June 17, 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 May 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 May 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 May 2024:

Week Period May 1 through May 3, 2024:

- **Remediation Activities:**
  - UPRR-contractor E3 began excavation activities at FE-01 (Photo No. 12).

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- **Dust Control and Air Monitoring:**
  - Atlas Technical Consultants (Atlas) conducted real time air and dust monitoring at the Site 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 May 1st through 3rd (Appendix B).

- **Soil/Waste Management**
  - The removed material (asphalt pavement, concrete and soil) was containerized in roll-offs staged on Site. Five-point composite samples were collected from each roll-off container for waste characterization. One roll-off container was filled this week. The roll-offs were covered when not actively being loaded.
  - Tar-like material encountered during the excavation of FE-01 was sampled and placed in a 55-gallon drum pending characterization and disposal.

- **Stormwater Management**
  - Excavations were surrounded with straw wattles (Photo No. 1).
  - Nearby storm drains were surrounded by absorbent booms and straw wattles as part of the stormwater best management practices (BMPs) (Photo No. 2). BMPs were checked before and after the rain events.
  - Due to rain during this period, stormwater that accumulated in the FE-01, FE-02 and FE-03 excavations (for FE-02 and FE-03 - areas where asphalt had been removed) was pumped out with a vacuum truck and placed into a frac tank pending characterization and disposal (Photo No. 11).

Week Period May 6 through May 10, 2024:

- **Remediation Activities:**
  - E3 conducted the following activities during this week:
    - Resumed and completed excavation at FE-01, FE-02, FE-03 and FE-07 (Photo No. 14).
    - Began expanding excavations FE-01 and FE-03 to create one large excavation area due to tar seeps observed in the east sidewall of FE-01 and west sidewall of FE-03 (Photo No. 21).
    - Clean import backfill material was delivered to the Site on May 8, 2024 and stockpiled on plastic sheeting (Photo No. 15).
- **Dust Control and Air Monitoring:**
  - Atlas' air and dust monitoring indicated that no Target Dust Control Levels were exceeded during the remediation activities from May 6 to May 10, 2024, except on May 8th and May 9th (discussed below). Atlas additionally collected two air samples on May 6, 2024, in accordance with the DCAM Plan that were submitted to the laboratory to analyze the samples for lead, arsenic, and polynuclear aromatic hydrocarbons (PAHs). Arsenic and lead were not detected above laboratory method detection limits. Results of the integrated air samples for PAHs indicated that there were no exceedances of TCEQ Air Monitoring Comparison Values (AMCV). Laboratory analytical results are included in Atlas' monthly summary provided in Appendix B.
  - High background regional air pollution was noted in the area on May 8 and May 9, 2024 which led to PM2.5 levels to be above the Action Level threshold on May 8th and above the Stop-Work Level on May 9th. Surrounding sites, including the nearby TCEQ Houston North Wayside C405/C1033

station, exhibited similar elevated readings indicating poor regional air quality on these days due to fires in Mexico and Central America (Appendix B).

- **Soil/Waste Management**
  - Excavated concrete/asphalt and soil generated this week were placed in 28 roll-off containers, staged on Site. Five-point composite samples were collected from each roll-off container for waste characterization. The roll-off containers were covered when not actively being loaded.
  - Tar-like material recovered from excavations FE-02, FE-03, and FE-07 was sampled and placed in 55-gallon drums pending characterization and disposal.

- **Stormwater Management**
  - Following a rain event on May 5th, E3 removed the stormwater that accumulated in the excavations (Photo No. 13) with the vacuum truck. The collected stormwater was placed into a mini frac tank pending characterization and disposal.
  - As part of the stormwater BMPs and to limit stormwater runoff from entering the excavations, E3 constructed temporary soil berms using the clean backfill on the upgradient sides of the excavations. Straw wattles were also placed around the new excavations. BMPs were checked before and after the rain events.
  - The backfill stockpiles were covered to keep the material dry.

Week Period May 13 through May 17, 2024:

- **Remediation Activities:**
  - E3 conducted the following activities during this week:
    - Completed the soil excavation in the expansion area between FE-01 and FE-03 creating one large excavation (Photo No. 23)
    - Extended the FE-02 excavation sidewalls to the southeast, south, and southwest.

- **Dust Control and Air Monitoring:**
  - Air and dust monitoring indicated that no Target Dust Control Levels were exceeded during the remediation activities from May 13 to May 17, except on May 13th (discussed below). Atlas collected two integrated air samples with a field blank on May 15, 2024, that were analyzed in accordance with the DCAM Plan. Arsenic and lead concentrations were not detected above laboratory method detection limits (MDLs). Results of the integrated air samples for PAHs indicated that there were no exceedances of TCEQ AMCVs. Laboratory analytical results are included in Atlas' monthly summary provided in Appendix B.
  - One air monitoring unit had elevated PM concentrations on May 13th. Atlas personnel investigated this increase and determined this short-term increase was due to dust related to a railroad contractor loading equipment near the air monitoring station, and not the excavation work.

- **Soil/Waste Management**
  - Excavated asphalt/concrete pavement and soil were placed in 41 roll-off containers and staged on the Site. Five-point composite samples were collected from each roll-off container for waste characterization. Roll-off containers were covered when not actively being loaded.

- **Stormwater Management**

- Following rain events on May 13th and May 16th, stormwater was recovered from the excavations using vacuum trucks and containerized in mini frac tanks located on Site pending characterization and disposal. BMPs were checked before and after the rain events (Photo No. 24).

Week Period May 20 through May 24, 2024:

- **Remediation Activities:**
  - E3 completed the following excavation activities this week:
    - Extended the excavation at FE-7 to the north, south, east and west (Photo 32).
    - Continued excavations at the expanded FE-02 location to the south and southwest (Photo 33).

- **Dust Control and Air Monitoring:**
  - No Target Dust Control Levels were exceeded during the remediation activities from May 20th and May 24th, except on May 21st (discussed below). Atlas collected two integrated air samples on May 22, 2024, in accordance with the DCAM Plan. Samples were submitted to the laboratory for lead, arsenic, and PAHs analyses. Arsenic and lead concentrations were not detected above laboratory method detection limits (MDLs). Results of the integrated air samples for PAHs indicated that there were no exceedances of TCEQ AMCVs. Laboratory analytical results are included in Atlas' monthly summary provided in Appendix B.
  - On May 21st PM2.5 concentrations reached the Stop Work level at approximately 12:15 pm; however, no excavation work was occurring at the time. Start of work was paused until PM2.5 levels fell below the Stop Work threshold (approximately 30 minutes). Surrounding air monitors also indicated high levels of particulate matter in the area (Appendix B).

- **Soil/Waste Management**
  - Excavated asphalt/concrete pavement and soil were placed in 42 roll-off containers and staged on the Site. Five-point composite samples were collected from each roll-off container for waste characterization. Roll-off containers were covered when not actively being loaded.

- **Stormwater Management**
  - Stormwater was recovered on May 20th from excavations following a rain event using the vacuum truck. E3 pumped the water into mini frac tanks located on Site pending characterization and disposal (Photo 31).

Week Period May 27 through May 31, 2024:

- **Remediation Activities:**
  - E3 completed the following excavation activities this week (Photo No. 48):
    - FE-02 south expansion area,
    - FE-7 extension area,
    - FE-04 excavation area, and
    - Began excavating FE-11.

- **Dust Control and Air Monitoring:**
  - Atlas noted on May 28th prior to the start of excavation activities that the Stop Work threshold was exceeded at all the dust monitoring stations for PM2.5 due to regional poor air quality across the Houston area. As a result, Atlas prepared an amendment dated June 15, 2024 to the DCAM Plan

with revised Target Dust Control Levels during periods of regional poor air quality using the TCEQ air monitoring station at Houston North Wayside C405/C1033 as a baseline for regional quality (Attachment C). No other exceedances of Target Dust Control Levels occurred during this time period.

- **Soil/Waste Management**
  - Excavated asphalt/concrete pavement and soil were placed in 32 roll-off containers and staged on the Site (Photo No. 41). Five-point composite samples were collected from each roll-off container for waste characterization. Roll-off containers were covered when not actively being loaded.

- **Stormwater Management**
  - Following rain events from May 28 to May 30, stormwater was recovered from the excavations using vacuum trucks and containerized in mini frac tanks located on Site pending characterization and disposal.

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 May 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 DNAPL using an interface probe. No measurable NAPL has been detected within the sumps using the interface probe through May 2024. A hoe has continued to be used to recover DNAPL, if present, from the bottom of each of the sumps during the weekly inspections. No DNAPL was encountered or recovered from the Sumps during May 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 May 2024.
- Some tar-like material was observed along the concrete joint between the NAPL Collection System and the existing concrete at Stall B107 during the May 22, 2024 inspection (Photo Nos. 39).
- 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:
  - May 1st – at 9, 20 and 21 inches (Photo Nos. 8-10).
  - May 8th – at 1, 23 and 22 inches (Photo Nos. 18-20).
  - May 15th – at 0, 20, and 21 inches (Photo Nos. 26-28).
  - May 22nd – NAPL Collection System sumps were not able to be measured due to the ongoing focused excavations.
  - May 29th – at 0, 19.5, and 19 inches (Photo Nos. 44-46).
- During the May 2024 inspections, the water in Sump 1 was observed to be light brown or brown in color, the water in Sump 2 was observed to be light brown or clear and Sump 3 was observed to be clear. A sheen was observed at Sump 1 during the May 8, 2024 inspection (Photo No. 18). No odors were reported during the May inspections.

Areas Outside NAPL Collection System Inspections

For areas outside the NAPL Collection System, a small amount of tar-like material was observed on the concrete or asphalt surface at the following locations during the May 2024 weekly inspections. The tar-like material was recovered from these locations when observed:

Seep Observations Outside the NAPL Collection System Area	
Stall Number	**Observation Date(s)**
A011	May 1st, May 22nd and May 29th (Photo Nos. 3, 34 and 42)
A022	May 1st and 22nd (Photo Nos. 4 and 36)
B042	May 22nd (Photo No. 37)
B056	May 1st, May 15th and May 29th (Photo Nos. 5, 25 and 43)
B057	May 22nd (Photo No. 38)
B102 Joint	May 1st (Photo No. 6)
B107	May 22nd (Photo No. 39)
Track 802	May 1st , May 8th , May 15th and May 22nd (Photo Nos. 7, 17, 29 and 35)
RD-14	May 8th and May 15th (Photo Nos. 16 and 30)

Note: Seep observed next to Track 802 is approximately 280 feet northwest of the NAPL Collection System. Seep RD-14 is located within the concrete road area (RD-14) about 45 feet north of Track 802 and east of the existing Track 802 seep location.

- Tar-like material observed during the weekly inspection events was removed and recovered using a hand tool to scrap up the material. The number of tar-like material seeps observed, and total volume of material recovered during the month of May was slightly less than during the April inspections. Less than 0.2 gallons of tar-like material were recovered for the month from the seep locations. The material recovered was placed in a drum staged at the CSA for disposal.
- UPRR remediation contractor E3 was mobilized to the site on May 10th to pressure wash areas of brown staining/residue present in cracks in the pavement in stalls A060 -A074 (Photo No. 22). The brown staining was again observed in cracks in the pavement in stalls B060-B070 during the May 22nd inspection. A small amount of seep water was also present in the depressions in the joint between the asphalt and concrete pavement in stall A010 and A011 during the May 22nd inspection (Photo No. 34). E3 returned to the site on May 28, 2024, to recover this seep water and pressure wash the brown staining (Photo No. 40). Wash water from the clean-up events was recovered and is staged in a tote onsite pending transportation and disposal. UPRR will continue to have a remediation contractor pressure wash and collect the water in the areas where the brown staining and seeps are observed, as needed.

- During the May 2024 inspections, no NAPL seeps were observed at the seven July 2020 test pit locations (stalls A010, A021, A098, B013, B057, B096 and B108). The seep observed in stall B057 is located in the cracks in the asphalt pavement and not at the test pit location.
- A follow-up video camera survey of the stormwater sewer lines in the central area of the Englewood IM Yard was conducted on August 26, 2021 to evaluate the stormwater line near the test pit locations. Details of the follow-up video survey and test pit evaluation will be provided in the Interim Measures Response Action Completion Report after the activities detailed in the Interim Measure Work Plan (discussed above) are completed.

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.

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Consultant, Environmental Scientist

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

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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 – May 2024
Attachment C – Dust Control and Air Monitoring Plan Addendum

TABLE 1
NAPL Measurements - NAPL Collection System - Englewood Intermodal Yard
UPRR Houston, tx - Wood Preserving Works

Measured Date	Sump 1 (B099/B100) Freeboard (in)	Sump 2 (B103/B104) Freeboard (in)	Sump 3 (B107/B108) Freeboard (in)	Depth to DNAPL (in)	Comments
8/14/2019	2.5	28	29	Not measurable	
8/21/2019	0	27.5	26.5	Not measurable	
8/28/2019	44.5	47.9	45	Not measurable	Water from sumps pumped out
9/4/2019	19	42	41.5	Not measurable	
9/13/2019	0	39.5	38	Not measurable	
9/20/2019	0	3	2.5	Not measurable	
9/25/2019	0	42	42.5	Not measurable	Water from sumps pumped out
10/2/2019	2.5	42.5	42	Not measurable	Sheen visible in B107/B108 sump, less than 0.1 gal of DNAPL recovered
10/9/2019	3	42	41.5	Not measurable	Sheen visible in B107/B108 sump, less than 0.1 gal of DNAPL recovered
10/16/2019	0	39.5	39	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
10/24/2019	3	35	25	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
10/29/2019	0	24	23	Not measurable	Water from sumps pumped out
10/30/2019	0	40	39	Not measurable	Slight sheen visible in B107/B108 sump
11/6/2019	9	39	38.5	Not measurable	
11/13/2019	7	30	29	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
11/19/2019	4	26	25.5	Not measurable	
11/27/2019	0	25	23	Not measurable	
12/3/2019	2	25.5	25	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
12/11/2019	1.5	17	16.54	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
12/17/2019	5	19.5	17.5	Not measurable	
12/23/2019	10	21	20.5	Not measurable	
1/7/2020	9	13	12.5	Not measurable	
1/8/2020	9	13	12.5	Not measurable	Water from sumps pumped out
1/17/2020	0	32	31.5	Not measurable	
1/21/2020	2.5	26.5	26	Not measurable	
1/28/2020	0	0	0	Not measurable	
2/4/2020	2	11	10.5	Not measurable	
2/12/2020	0	0	0	Not measurable	
2/18/2020	1.5	11.5	10.25	Not measurable	Water from sumps pumped out on 2/20/2020
2/27/2020	2	42	36	Not measurable	
3/6/2020	1	36	36	Not measurable	
3/11/2020	2	36	35.5	Not measurable	
3/18/2020	0	35.5	35	Not measurable	
3/27/2020	0	29	28	Not measurable	
4/3/2020	1.5	29	28.5	Not measurable	
4/8/2020	0	23	22	Not measurable	
4/15/2020	0.5	23	22	Not measurable	
4/21/2020	0	21	21	Not measurable	
4/28/2020	0	23	22	Not measurable	
5/4/2020	-	-	-	Not Measured	Measurements were not taken; the inspector was unable to open the sumps
5/12/2020	0	20	19	Not measurable	
5/19/2020	0	15.75	14.25	Not measurable	Sump 1 pumped down (May 22nd)
5/27/2020	0	14	13	Not measurable	
6/1/2020	0	7	5	Not measurable	
6/10/2020	0	10	9	Not measurable	
6/17/2020	1	12	11	Not measurable	
6/25/2020	0	0	0	Not measurable	
6/30/2020	0	0	0	Not measured	
7/1/2020	48	46	47	Not measurable	Sumps 1, 2, & 3 pumped down
7/8/2020	34	24.5	24	Not measurable	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
7/15/2020	32	29.5	29	Not measurable	Sheen visible in B99/B100 sump & B107/B108 sump, less than 0.1 gal of DNAPL recovered B107/B108 sump
7/23/2020	0	23	22.5	Not measured	Less than 0.1 gal of DNAPL recovered from B107/B108 Sump
7/31/2020	0	11	10	Not measurable	
8/5/2020	0	7	5	Not measurable	
8/13/2020	1	11	10	Not measurable	
8/19/2020	0	7	6	Not measurable	
8/26/2020	0	10	9	Not measurable	
9/2/2020	43	37	38	Not measurable	Sumps 1, 2, & 3 pumped down (September 1); Sheen visible in B99/B100 sump & B107/B108 sump
9/9/2020	28	37	36	Not measurable	Sheen visible in B107/B108 sump
9/15/2020	1	35	33	Not measurable	
9/23/2020	0	0	0	Not measurable	

TABLE 1
NAPL Measurements - NAPL Collection System - Englewood Intermodal Yard
UPRR Houston, tx - Wood Preserving Works

Measured Date	Sump 1 (B099/B100) Freeboard (in)	Sump 2 (B103/B104) Freeboard (in)	Sump 3 (B107/B108) Freeboard (in)	Depth to DNAPL (in)	Comments
9/30/2020	1	10	9	Not measurable	
10/8/2020	4	12	11.5	Not measurable	
10/15/2020	0	11	10.5	Not measurable	Less than 0.1 gal of DNAPL recovered B107/B108 sump
10/21/2020	1	10.5	9.25	Not measurable	
10/28/2020	0	11	10	Not measurable	
11/4/2020	9	13	12	Not measurable	
11/11/2020	0.5	12	11	Not measurable	
11/18/2020	3.5	13	12	Not measurable	
11/24/2020	7	14	13.5	Not measurable	
11/30/2020	2	7	6	Not measurable	
12/10/2020	5	10.5	10	Not measurable	
12/18/2020	4	10	9	Not measurable	
12/23/2020	1	9	7.5	Not measurable	
12/31/2020	0	4	3.5	Not measurable	
1/6/2021	4	10.5	9	Not measurable	
1/15/2021	43	39	37.5	Not measurable	Sumps 1, 2, & 3 pumped down
1/22/2021	0	34	33	Not measurable	Sheen visible in B107/B108 sump
1/29/2021	2	31	30	Not measurable	Sheen visible in B107/B108 sump
2/4/2021	4	30	29.5	Not measurable	Sheen visible in B099/B100 sump
2/10/2021	0	27	25.5	Not measurable	
2/17/2021	0	0	0	Not measurable	
2/24/2021	2	10	9.5	Not measurable	
3/2/2021	0	0	0	Not measurable	
3/10/2021	0	10	9.75	Not measurable	
3/17/2021	0	2	1	Not measurable	
3/24/2021	0	3.5	2	Not measurable	
3/31/2021	0	6.5	7	Not measurable	
4/8/2021	0	7.5	7	Not measurable	
4/14/2021	0	6.5	6	Not measurable	Less than 0.1 gal of DNAPL recovered B107/B108 sump; Sheen visible in B103/104 and B107/B108 sumps
4/21/2021	0.5	9	8.5	Not measurable	
4/28/2021	0	8.5	8	Not measurable	
5/5/2021	0	7.5	7	Not measurable	
5/12/2021	0	8	7.5	Not measurable	
5/19/2021	0	0	0	Not measurable	
5/26/2021	0	2	0.5	Not measurable	
5/27/2021	41	32	26	Not measurable	Sumps 1,2, & 3 pumped down
6/2/2021	0	40	38	Not measurable	Sheen visible in B107/108 sump
6/9/2021	0	30	28.5	Not measurable	
6/16/2021	0	24	25	Not measurable	
6/23/2021	0	12	13	Not measurable	
6/30/2021	0	3	1	Not measurable	
7/7/2021	0	0	0	Not measurable	
7/14/2021	0	0	0	Not measurable	Sumps 1,2, & 3 pumped down (July 15)
7/21/2021	0	39	37	Not measurable	
7/29/2021	0	37	35.5	Not measurable	
8/4/2021	0	36	34	Not measurable	Sheen visible in B103/104 and B107/B108 sumps
8/11/2021	0	33	32	Not Measured	Depth to DNAPL measurements were not taken; the interface probe was not functioning properly
8/18/2021	0	25	23	Not measurable	
8/25/2021	0	20	22	Not measurable	
9/1/2021	0	20	17	Not measurable	
9/8/2021	3	14	11	Not measurable	
9/15/2021	0	3	4	Not measurable	Sumps 1,2, & 3 pumped down (September 17)
9/22/2021	31.5	46	46	Not measurable	Sheen visible in B107/B108 sump
9/29/2021	0	29	30.75	Not measurable	Sheen visible in B103/104 and B107/B108 sumps
10/7/2021	6	18	17.5	Not measurable	
10/13/2021	3.6	10.56	9.72	Not measurable	Sheen visible in B103/104 and B107/B108 sumps; brown discoloration and slight odor noted B099/B100 sump
10/20/2021	0	13.94	12.6	Not measurable	Sumps 1,2, & 3 pumped down (October 21)
10/27/2021	0	22	21	Not measurable	Sheen visible in B099/B100 sump
11/3/2021	10	20	21	Not measurable	
11/10/2021	12	16	15	Not measurable	
11/17/2021	8	16	15	Not measurable	
11/24/2021	7	14	13	Not measurable	
12/1/2021	7	15	14	Not measurable	
12/8/2021	6	12.5	12	Not measurable	
12/15/2021	7	15	15	Not measurable	
12/22/2021	-	-	-	Not Measured	Partial site inspection conducted 12/22/21; Sump measurements were not taken
12/29/2021	0	11.5	11	Not measurable	
1/5/2022	8.75	13.5	12.25	Not measurable	

