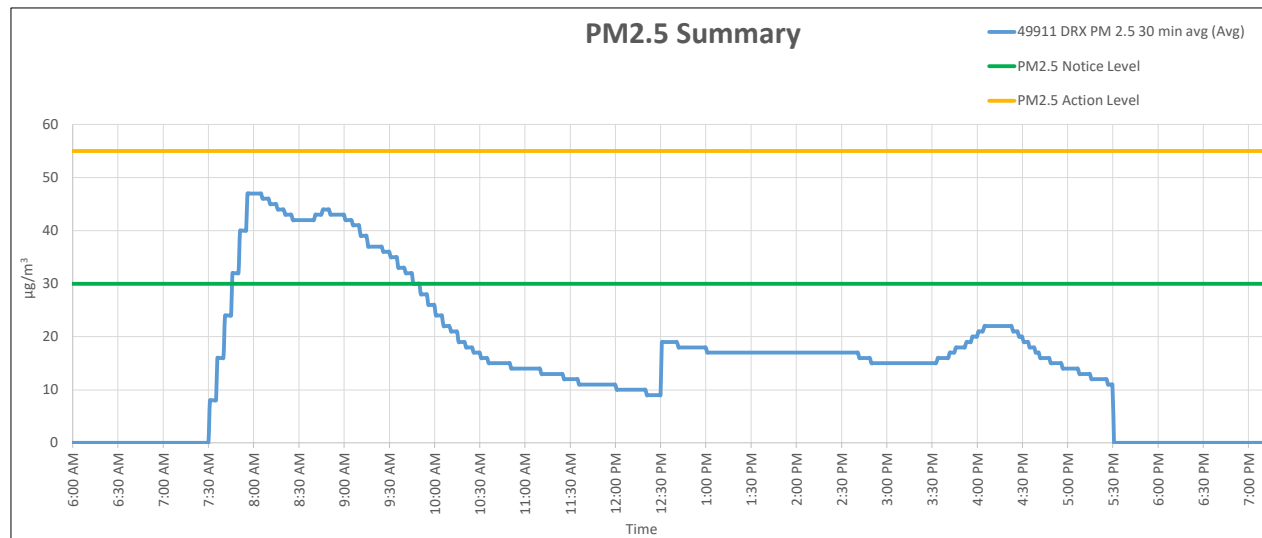
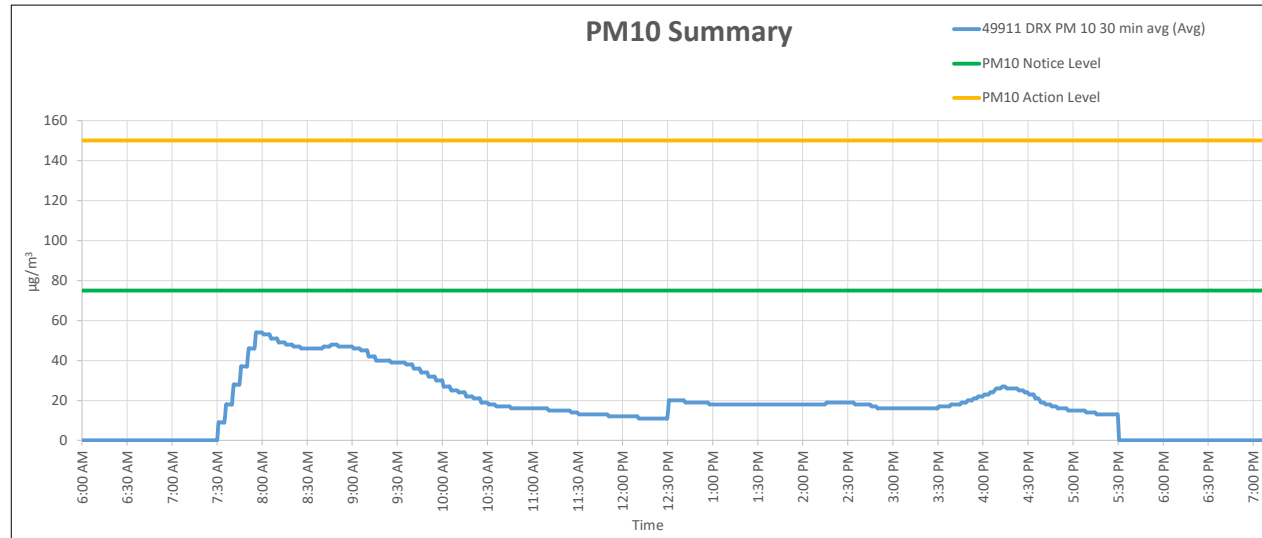
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Saturday, August 24, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	6:26 AM	5:30 PM	29.49	64.00	27.00	57.00



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Saturday, August 24, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	7:31 AM	5:30 PM	23.33	54.00	21.08	47.00



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Saturday, August 24, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	6:46 AM	5:30 PM	33.96	77.00	31.89	72.00

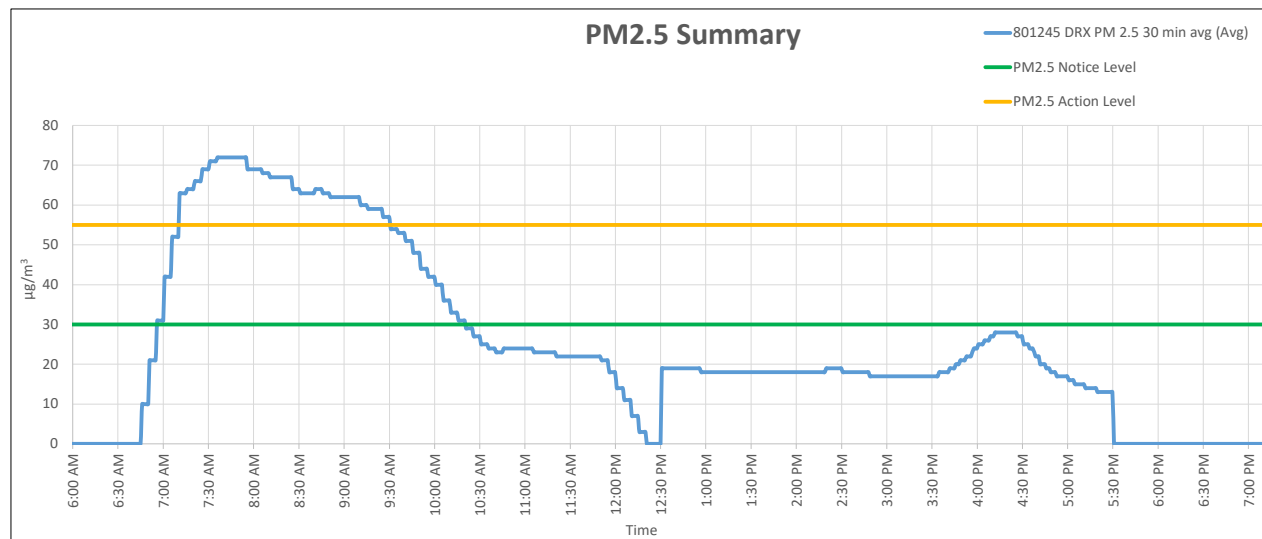
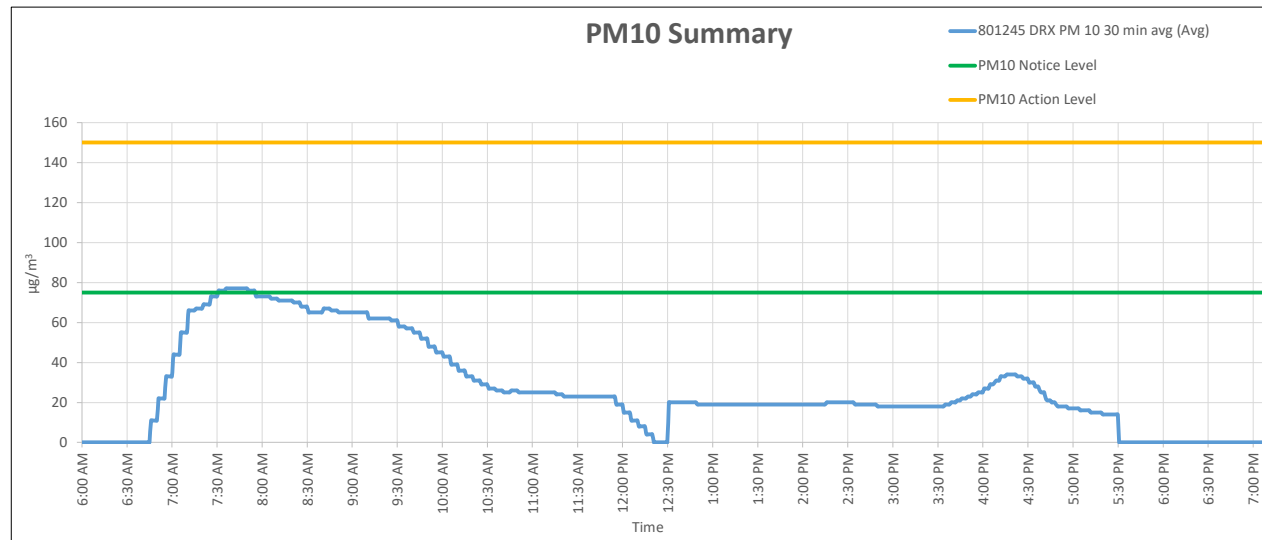
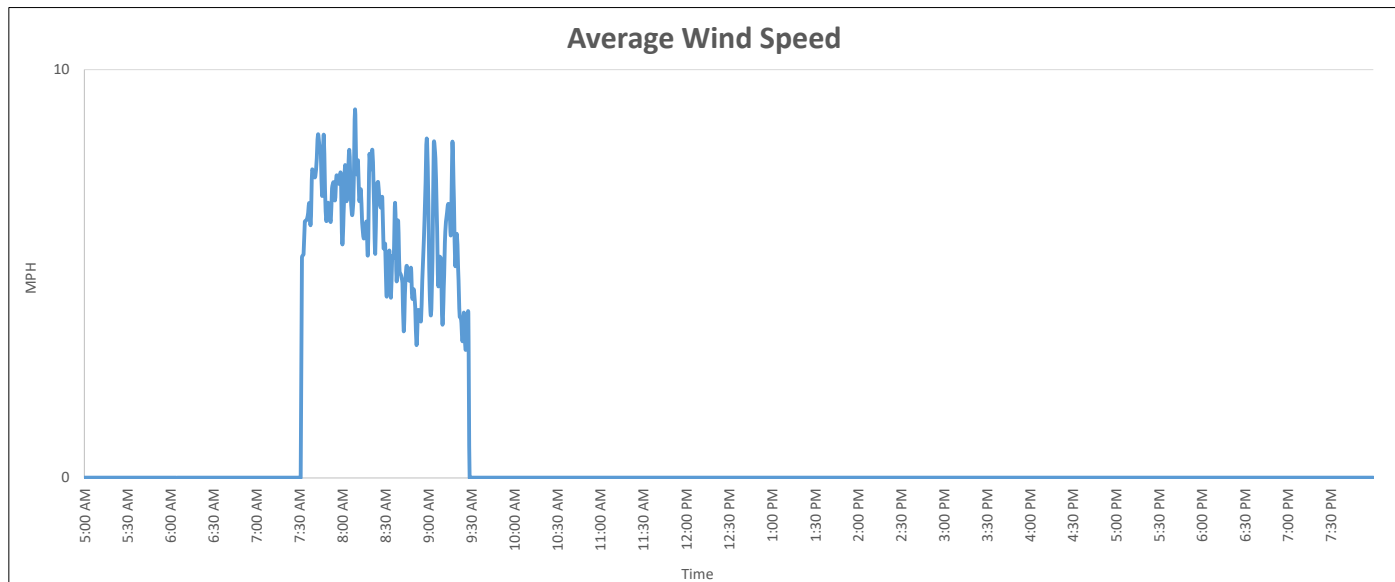
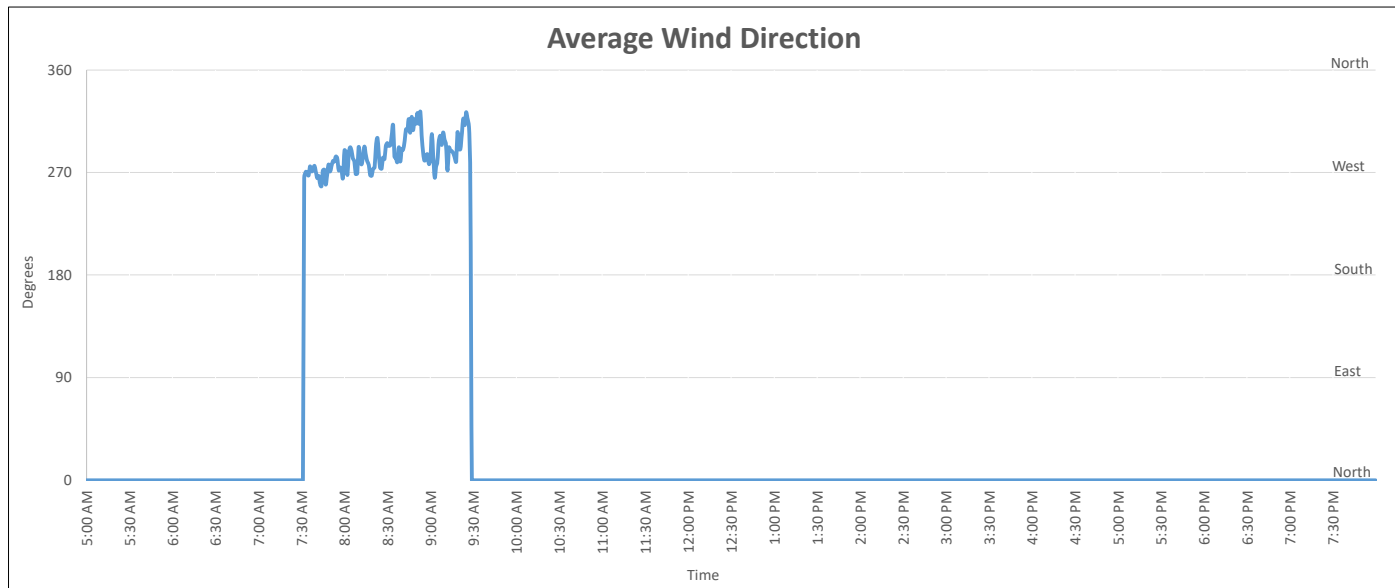
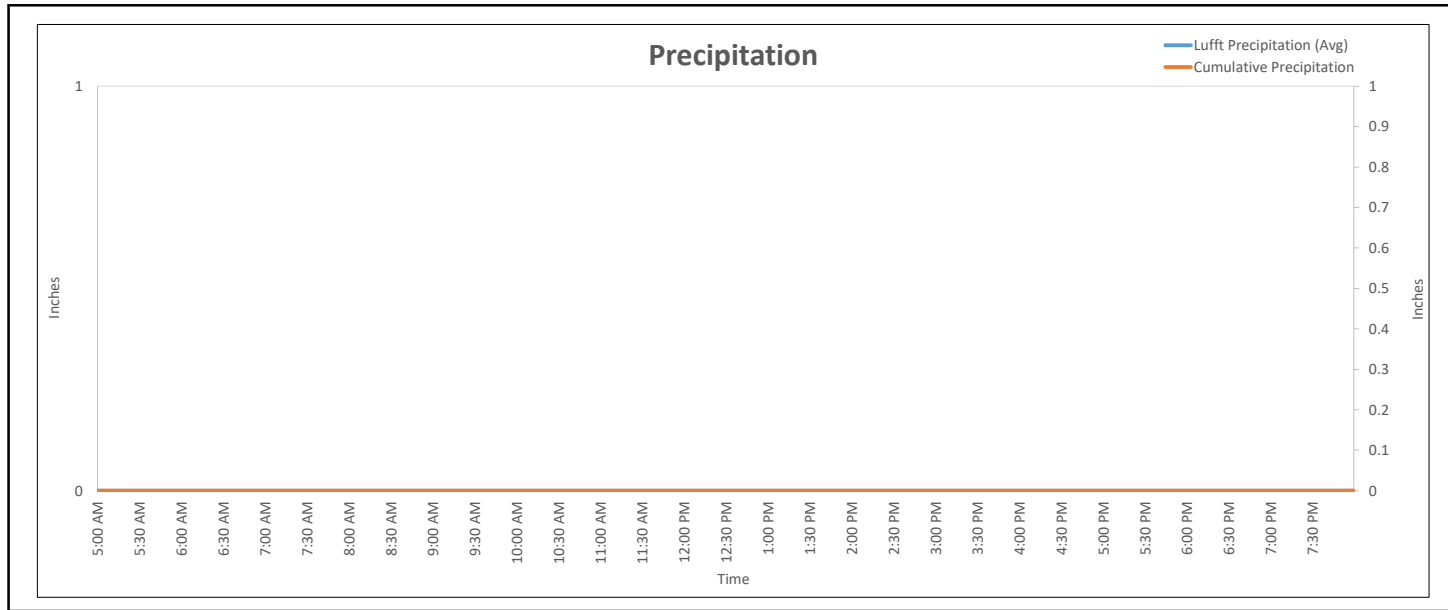


Table 5 – Direct Read Summary							
Union Pacific Houston Wood Preserving Works							
Houston, Texas							
Date	Modem #	PM ₁₀ Concentration (µg/m ³)			PM _{2.5} Concentration (µg/m ³)		
		Min	Max	Average	Min	Max	Average
Week 14							
8/26/2024	48374	2.000	28.000	17.221	2.000	23.000	14.621
	47161	2.000	25.000	16.497	2.000	23.000	15.299
	48033	2.000	39.000	23.776	2.000	29.000	19.190
	48571	3.000	37.000	21.409	2.000	27.000	16.417
	48375	3.000	38.000	23.028	2.000	29.000	18.604
	801245	3.000	44.000	26.401	2.000	36.000	22.401
	49911	2.000	31.000	20.424	2.000	23.000	15.781
8/27/2024	48374	2.000	30.000	13.737	1.000	27.000	12.525
	47161	1.000	31.000	13.696	1.000	29.000	12.920
	48033	2.000	43.000	19.354	2.000	35.000	16.734
	48571	1.000	39.000	17.281	1.000	32.000	14.409
	48375	2.000	42.000	21.155	2.000	35.000	18.825
	801245	2.000	50.000	23.976	2.000	44.000	21.490
	49911	1.000	37.000	17.861	1.000	29.000	15.103
8/28/2024	48374	2.000	29.000	14.762	2.000	28.000	14.151
	47161	2.000	27.000	13.641	2.000	26.000	13.185
	48033	2.000	32.000	17.866	2.000	29.000	16.570
	48571	0.000	28.000	16.042	0.000	25.000	14.696
	48375	3.000	32.000	19.318	2.000	31.000	18.101
	801245	3.000	39.000	20.998	3.000	36.000	19.633
	49911	2.000	29.000	17.098	2.000	26.000	15.506
8/29/2024	48374	1.00	37.00	9.95	1.00	36.00	9.56
	47161	1.00	29.00	10.23	1.00	28.00	9.93
	48033	1.00	27.00	10.96	1.00	25.00	10.36
	48571	1.00	52.00	13.34	1.00	46.00	12.16
	48375	0.00	29.00	9.17	0.00	26.00	8.65
	801245	3.00	37.00	14.03	3.00	34.00	13.22
	49911	0.00	41.00	15.68	0.00	37.00	10.61
Note:							
1. Values shown in GREEN are above the Notice Level Threshold.							
2. Values shown in ORANGE are above the Action Level Threshold.							
3. Values shown in RED are above the Stop-Work Level Threshold.							

Union Pacific Railroad
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Monday, August 26, 2024

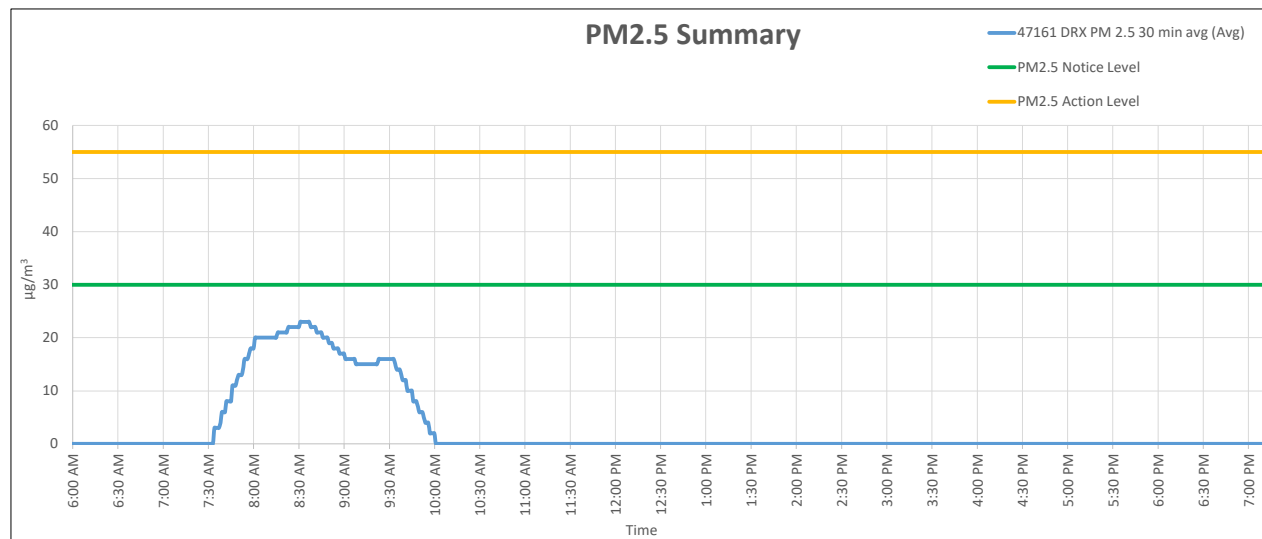
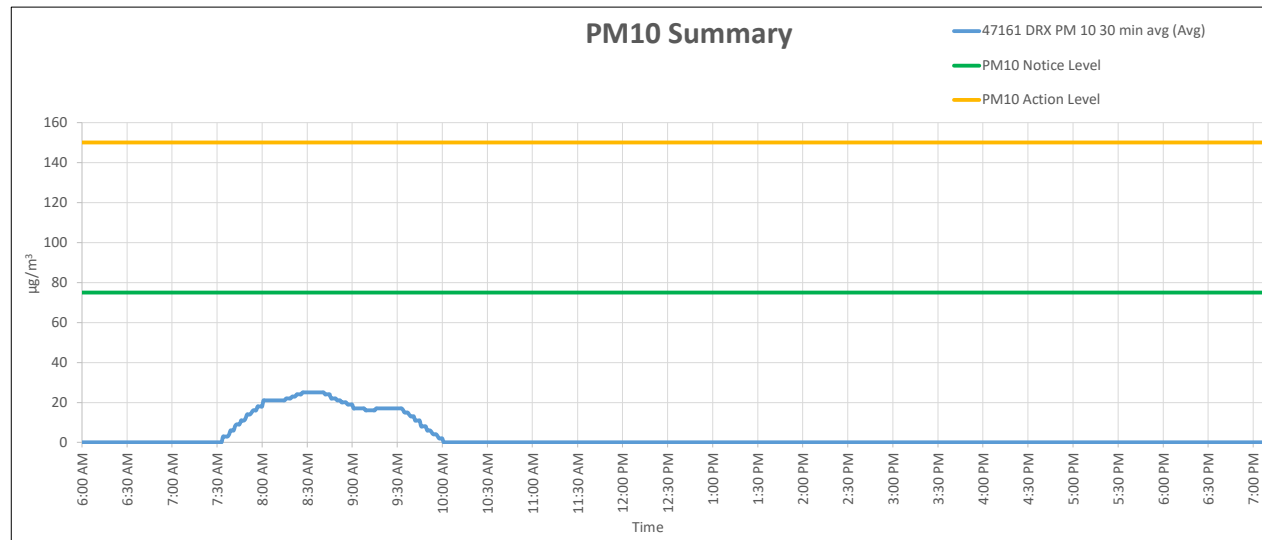


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Monday, August 26, 2024



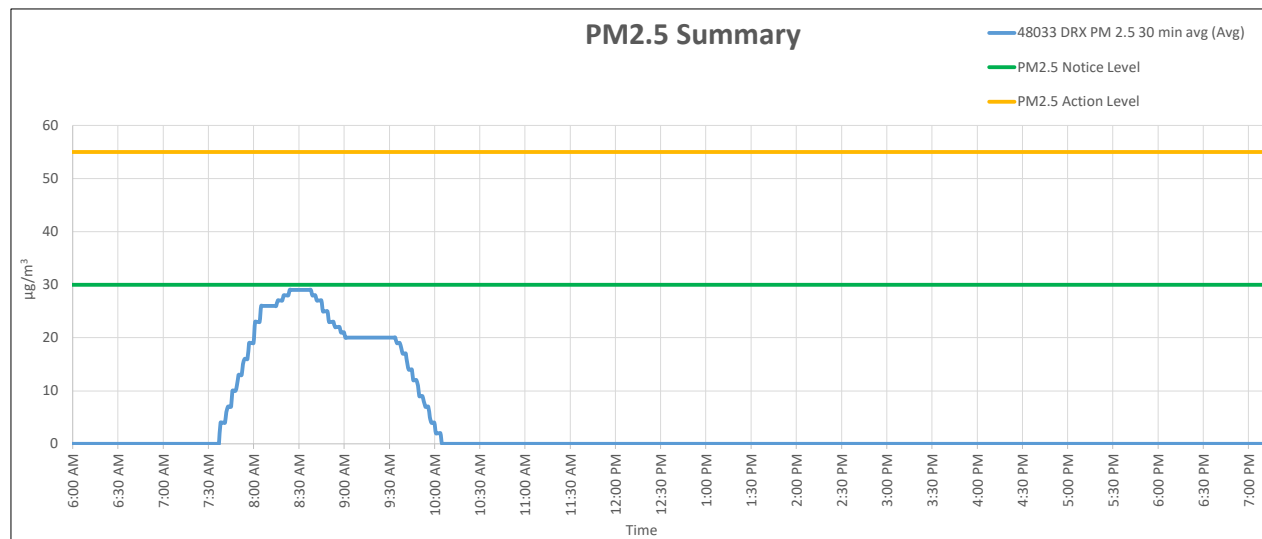
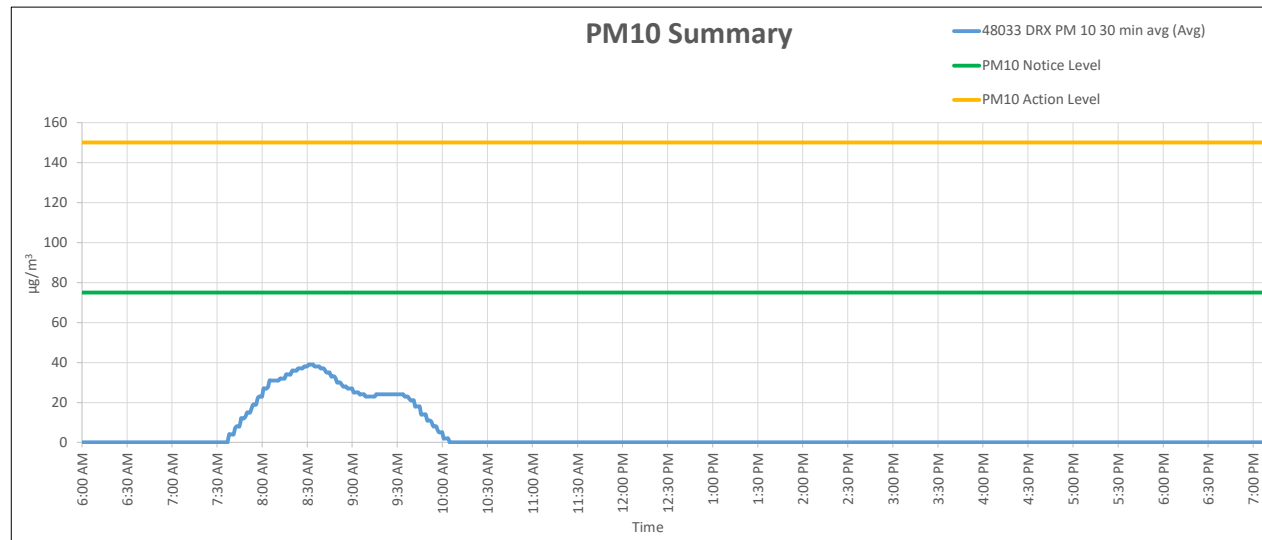
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	7:34 AM	10:00 AM	16.50	25.00	15.30	23.00



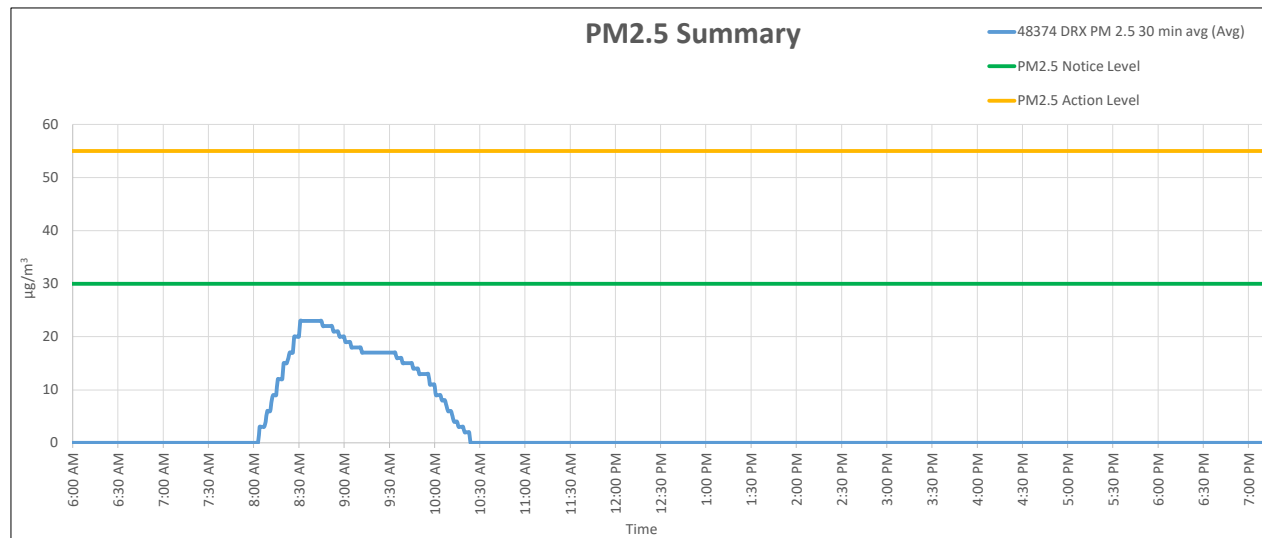
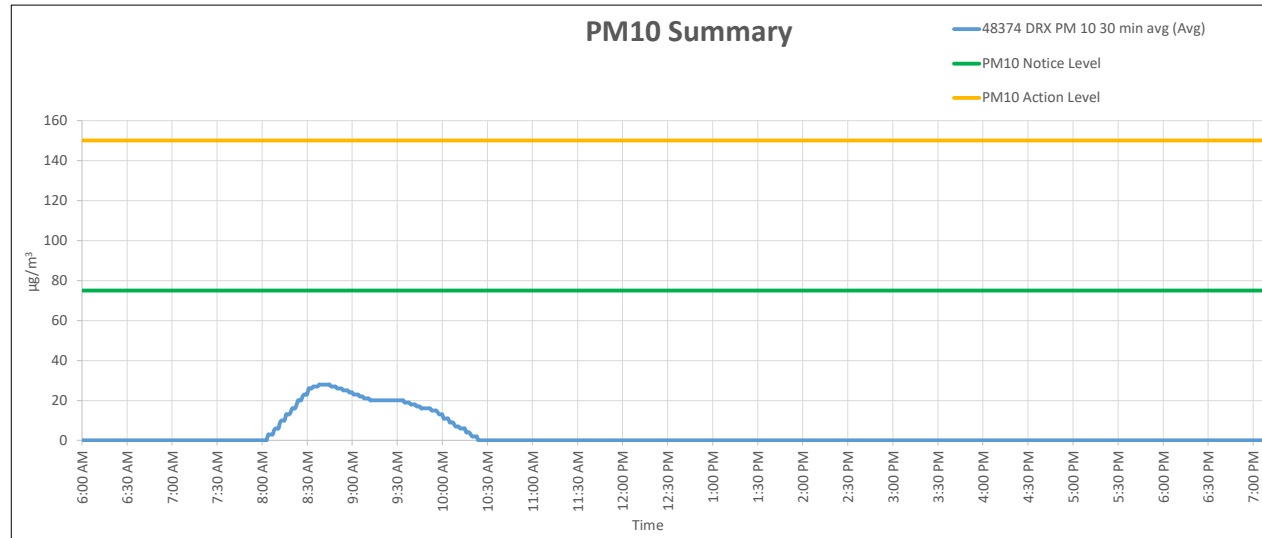
Union Pacific Railroad
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Monday, August 26, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	7:38 AM	10:04 AM	23.78	39.00	19.19	29.00



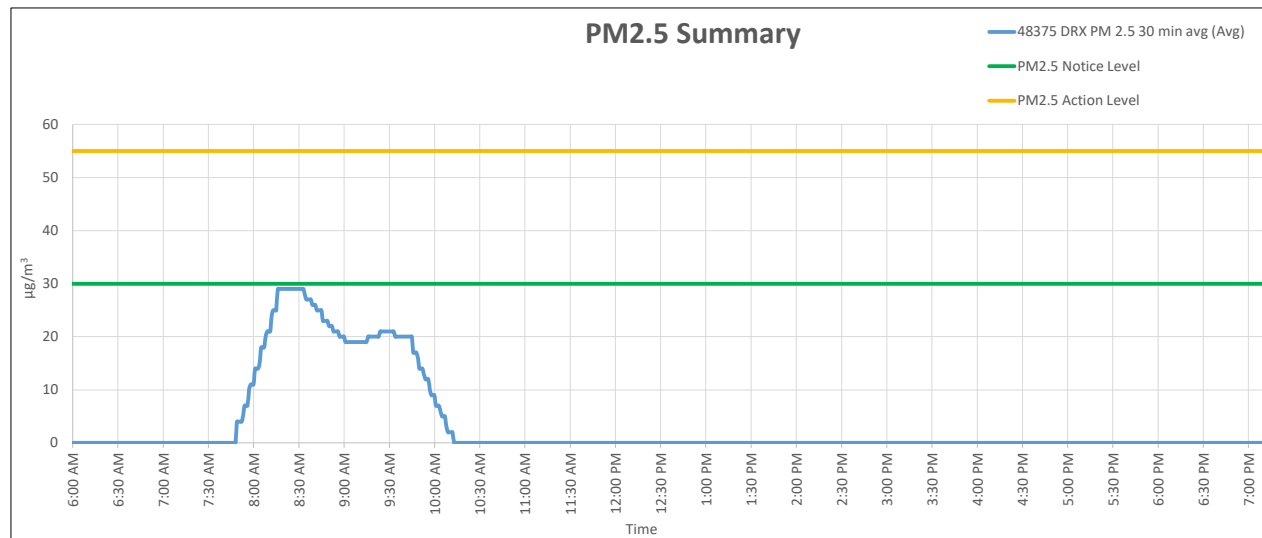
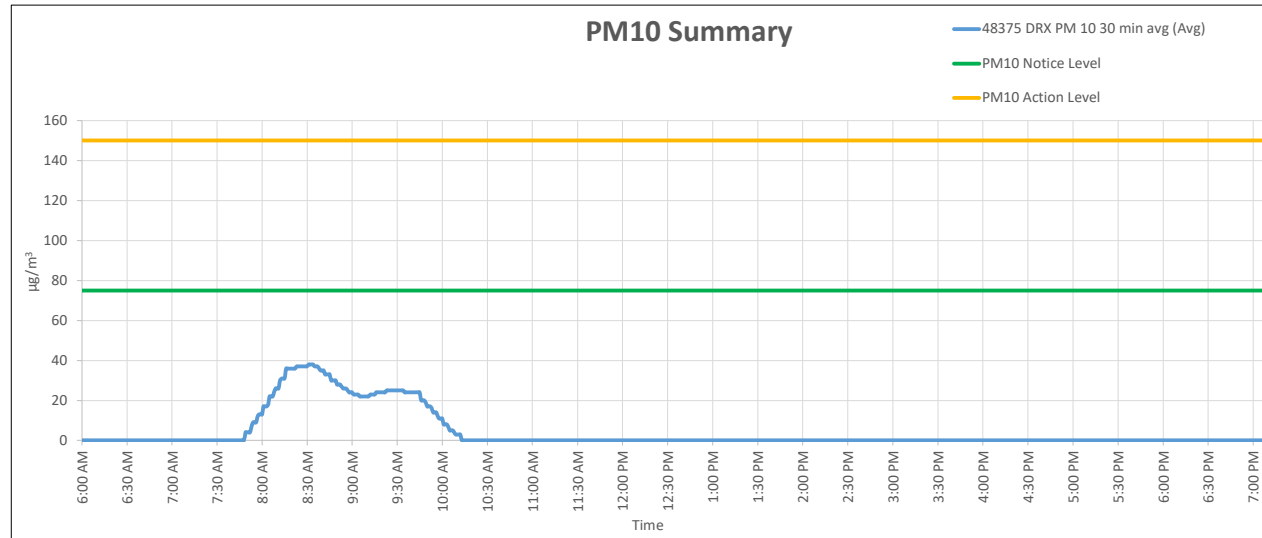
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	8:04 AM	10:23 AM	17.22	28.00	14.62	23.00



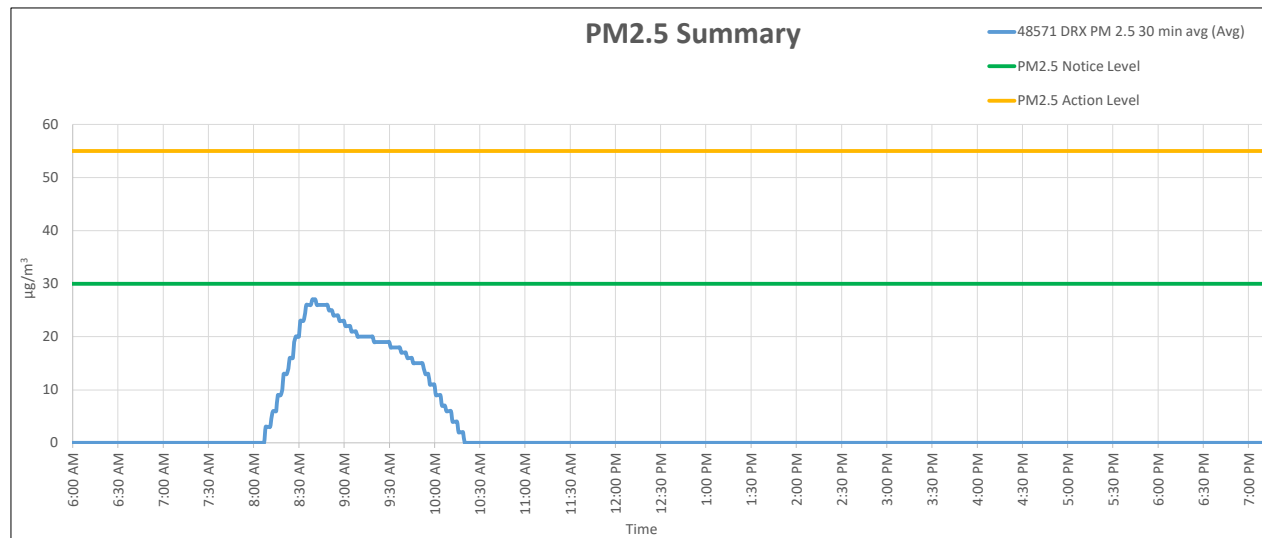
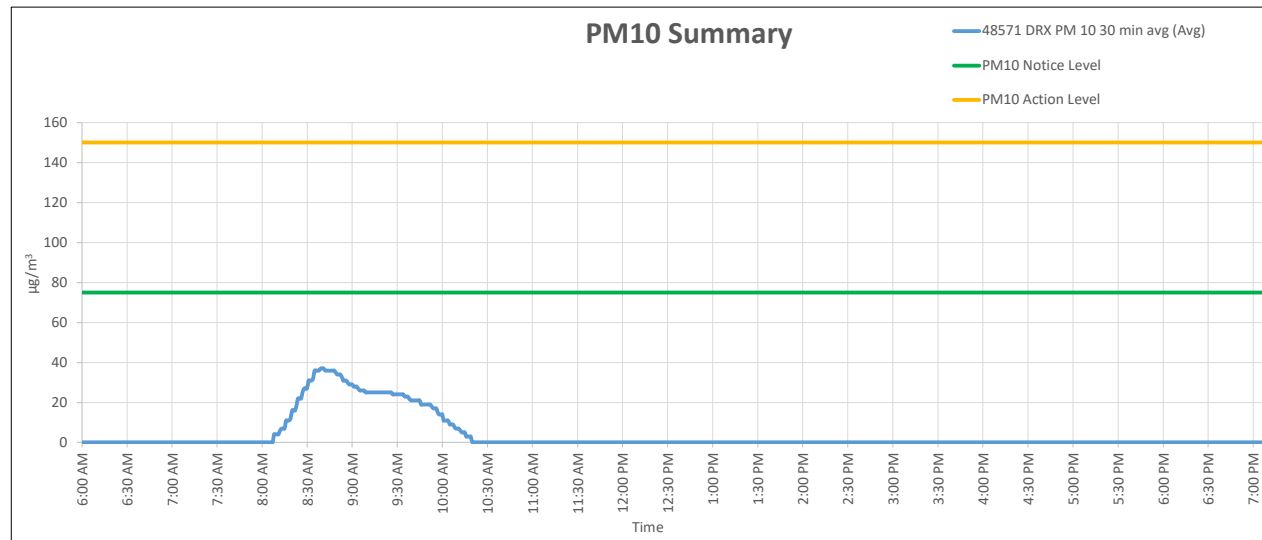
Union Pacific Railroad
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Monday, August 26, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	7:49 AM	10:12 AM	23.03	38.00	18.60	29.00



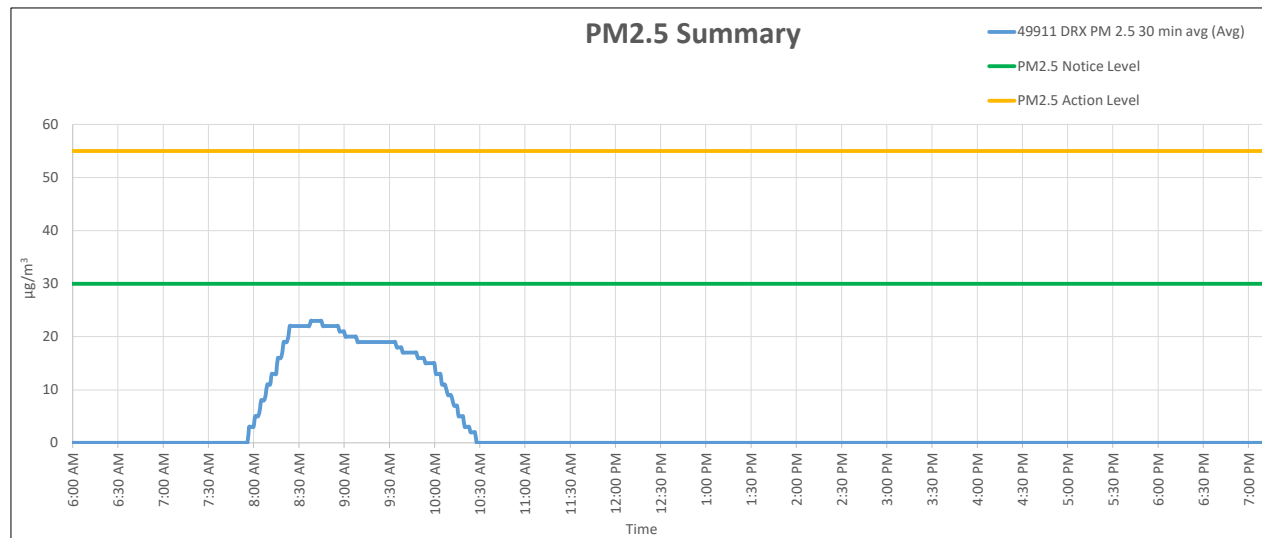
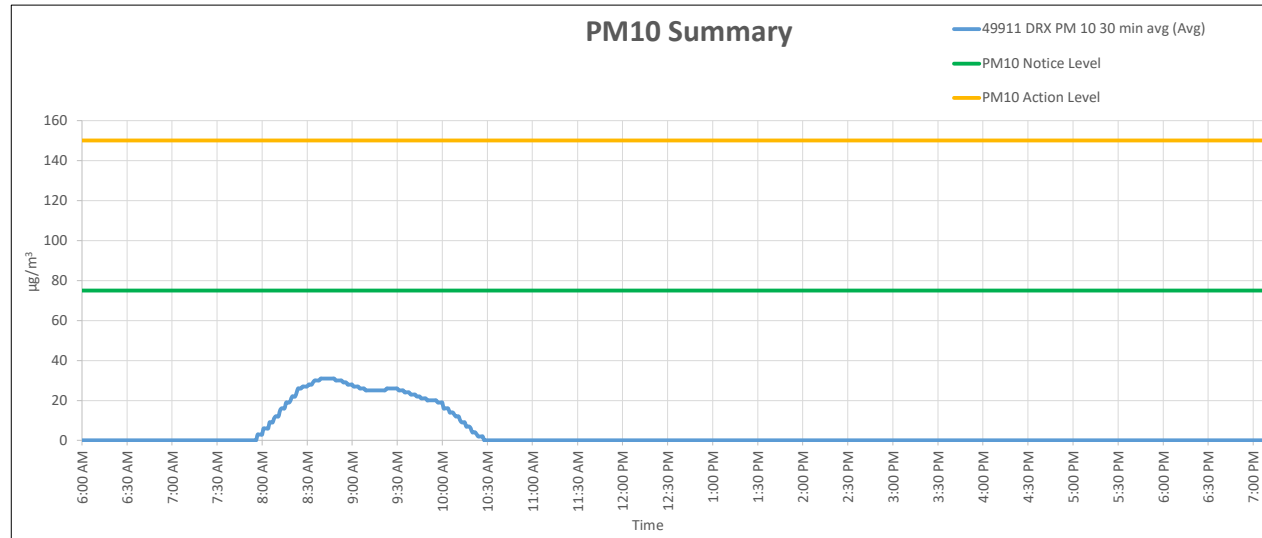
Union Pacific Railroad
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Monday, August 26, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	8:08 AM	10:19 AM	21.41	37.00	16.42	27.00



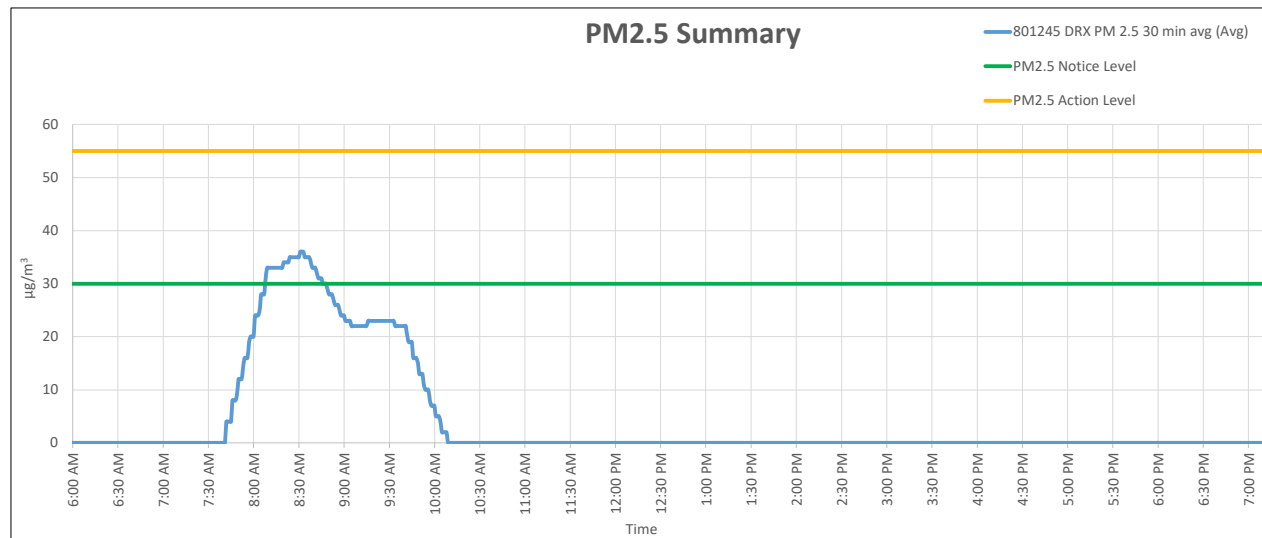
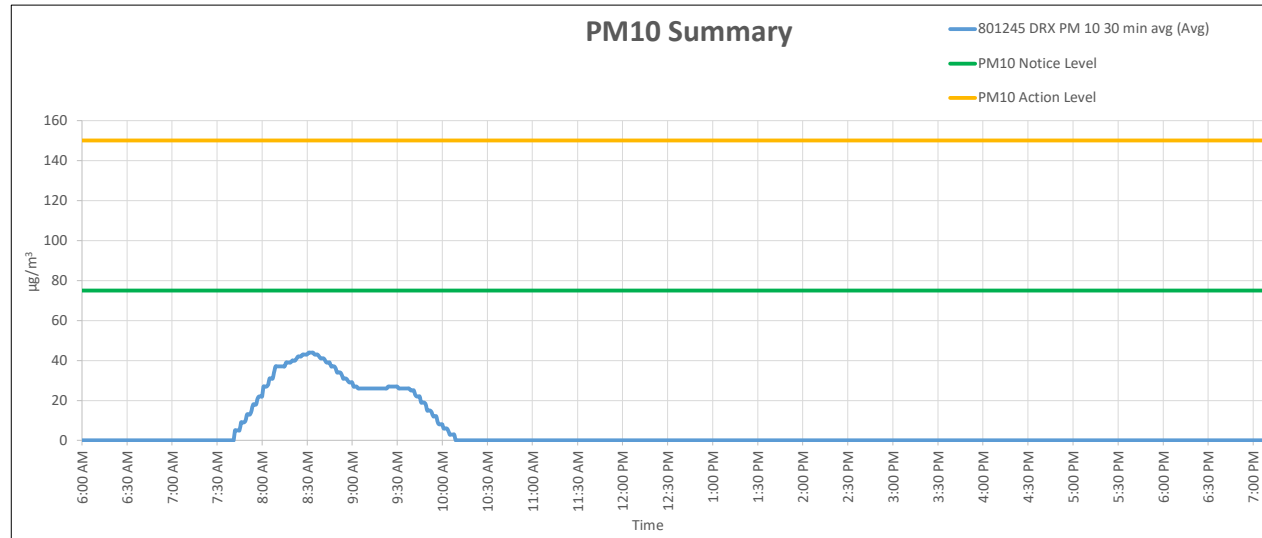
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	7:57 AM	10:27 AM	20.42	31.00	15.78	23.00