TABLE 1
NAPL Measurements - NAPL Collection System - Englewood Intermodal Yard
UPRR Houston, tx - Wood Preserving Works

Measured Date	Sump 1 (B099/B100) Freeboard (in)	Sump 2 (B103/B104) Freeboard (in)	Sump 3 (B107/B108) Freeboard (in)	Depth to DNAPL (in)	Comments
1/12/2022	6	12	12	Not measurable	
1/19/2022	13.5	17	16	Not measurable	Sheen visible in B099/B100 sump
1/27/2022	3	9	9	Not measurable	
2/2/2022	-	-	-	Not Measured	Measurements were not taken; the inspector was unable to open the sumps
2/9/2022	9	15	15	Not measurable	
2/16/2022	8.5	17	16	Not measurable	
2/23/2022	5.5	14	13.5	Not measurable	
3/2/2022	5.5	15	14	Not measurable	
3/9/2022	4.5	7	6	Not measurable	
3/16/2022	48	36	45	Not measurable	Sumps 1,2, & 3 pumped down during inspection; less than 0.5 gal of DNAPL recovered B107/B108 sump
3/23/2022	6	29	28	Not measurable	
3/30/2022	5.5	28	28	Not measurable	
4/6/2022	3.5	19	18	Not measurable	
4/13/2022	4.5	18	15	Not measurable	Sheen visible in B099/B100 sump
4/20/2022	5	18	18	Not measurable	Sheen visible in B099/B100 sump
4/27/2022	4.5	12	8.5	Not measurable	
5/4/2022	48	42	45	Not measurable	Sumps 1,2, & 3 pumped down during inspection; Sheen visible in B099/B100 sump
5/11/2022	16	44.5	44	Not measurable	Sheen visible in B099/B100, B103/104, and B107/B108 sumps
5/18/2022	6.5	45	45	Not measurable	
5/25/2022	0	25	24	Not measurable	
6/1/2022	5.5	24	24	Not measurable	
6/8/2022	5	22	22	Not measurable	Sheen visible in B099/B100 and B103/104 sumps
6/15/2022	5	25	24	Not measurable	
6/22/2022	4.5	24	21	Not measurable	
6/29/2022	6	21	21	Not measurable	
7/6/2022	5.5	13	13	Not measurable	
7/13/2022	5	15	14	Not measurable	Sheen visible in B099/B100 sump
7/20/2022	51.5	38	43.5	Not measurable	Sumps 1,2, & 3 pumped down during inspection; less than 0.1 gal of DNAPL recovered B099/B100 sump
7/27/2022	4	42	40	Not measurable	
8/3/2022	5	39	39	Not measurable	
8/10/2022	5.5	38	38	Not measurable	Sheen visible in B107/B108 sump
8/17/2022	5.5	25.5	25	Not measurable	
8/24/2022	0	0.5	0	Not measurable	Inspector unable to open B099/B100 and B107/B108 sumps as there was standing water on top of the sumps due to ongoing rain event
8/31/2022	52	52	48	Not measurable	Sumps 1,2, & 3 pumped down during inspection; sheen visible in B103/B104 sump
9/7/2022	3	37	37	Not measurable	
9/14/2022	1	34	31	Not measurable	Sheen visible in B099/B100 sump
9/21/2022	2.2	31.5	27.5	Not measurable	Sheen visible in B107/B108 sump
9/28/2022	3	30	31	Not measurable	Sheen visible in B099/B100 and B107/B108 sumps
10/5/2022	8	33	33	Not measurable	Sheen visible in B099/B100 and B107/B108 sumps
10/12/2022	7	32	32	Not measurable	Sheen visible in B099/B100 and B107/B108 sumps
10/19/2022	48	48	48	Not measurable	Sumps 1,2, & 3 pumped down during inspection; less than 0.1 gal of DNAPL recovered from B107/108 sump; small amount of DNAPL visible but not recoverable in B099/B100 sump; sheen visible in B099/B100 and B103/B104 sumps on recharge water after pumpdown
10/26/2022	6	46	45	Not measurable	Sheen visible in B107/B108 sump
11/2/2022	4	19	19	Not measurable	
11/9/2022	6	14	13	Not measurable	
11/16/2022	8	14	12	Not measurable	
11/22/2022	0	0	0	Not measurable	
11/30/2022	3	10	9	Not measurable	Very slight sheen visible in Sumps 1, 2, and 3; less than 0.2 gal of DNAPL recovered from B107/108 sump
12/7/2022	4	13.5	13	Not measurable	
12/14/2022	0	0	0	Not measurable	Replaced dipper tool with hoe for NAPL recovery from sumps. Less than 0.4 gal of DNAPL recovered from B099/B100 sump; approximately 0.1 gal of DNAPL recovered from B107/B108 sump
12/21/2022	4	8	7	Not measurable	
12/28/2022	16	14	14	Not measurable	
1/4/2023	3.5	7.5	6	Not measurable	
1/11/2023	12	12	3	Not measurable	
1/18/2023	3	13	13	Not measurable	
1/25/2023	3	6	5	Not measurable	

TABLE 1
NAPL Measurements - NAPL Collection System - Englewood Intermodal Yard
UPRR Houston, tx - Wood Preserving Works

Measured Date	Sump 1 (B099/B100) Freeboard (in)	Sump 2 (B103/B104) Freeboard (in)	Sump 3 (B107/B108) Freeboard (in)	Depth to DNAPL (in)	Comments
2/1/2023	<1	1	<1	Not measurable	
2/8/2023	5	13	12	Not measurable	
2/15/2023	<1	2	2.5	Not measurable	Sumps B099/B100, B103/B104, and B107/B108 pumped down during inspection
2/22/2023	32	42	43	Not measurable	Sheen visible in B099/B100, B103/B104, and B107/B108 sumps; water in B099/B100 noted as brown color with high turbidity
3/1/2023	9	41	40	Not measurable	Sheen visible in B099/B100, B103/B104, and B107/B108 sumps, water color in sumps noted as brown
3/8/2023	5	42	41	Not measurable	B099/B100 & B103/B104 light brown color
3/15/2023	4	42	41	Not measurable	B099/B100 and B013/B104 brown color; B107/B108 very light brown color
3/22/2023	8	26.5	25.5	Not measurable	B099/B100 light brown color
3/29/2023	3	24	25	Not measurable	B099/B100 light brown color
4/5/2023	2.5	25	25	Not measurable	B099/B100 light brown color
4/12/2023	4	12	14	Not measurable	All three sumps pumped down during inspection, B099/B100 brown color
4/19/2023	5	42	42	Not measurable	Sheen visible in B107/B108 sump
4/26/2023	4	31.5	31.5	Not measurable	Sheen visible in B107/B108 sump
5/3/2023	3	18	17.5	Not measurable	
5/10/2023	0	1.5	0	Not measurable	Sheen visible in B107/B108 sump
5/17/2023	0	2	0	Not measurable	Sheen visible in B107/B108 sump
5/24/2023	2	14	13	Not measurable	Pumpdown and boom swap.
5/31/2023	28	50	49	Not measurable	B099/B100 water color brown. B103/B104 and B107/B108 water color light brown.
6/7/2023	3	38	37	Not measurable	Sheen visible in all Sumps. B099/B0100 water color brown and, light brown on both B103/B104 and B107/B108.
6/14/2023	4	38	37	Not measurable	Sheen Visible in B099/B100 & B107/B108. water color brown on B099/B100 & light brown in all other sumps.
6/21/2023	3	36	37	Not measurable	Sheen Visible in B107/B108. water color brown on B099/B100 & light brown in all other sumps.
6/28/2023	3	31	31	Not measurable	Sheen Visible in B099/B100 & B107/B108. water color dark brown on B099/B100 & B107/B108, light brown in B103/B104.
7/12/2023	3	20	19	Not measurable	Sheen Visible in B099/B100 and B107/B108. Water color brown on B099/B100, light brown in B103/B104.
7/19/2023	3	19	19	Not measurable	Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100 and clear on B103/B104 and B107/B108.
7/26/2023	3	21	20	Not measurable	Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100, light brown on B103/B104, and clear on B107/B108.
8/2/2023	0	16.5	15.5	Not measurable	Sheen Visible on B107/B108. Water color dark brown on B099/B100, light brown on B103/B104, and clear on B107/B108. Pumpdown conducted 8/4/2023.
8/9/2023	42	47	47	Not measurable	Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100, light brown on B103/B104, and clear on B107/B108.
8/16/2023	38.5	47	47	Not measurable	Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100 and light brown on B103/B104 and B107/B108.
8/23/2023	33	46	46	Not measurable	Sheen visible in all Sumps. B099/B100 water color dark brown and, light brown on both B103/B104 and B107/B108.
8/30/2023	33	46	44	Not measurable	Sheen visible in all Sumps. B099/B100 water color dark brown and, light brown on both B103/B104 and B107/B108.
9/6/2023	1	38	38	Not measurable	Sheen visible in all Sumps. B099/B100 water color light brown, and clear on both B103/B104 and B107/B108.
9/13/2023	0	33	33	Not measurable	Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100 and clear on B103/B104 and B107/B108. Pumpdown conducted 9/15/2023.
9/20/2023	14	41	40	Not measurable	Sheen Visible on B099/B100 and B107/B108. Water color brown on B099/B100 and light brown on B103/B104 and B107/B108.
9/27/2023	0.5	33	34	Not measurable	Sheen Visible on B099/B100 and B107/B108. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.

TABLE 1
NAPL Measurements - NAPL Collection System - Englewood Intermodal Yard
UPRR Houston, tx - Wood Preserving Works

Measured Date	Sump 1 (B099/B100) Freeboard (in)	Sump 2 (B103/B104) Freeboard (in)	Sump 3 (B107/B108) Freeboard (in)	Depth to DNAPL (in)	Comments
10/4/2023	0	0	0	Not measurable	No sheen visible in all sumps. Water color brown on B099/B100 and light brown on B103/B104 and B107/B108. Heavy rains all week filled up sumps.
10/11/2023	0	0	0	Not measurable	Sheen visible on B103/B104. B099/B100 water color light brown, clear on B103/B104 and B107/B108. Heavy rains in the week filled up sumps. Pumpdown conducted 10/13/2023.
10/18/2023	46	48	47	Not measurable	Sheen visible on B099/B100 and B107/B108. Water color brown on B099/B100. Water color clear on B103/B104. Water color light brown on B107/B108.
10/25/2023	39	44	43	Not measurable	Sheen visible on B099/B100 and B107/B108. Water color dark brown on B099/B100 and light brown on B103/B104 and B107/B108.
11/1/2023	6.5	33	33	Not measurable	Sheen visible on B099/B100 and B107/B108. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
11/8/2023	12	34	33	Not measurable	Sheen visible on B099/B100. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
11/15/2023	2	6	5.5	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
11/22/2023	7	13	12	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
11/29/2023	5.5	10	9.5	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
12/6/2023	8	14	14	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
12/13/2023	5	10	9.5	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
12/20/2023	5	10	9	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
12/27/2023	6	13	11	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
1/3/2024	0	0	0	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on 103/B104 and B107/B108.
1/10/2024	5	10	9.5	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
1/17/2024	12	15.5	15	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
1/24/2024	0	0	0	Not measurable	No sheen observed in any of the sumps. Water color clear in all sumps.
1/31/2024	2	9.5	9	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
2/7/2024	2	18	16	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
2/14/2024	6	18	18	Not measurable	No sheen observed in any of the sumps. Water color clear on B099/B100, B103/B104 and B107/B108.
2/21/2024	6	14	13	Not measurable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
2/28/2024	4	14	15	Not measureable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
3/6/2024	4	15	15	Not measureable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
3/13/2024	0	11	11	Not measureable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
3/20/2024	0	7.5	7.5	Not measureable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.

TABLE 1
NAPL Measurements - NAPL Collection System - Englewood Intermodal Yard
UPRR Houston, tx - Wood Preserving Works

Measured Date	Sump 1 (B099/B100) Freeboard (in)	Sump 2 (B103/B104) Freeboard (in)	Sump 3 (B107/B108) Freeboard (in)	Depth to DNAPL (in)	Comments
3/27/2024	0	7	6	Not measureable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. Some DNAPL (1.5 inches) was recovered from the bottom of Sump 1.
4/3/2024	0	10	10	Not measureable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108. Some DNAPL (3 cubic inches) was recovered from the bottom of Sump 1.
4/10/2024	0	0	0	Not measureable	No sheen observed in any of the sumps. Water color brown on B099/B100 and clear on B103/B104 and B107/B108.
4/17/2024	0	10	9.5	Not measureable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
4/24/2024	2.5	12	11	Not measureable	Sheen visible on B099/B100. Water color brown on B099/B100 and clear on B103/B104 and B107/B108. Pumpdown conducted 4/26/2024.
5/1/2024	9	20	21	Not measureable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
5/8/2024	1	23	22	Not measureable	Sheen visible on B099/B100. Water color brown on B099/B100 and light brown on B103/B104 and clear on B107/B108.
5/15/2024	0	20	21	Not measureable	No sheen observed in any of the sumps. Water color light brown on B099/B100 and clear on B103/B104 and B107/B108.
5/22/2024[1]	--	--	--	--	--
5/29/2024	0	19.5	19	Not measureable	No sheen observed in any of the sumps. Water color brown on B099/B100 and clear on B103/B104 and B107/B108.

Note:
Freeboard in sumps is measured as depth to water from top rim of sump, measured in inches

1. Freeboard not measured on 5/22/2024 due to the ongoing excavations as part of the Interim Measures Work Plan Contruction Activities

ATTACHMENT A

Weekly Inspection Photolog

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
1	5/1/2024

Description:

Stormwater best management practices (BMPs) in place around excavations in preparation for rain events.

Lat: 29.78404
Long: -95.32104

Photo No.	Inspection Date:
2	5/1/2024

Description:

Stormwater BMPs in place surrounding drains on site.

Lat: 29.78392
Long: -95.32116

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
3	5/1/2024

Description:

Stall A011. Some tar-like material observed at Test Pit A011 location, material removed. Area where Focused Excavation FE-06 is planned.

Lat: 29.785467
Long: -95.318341

Photo No.	Inspection Date:
4	5/1/2024

Description:

Stall A022, some tar-like material observed at the seep location along the edge, material removed. Area where Focused Excavation FE-05 is planned.

Lat: 29.78537
Long: - 95.31869

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
5	5/1/2024

Description:

Stall B056. Some tar-like material was observed and removed from historical seep location along asphalt crack. Area where Focused Excavation FE-04 is planned.

Lat: 29.784751
Long: -95.319532

Photo No.	Inspection Date:
6	5/1/2024

Description:

Stall B102 (joint) some tar-like material observed at historical seep site along concrete joint, material removed. Area where Focused Excavation FE-02 is planned.

Lat: 29.784197
Long: -95.320821

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
7	5/1/2024

Description:

North side of Track 802, some new tar-like material observed at seep location near the edge of the ballast, material removed.

Lat: 29.784947
Long: -95.321214

Photo No.	Inspection Date:
8	5/1/2024

Description:

Sump 1 (B099/B100), 9 inches of freeboard in sump, no odor noted, no sheen observed, water color noted as light brown.

Lat: 29.7844000
Long: - 95.3205861

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
9	5/1/2024

Description:

Sump 2 (B103/B104), 20 inches of freeboard in sump. No odor or sheen observed, color noted as clear.

Lat: 29.7842861
Long: - 95.3208611

Photo No.	Inspection Date:
10	5/1/2024

Description:

Sump 3 (B107/B108), 21 inches of freeboard in sump, no sheen observed, water color noted as clear.

Lat: 29.7844000
Long: - 95.3205861

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
11	5/2/2024

Description:

UPRR remediation contractor E3 vacuuming stormwater out of an excavation.

Lat: 29.78419
Long: -95.32091

Photo No.	Inspection Date:
12	5/3/2024

Description:

E3 beginning excavation at FE-01.

Lat: 29.78435
Long: -95.32078

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
13	5/6/2024

Description:

E3 vacuuming out stormwater out of an excavation.

Lat: 29.78422
Long: -95.32093

Photo No.	Inspection Date:
14	5/8/2024

Description:

E3 excavating FE-07.

Lat: 29.78432
Long: -95.32071

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
15	5/8/2024

Description:

E3 delivering backfill material to the Site.

Lat: 29.78398
Long: -95.3211

Photo No.	Inspection Date:
16	5/8/2024

Description:

RD-14 Seep location observed within the concrete road area (RD-14) north of Track 802 (east of existing Track 802 seep location), some new tar-like material observed along a concrete joint, material removed.

Lat: 29.785064
Long: -95.321219

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
17	5/8/2024

Description:

North side of Track 802, some tar-like material observed at seep location near the edge of the ballast, material removed.

Lat: 29.784947
Long: -95.321214

Photo No.	Inspection Date:
18	5/8/2024

Description:

Sump 1 (B099/B100), 1 inch of freeboard in sump, sheen observed, water color noted as brown.

Lat: 29.7844000
Long: - 95.3205861

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
19	5/8/2024

Description:

Sump 2 (B103/B104), 23 inches of freeboard in sump. No odor or sheen observed, color noted as light brown.

Lat: 29.7842861
Long: - 95.3208611

Photo No.	Inspection Date:
20	5/8/2024

Description:

Sump 3 (B107/B108), 22 inches of freeboard in sump, no sheen observed, water color noted as clear.

Lat: 29.7844000
Long: - 95.3205861

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
21	5/10/2024

Description:

E3 sawing concrete in the area between excavations FE-01 and FE-03. FE-02 is in the foreground of the photo.

Lat: 29.7844000
Long: - 95.3205861

Photo No.	Inspection Date:
22	5/10/2024

Description:

E3 pressure washing staining in rows A060 to A074.

Lat: 29.784947
Long: -95.321214

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
23	5/15/2024

Description:

Excavation in the expansion area between FE-01 and FE-03 and the north extension area.

Lat: 29.78425
Long: -95.3208

Photo No.	Inspection Date:
24	5/15/2024

Description:

Stormwater best management practices (BMPs) soil berms and straw wattles in place in the FE-01/FE-03 expansion area.

Lat: 29.78429
Long: -95.32101

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
25	5/15/2024

Description:

Stall B056. Some tar-like material observed at historical seep location along asphalt crack, material removed. Area where Focused Excavation FE-04 is planned.

Lat: 29.7847472
Long: -95.3195417

Photo No.	Inspection Date:
26	5/15/2024

Description:

Sump 1 (B099/B100), 0 inches of freeboard in sump, no sheen observed, water color noted as light brown.

Lat: 29.7844000
Long: - 95.3205861

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
27	5/15/2024

Description:

Sump 2 (B103/B104), 20 inches of freeboard in sump. No odor or sheen observed, color noted as clear.

Lat: 29.7842861
Long: - 95.3208611

Photo No.	Inspection Date:
28	5/15/2024

Description:

Sump 3 (B107/B108), 21 inches of freeboard in sump, no sheen observed, water color noted as clear.

Lat: 29.7844000
Long: - 95.3205861

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
29	5/15/2024

Description:

North side of Track 802, some tar-like material observed at seep location near the edge of the ballast, material removed.