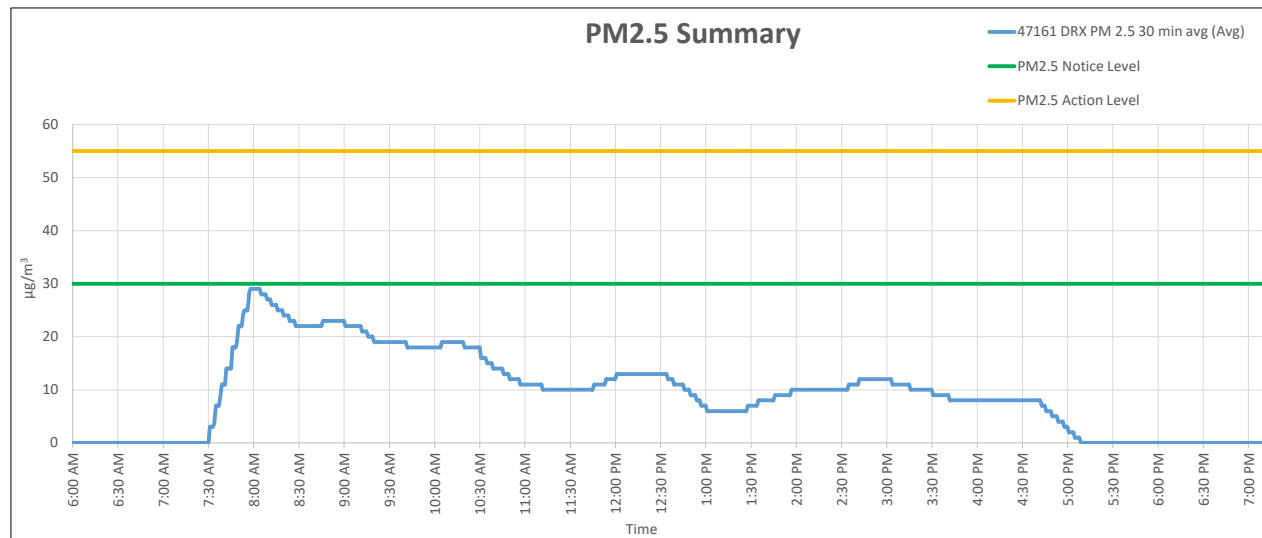
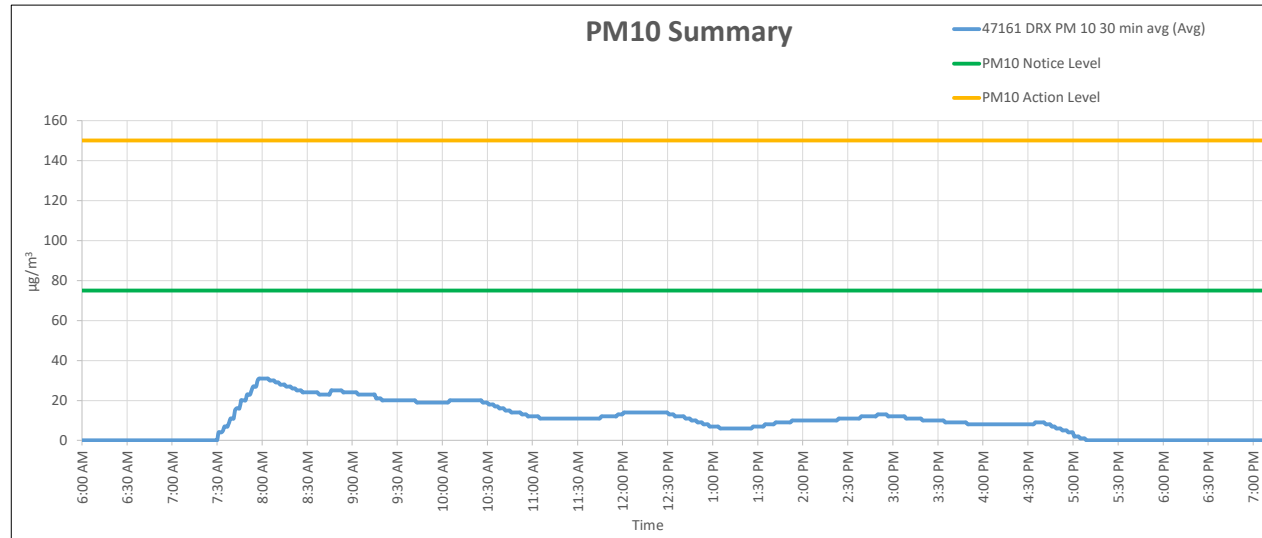
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	7:42 AM	10:08 AM	26.40	44.00	22.40	36.00



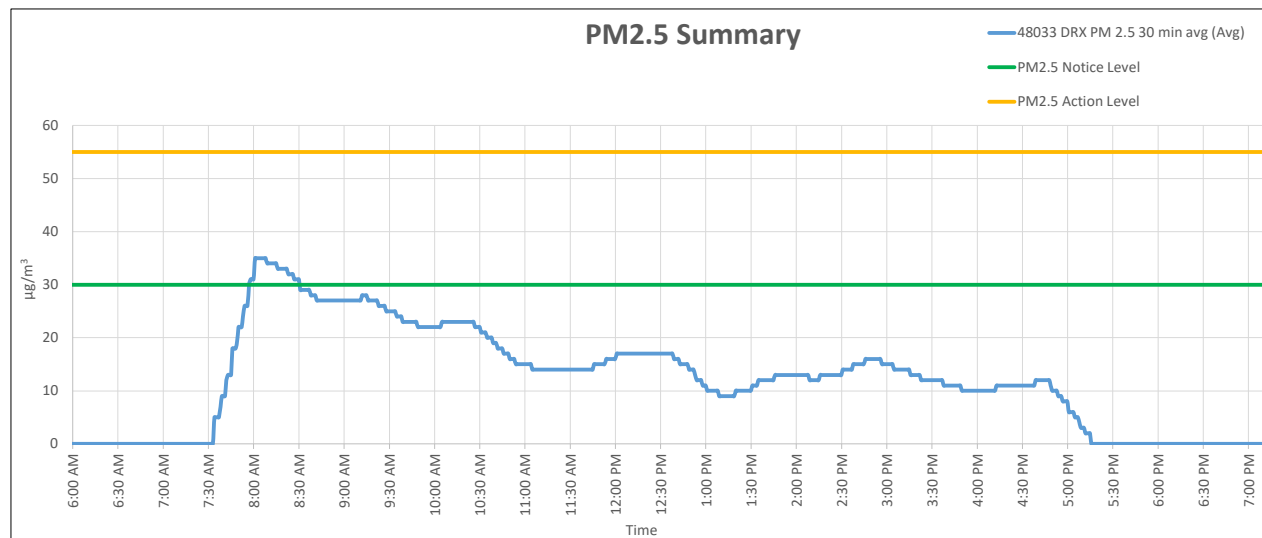
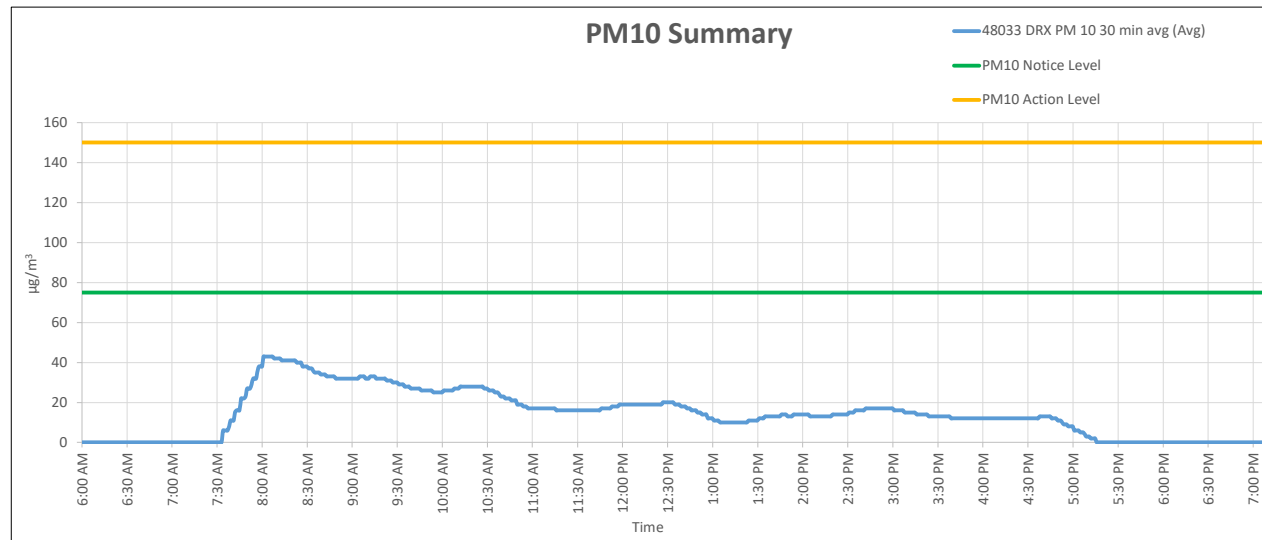
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	7:31 AM	5:04 PM	13.70	31.00	12.92	29.00



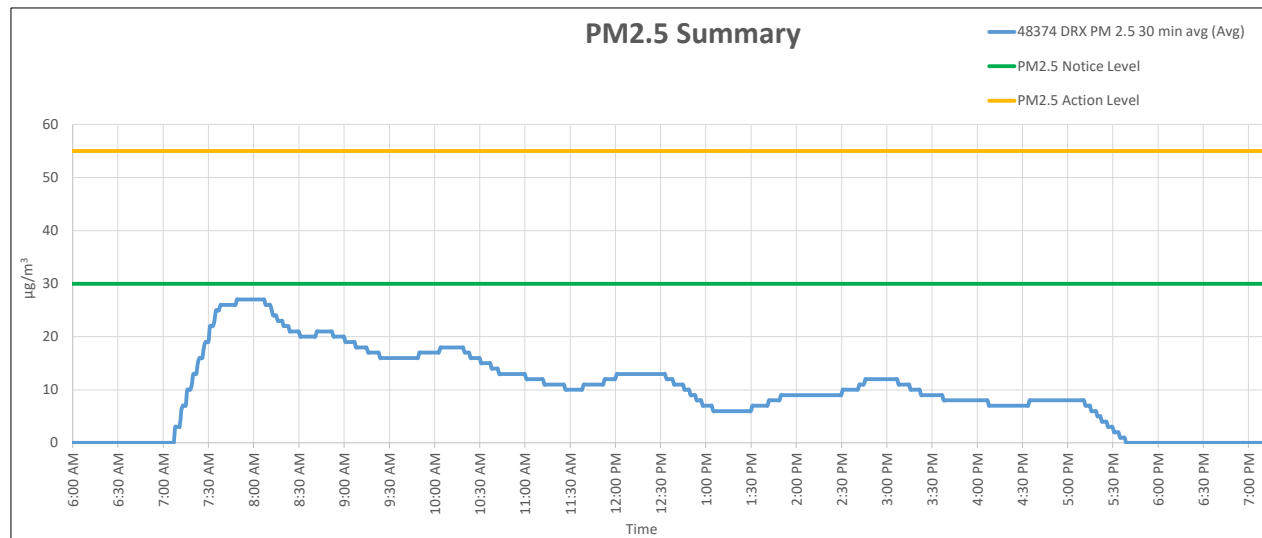
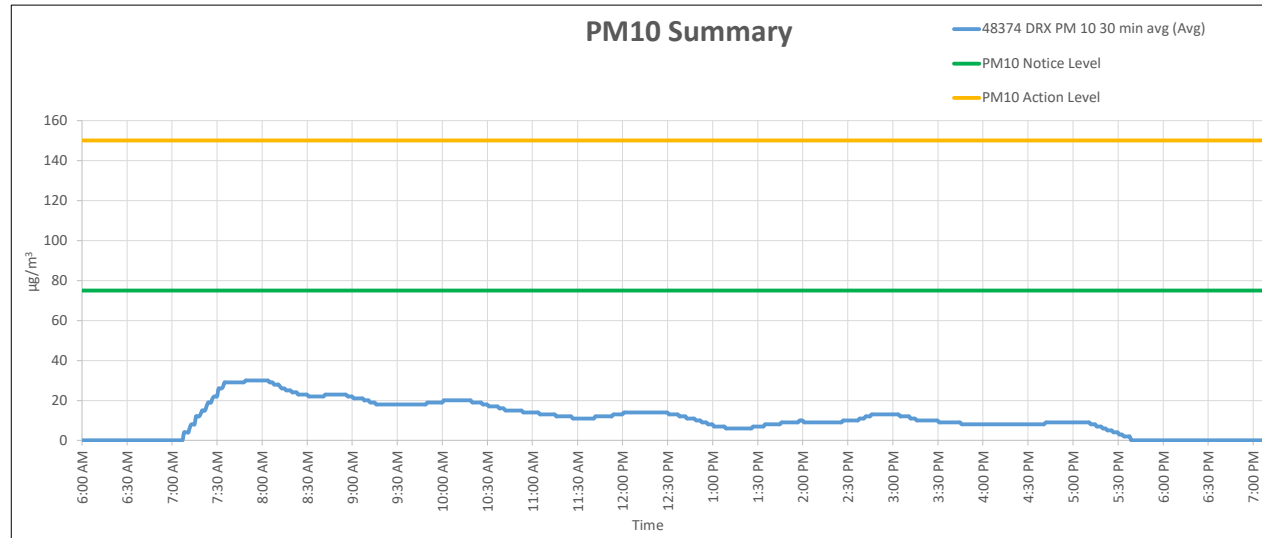
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	7:34 AM	5:15 PM	19.35	43.00	16.73	35.00

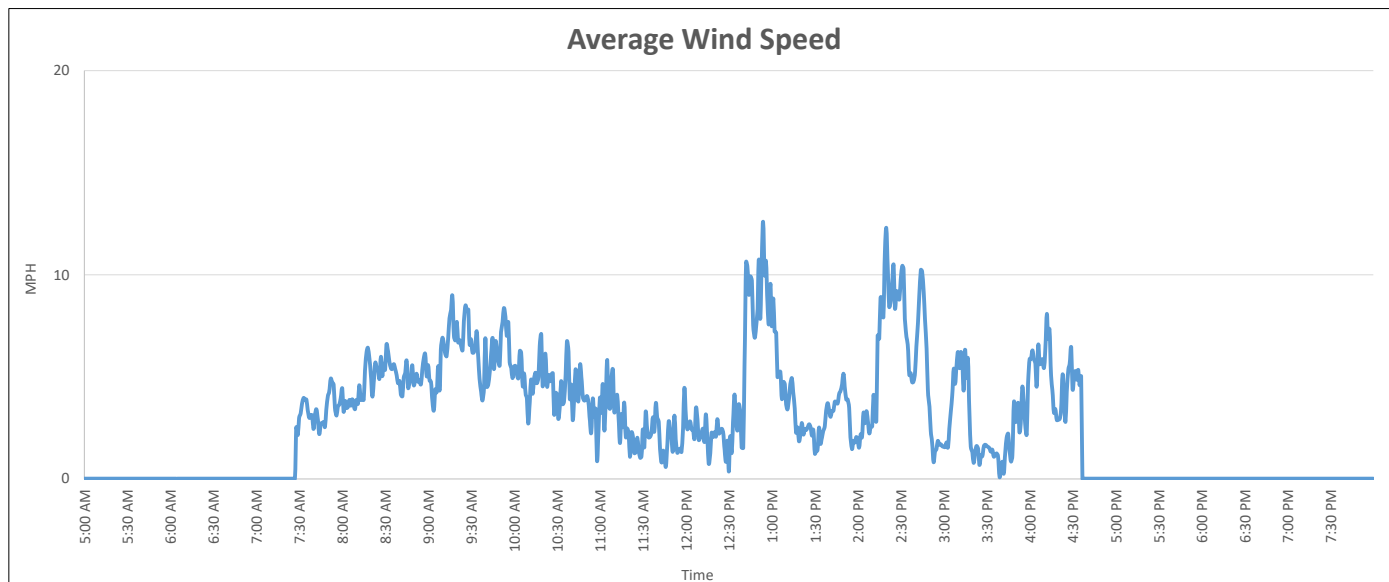
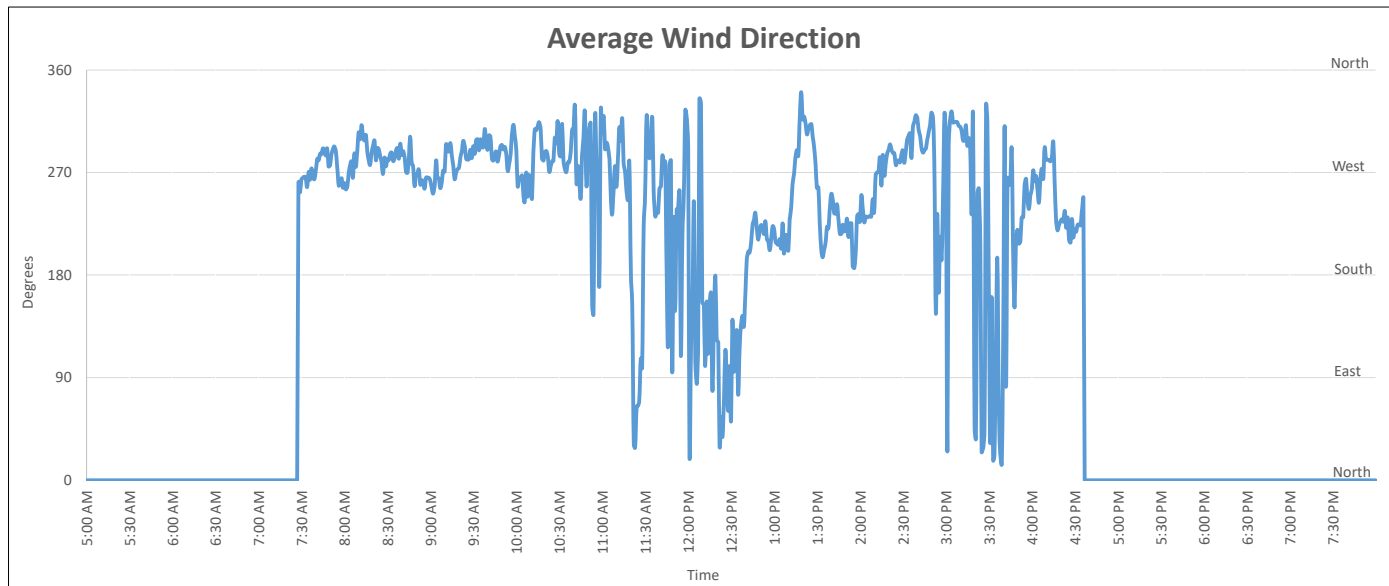


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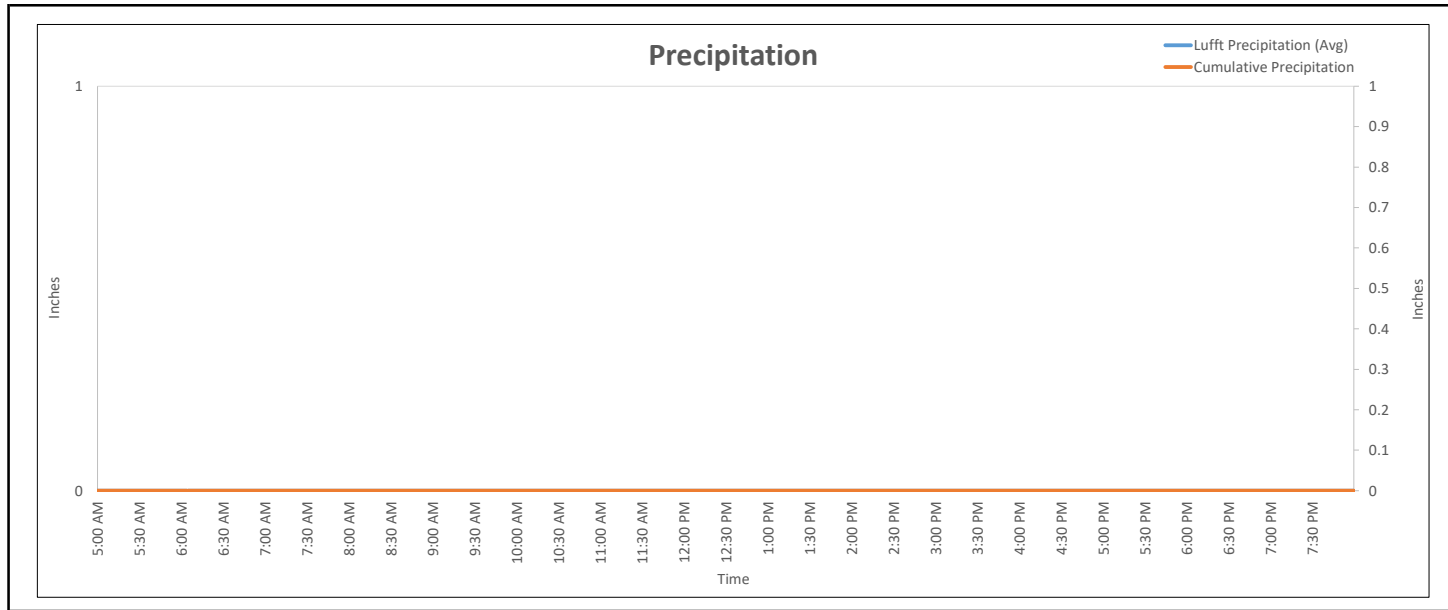
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	7:08 AM	5:38 PM	13.74	30.00	12.52	27.00



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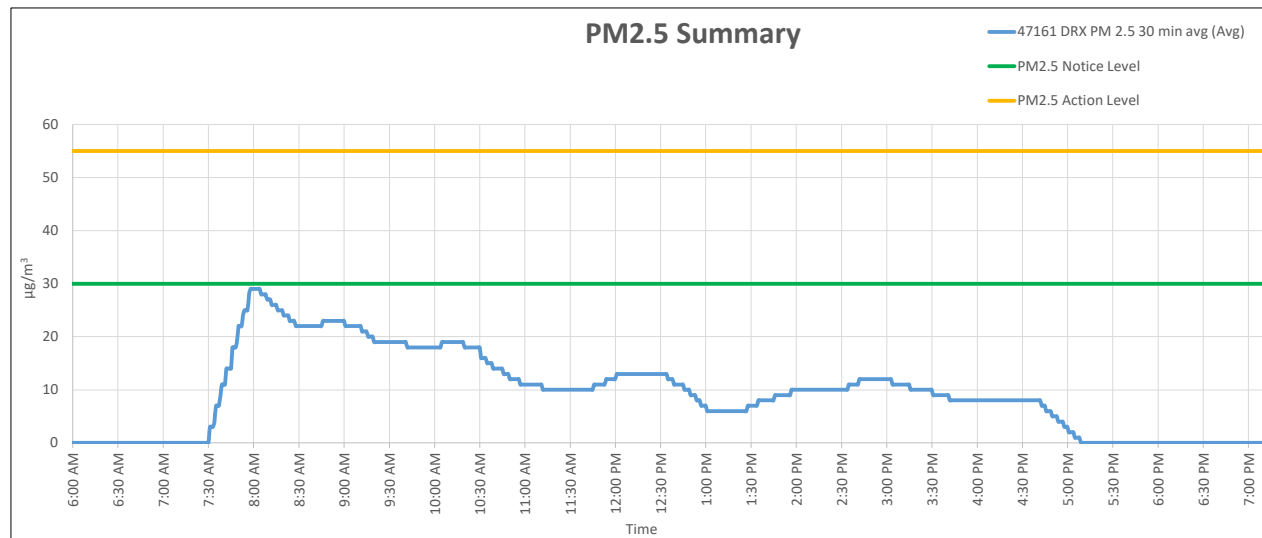
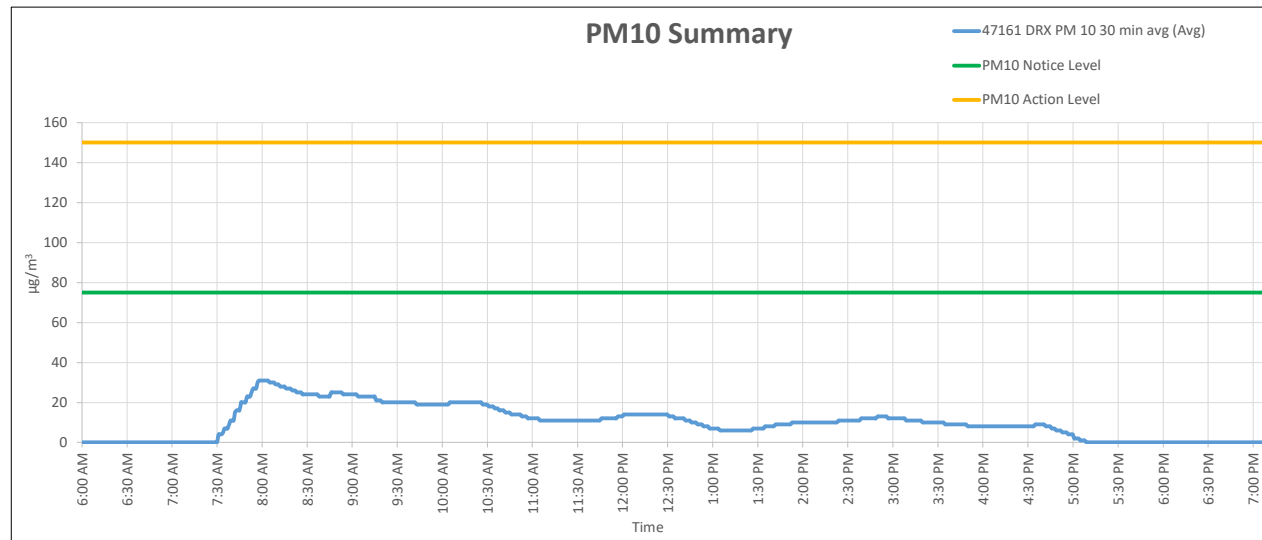