Lat: 29.784947
Long: -95.321214

Photo No.	Inspection Date:
30	5/15/2024

Description:

RD-14 Seep location observed within the concrete road area (RD-14) north of Track 802 (east of existing Track 802 seep location), some new tar-like material observed along a concrete joint, material removed.

Lat: 29.785064
Long: -95.321219

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
31	5/20/2024

Description:

Frac tanks containing recovered stormwater in Site excavations. Pending characterization and disposal.

Lat: 29.78371
Long: -95.32069

Photo No.	Inspection Date:
32	5/21/2024

Description:

Excavated FE-07 extension to the south.

Lat: 29.785064
Long: -95.321219

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
33	5/22/2024

Description:

FE-02 excavation south extension area.

Lat: 29.78418
Long: -95.32089

Photo No.	Inspection Date:
34	5/22/2024

Description:

Stall A011. Some new tar-like material observed at historical seep location along asphalt crack, material removed.

Lat: 29.785467
Long: -95.318341

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
35	5/22/2024

Description:

North side of Track 802, some tar-like material observed at seep location near the edge of the ballast, material removed.

Lat: 29.784947
Long: -95.321214

Photo No.	Inspection Date:
36	5/22/2024

Description:

Stall A022, some tar-like material observed at the seep location along the edge, material removed. Area where Focused Excavation FE-05 is planned.

Lat: 29.78537
Long: - 95.31869

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
37	5/22/2024

Description:

Stall B042. Some tar-like material observed at historical seep location along asphalt crack, material removed. Area where Focused Excavation FE-08 is planned.

Lat: 29.784923
Long: -95.319124

Photo No.	Inspection Date:
38	5/22/2024

Description:

Stall B057, some tar-like material observed and removed at seep location along asphalt crack, material removed. Area where Focused Excavation FE-04 is planned.

Lat: 29.784769
Long: -95.3195798

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
39	5/22/2024

Description:

Stalls B107, some new tar-like material observed at seep location on concrete joint along the southern edge of the excavated area, material removed.

Lat: 29.784156
Long: -95.320953

Photo No.	Inspection Date:
40	5/28/2024

Description:

E3 pressure washing brown staining on rows B060 to B070.

Lat: 29.7847472
Long: -95.3195417

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
41	5/29/2024

Description:

E3 loading excavated material into roll-off containers stored on site pending characterization and disposal.

Lat: 29.78405
Long: -95.3206

Photo No.	Inspection Date:
42	5/29/2024

Description:

Stall A011. Some new tar-like material observed at historical seep location along asphalt crack, material removed. Area where Focused Excavation FE-06 is planned.

Lat: 29.785467
Long: -95.318341

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
43	5/29/2024

Description:

Stall B056. Some new tar-like material observed at historical seep location along asphalt crack, material removed. Area where Focused Excavation FE-04 is planned.

Lat: 29.7847472
Long: -95.3195417

Photo No.	Inspection Date:
44	5/29/2024

Description:

Sump 1 (B099/B100), 0 inches of freeboard in sump,no sheen, water color noted as brown.

Lat: 29.7844000
Long: - 95.3205861

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
45	5/29/2024

Description:

Sump 2 (B103/B104), 19.5 inches of freeboard in sump. No odor or sheen observed, color noted as clear.

Lat: 29.7842861
Long: - 95.3208611

Photo No.	Inspection Date:
46	5/29/2024

Description:

Sump 3 (B107/B108), 19 inches of freeboard in sump, no sheen observed, water color noted as clear.

Lat: 29.7844000
Long: - 95.3205861

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
Union Pacific Railroad	Englewood Intermodal Yard, Houston, Texas	31406585.016

Photo No.	Inspection Date:
47	5/30/2024

Description:

BMPs in place around drains before a rain event.

Lat: 29.78477
Long: -95.31953

Photo No.	Inspection Date:
48	5/30/2024

Description:

E3 excavating location FE-04.

Lat: 29.78476
Long: - 95.31952

ATTACHMENT B

Air Monitoring Monthly Report – May 2024

Union Pacific Railroad
Houston Wood Preserving Works Site
Focused Excavation Project

Air Monitoring Monthly Report
May 2024

Houston, Texas

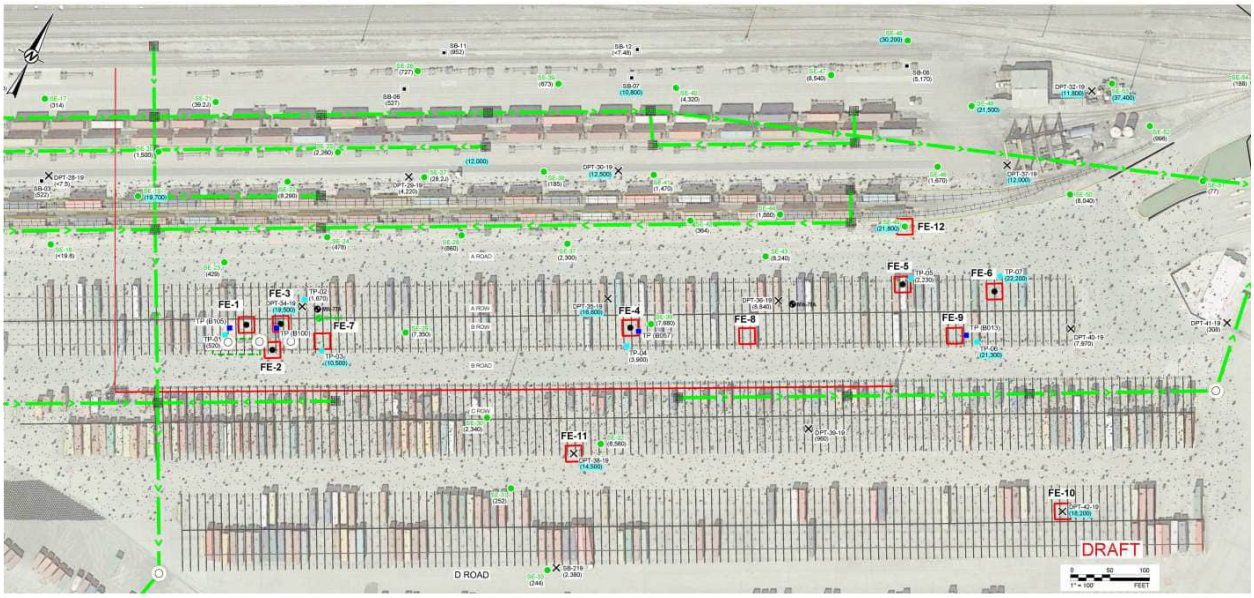
TABLE OF CONTENTS

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), Michaela Simpson, 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 PM_{10} 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 PM_{10} air monitoring. $PM_{2.5}$ and PM_{10} 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.

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 PM_{10} 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
- PM_{10} (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 PM_{10} 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 PM_{10} are calculated by each monitor on each sampling day during the excavation activities. Both $PM_{2.5}$ and PM_{10} are measured by the monitor every two

(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.

Monitoring levels did reach the Stop Work threshold during the month of May. During the Stop Work surrounding TCEQ air monitors were evaluated and it was determined that regional air quality in the Houston area was poor and the high readings were not a result of excavation activities.

On May 9th, visual inspections in the morning showed very poor regional air quality. Atlas personnel reviewed regulatory air monitoring data from TCEQ from several sites surrounding the UPRR HWPW site and around Houston, including the nearby Houston North Wayside C405/C1033 site. TCEQ monitors showed elevated readings across the Houston area, confirming it was a wide spread atmospheric even and not related to excavation activities. Weather reports show smoke in the Houston area due to fires in Mexico and Central America. A weather inversion was trapping the smoke near the surface.

On May 13th, Unit 03 had elevated monitor levels. Upon visual inspection surrounding the monitor, it was determined by Atlas personnel that other work at the railroad not related to the excavation activities was creating the dust. The excess dust from this project caused the elevated monitor levels. No action was taken.

On May 21st at approximately 12:15 pm PM2.5 readings approach a Stop Work level. No excavation work is occurring. A Stop Work is administered. Work resumes at 12:45 pm when PM2.5 levels fall below Stop Work thresholds. Water spray is being used as dust mitigation. A review of TCEQ ambient air quality monitors surrounding the site is reviewed. It is determined that the Houston North Wayside Monitor C405/C1033 monitor is also showing high levels of particulate.

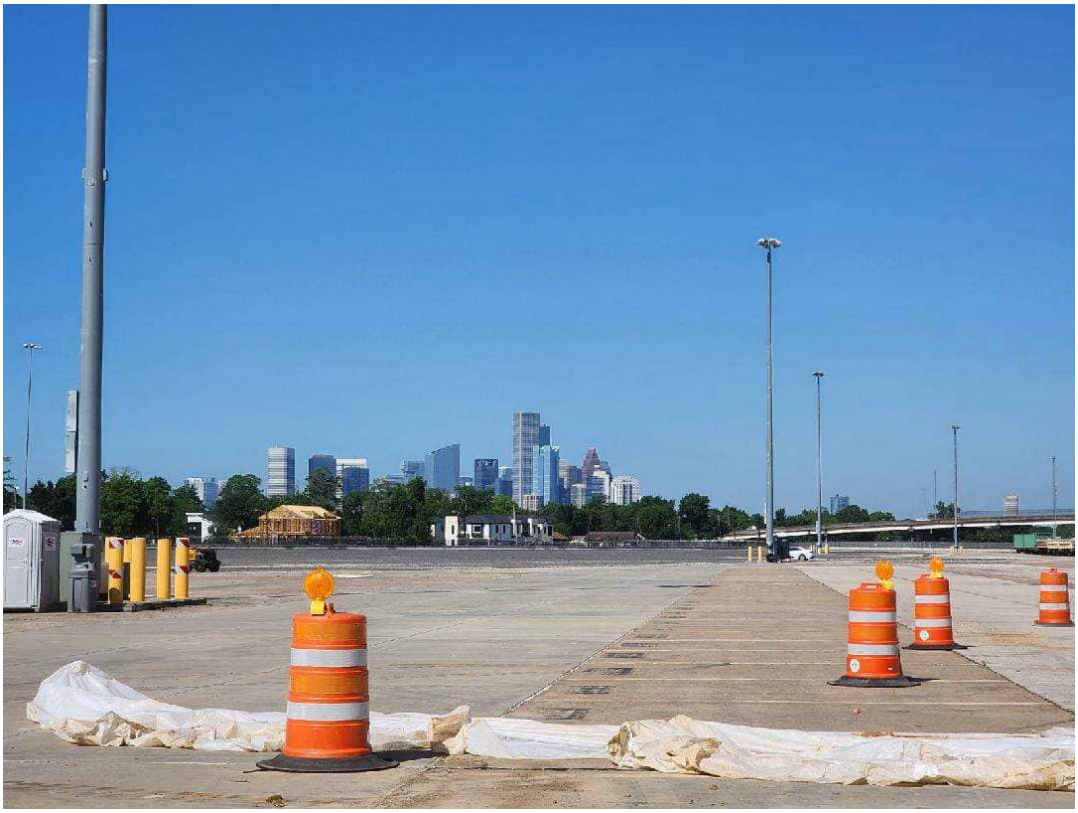
On May 28th, visual inspections showed very poor regional air quality. Atlas personnel reviewed regulatory air monitoring data from TCEQ from several sites surrounding the UPRR HWPW site and around Houston, including the nearby Houston North Wayside C405/C1033 site. TCEQ monitors showed elevated readings across the Houston area, confirming it was a wide spread atmospheric even and not related to excavation activities. The elevated monitor levels were likely caused by a weather inversion over the city of Houston. Residual particulate matter was likely trapped under the inversion.

Union Pacific Railroad
Houston Wood Preserving Works Site
Houston, Texas
Air Quality Index Values

Reporting Area	Date	Daily AQI for Ozone	Daily AQI for $PM_{2.5}$	Daily AQI for PM_{10}
Houston-Galveston-Brazoria	5/9/2024	71	124	-
	5/21/2024	61	84	-
	5/28/2024	44	76	-

On good air quality days in Houston, the Houston skyline is visible from the site as seen in Photo 1.

Photo 1: Houston Skyline from the HWPW site



Poor air quality days in Houston make the skyline far less visible as seen in Photos 2 and 3.

Photos 2 and 3: Houston Skyline from the HWPW site during poor air quality days

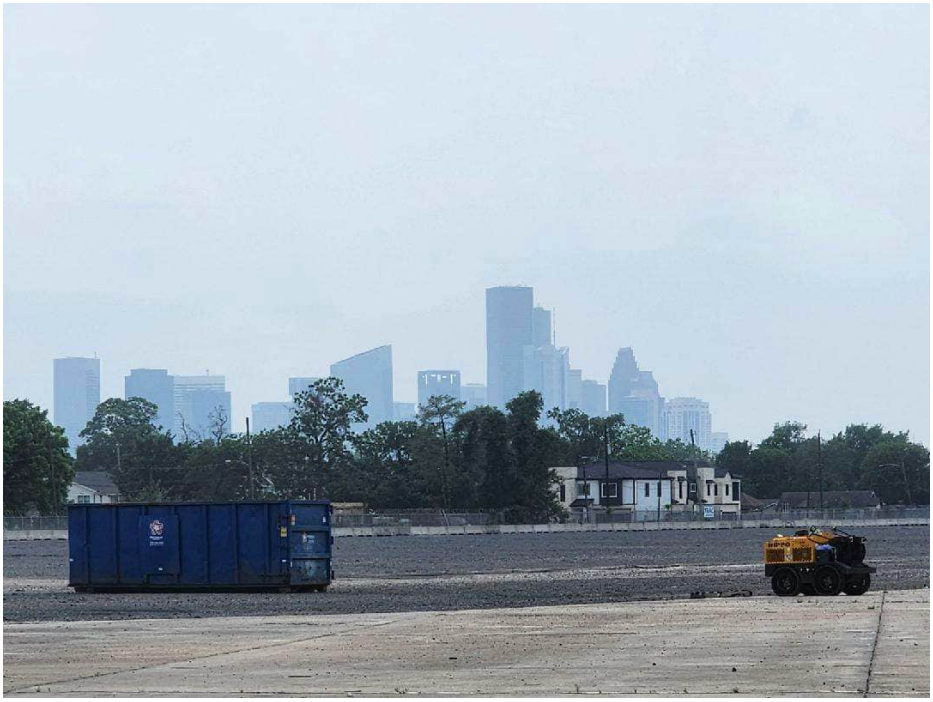
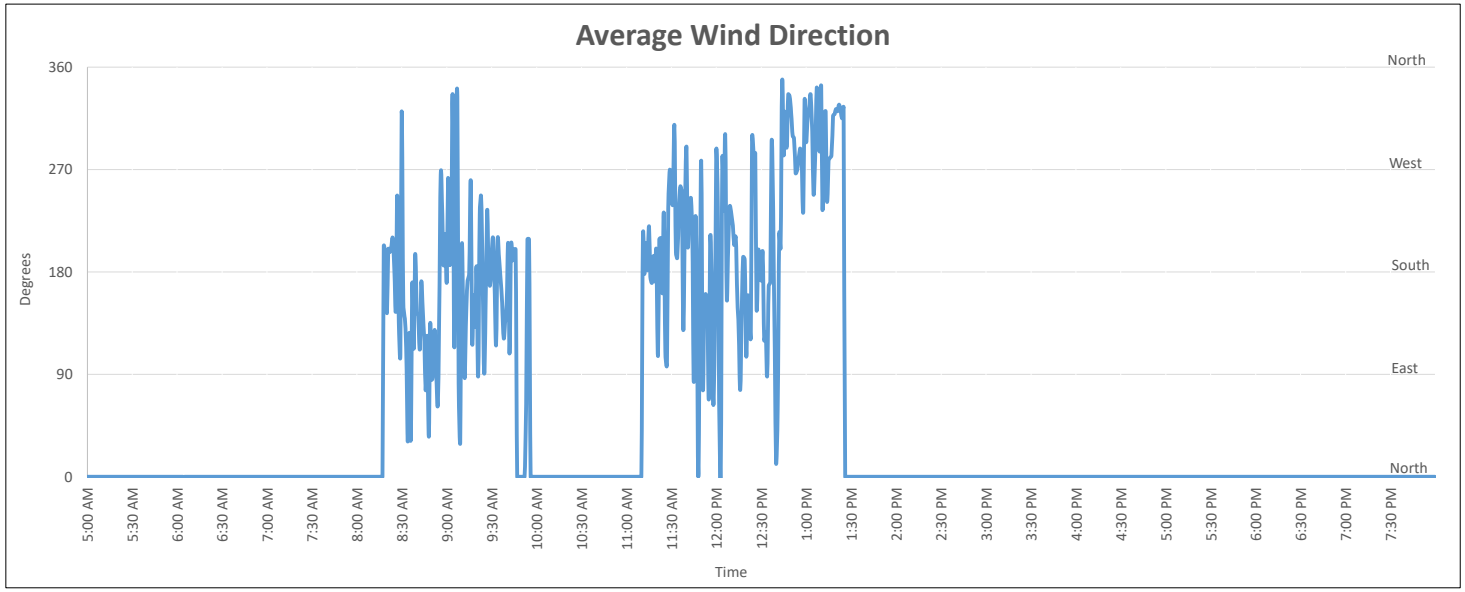


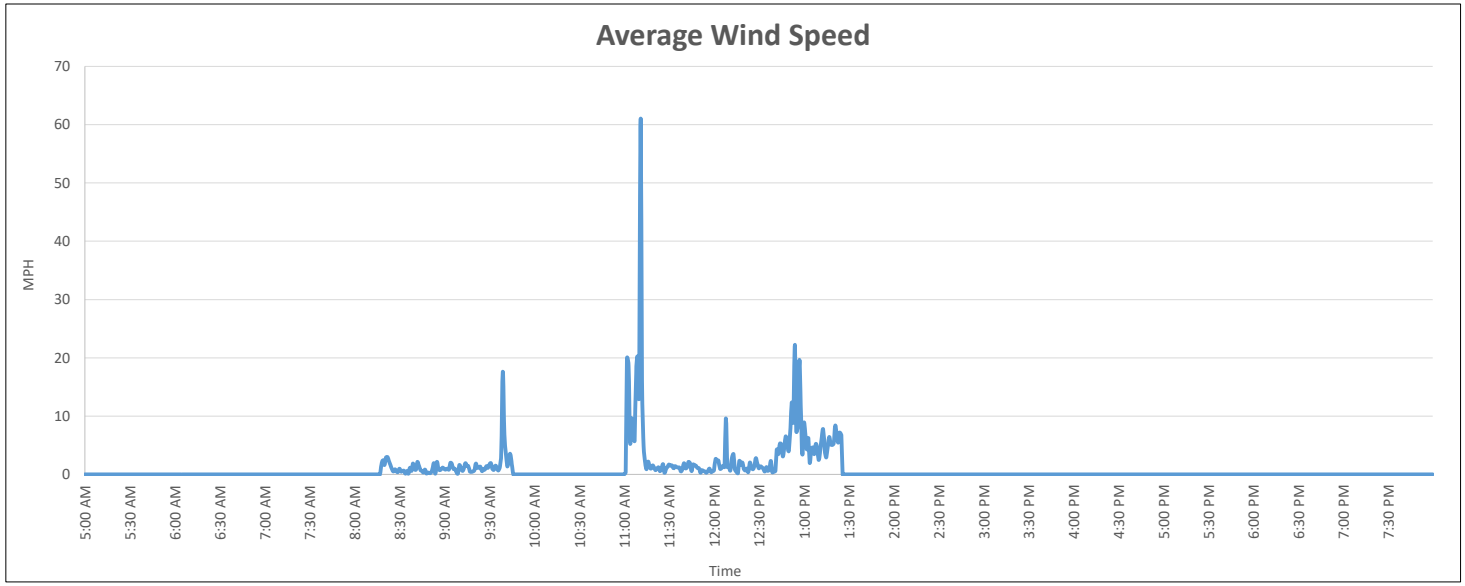
Table 5 – Direct Read Summary Union Pacific Houston Wood Preserving Works Houston, Texas							
Date	Modem #	PM_{10} Concentration ($\mu g/m^3$)			$PM_{2.5}$ Concentration ($\mu g/m^3$)		
		Min	Max	Average	Min	Max	Average
Week 1							
4/29/2024	48374	2	25.00	17.03	2.00	24.00	16.61
	47161	0	24.00	16.43	0.00	24.00	16.20
	48033	3	23.00	16.57	2.00	23.00	16.03
	48571	3	27.00	19.63	3.00	26.00	18.93
	48375	0	4.00	2.05	0.00	4.00	2.04
	801245	2	20.00	13.48	2.00	19.00	12.82
	49911	7	35.00	19.69	6.00	31.00	18.55
	219671						
4/30/2024	48374	1	37.00	15.12	1.00	35.00	14.49
	47161	0	41.00	17.83	0.00	40.00	17.26
	48033	1	52.00	14.96	1.00	48.00	13.85
	48571	1	42.00	14.16	1.00	38.00	12.68
	48375	0	6.00	2.25	0.00	6.00	2.24
	801245	1	53.00	17.68	1.00	49.00	16.23
	49911	2	58.00	11.11	1.00	46.00	9.43
	219671						
5/1/2024	48374	2	23.00	19.31	2.00	23.00	18.59
	47161	1	19.00	14.34	1.00	19.00	14.19
	48033	2	20.00	16.81	2.00	19.00	15.51
	48571	2	23.00	17.82	2.00	22.00	16.61
	48375	0	3.00	1.93	0.00	3.00	1.93
	801245	1	18.00	14.86	1.00	17.00	13.44
	49911	0	21.00	16.29	0.00	21.00	15.45
	219671						
5/2/2024	48374	0	32.00	18.33	0.00	32.00	18.01
	47161	3	39.00	25.10	3.00	39.00	24.85
	48033	3	31.00	21.70	3.00	30.00	20.97
	48571	3	27.00	19.34	3.00	25.00	18.39
	48375	0	5.00	3.38	0.00	5.00	3.28
	801245	3	28.00	20.16	3.00	27.00	19.34
	49911	3	35.00	21.10	3.00	34.00	20.50
	219671						
5/3/2024	48374	2	15.00	11.54	2.00	15.00	11.33
	47161	1	18.00	14.73	1.00	18.00	14.53
	48033	1	14.00	12.59	1.00	13.00	11.83
	48571	0	16.00	14.53	0.00	16.00	13.73
	48375	0	2.00	0.28	0.00	2.00	0.28
	801245	2	16.00	10.99	2.00	16.00	10.48
	49911	2	14.00	10.90	2.00	14.00	10.35
	219671						

Note:

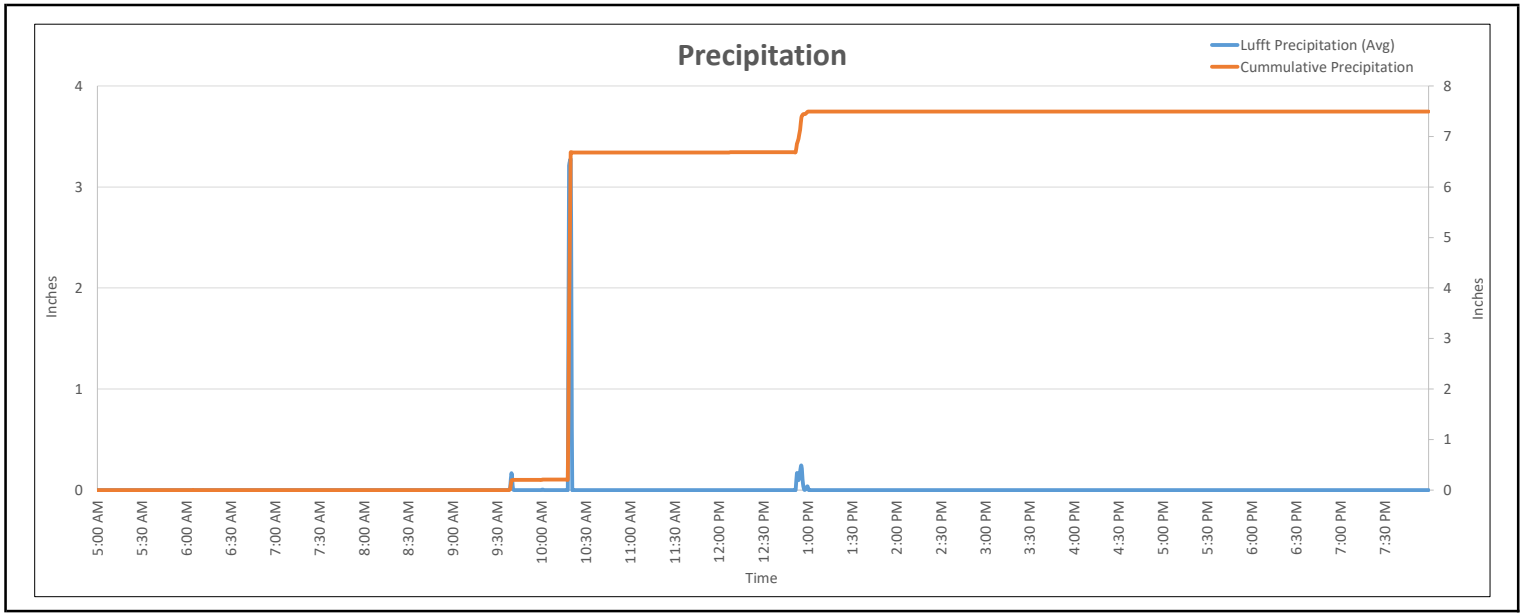
1. Values shown in GREEN are above the Notice Level Threshold.
2. Values shown in ORANGE are above the Action Level Threshold.
3. Values shown in RED are above the Stop-Work Level Threshold.

Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Monday, April 29, 2024



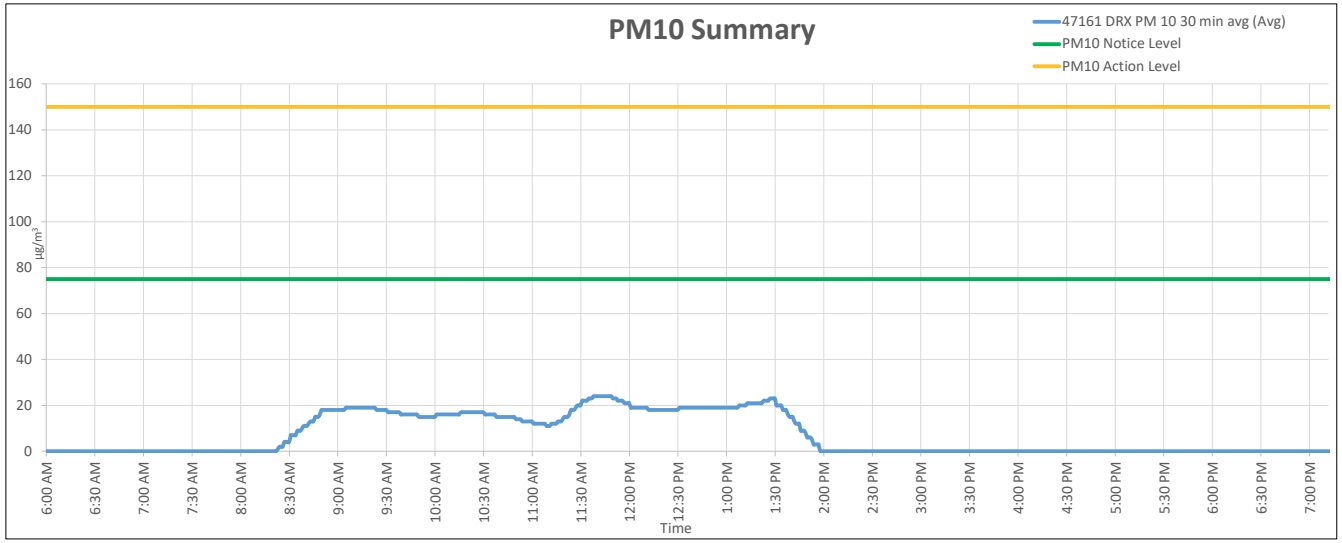


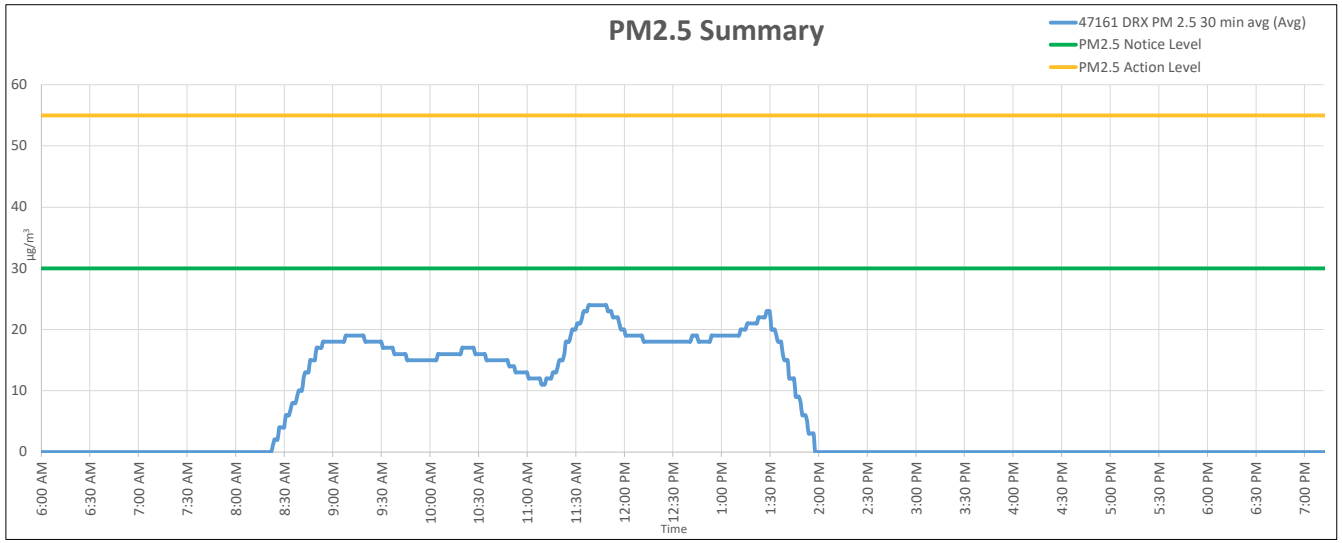
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Monday, April 29, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, April 29, 2024

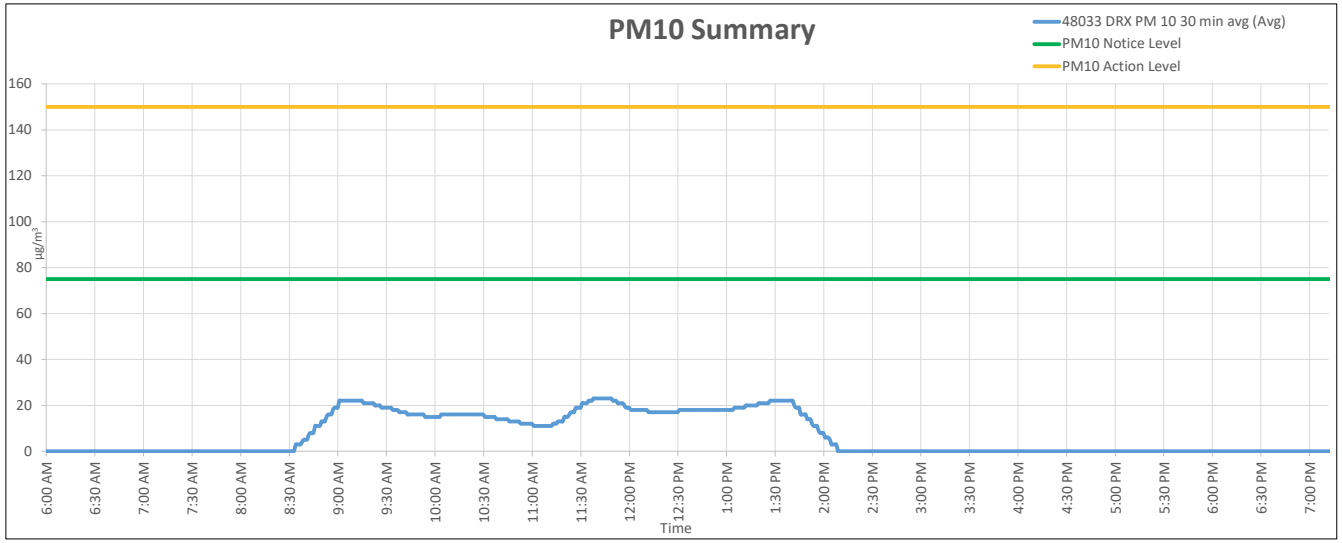
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	8:23 AM	1:57 PM	16.62	24.00	16.39	24.00

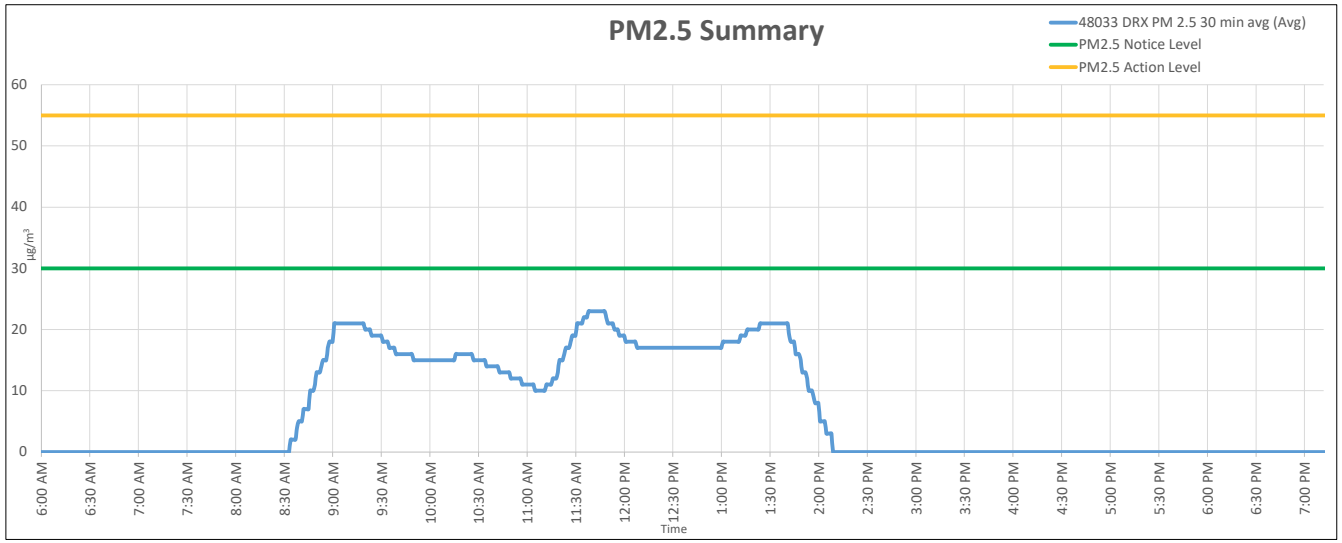




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, April 29, 2024

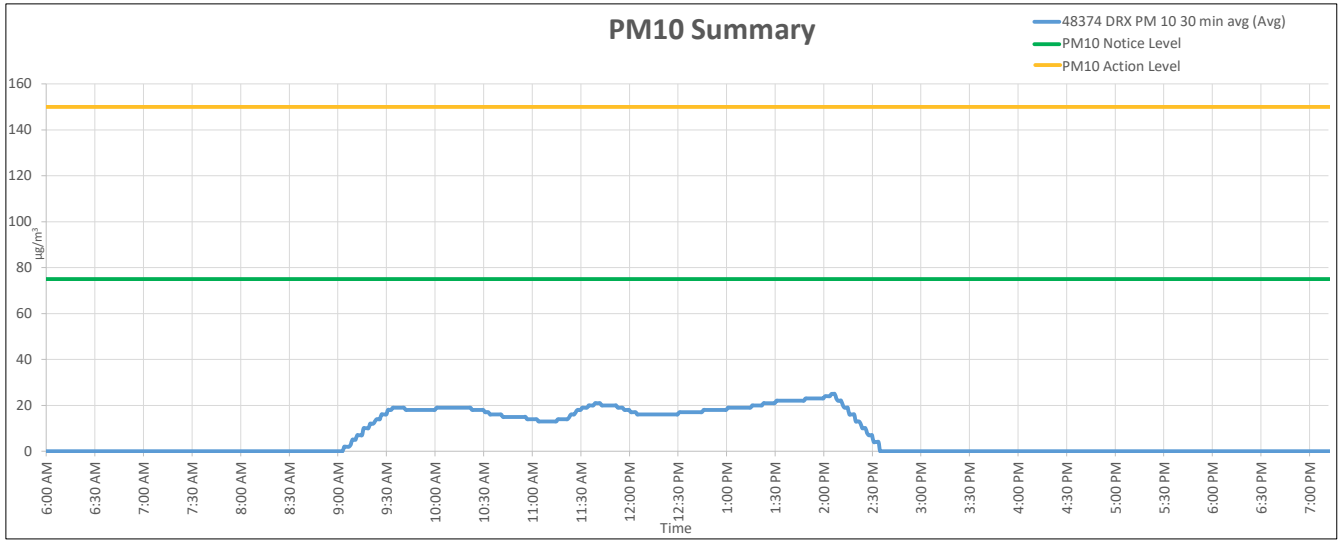
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	8:34 AM	2:08 PM	16.57	23.00	16.03	23.00

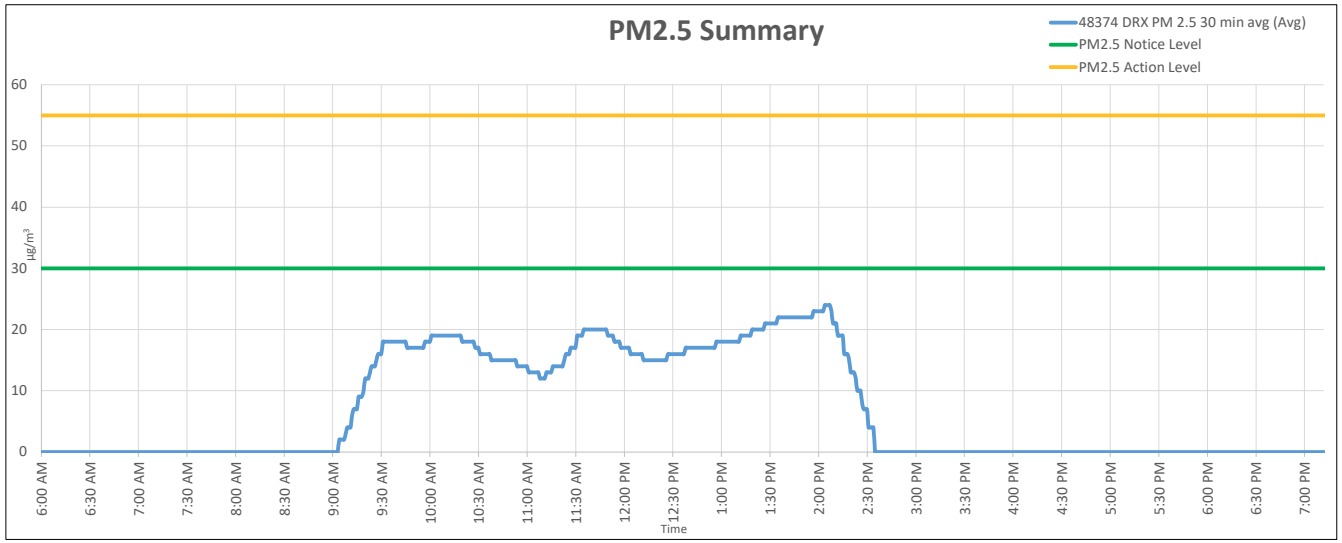




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, April 29, 2024

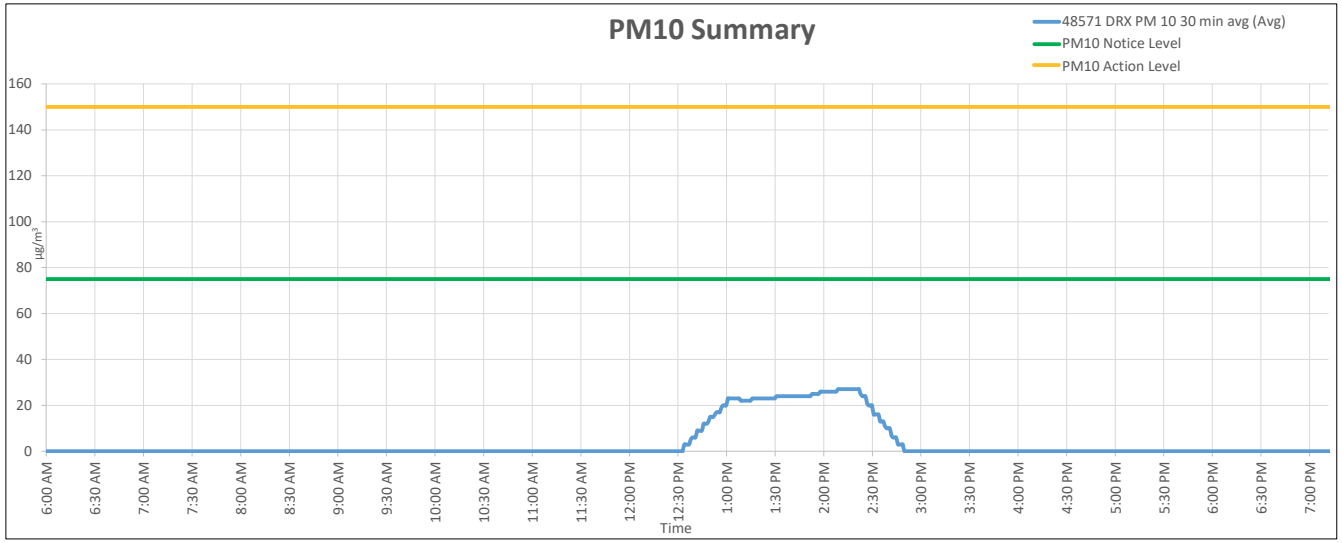
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	9:04 AM	2:34 PM	17.03	25.00	16.61	24.00