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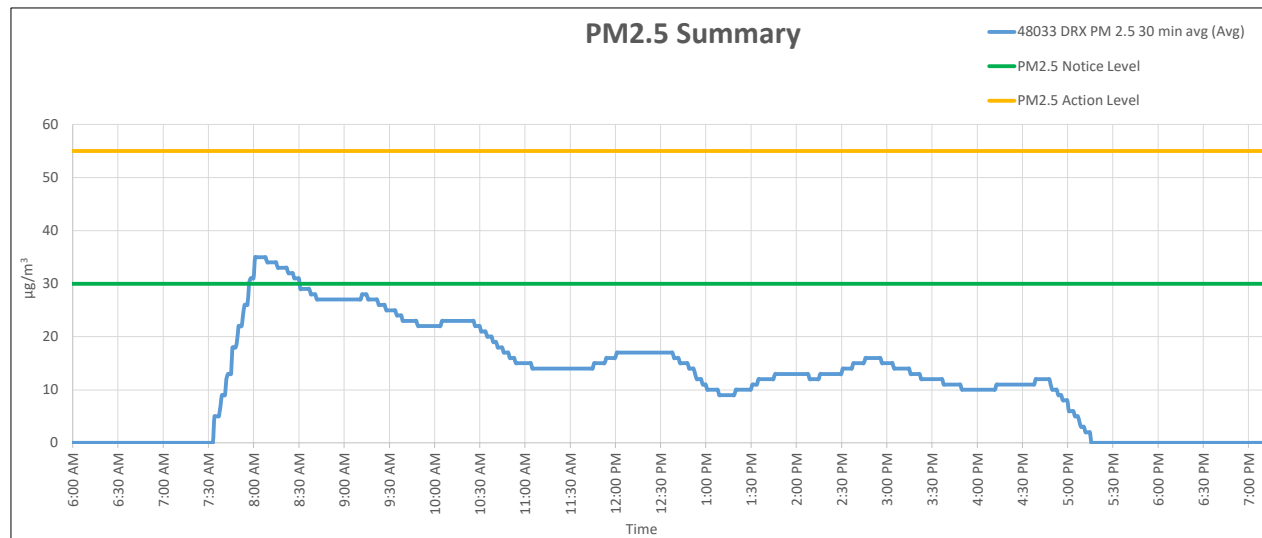
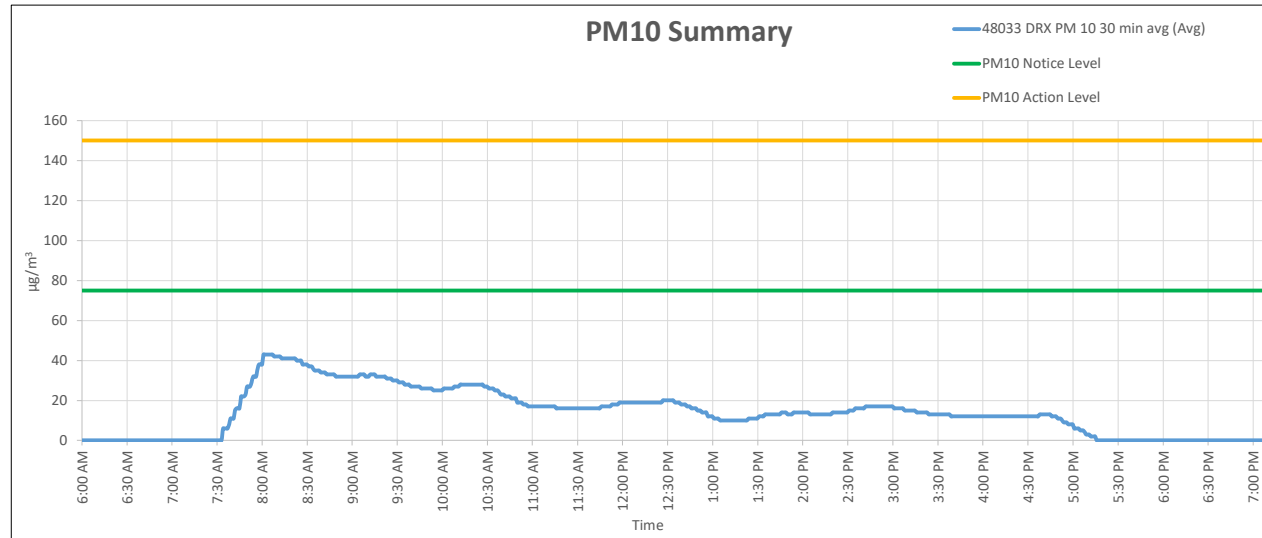
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	7:31 AM	5:04 PM	13.70	31.00	12.92	29.00



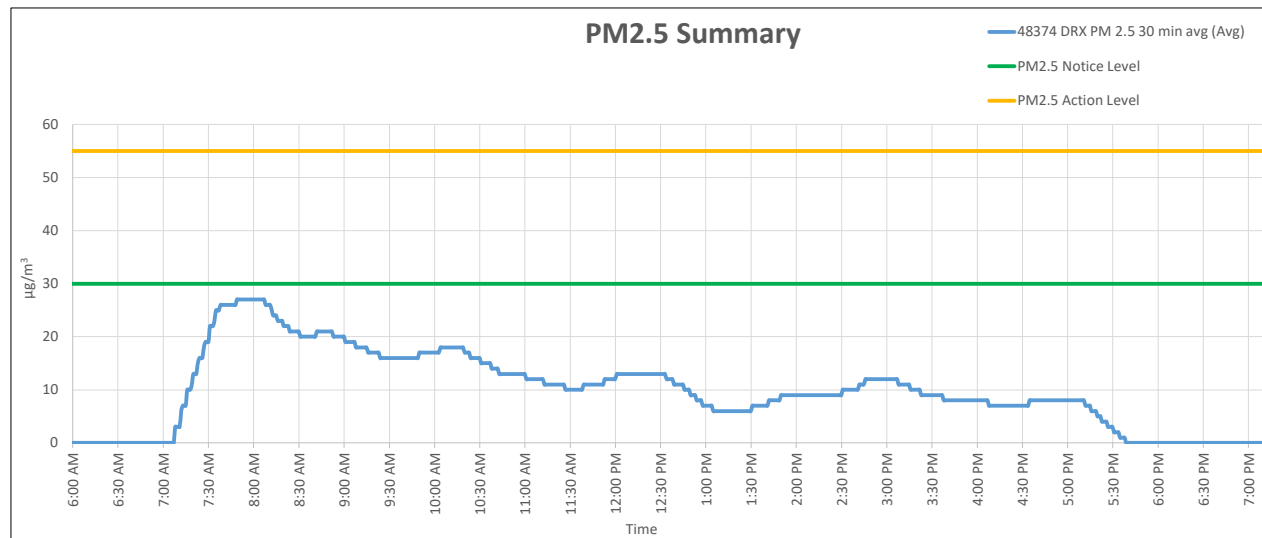
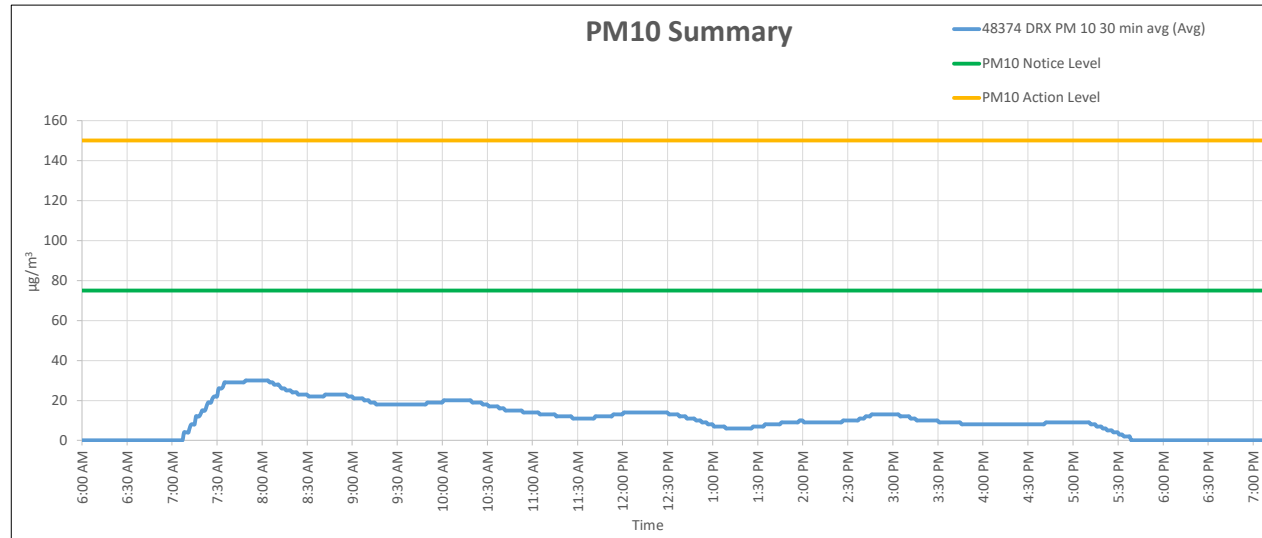
Union Pacific Railroad
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Tuesday, August 27, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	7:34 AM	5:15 PM	19.35	43.00	16.73	35.00



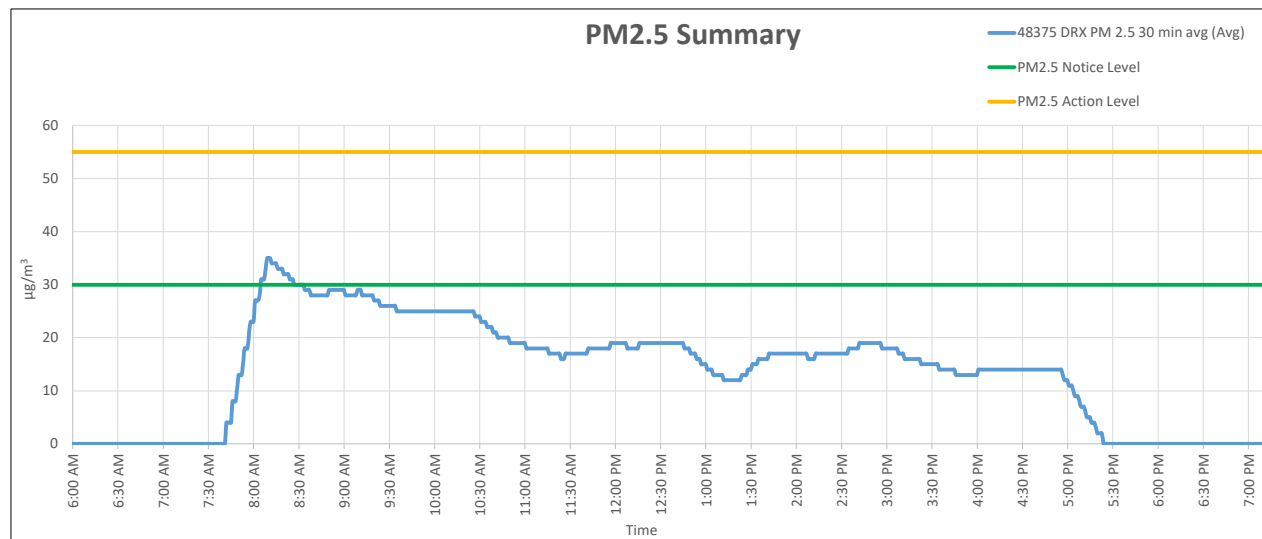
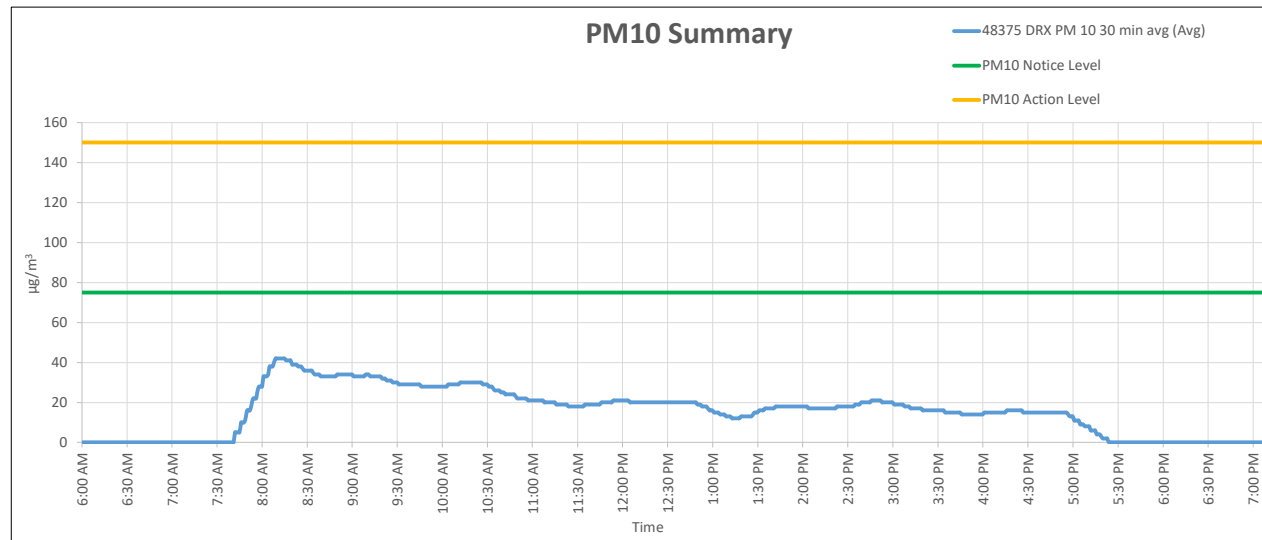
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	7:08 AM	5:38 PM	13.74	30.00	12.52	27.00



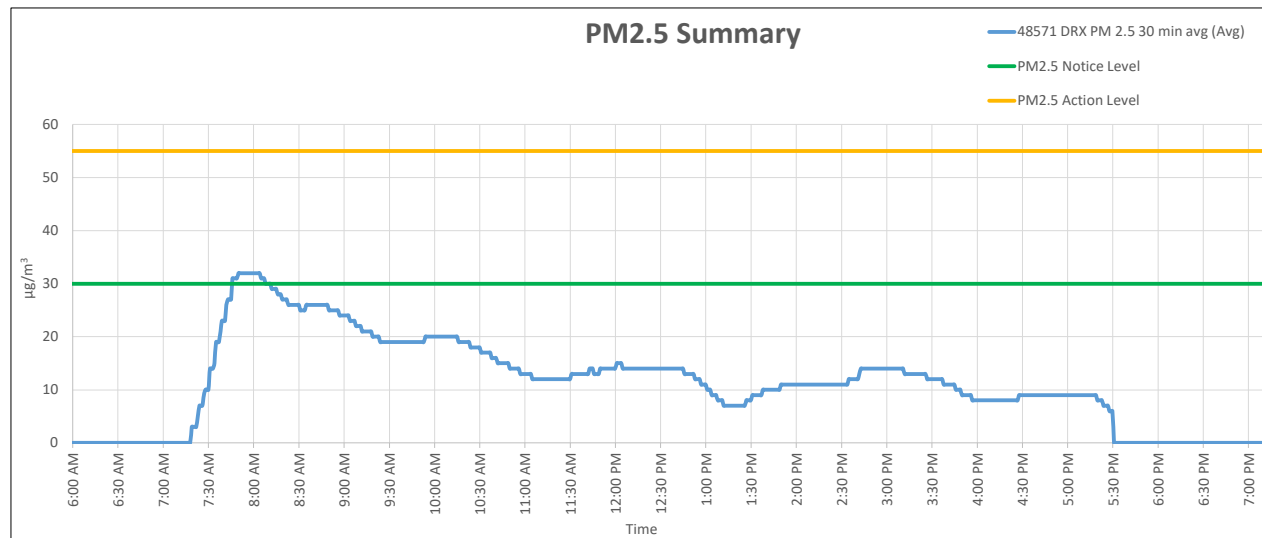
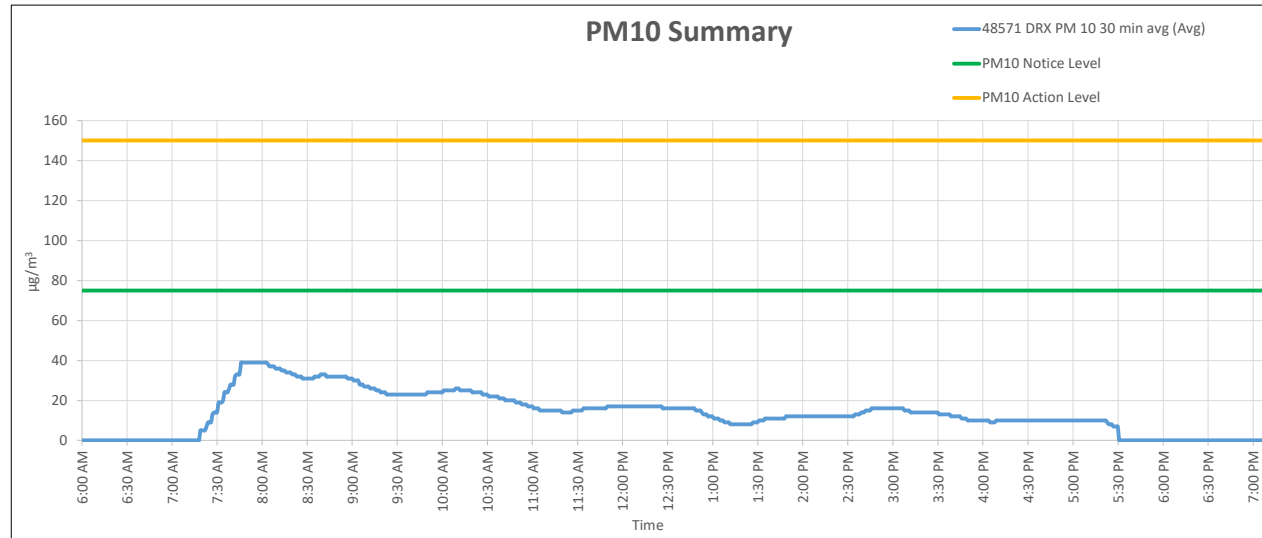
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	7:42 AM	5:23 PM	21.15	42.00	18.82	35.00



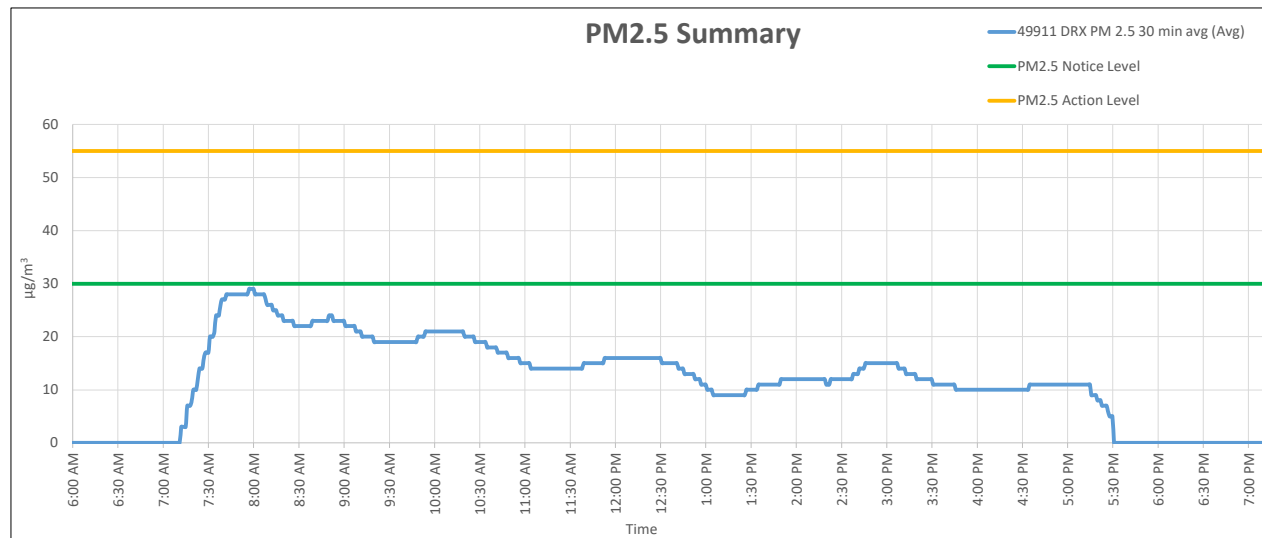
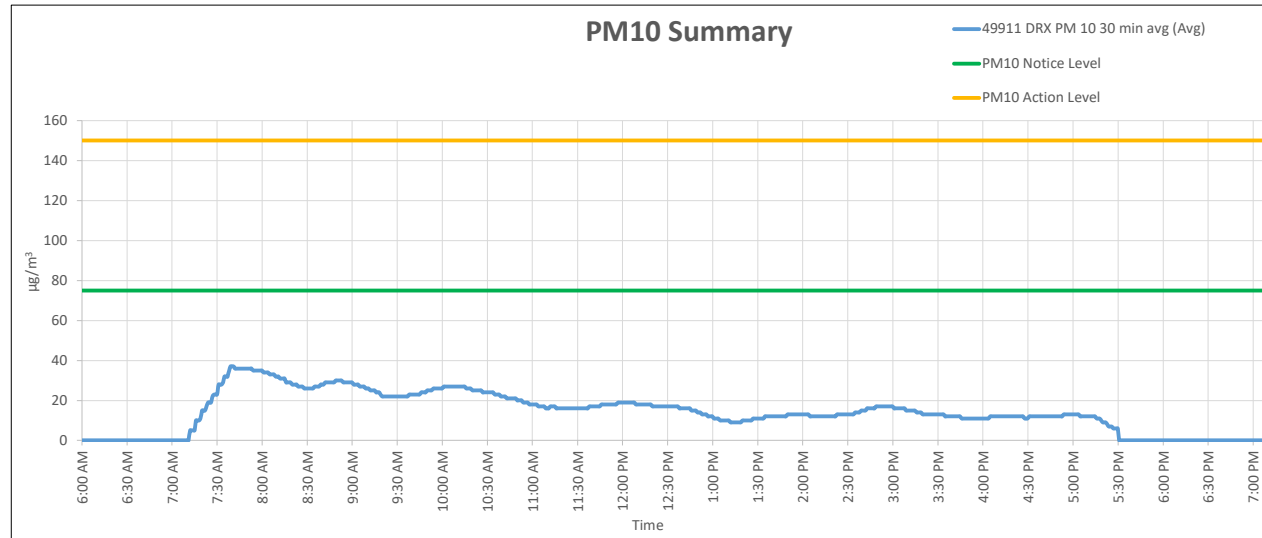
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	7:19 AM	5:30 PM	17.71	39.00	14.76	32.00