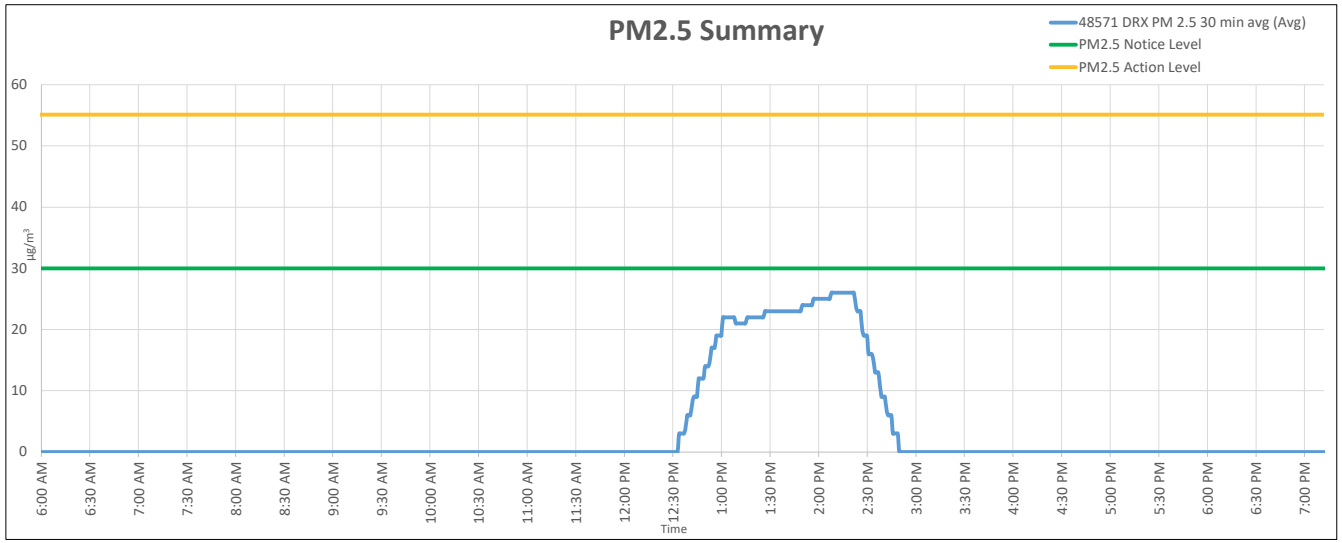




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, April 29, 2024

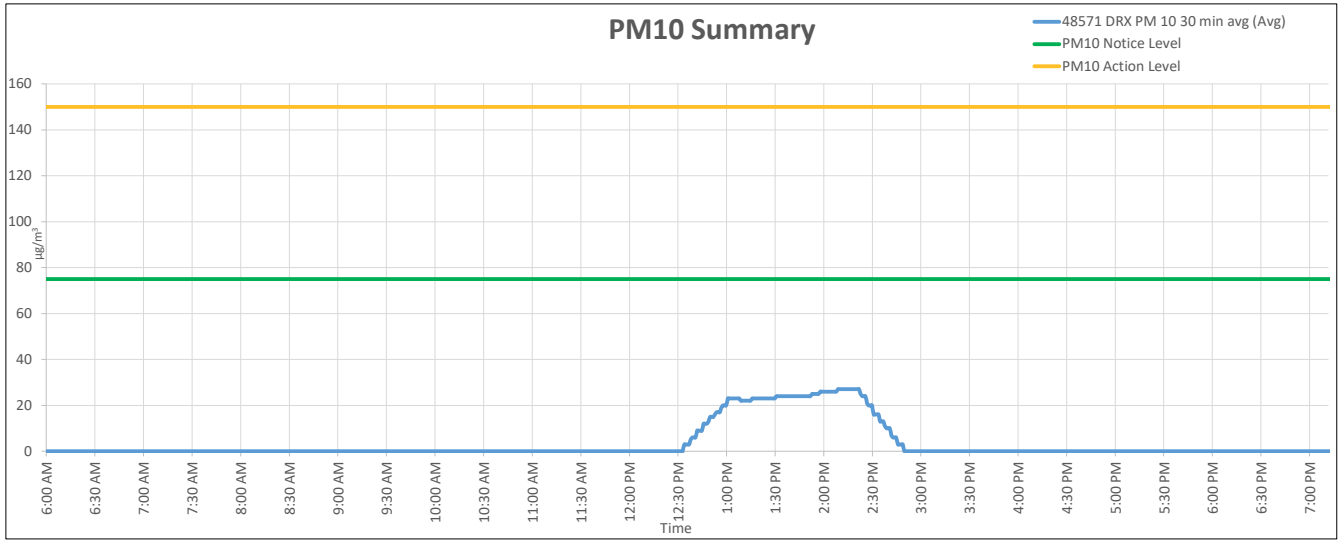
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	12:34 PM	2:49 PM	19.63	27.00	18.93	26.00

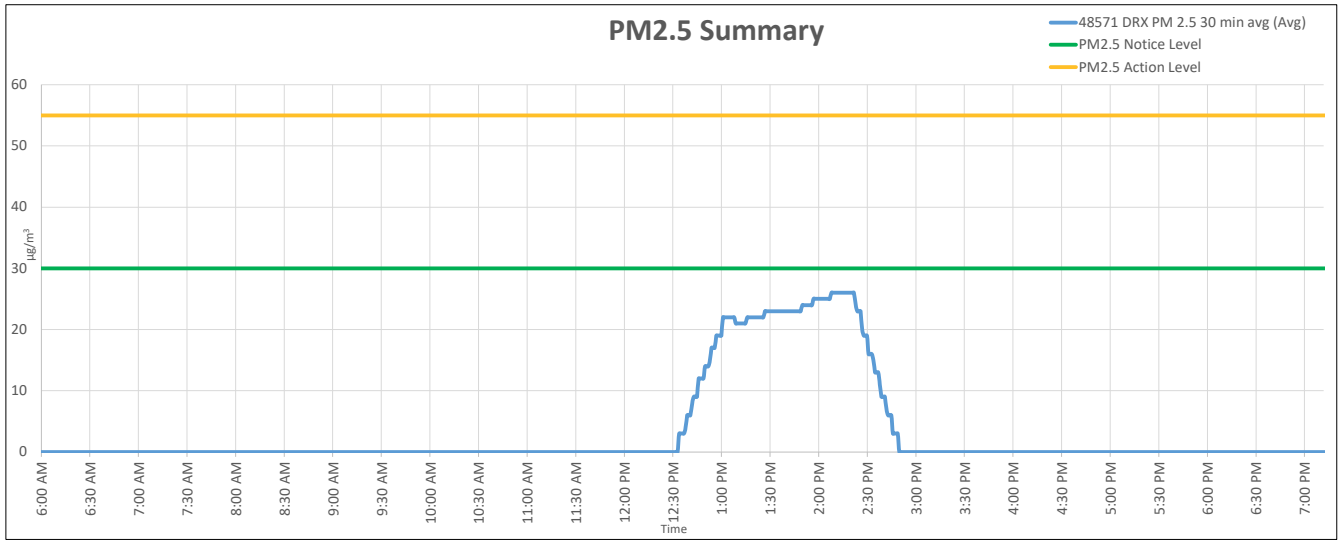




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, April 29, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	12:34 PM	2:49 PM	19.63	27.00	18.93	26.00





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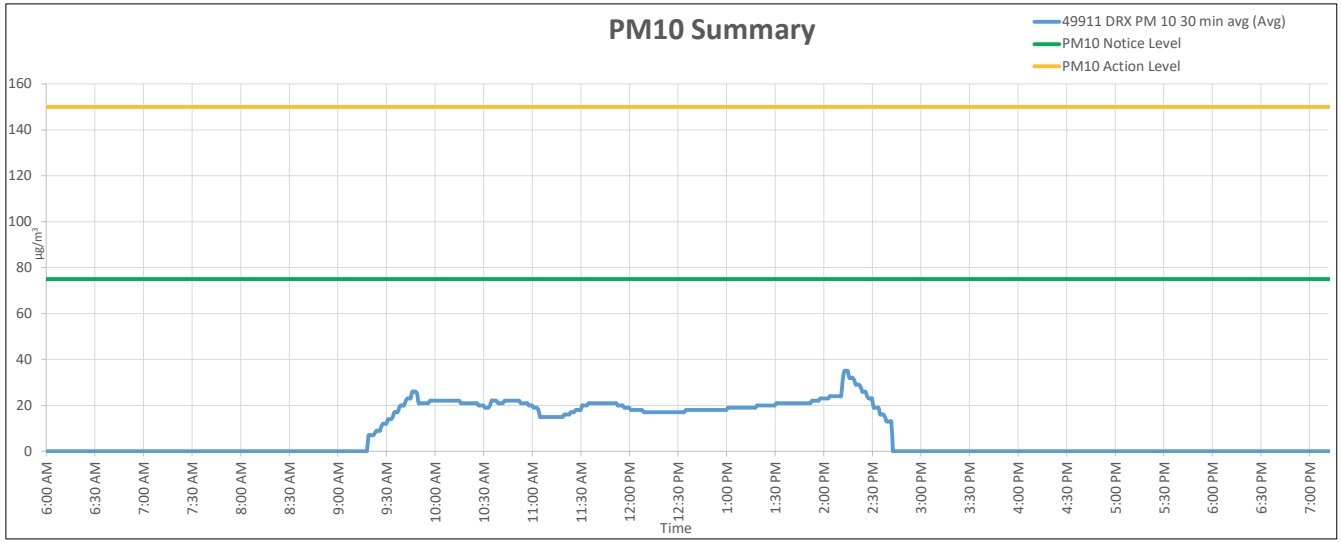
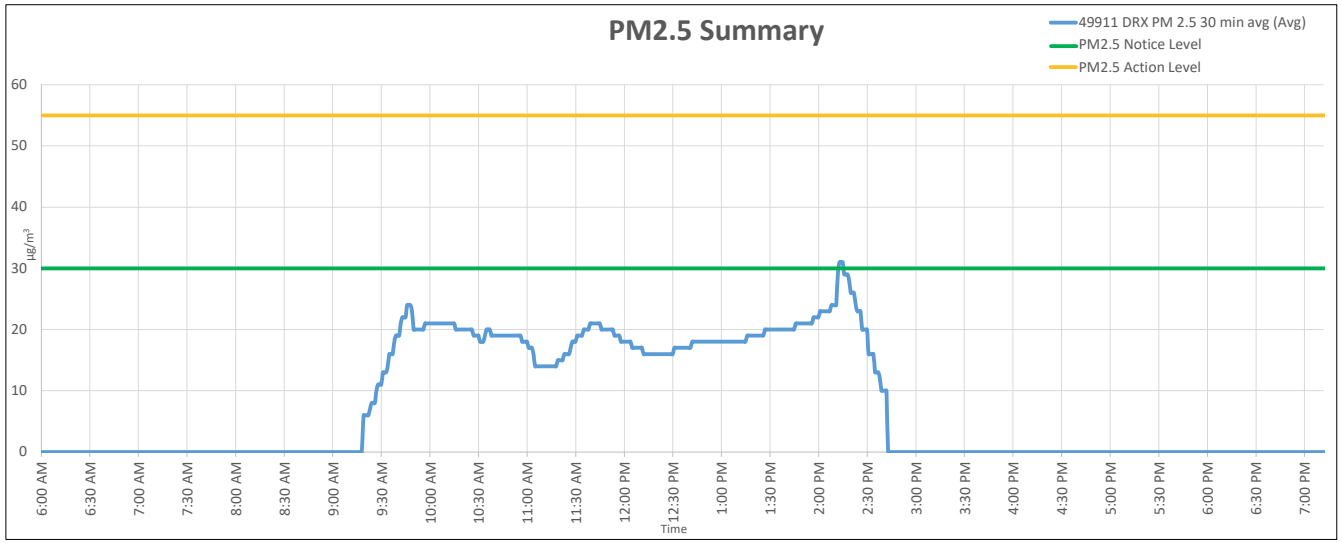
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	9:19 AM	2:42 PM	19.69	35.00	18.55	31.00





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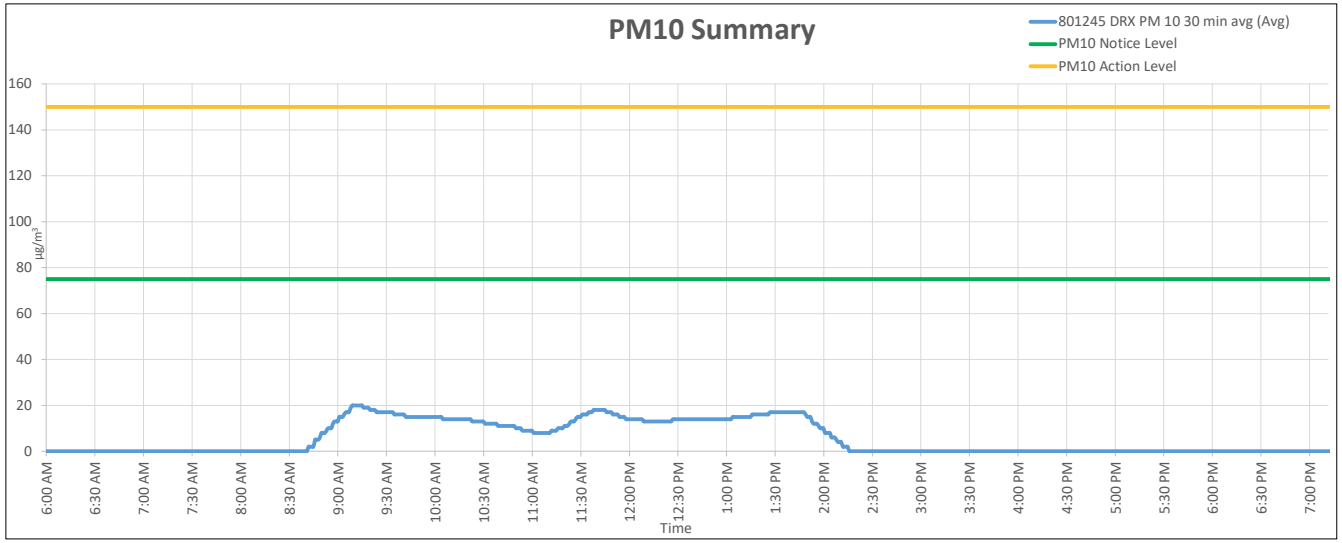
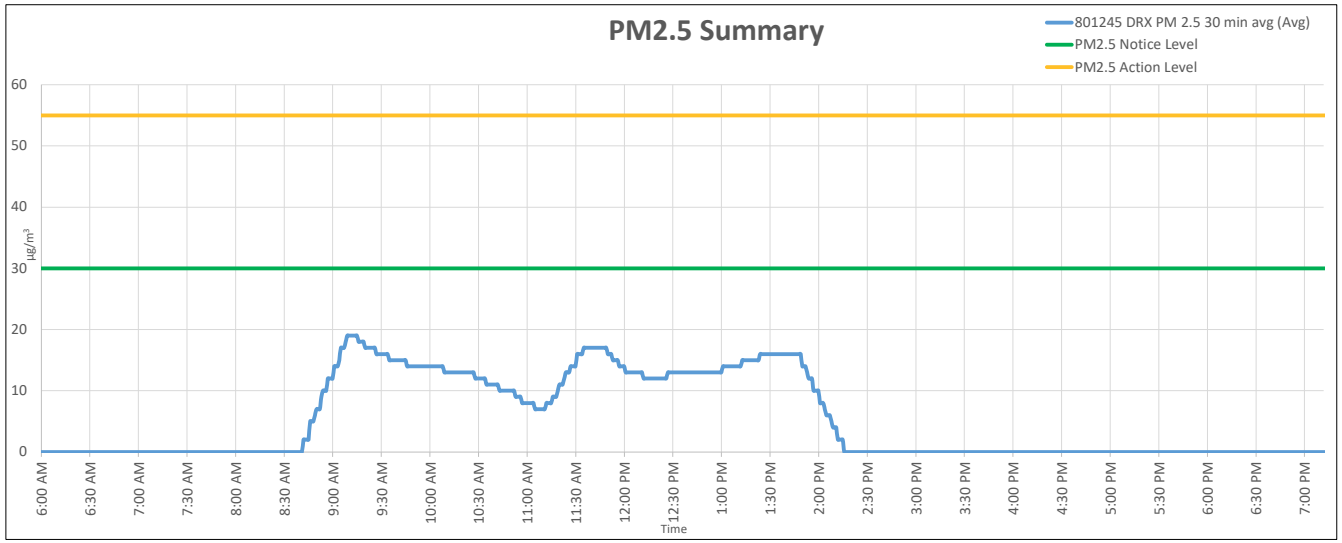
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	8:42 AM	2:15 PM	13.48	20.00	12.82	19.00





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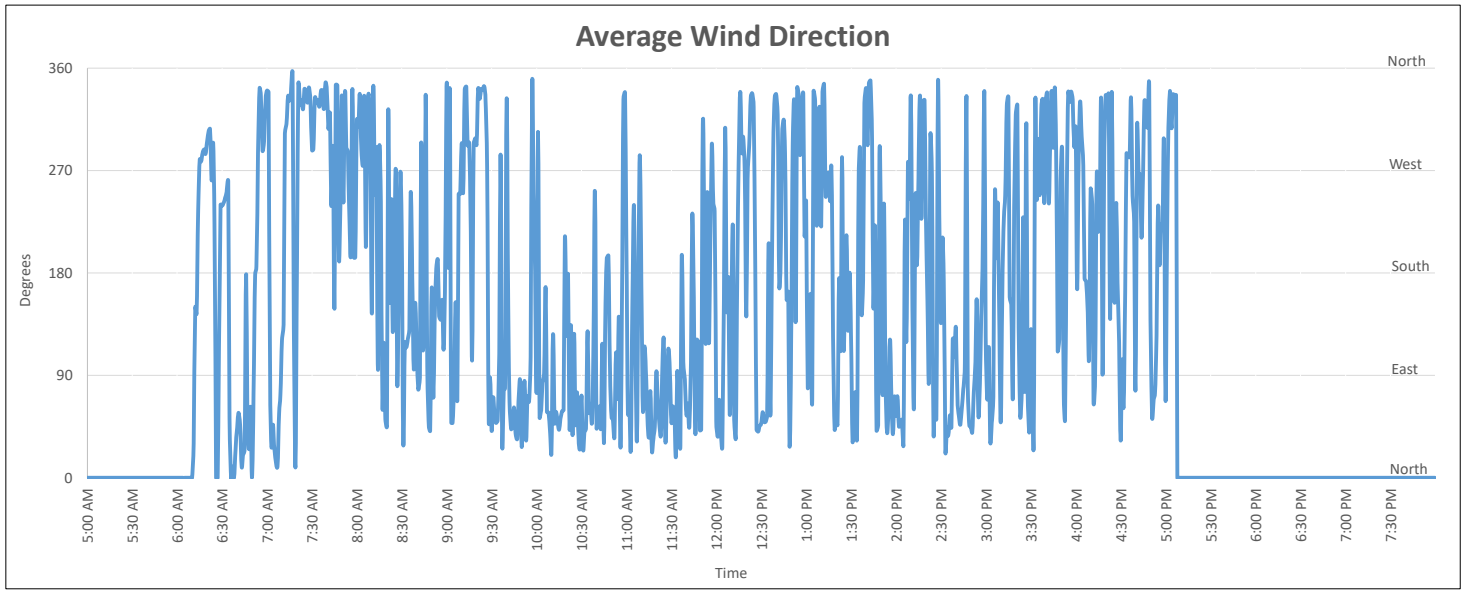

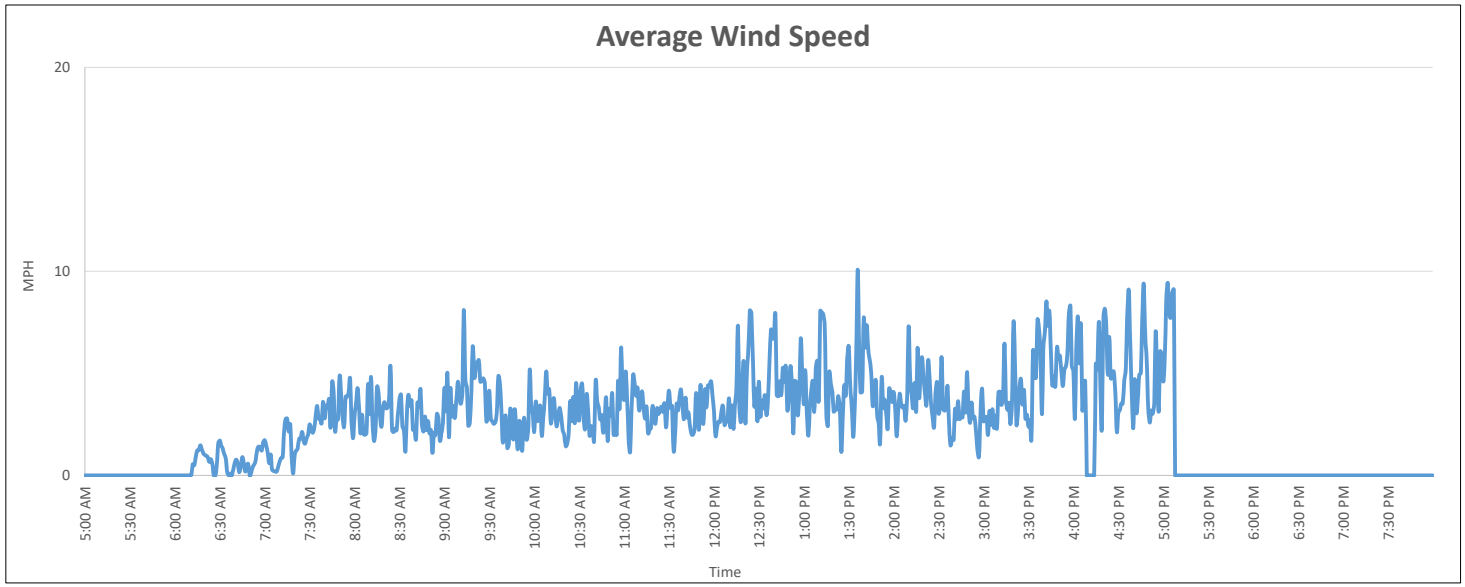

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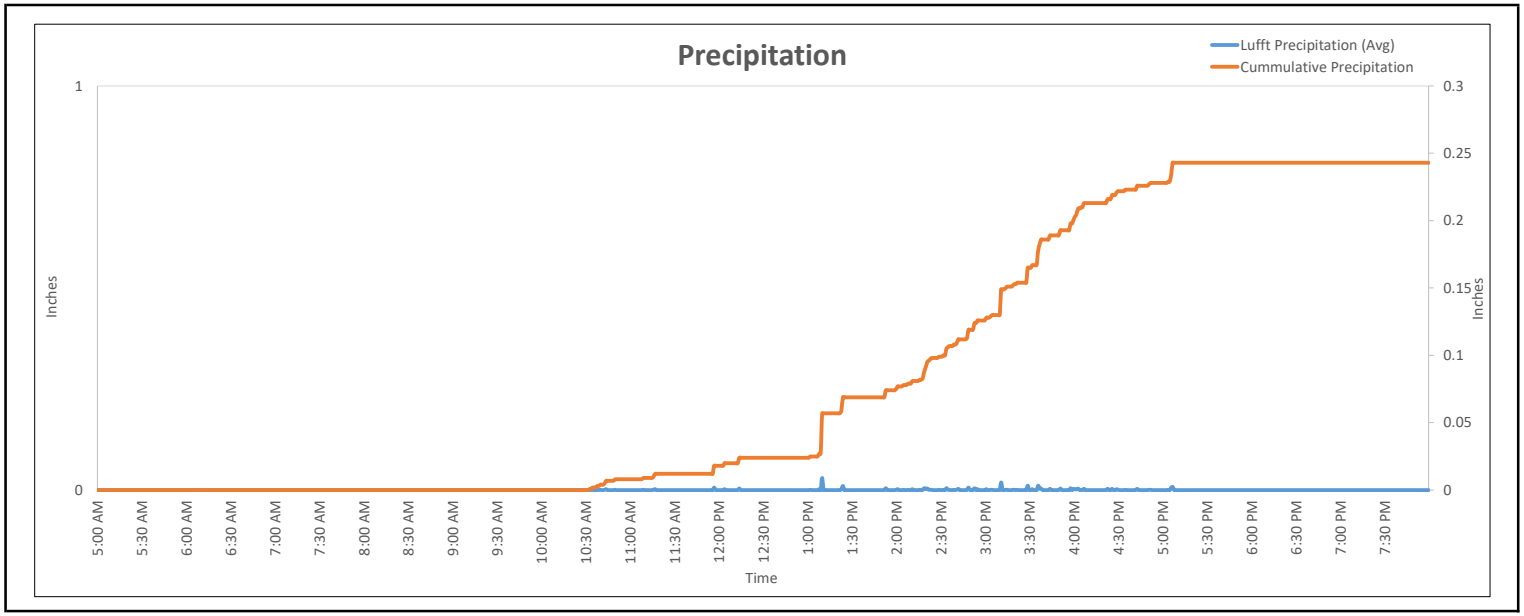

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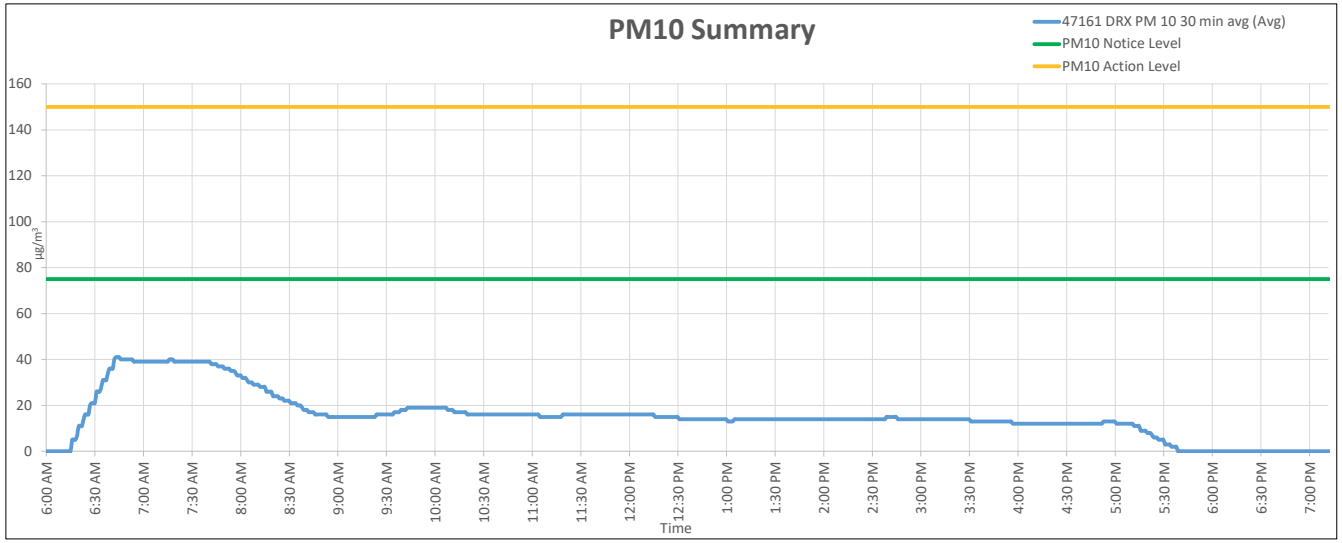
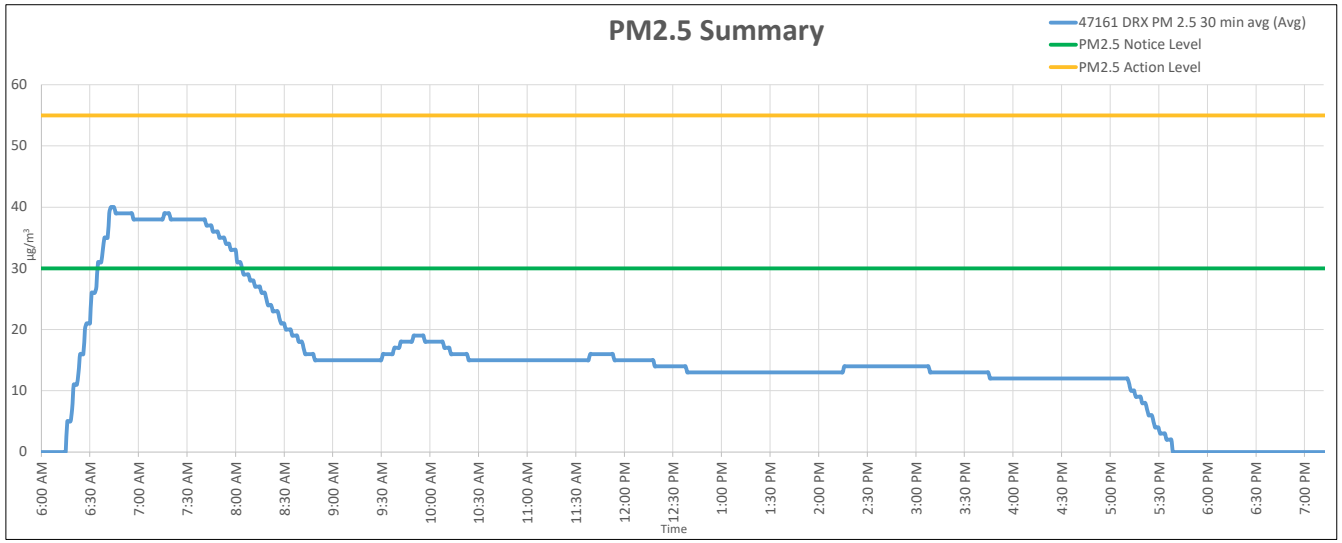
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:16 AM	5:38 PM	17.94	41.00	17.36	40.00





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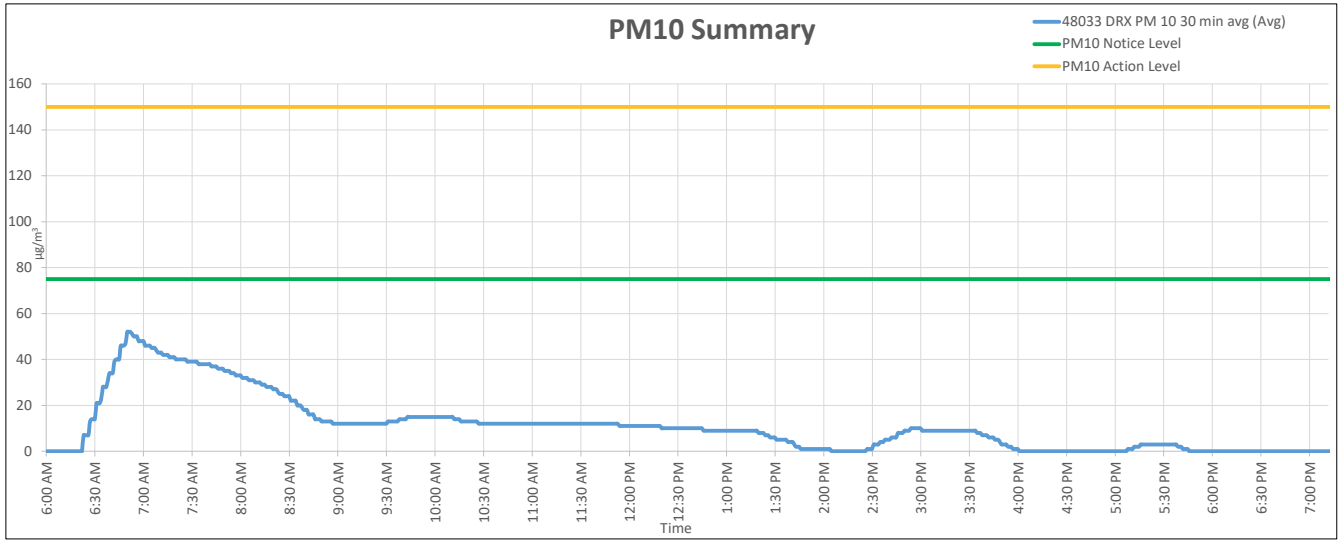
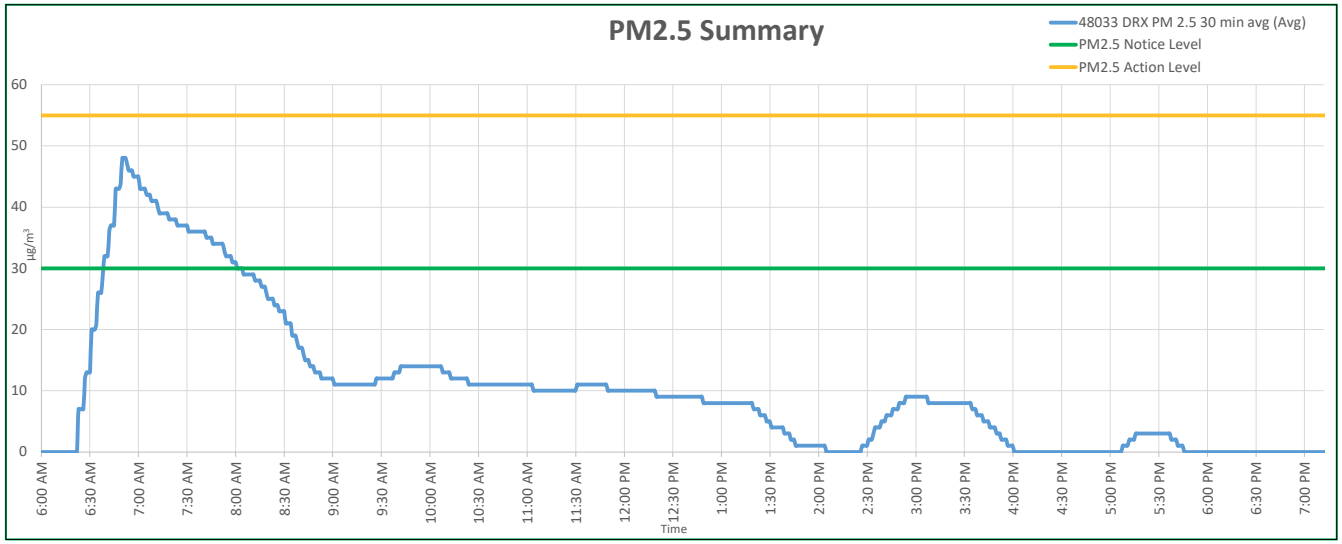
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:23 AM	5:41 PM	14.96	52.00	13.85	48.00





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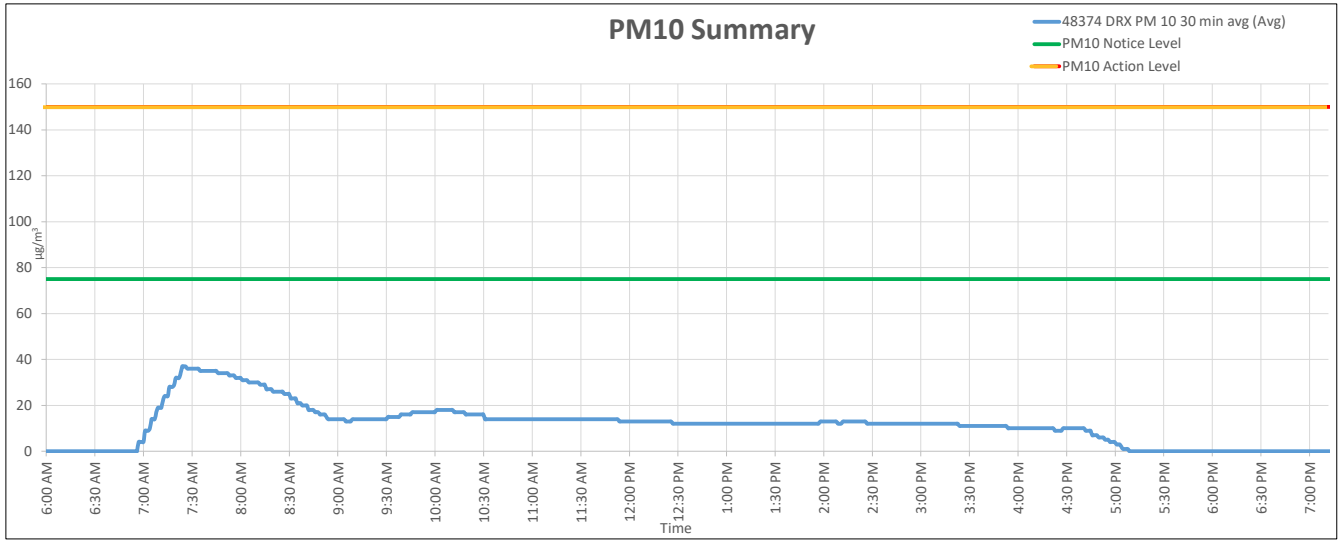
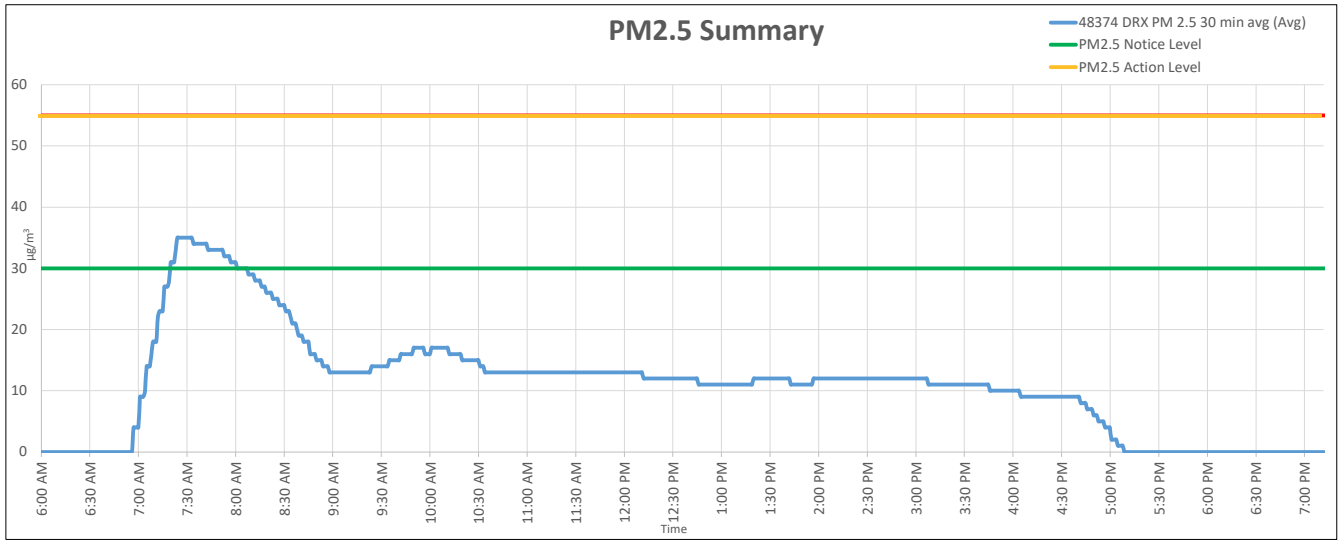
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:57 AM	5:04 PM	15.12	37.00	14.49	35.00