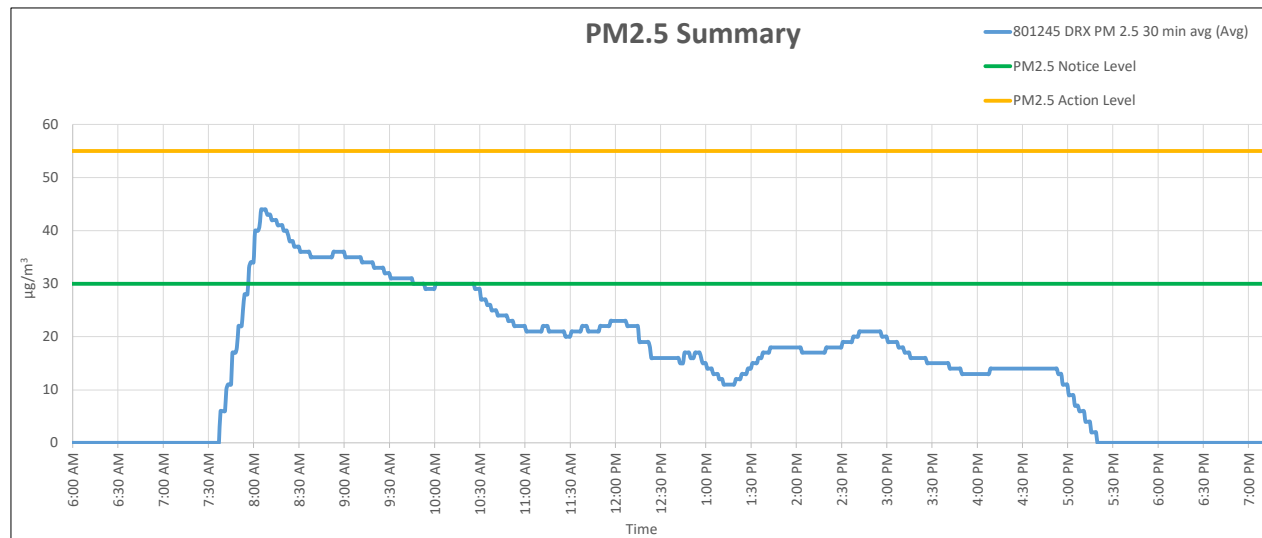
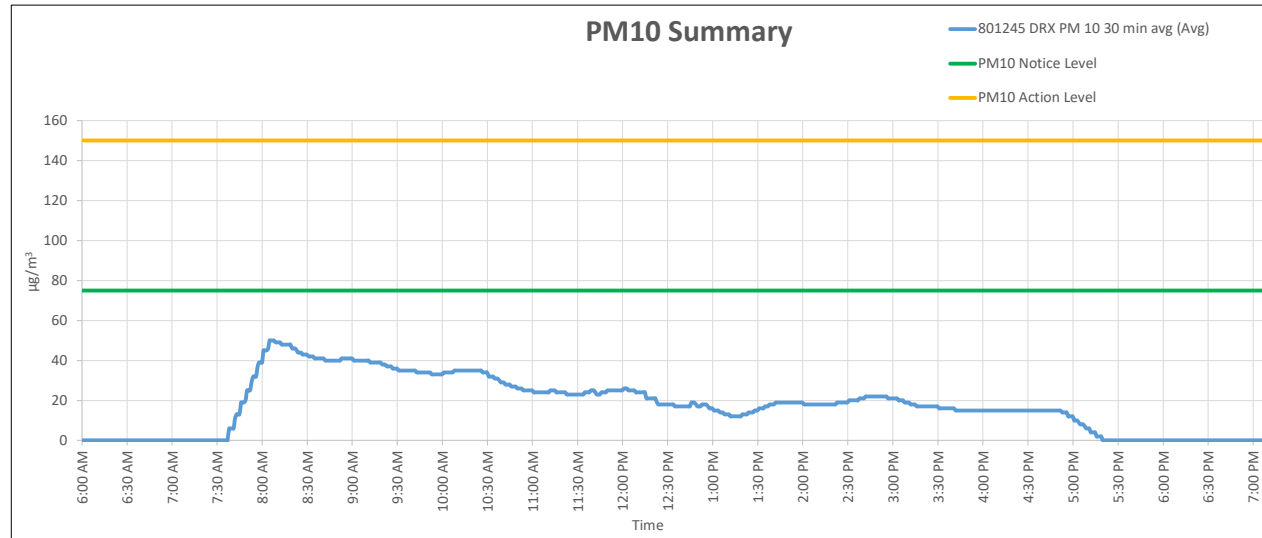
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	7:12 AM	5:30 PM	18.16	37.00	15.35	29.00

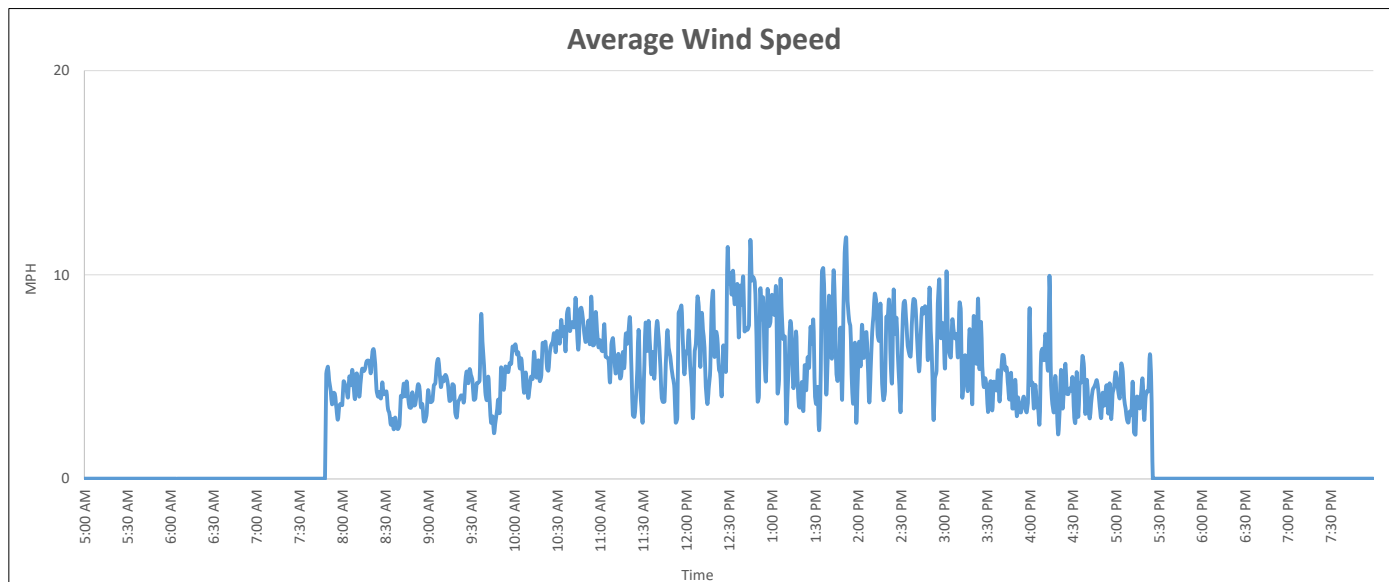
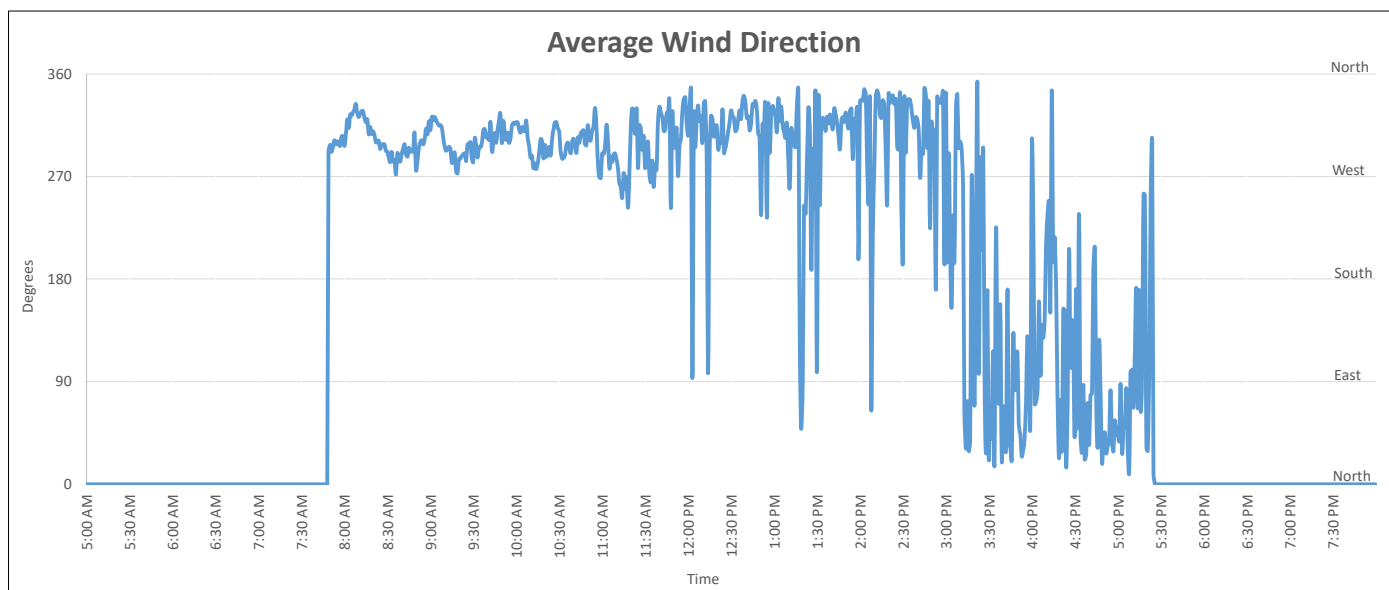


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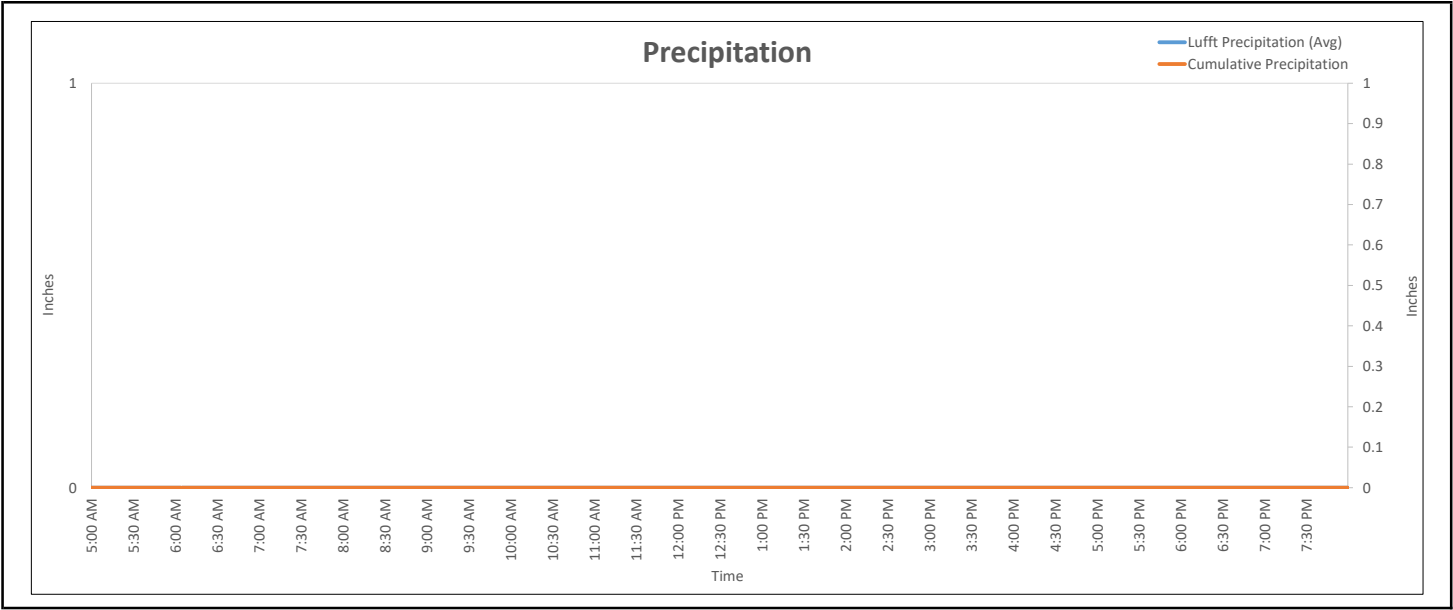
Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	7:38 AM	5:19 PM	23.98	50.00	21.49	44.00



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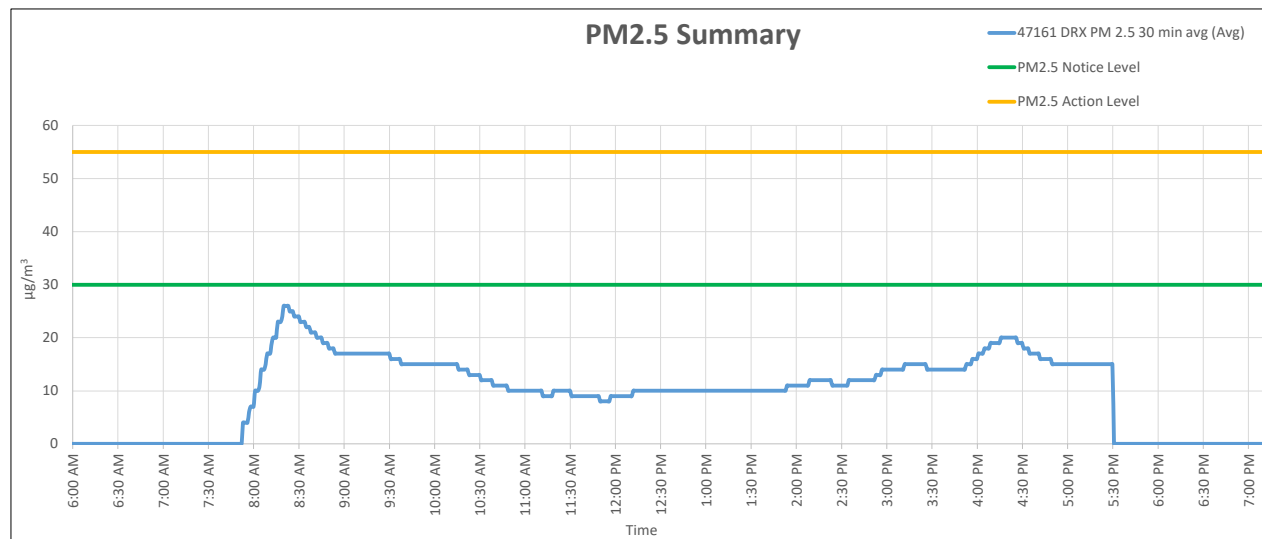
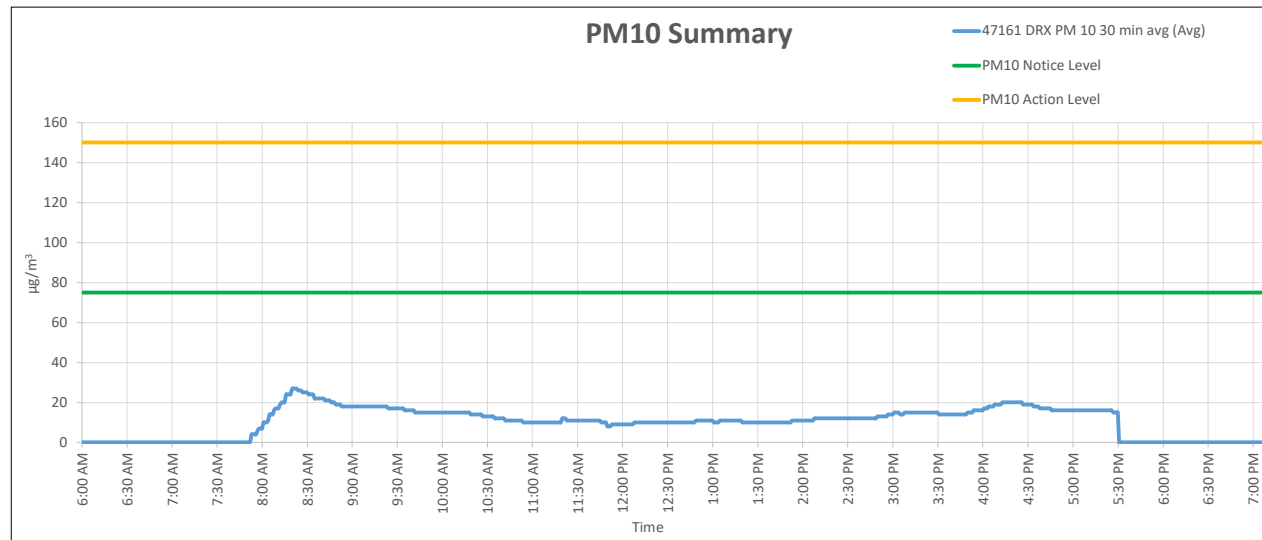


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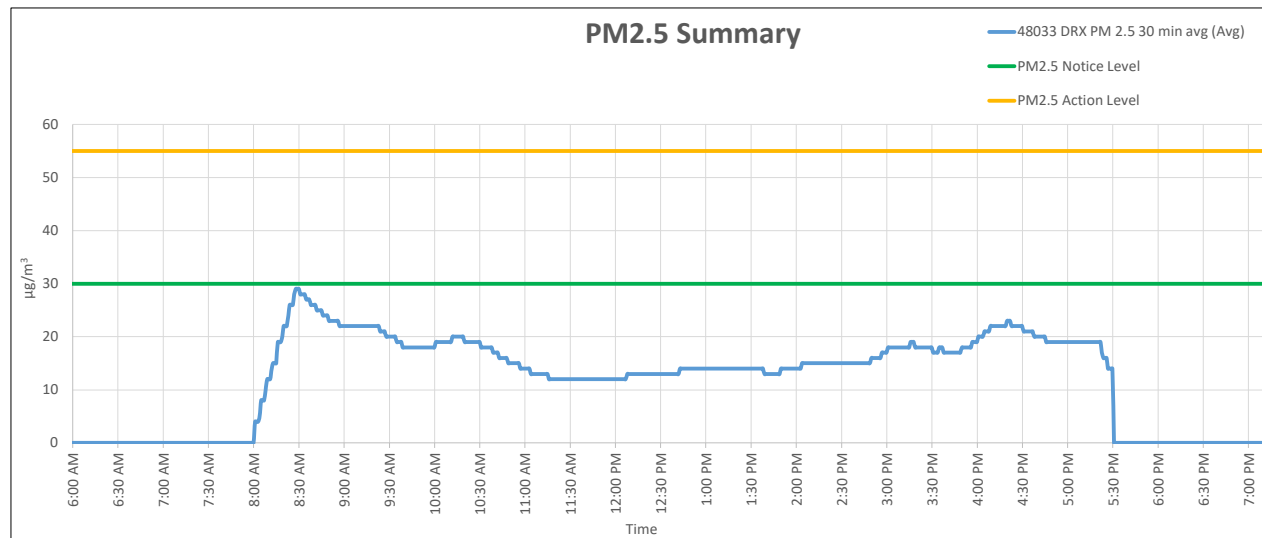
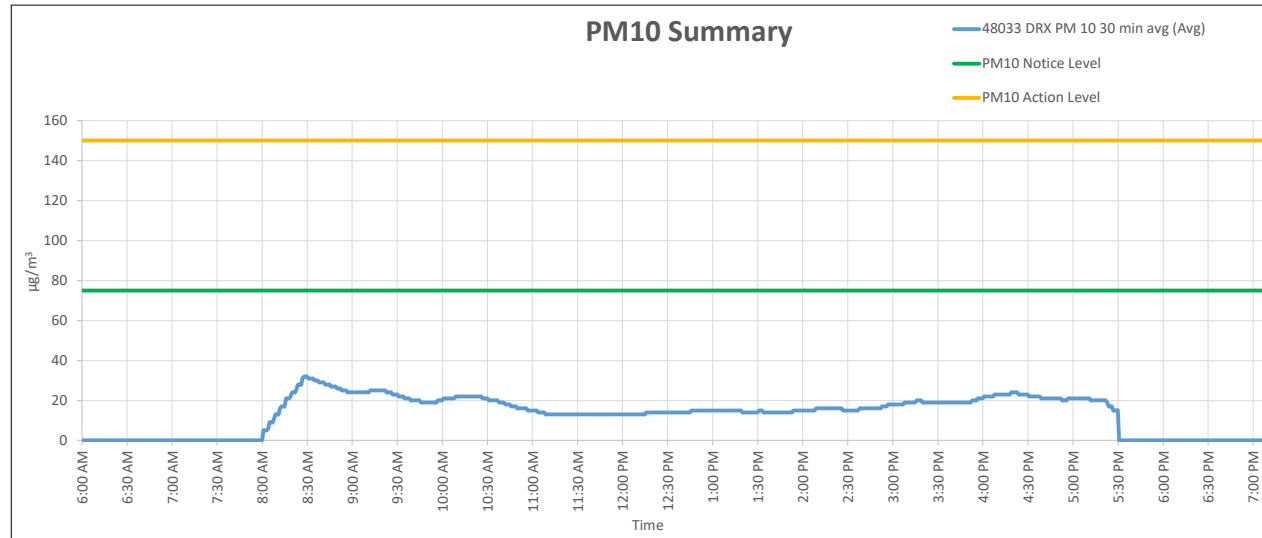
Union Pacific Railroad
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	7:53 AM	5:30 PM	13.93	27.00	13.47	26.00



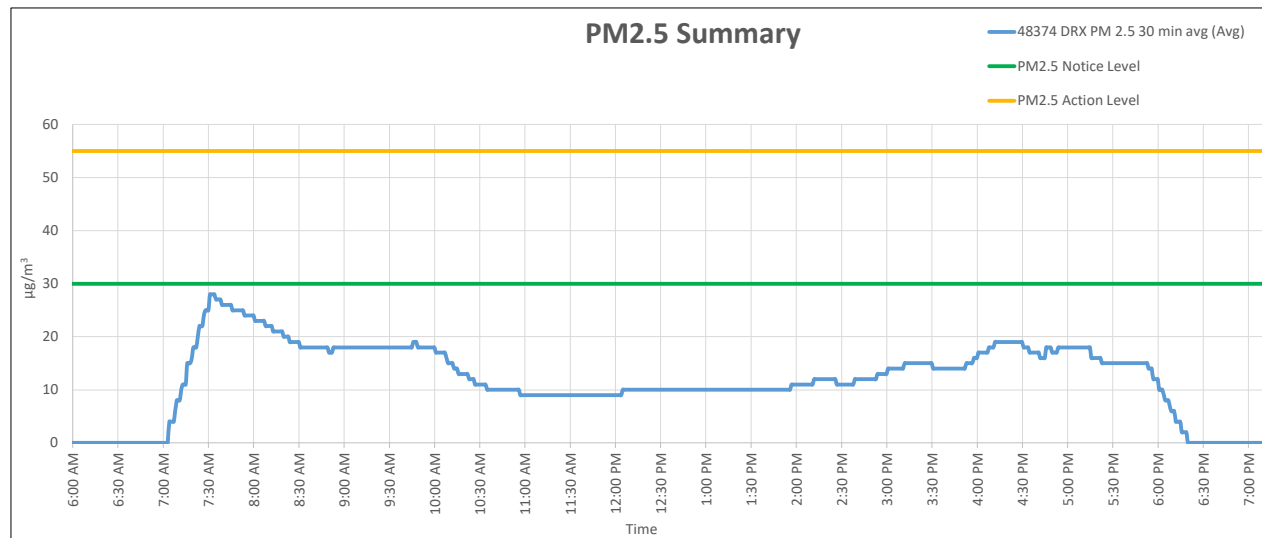
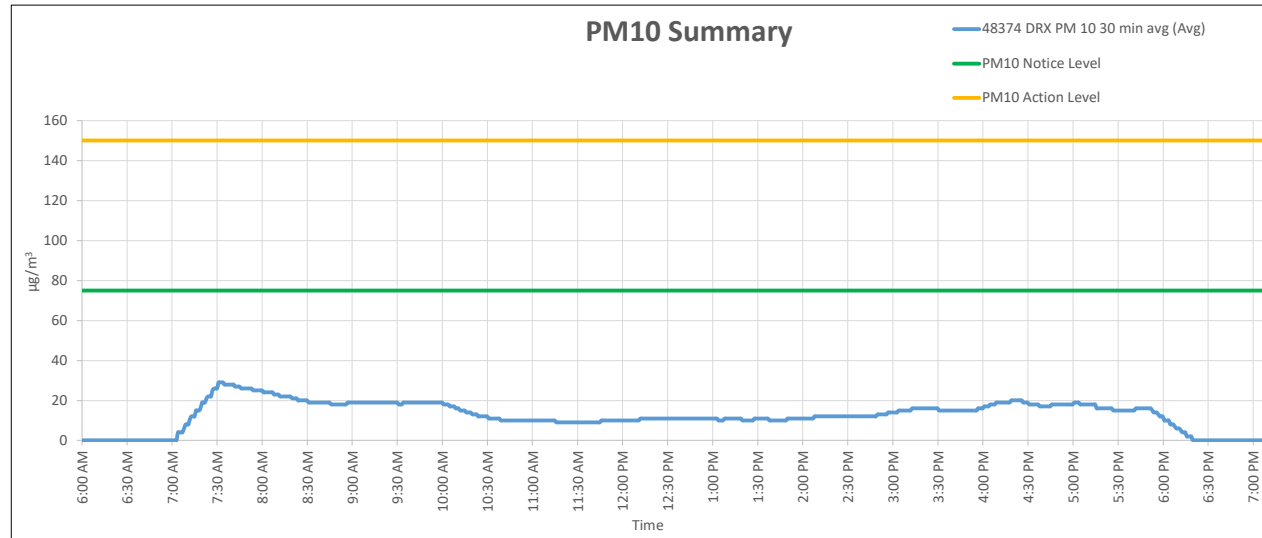
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Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	8:01 AM	5:30 PM	18.23	32.00	16.90	29.00