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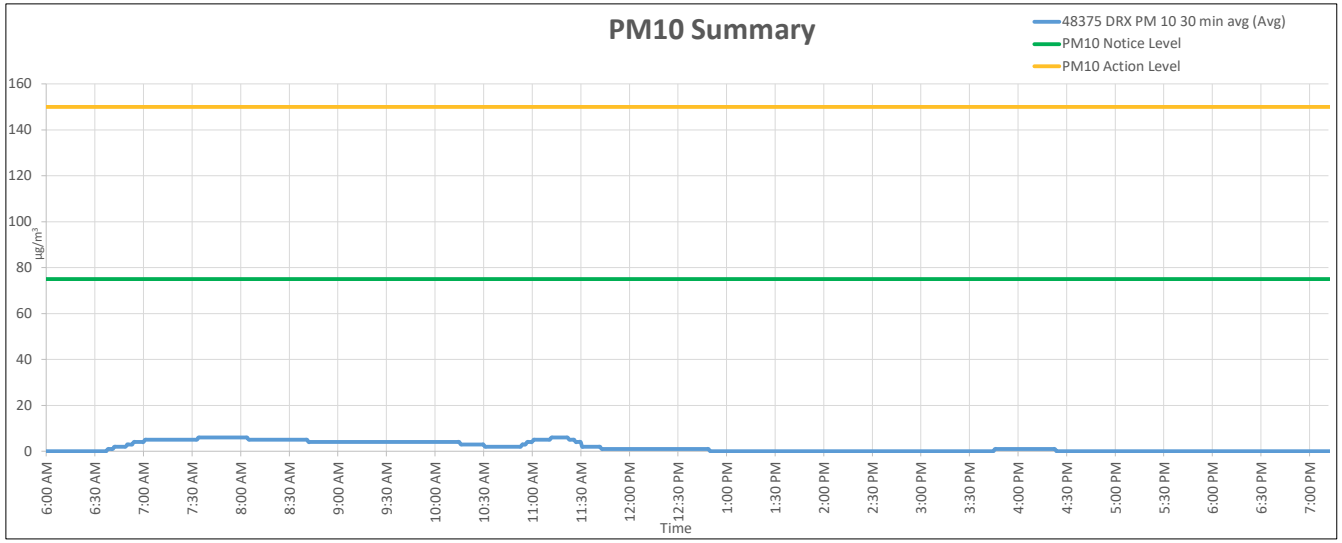
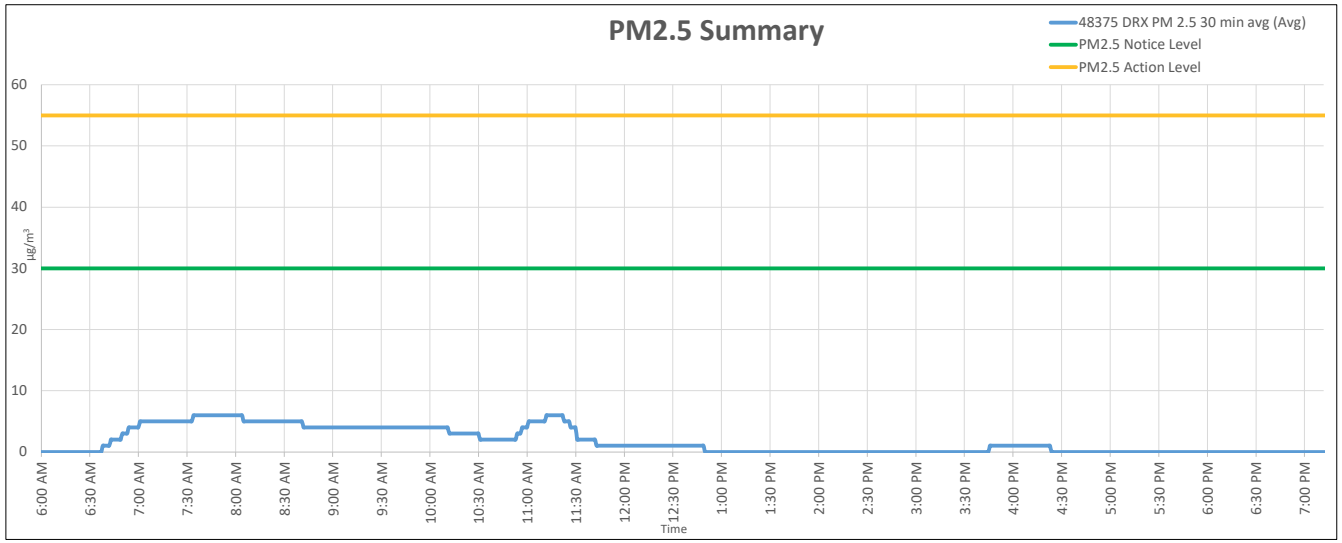
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:38 AM	11:42 AM	3.35	6.00	3.34	6.00





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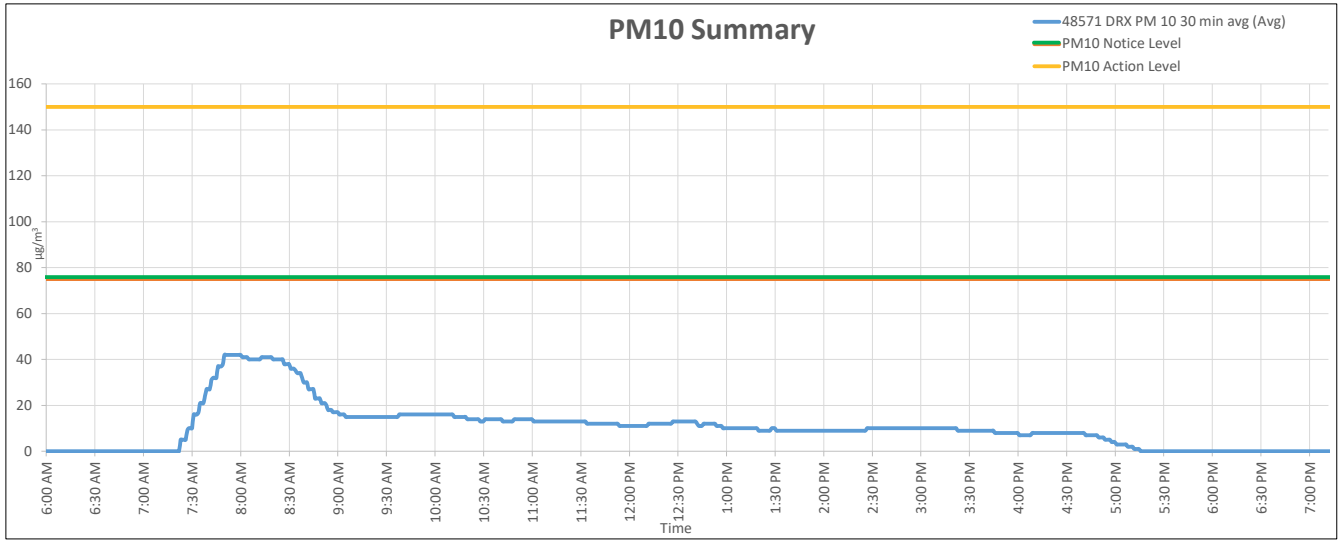
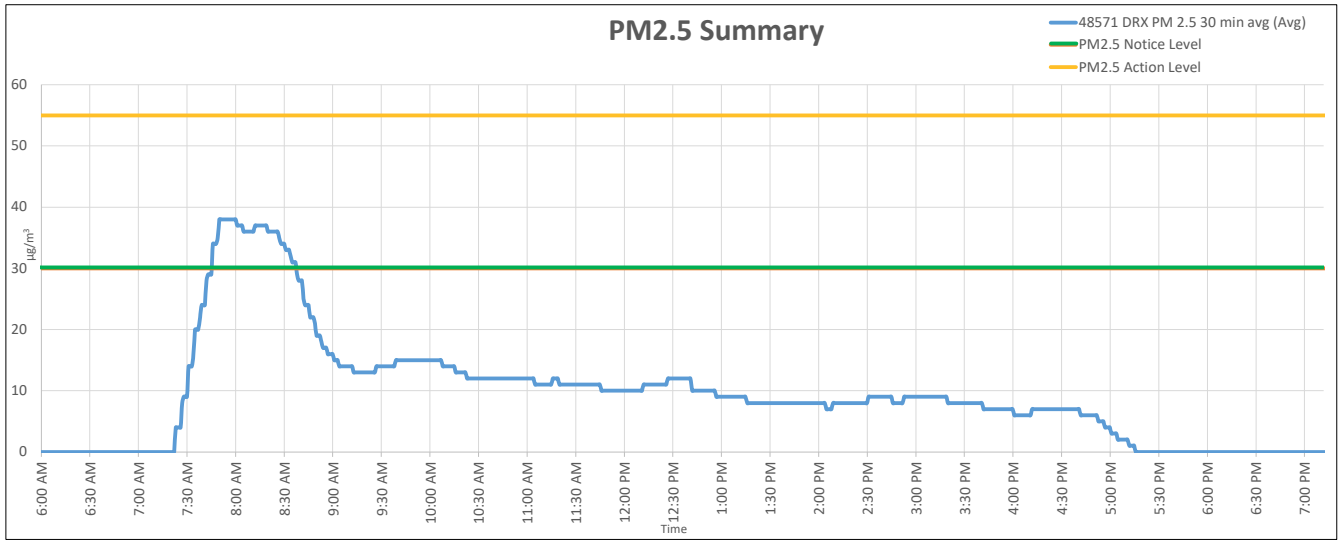
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:23 AM	5:11 PM	14.16	42.00	12.68	38.00





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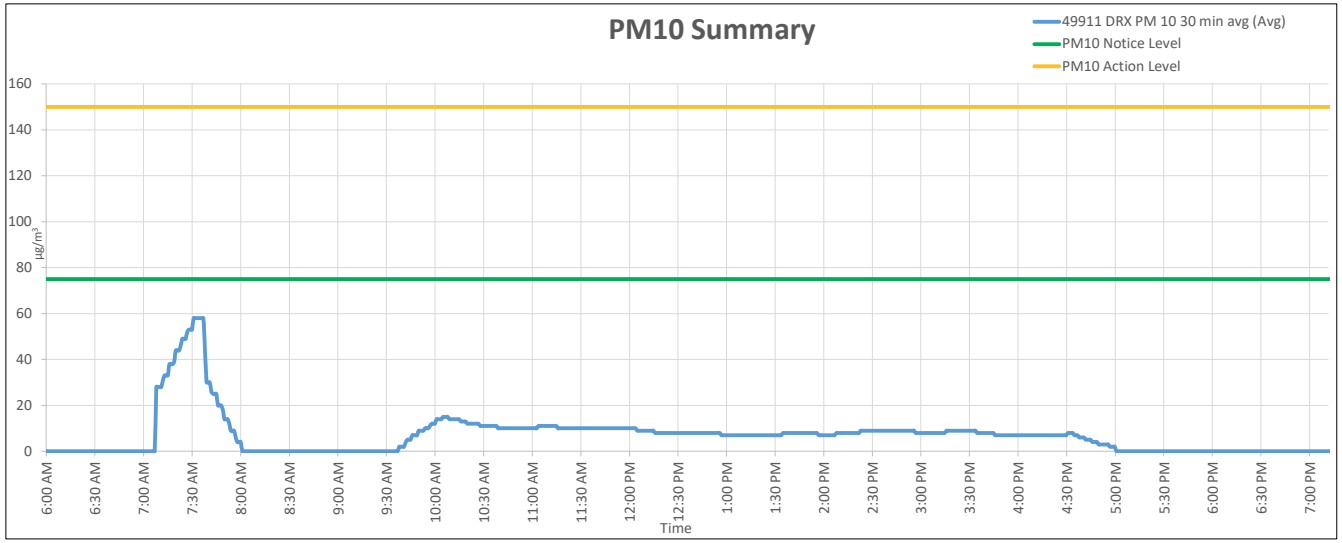
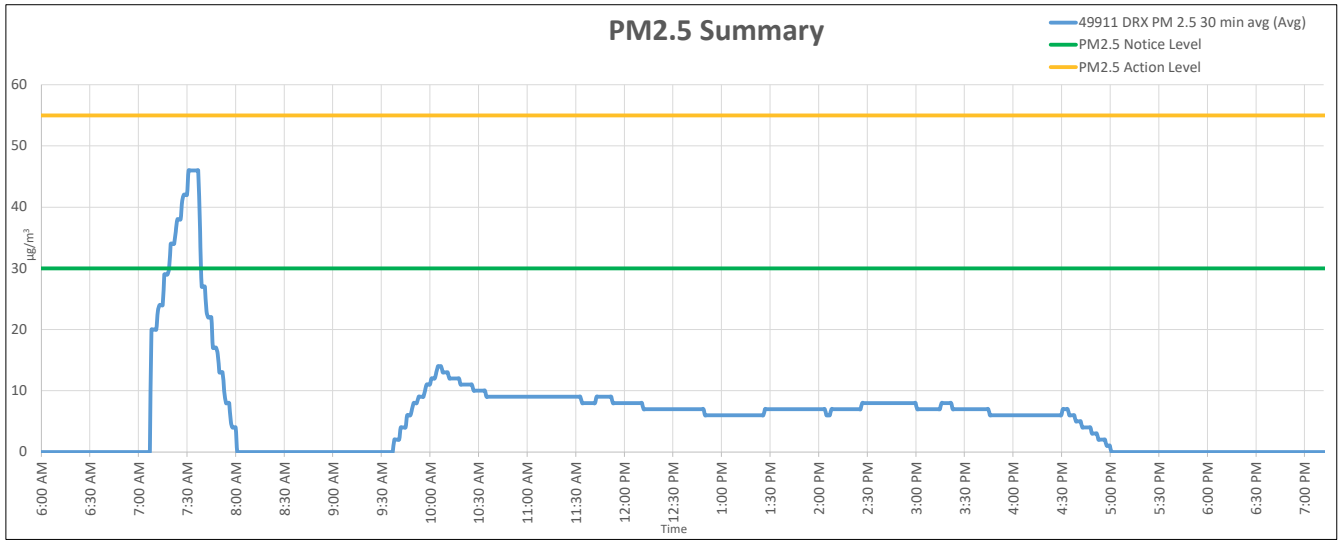
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	7:08 AM	5:00 PM	11.11	58.00	9.43	46.00





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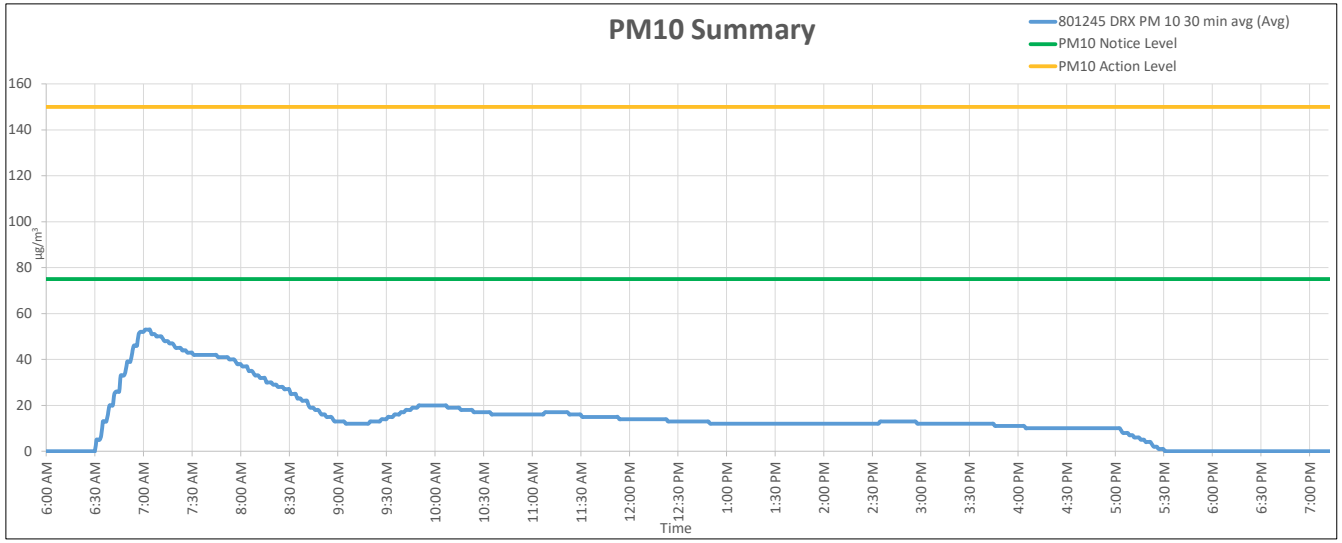
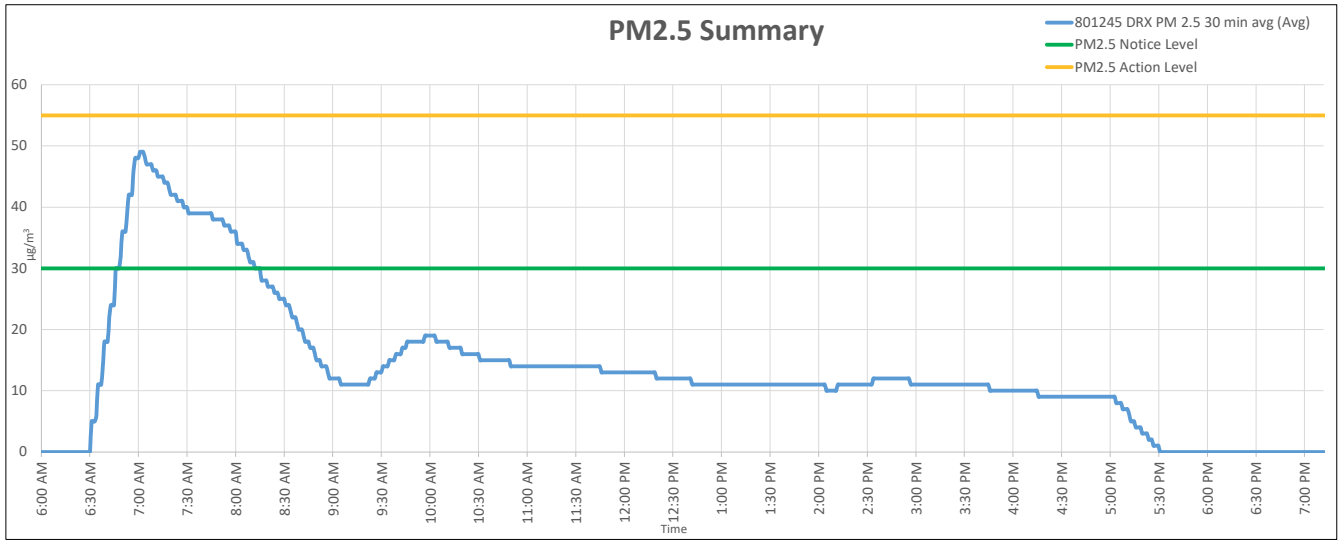
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:31 AM	5:26 PM	17.68	53.00	16.23	49.00