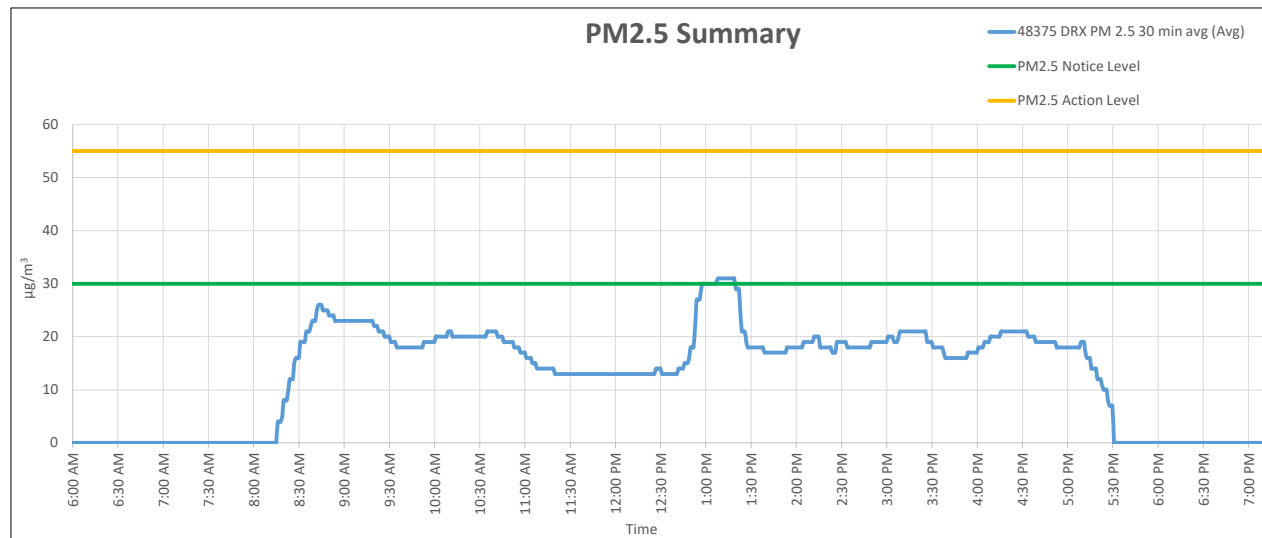
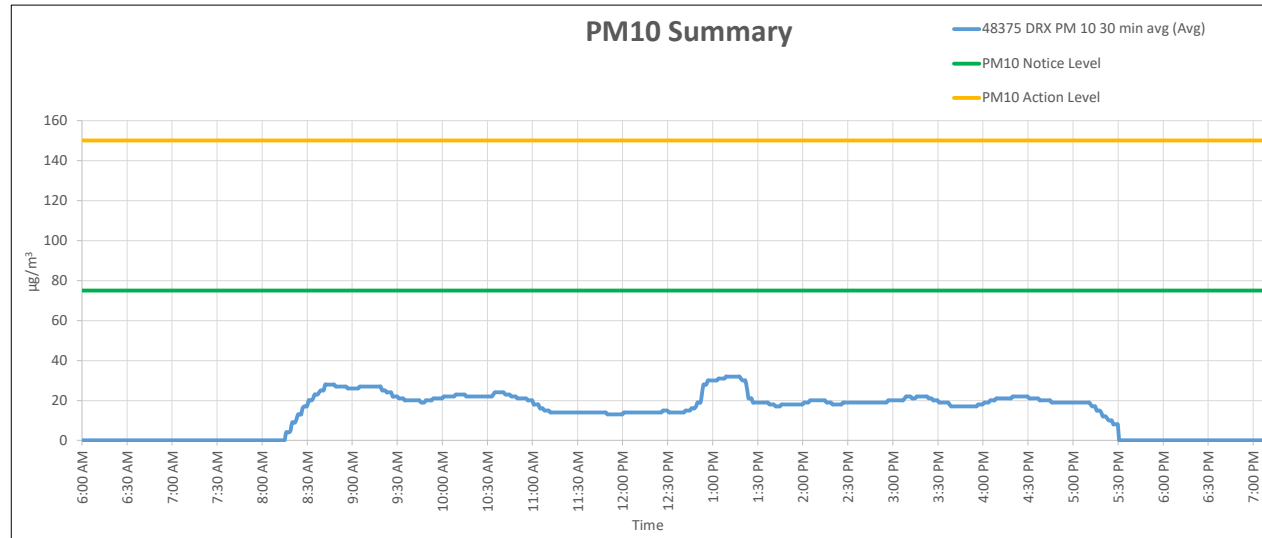
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, August 28, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
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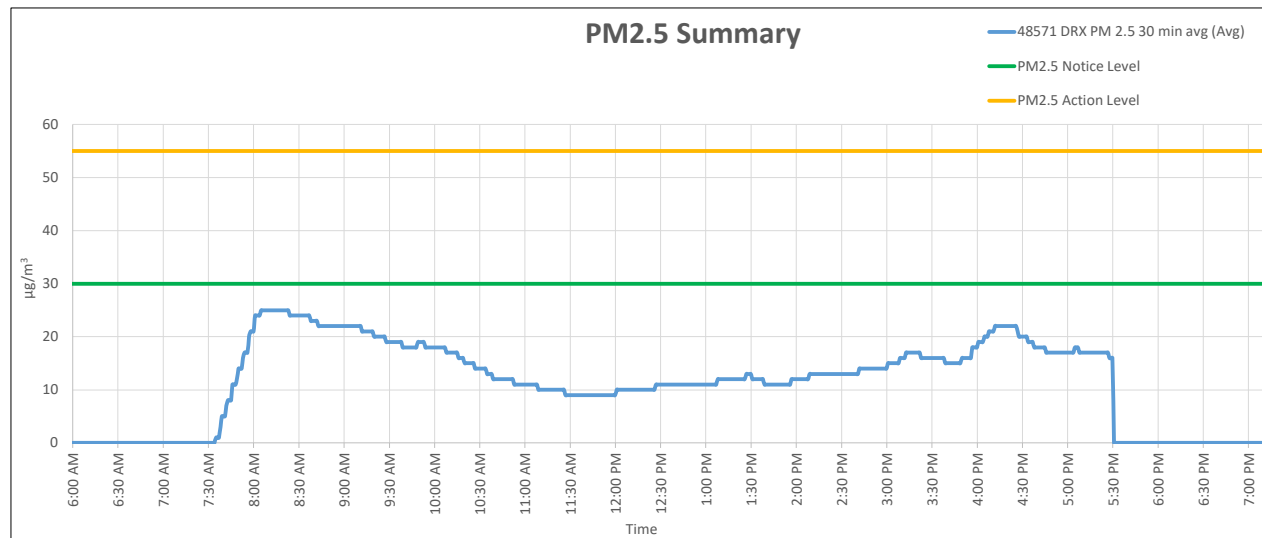
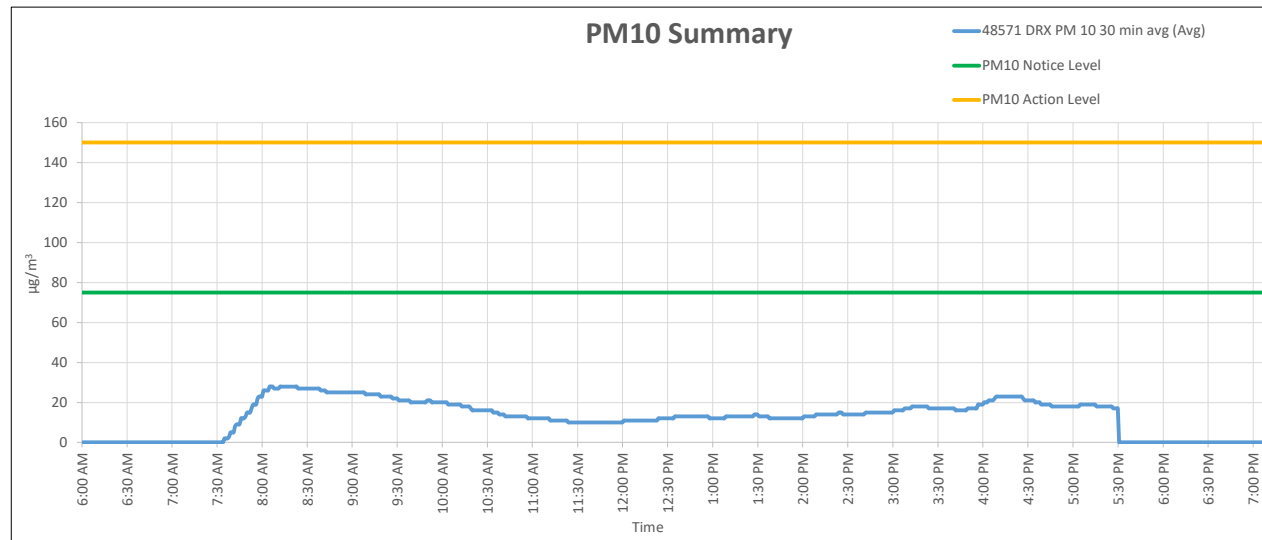
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, August 28, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	8:16 AM	5:30 PM	19.54	32.00	18.31	31.00



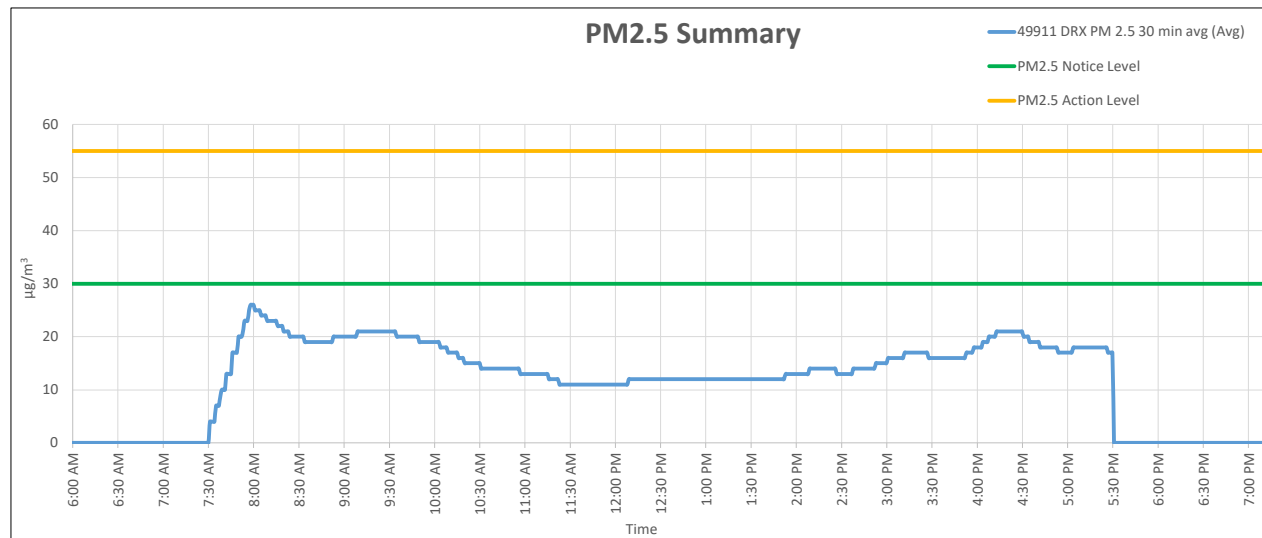
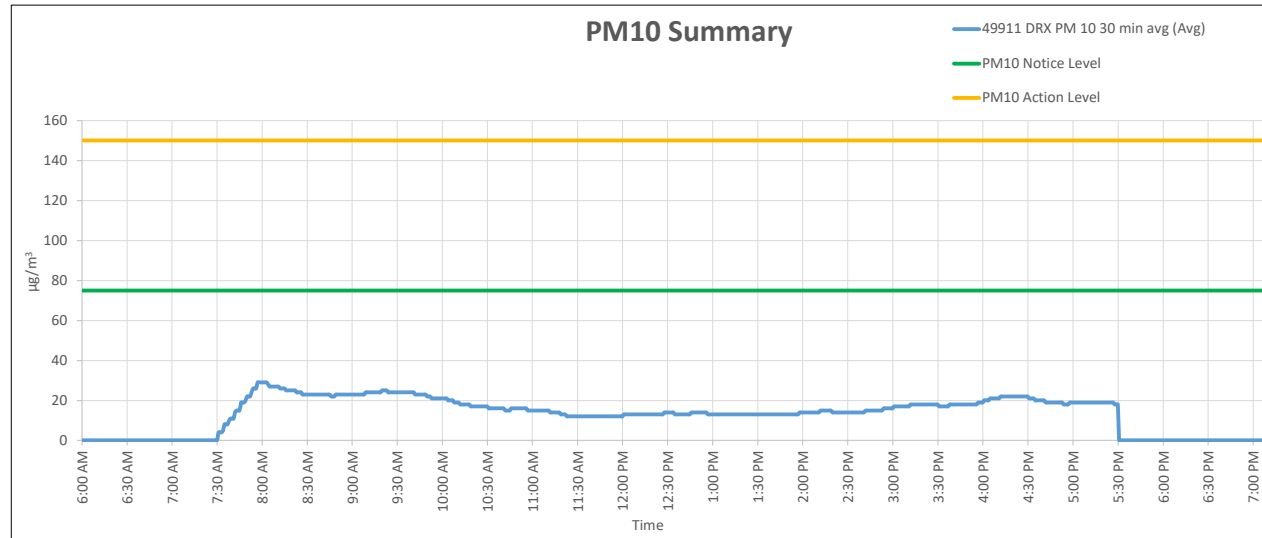
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, August 28, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	7:35 AM	5:30 PM	16.67	28.00	15.22	25.00



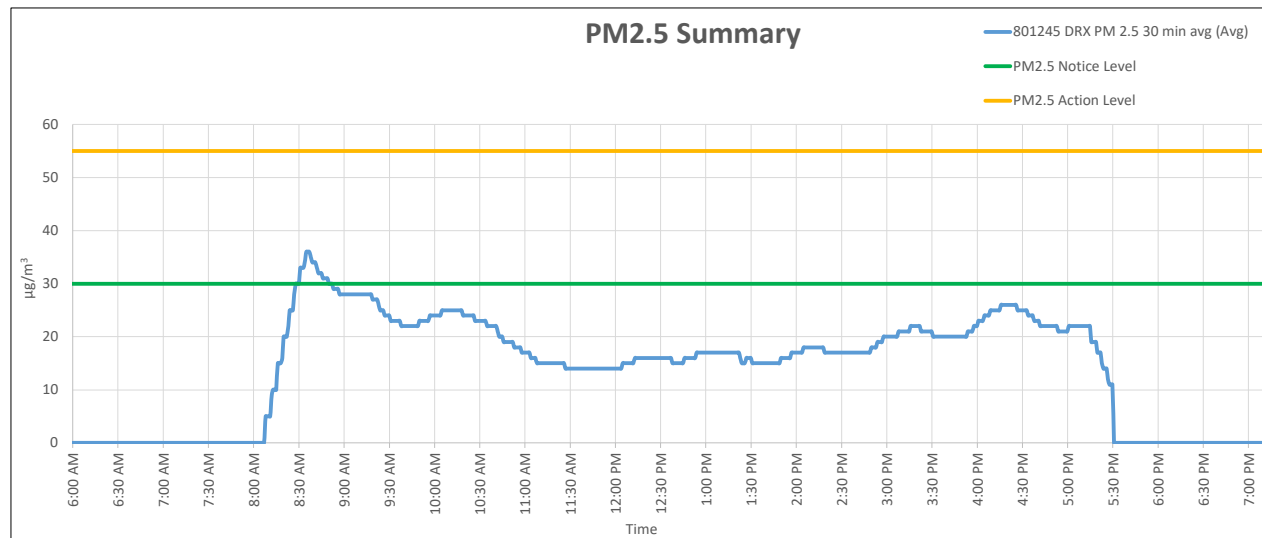
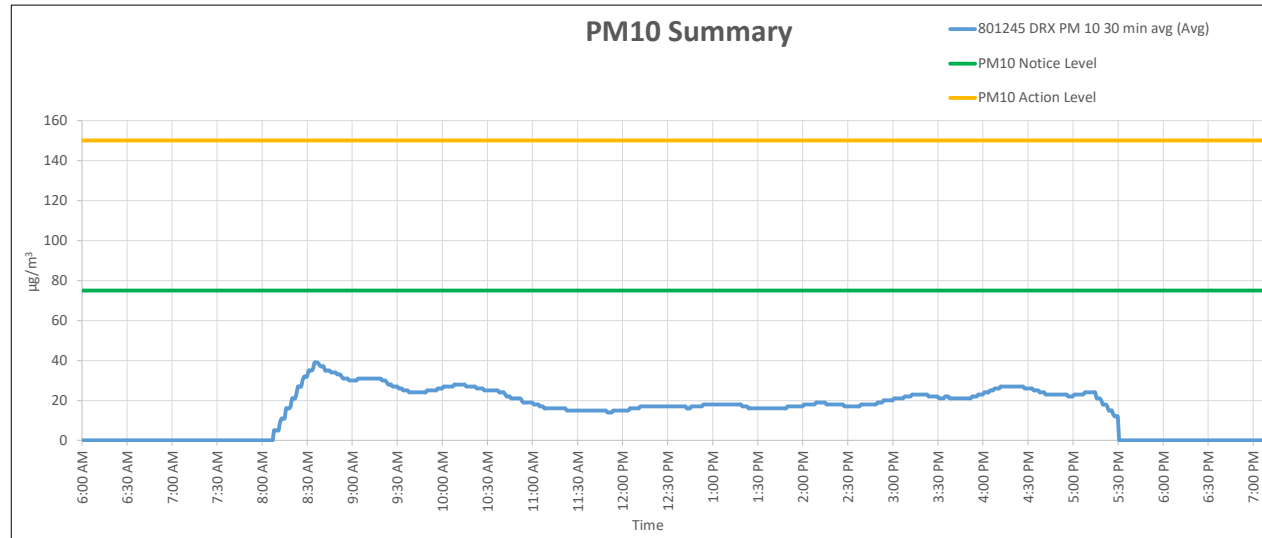
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, August 28, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	7:31 AM	5:30 PM	17.44	29.00	15.78	26.00

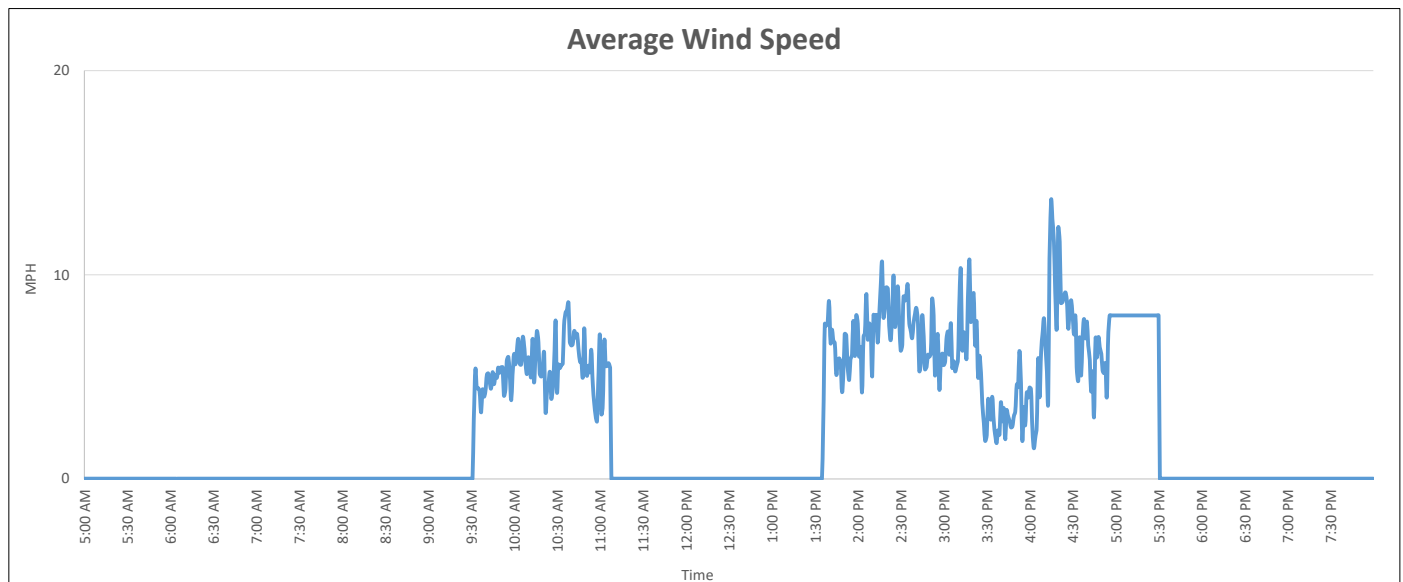
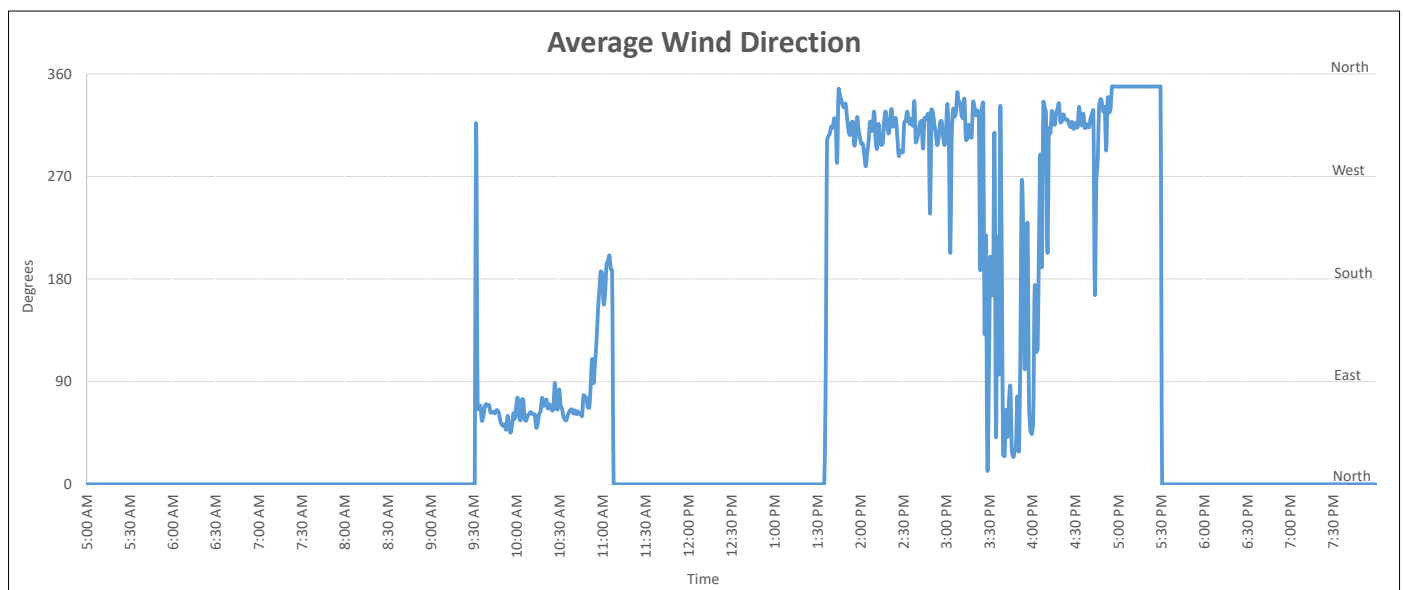


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, August 28, 2024

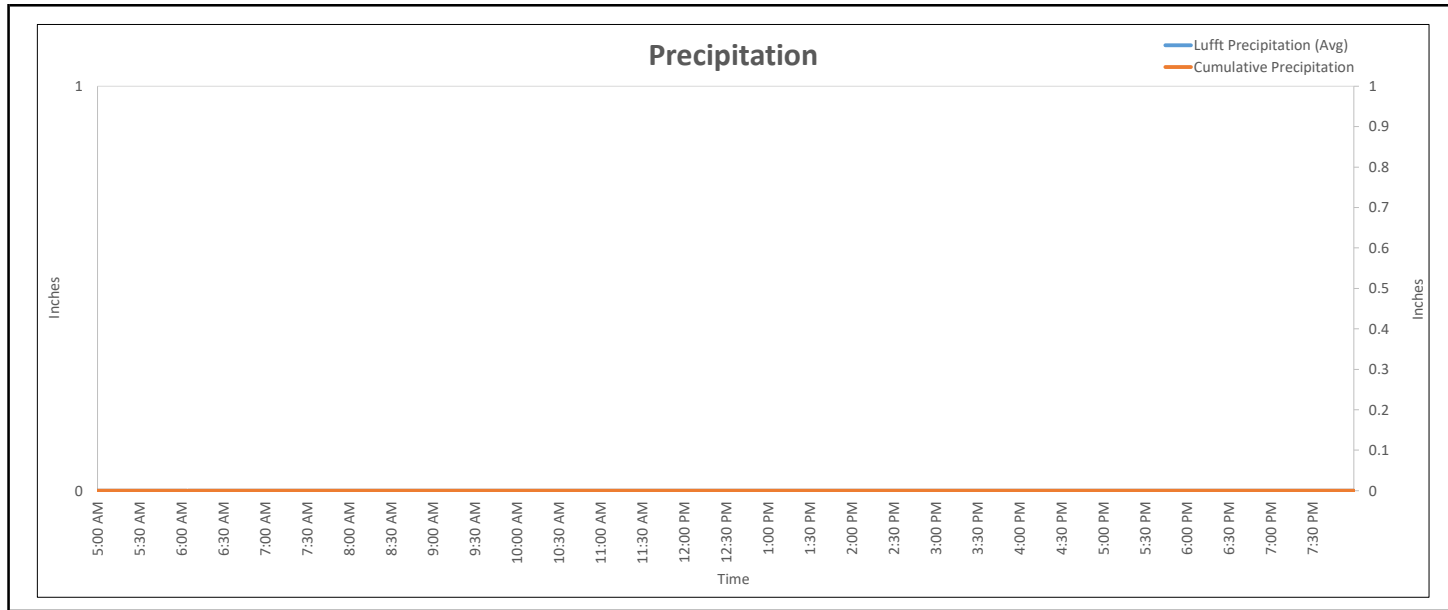
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801245	8:08 AM	5:30 PM	21.32	39.00	19.94	36.00



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Thursday, August 29, 2024

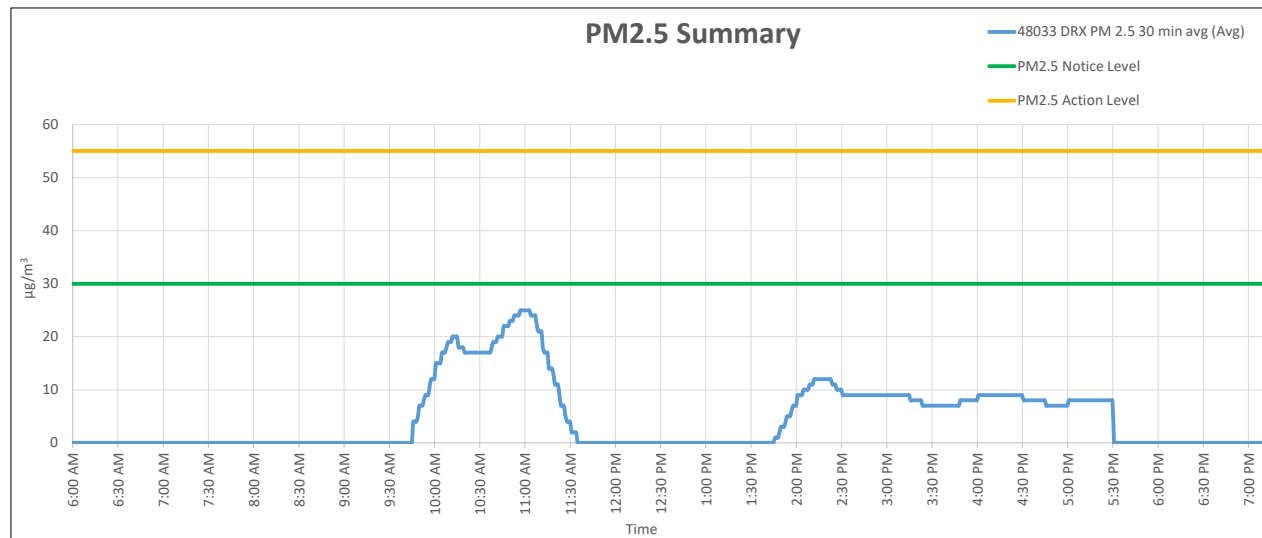
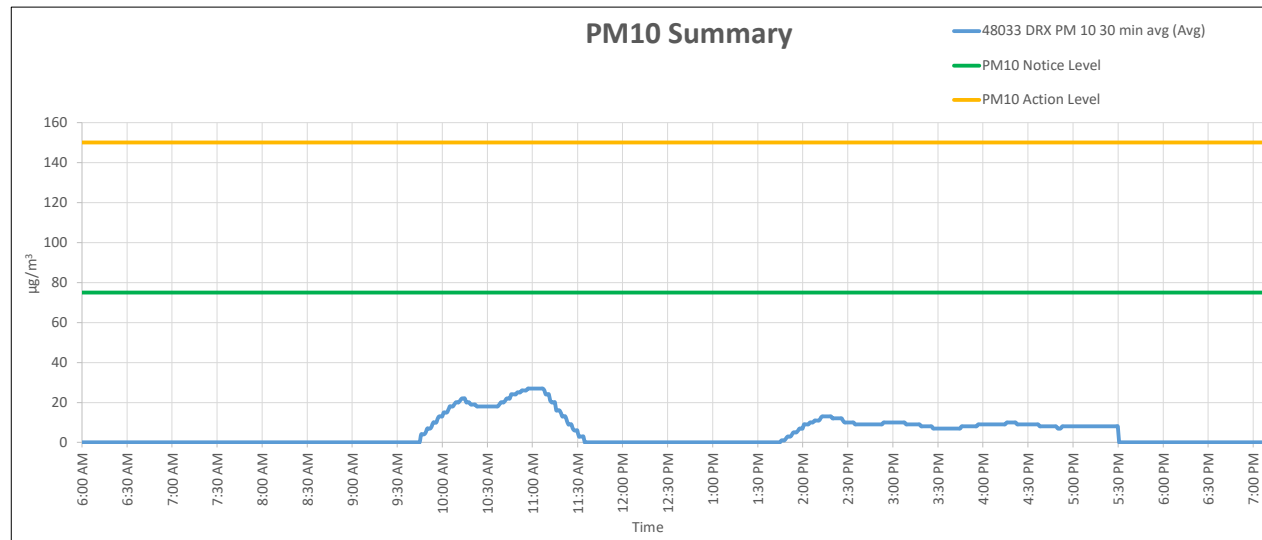


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Thursday, August 29, 2024



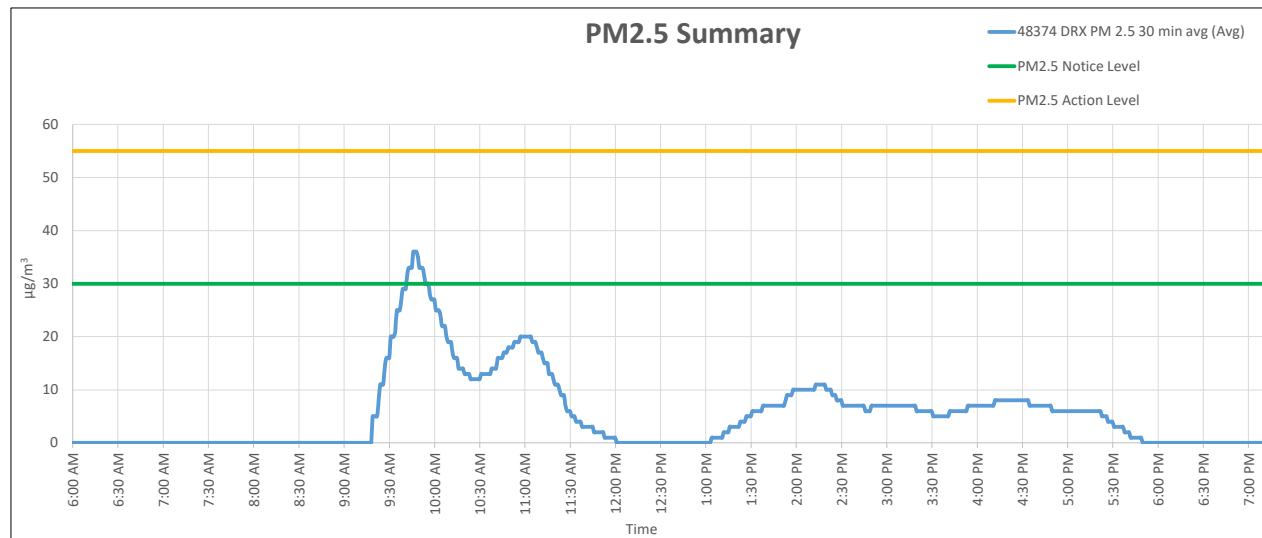
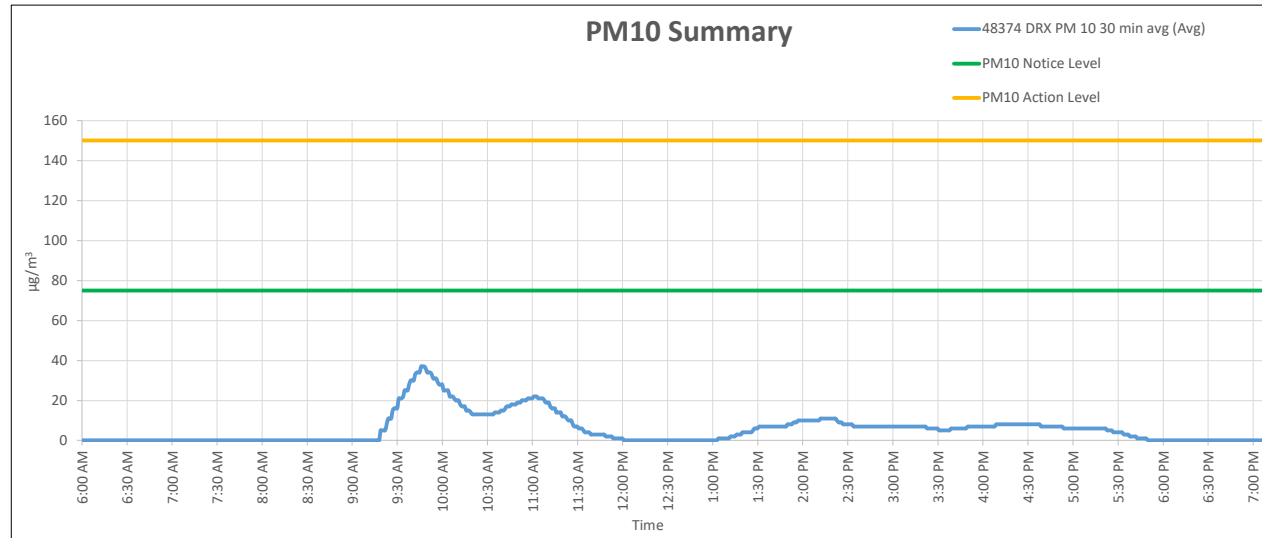
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 29, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48033	9:46 AM	5:30 PM	11.49	27.00	10.78	25.00



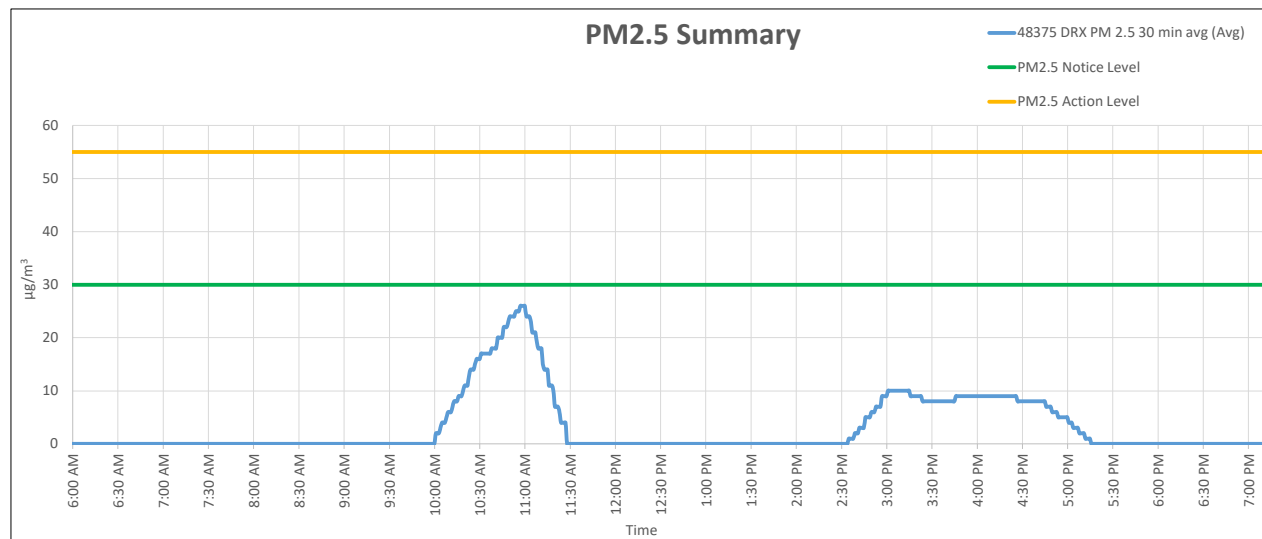
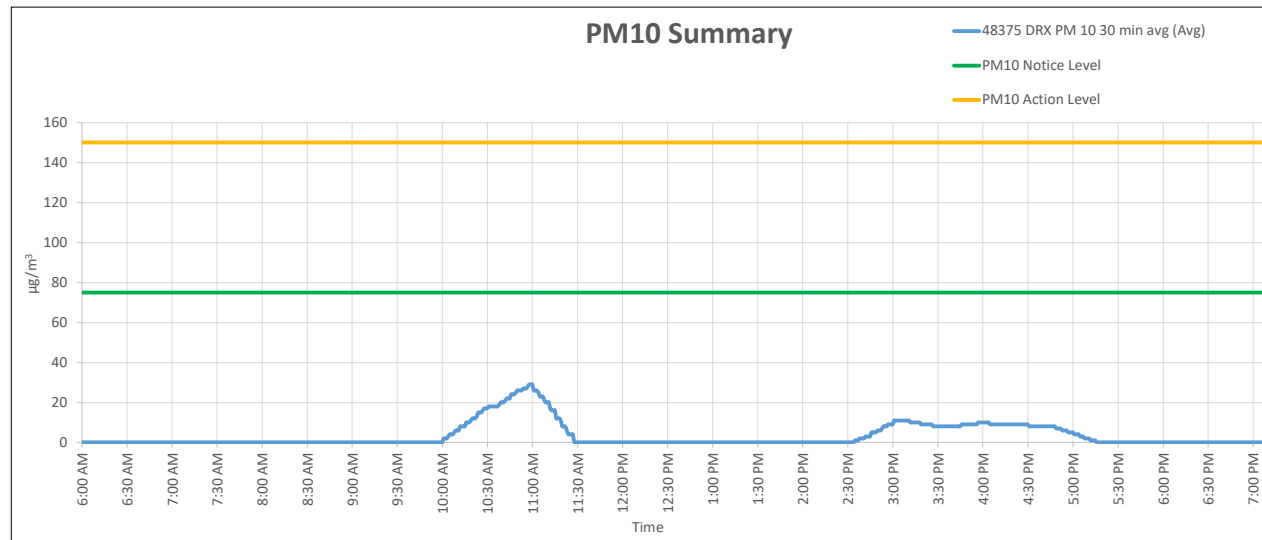
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 29, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48374	9:19 AM	5:42 PM	9.95	37.00	9.56	36.00



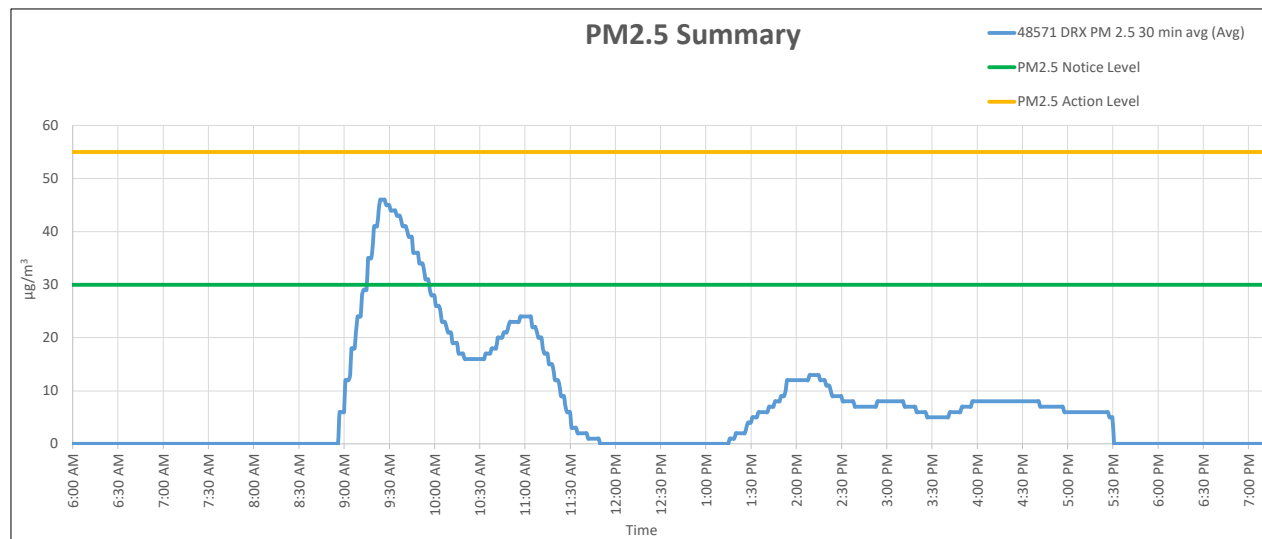
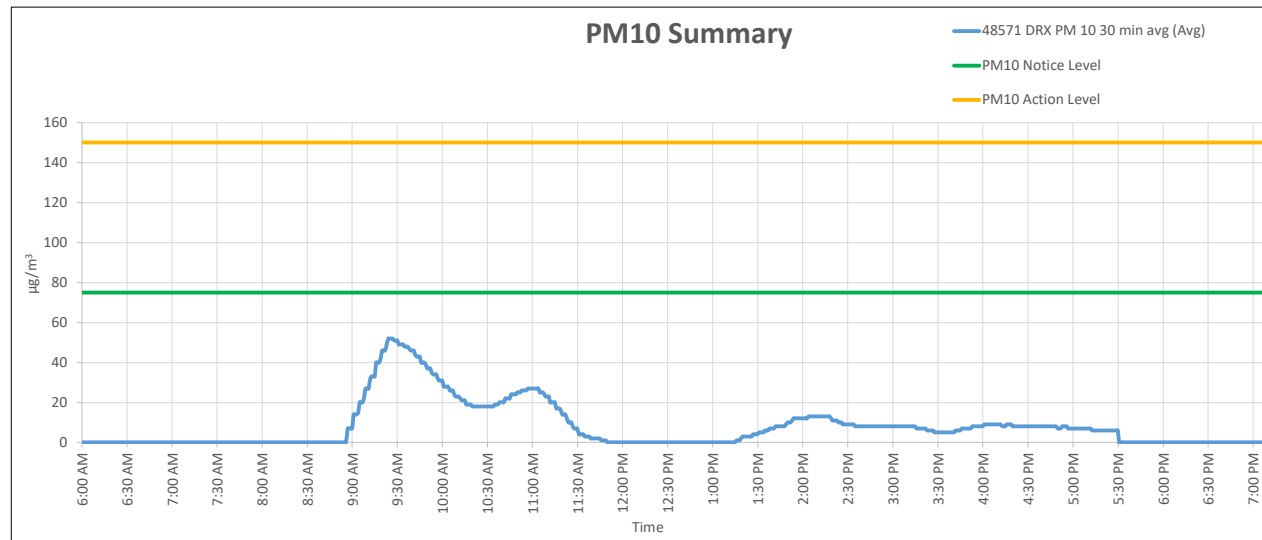
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 29, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48375	10:01 AM	5:11 PM	10.43	29.00	9.83	26.00



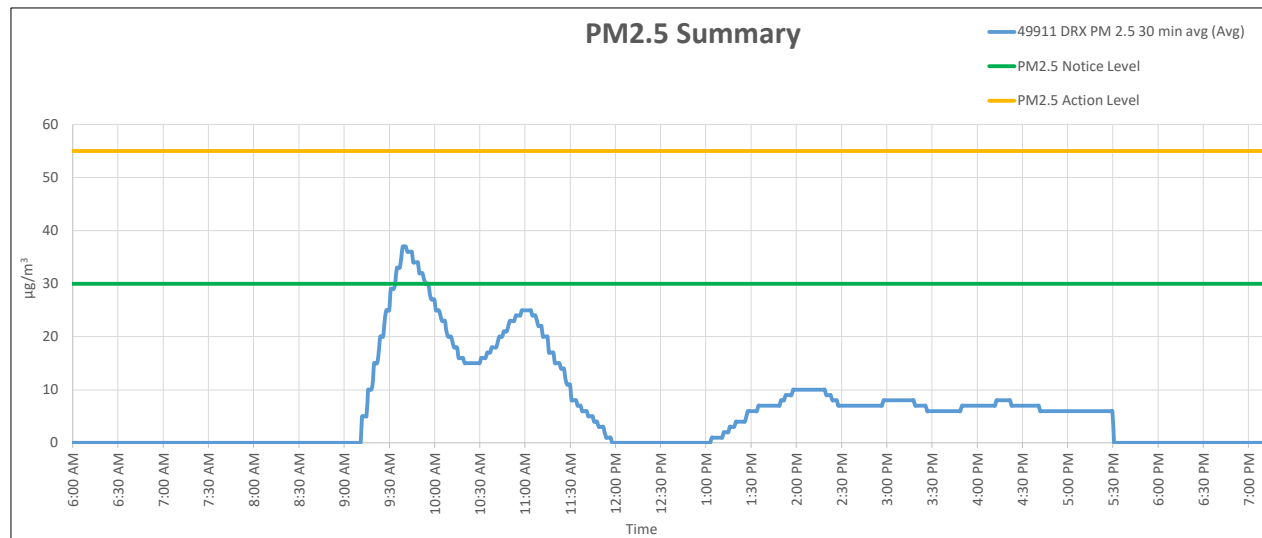
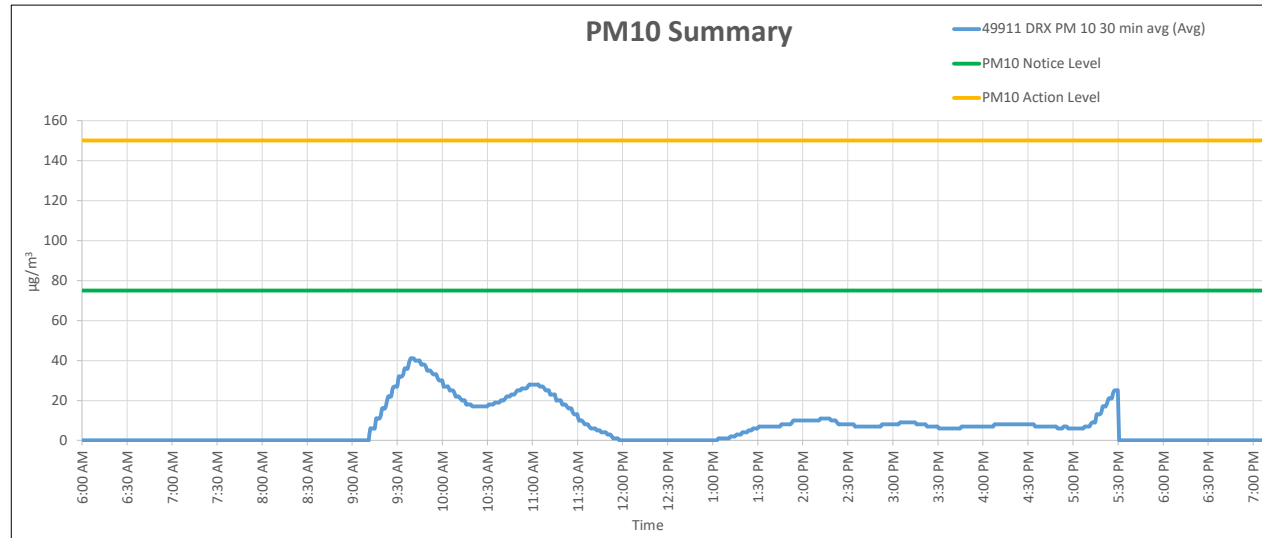
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 29, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
48571	8:57 AM	5:30 PM	14.50	52.00	13.16	46.00



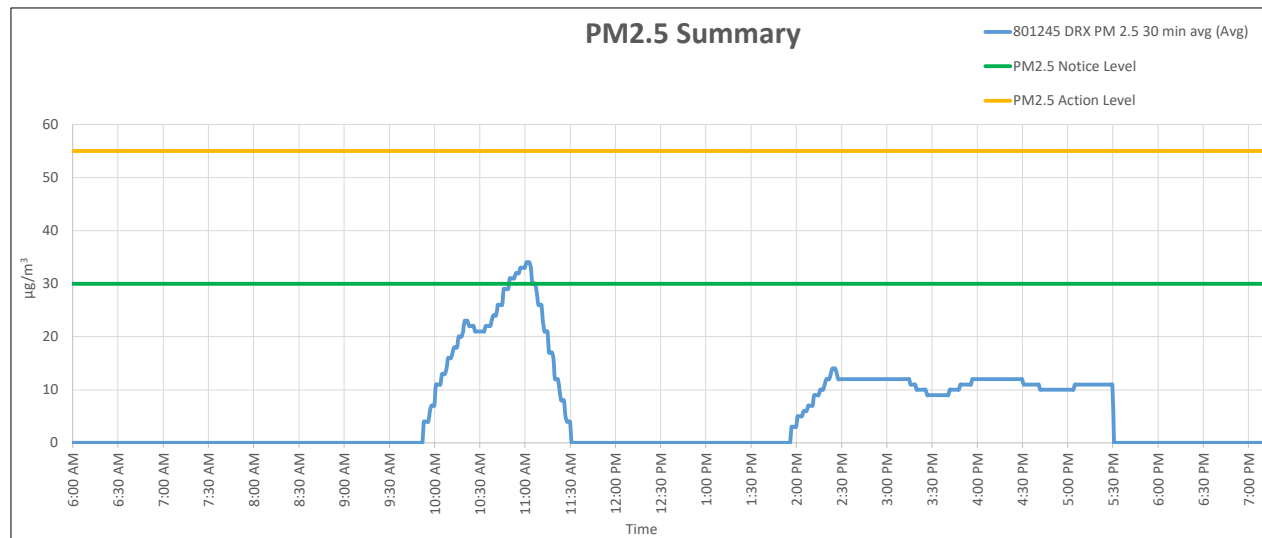
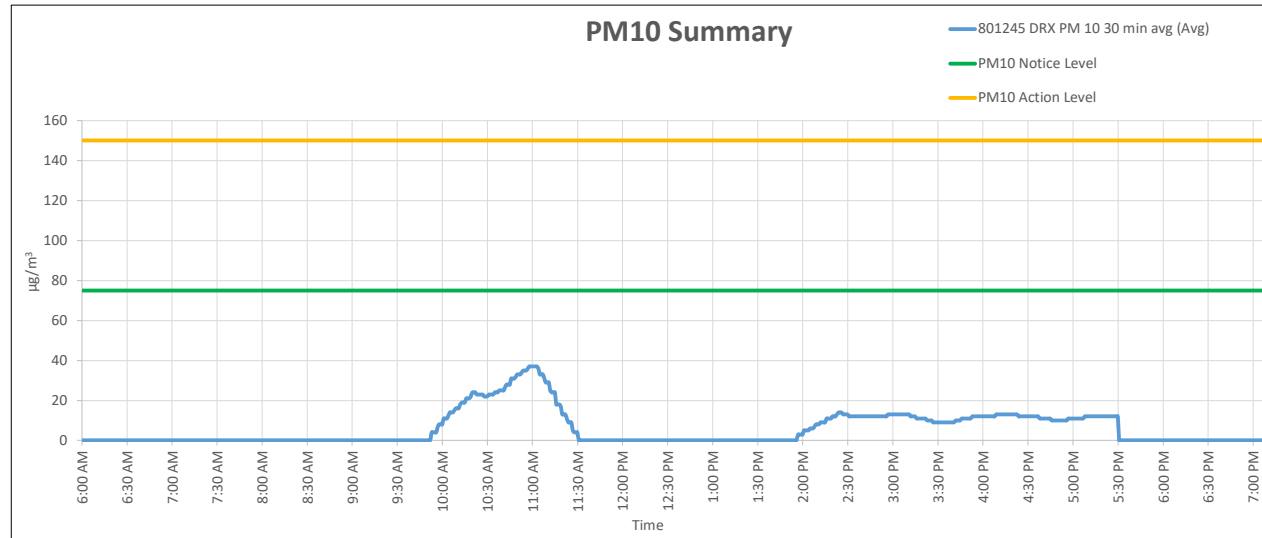
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 29, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
49911	9:12 AM	5:30 PM	12.82	41.00	11.32	37.00



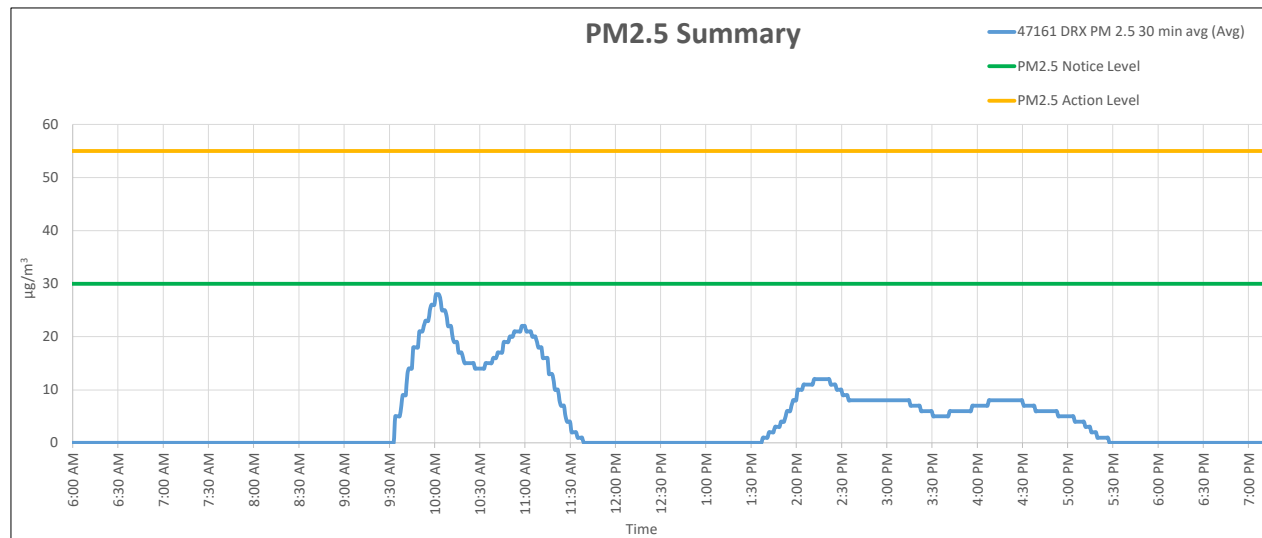
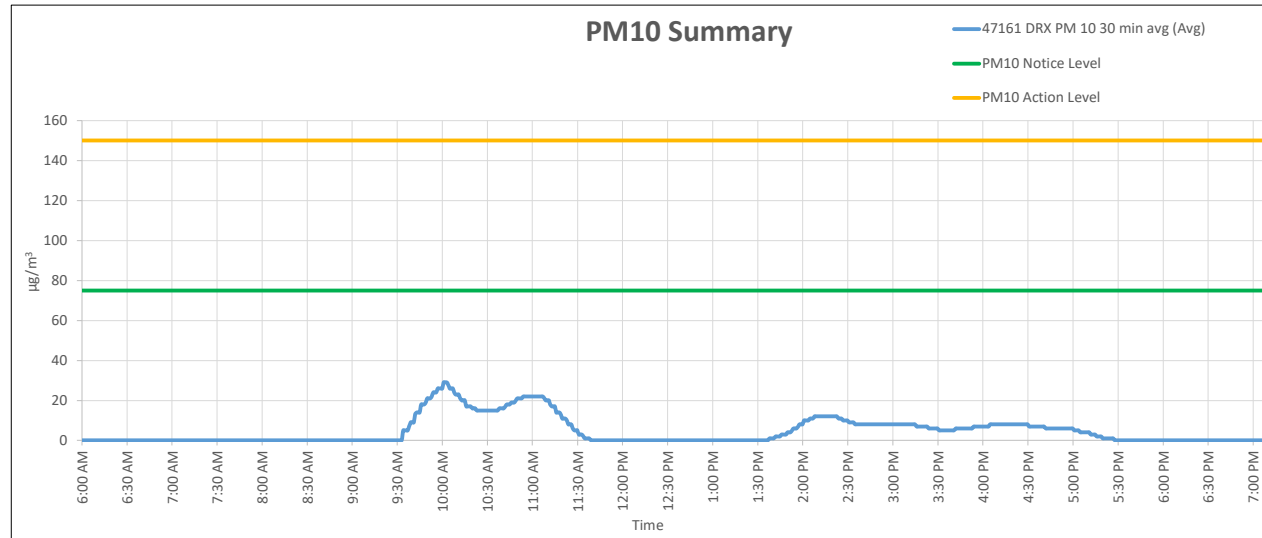
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 29, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	9:53 AM	5:30 PM	14.42	37.00	13.64	34.00



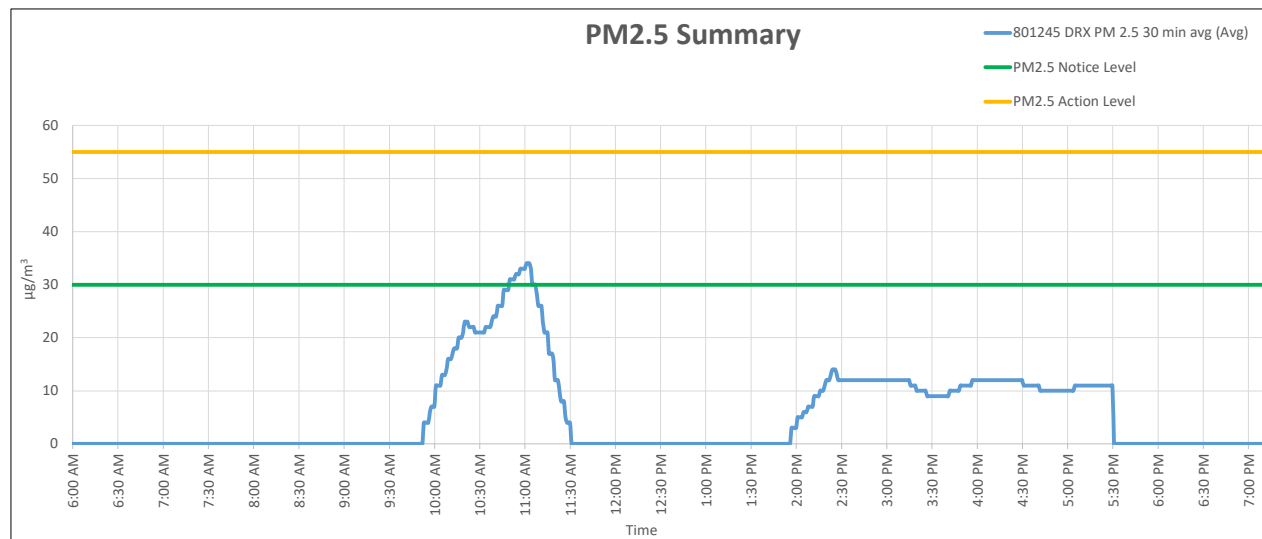
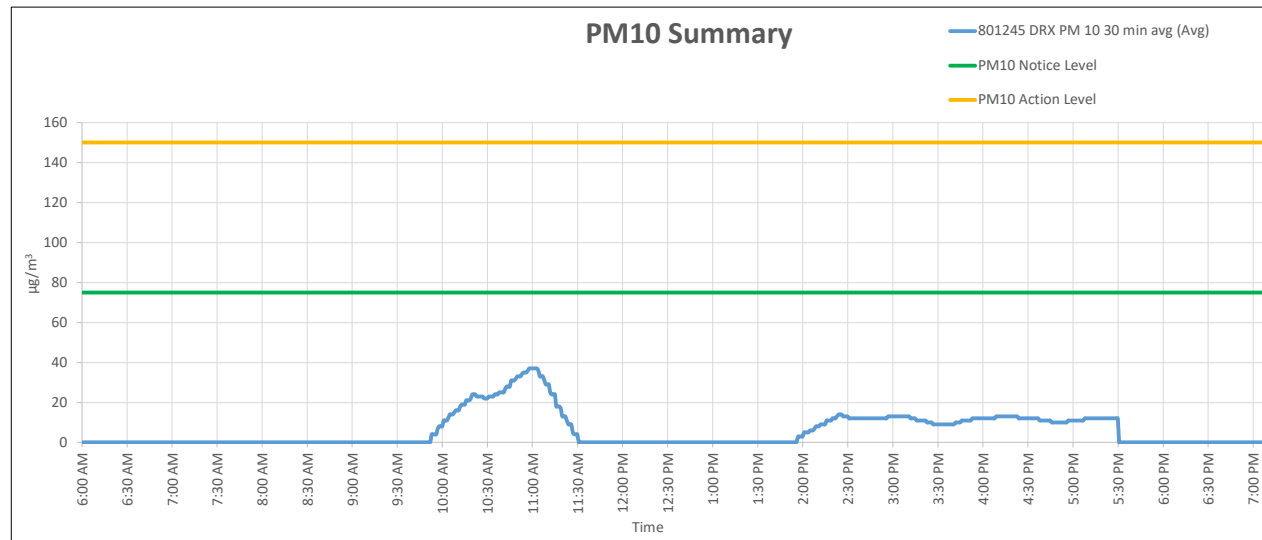
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 29, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	9:34 AM	5:19 PM	10.23	29.00	9.93	28.00



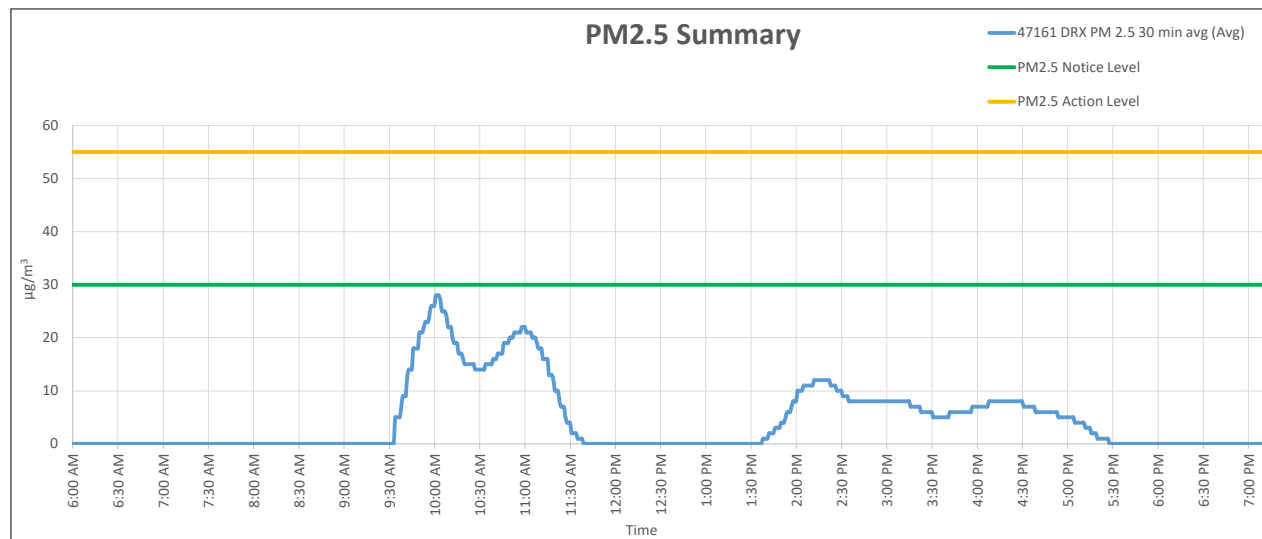
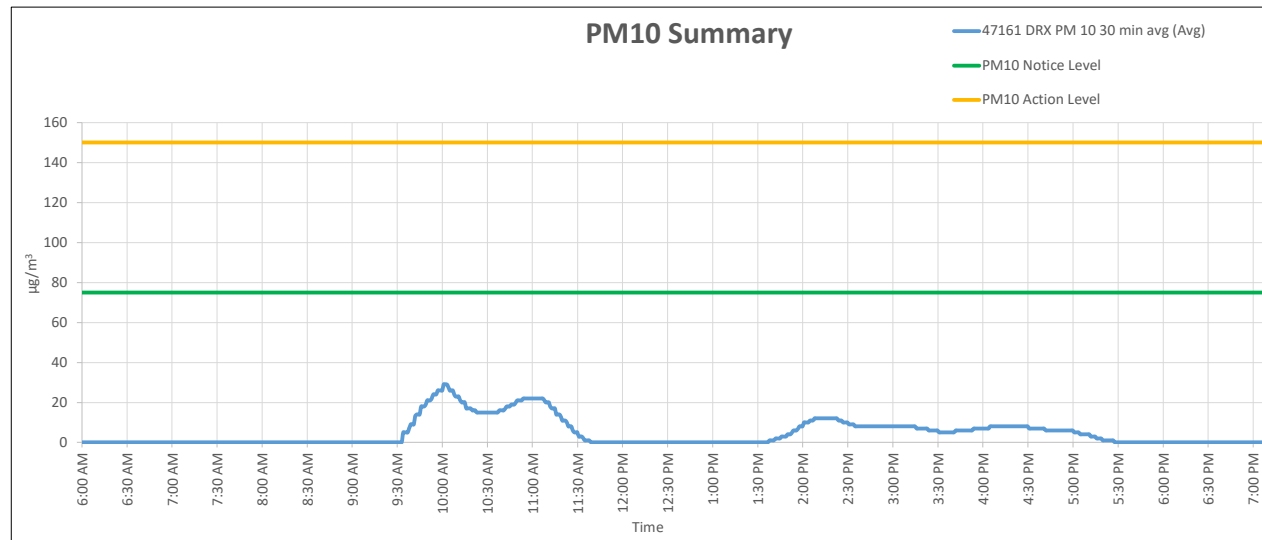
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 29, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
801245	9:53 AM	5:30 PM	14.42	37.00	13.64	34.00



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, August 29, 2024

Monitor Number	Start	Stop	Daily PM ₁₀ Average ($\mu\text{g}/\text{m}^3$)	Daily PM ₁₀ Maximum ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Average ($\mu\text{g}/\text{m}^3$)	Daily PM _{2.5} Maximum ($\mu\text{g}/\text{m}^3$)
47161	9:34 AM	5:19 PM	10.23	29.00	9.93	28.00



SECTION 3 RESULTS OF INTEGRATED AIR SAMPLING

3.1 Integrated Air Sampling

UPRR is collecting integrated air samples for polynuclear aromatic hydrocarbons (PAHs), lead and arsenic during the excavation activities. Integrated air sampling is a method of sampling that is collected by drawing a known volume of air through filters or media and sent to a laboratory for analysis. Due to the analysis required, integrated air sample results are not real time. The results provided herein are the most recent lab results available. Up to two (2) air samples are taken per week per pollutant. Lab results are compared to TCEQ short-term and long-term Air Monitoring Comparison Values (AMCV). AMCV values are chemical specific and are intended to be protective of human health and welfare.

- **Short-Term AMCV:** The short-term AMCV, based on acute exposure health and welfare data, is compared to monitored concentrations that can be 30 minutes to 1-hour, which represent a point in time for a specific location.
- **Long-Term AMCV:** The long-term AMCV, based on chronic health and welfare data, is used to evaluate annual averaged monitored concentrations or annual concentrations averaged over multiple years (if available), which represent multiple points in time for specific locations.

Health-based AMCVs are safe levels at which exposure is unlikely to result in adverse health effects. Airborne levels of these contaminants are considered acceptable if the 12-hour average airborne concentrations were below the applicable AMCV values presented below in Table 4.

Table 4 – TCEQ AMCV for Arsenic and PAH Union Pacific Houston Wood Preserving Works		
Houston, Texas		
Analyte	Short-Term AMCV ($\mu\text{g}/\text{m}^3$)	Long-Term AMCV ($\mu\text{g}/\text{m}^3$)
Arsenic	3	0.067
Acenaphthene	100	10
Acenaphthylene	100	10
Anthracene	1	0.067
Benzo(a)anthracene	0.5	0.05
Benzo(a)pyrene	NE	0.017
Benzo(b)fluoranthene	0.5	0.05
Benzo(c)pyrene	NE	NE
Benzo(g,h,i)perylene	0.5	0.05
Benzo(k)fluoranthene	0.5	0.05
Chrysene	0.5	0.05
Dibenzo(a,h)anthracene	0.5	0.05
Fluoranthene	0.5	0.05
Fluorene	10	1
Indeno(1,2,3-cd)pyrene	0.5	0.05
1-Methylnaphthalene	NE	NE
2-Methylnaphthalene	NE	NE
Naphthalene	500	50
Perylene	NE	NE

SECTION 3

Table 4 – TCEQ AMCV for Arsenic and PAH Union Pacific Houston Wood Preserving Works		
Houston, Texas		
Analyte	Short-Term AMCV ($\mu\text{g}/\text{m}^3$)	Long-Term AMCV ($\mu\text{g}/\text{m}^3$)
Phenanthrene	8	0.8
Pyrene	0.5	0.05
Acronyms: NE – None Established		

The Texas Commission on Environmental Quality (TCEQ) has adopted the USEPA NAAQS for lead. Airborne levels of lead were considered to be acceptable if concentrations measured were below $0.15 \mu\text{g}/\text{m}^3$ as a 3-month average concentration.

Integrated air samples were not taken during the month of August due to weather and work periods lasting less than the required sampling period of eight hours per day.



ATTACHMENT C

Dust Control and Air Monitoring Plan Addendum

June 15, 2024

Kevin Peterburs
Senior Manager
Union Pacific Railroad
4823 N 119th Street
Milwaukee, WI 53225

Via Email: kjpeterb@up.com

SUBJECT: Ambient Air Monitoring at the Houston Wood Preserving Works – Englewood Intermodal Yard – Focused Excavations

United Pacific Railroad Company–Houston Wood Preserving Works Site
4910 Liberty Road
Houston, Texas
Atlas Project No.: NPUP0003, Phase 2

Dear Mr. Peterburs:

Atlas Technical Consultants, LLC (Atlas) is proposing to amend the Dust Control and Air Monitoring Plan for the Houston Wood Preserving Works – Englewood Intermodal Yard – Focused Excavations to include revised Target Dust Control Levels. The revised levels would take action only during regional poor air quality days where onsite air monitoring levels are near or exceed the Stop Work threshold without additional excavation activities. Poor air quality days due to particulate matter are common in the Houston metroplex. The revised levels would ensure Union Pacific Railroad (UPRR) could continue excavation activities despite regional poor air quality.

The current Dust Control and Air Monitoring Plan dated October 20, 2023, anticipated the potential need to revise certain monitoring criteria due to environmental conditions. The plan states “If IHST identifies other sites or environmental conditions that clearly may confound particulate level measurements for control purposes, IHST may apply additional reasonable corrections or exclusions to monitoring station data. Any such corrections will be documented and communicated to UPRR managers and the project Environmental Manager. Together with UPRR, Atlas has determined poor regional air quality is an environmental condition that needs to be addressed. With this addendum, UPRR is proposing to exclude background monitor concentrations from the onsite monitor concentrations during regional poor air quality days to compare to the established control level thresholds.

Air quality concentrations from the TCEQ air monitoring station Houston North Wayside C405/C1033 would be used as a baseline to determine the regional air quality. The Houston North Wayside monitor is approximately 3.5 miles from the Houston Wood Preserving Works site. Revised thresholds would be implemented if the onsite monitor value minus the TCEQ monitor values exceeded the respective Notice Level, Action Level or Stop Work level.

The revised threshold levels are presented in Table 1.



Table 1 – Revised Established Control Levels Union Pacific Houston Wood Preserving Works Houston, Texas		
	PM _{2.5} 30-minute Average	PM ₁₀ 30-minute Average
Notice Level on Poor Air Quality Days	Onsite Monitor - TCEQ Monitor >30 µg/m ³	Onsite Monitor - TCEQ Monitor >75 µg/m ³
	The Notice Level is intended as an early warning of potential elevations in airborne dust levels. When the notice level is exceeded the onsite IH will investigate the area(s) where the initial elevations in dust levels are indicated, and inform the Remediation Manager, Environmental Manager and other designated personnel of the known or most likely source(s) of the elevated levels, and advise what actions, if any, appear warranted to limit airborne dust generation. The Remediation Manager and Environmental Manager will determine how to best implement the recommendations of the IH.	
Action Level on Poor Air Quality Days	Onsite Monitor - TCEQ Monitor >55 µg/m ³	Onsite Monitor - TCEQ Monitor >150 µg/m ³
	The Action Level is intended as an indication that control measures should be implemented in a timely manner to mitigate generation of airborne dusts. When the Action Level is exceeded, the IH will investigate the area(s) where the elevations in dust levels are indicated, and inform the Remediation Manager, Environmental Manager and other designated personnel of the known or most likely source(s) of the elevated levels, and advise what actions, if any, appear warranted to limit airborne dust generation. The Remediation Manager and Environmental Manager will determine how to best implement the recommendations of the IH.	
Stop-Work Level on Poor Air Quality Days	Onsite Monitor - TCEQ Monitor >85 µg/m ³	Onsite Monitor - TCEQ Monitor >300 µg/m ³
	The Stop-Work Level is intended as an indication that continued generation of airborne dusts at or above the specified levels are likely to result in overall daily averages or short-term elevations in airborne dust levels that could be greater than the parameters established for the project. When the Stop-Work Level is exceeded, work in the affected area(s) should be stopped until additional controls are implemented. The IH will investigate the area(s) where the elevations in dust levels are indicated, reporting his findings and recommendations to the Remediation Manager, Environmental Manager and other designated personnel. This team will work together to determine what control measures will be effective in reducing dust levels and how to best implement those measures and resume remediation activities. If stop-work levels are reached more than twice per day, the dust-generating activity will be stopped for the remainder of the workday and UPRR will design and implement a more effective dust control program prior to resuming work the following workday.	
Acronyms: IH – Industrial Hygienist		

TCEQ real-time air monitoring data can be delayed by two to three hours. The onsite Industrial Hygienist would note the most recent available value from the North North Wayside C405/C1033 monitor and calculate the difference between the two monitors. If the difference is below the respective Notice Level, Action Level or Stop Work level excavation activities can continue. If the difference between the two monitors exceed the respective Notice Level, Action Level or Stop Work level then appropriate action by UPRR personnel will be taken.