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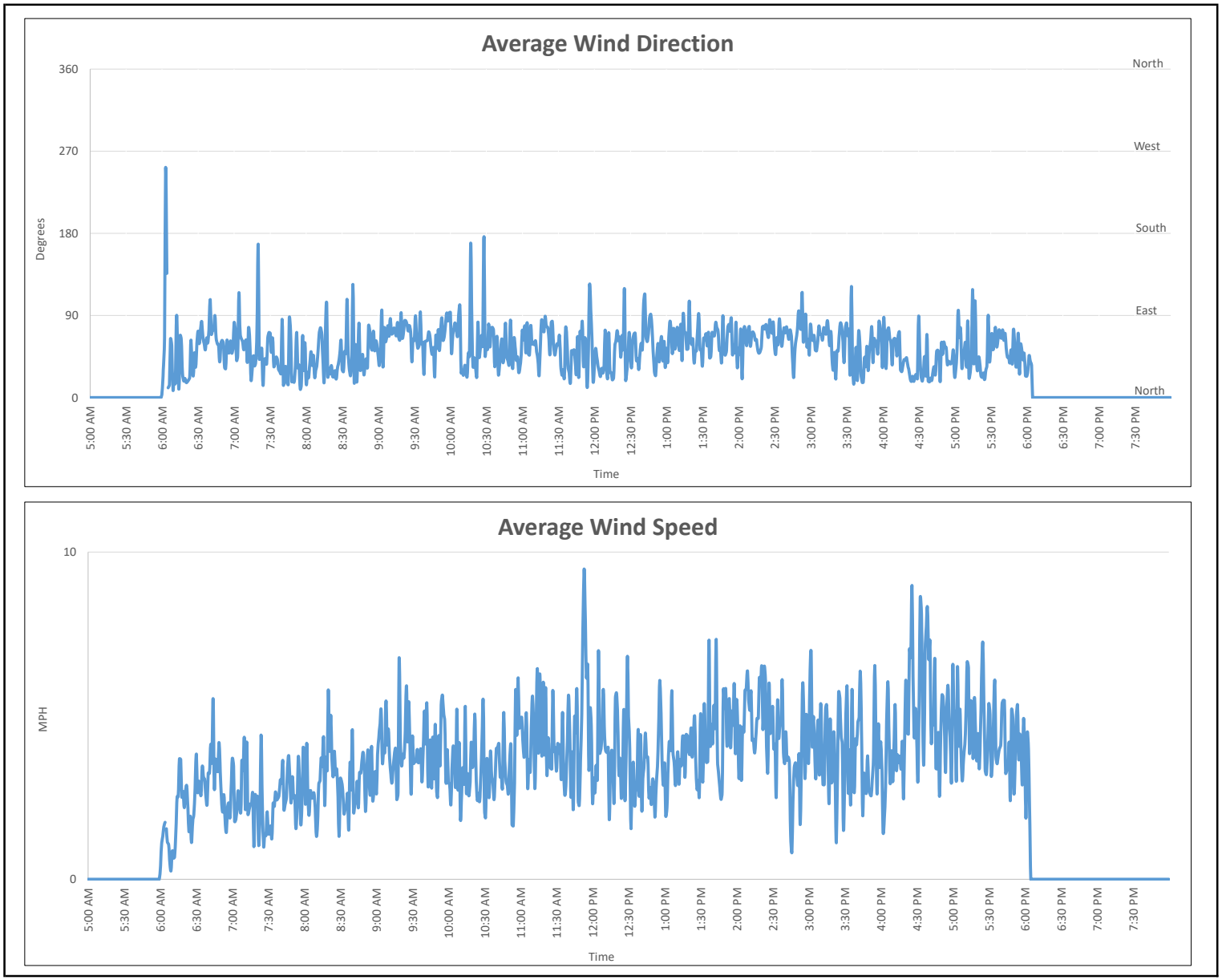

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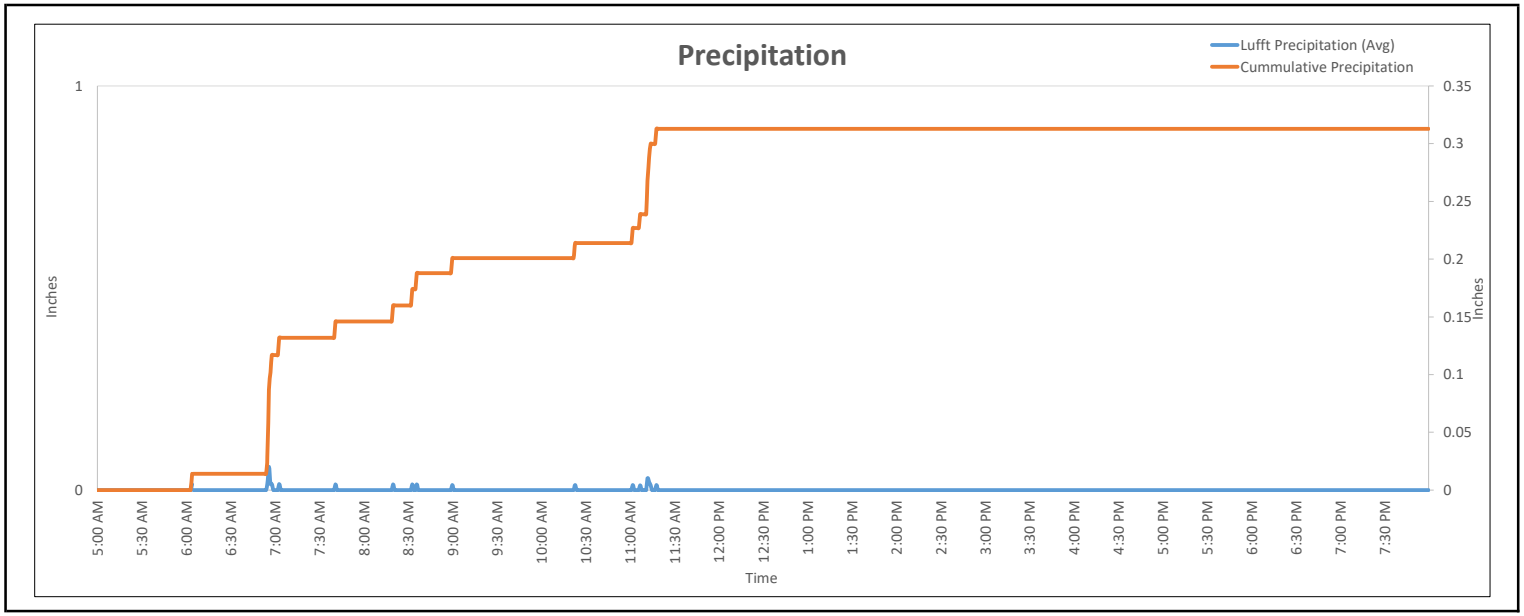

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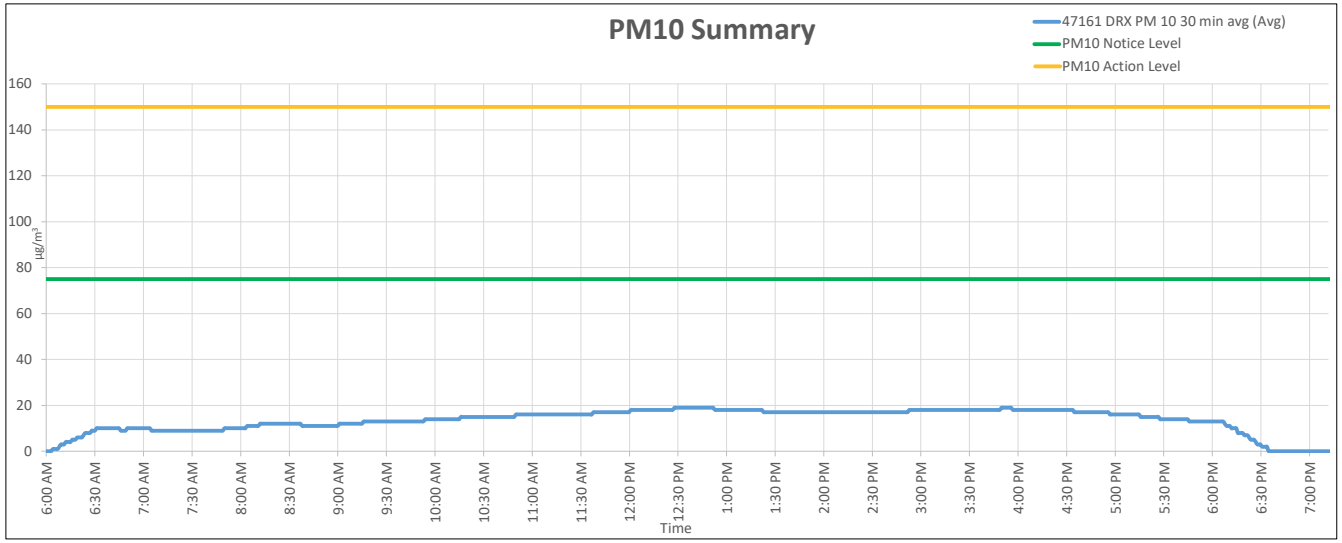
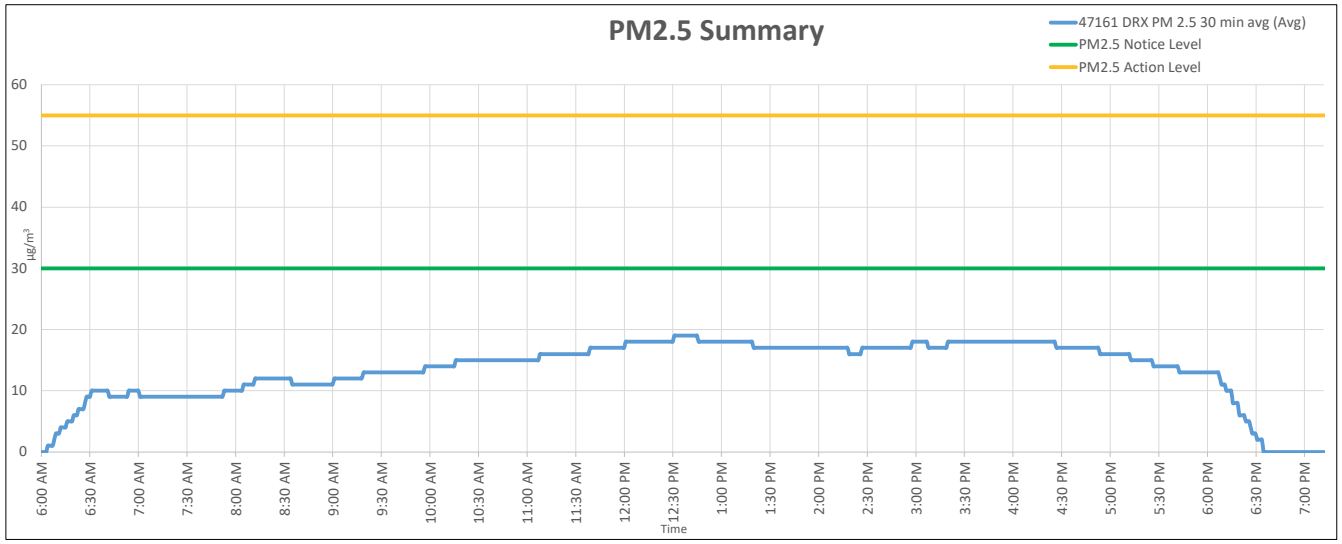
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:04 AM	6:34 PM	14.34	19.00	14.19	19.00





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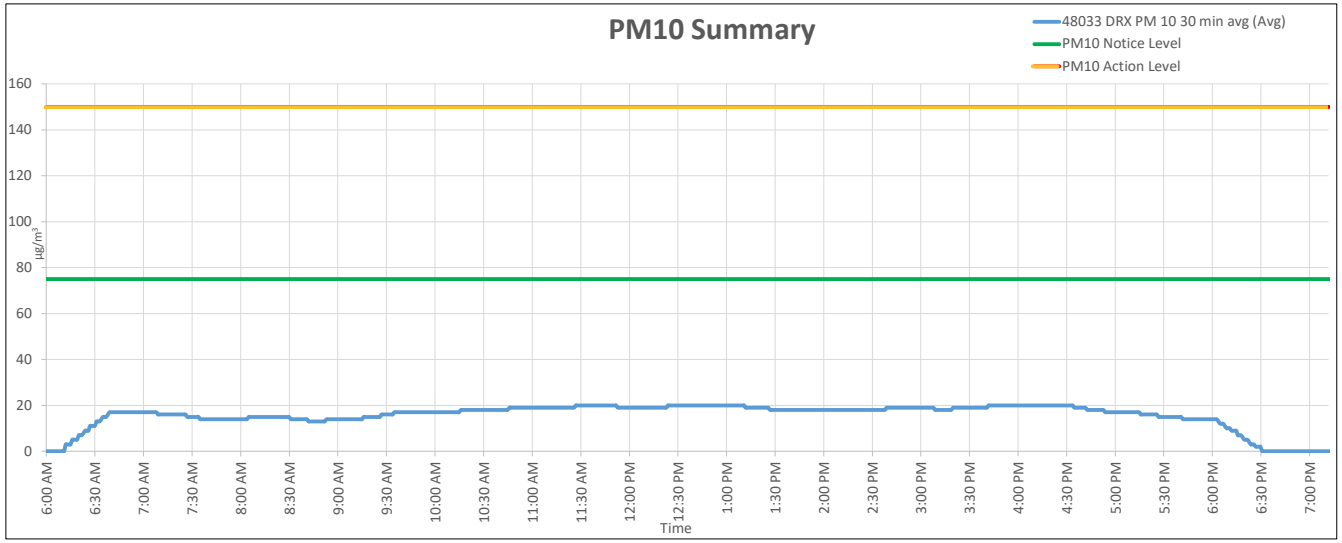
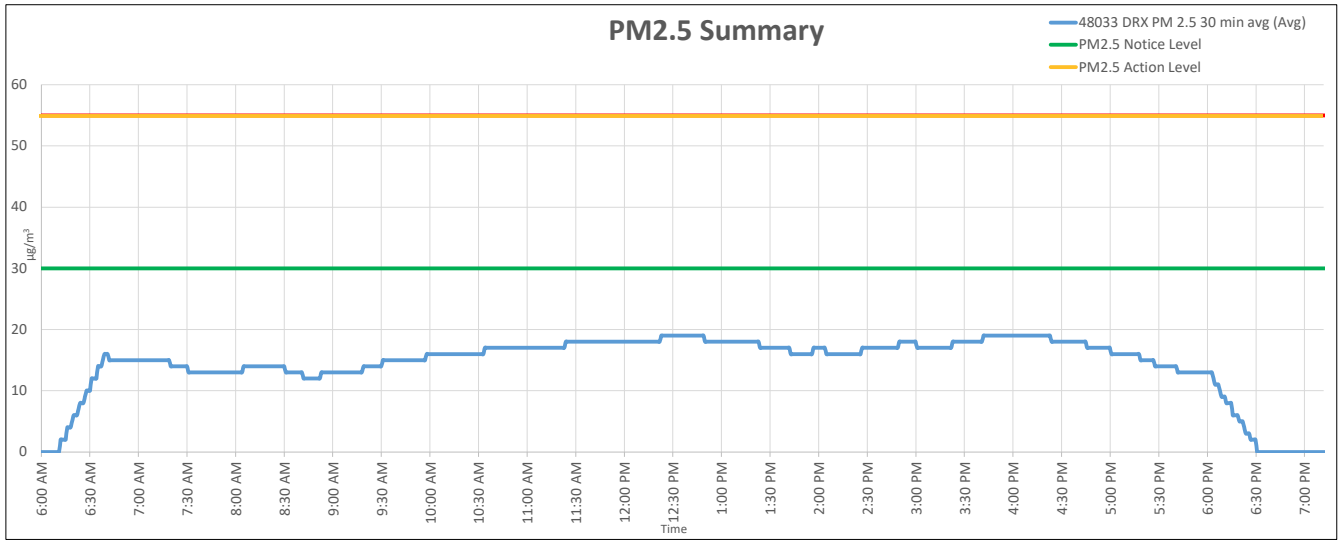
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:12 AM	6:30 PM	16.81	20.00	15.51	19.00





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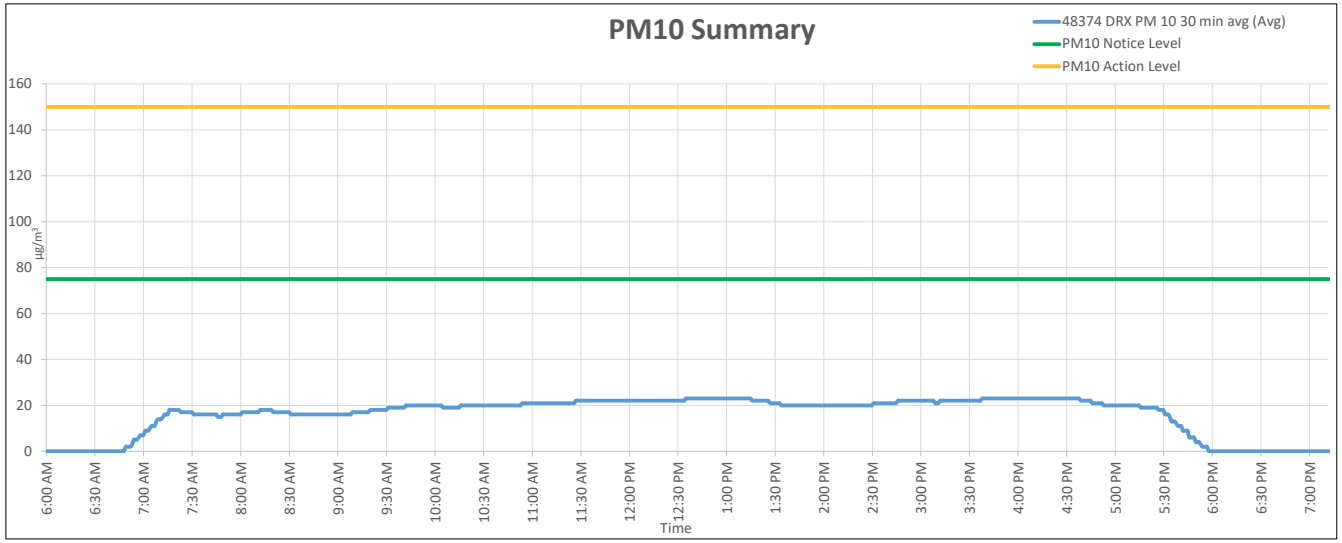
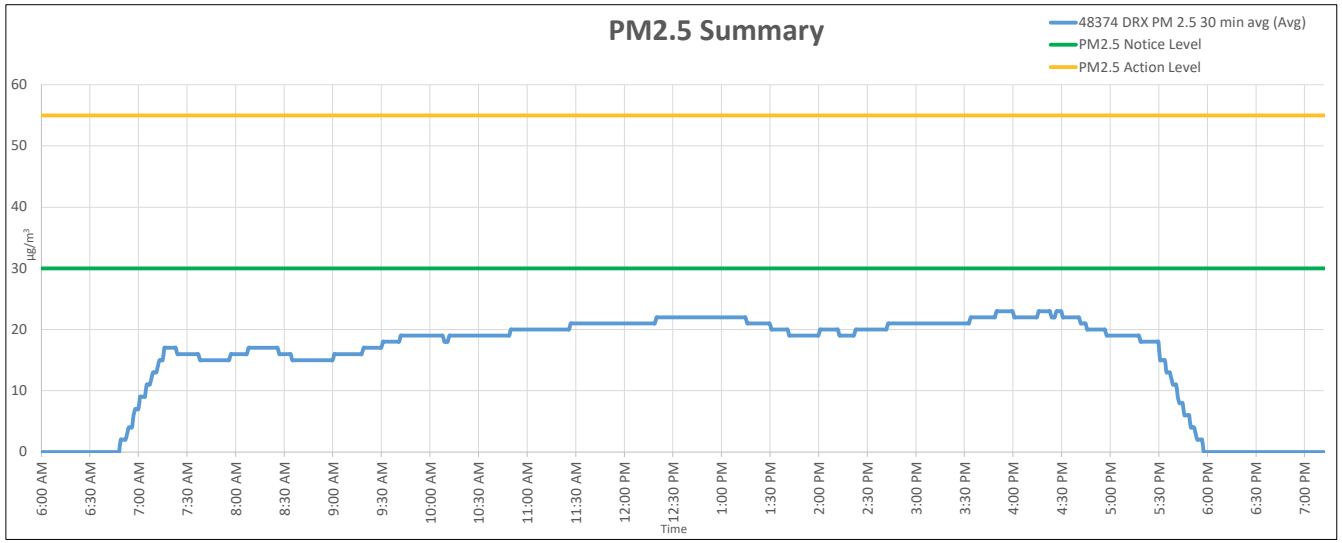
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:49 AM	5:57 PM	19.31	23.00	18.59	23.00





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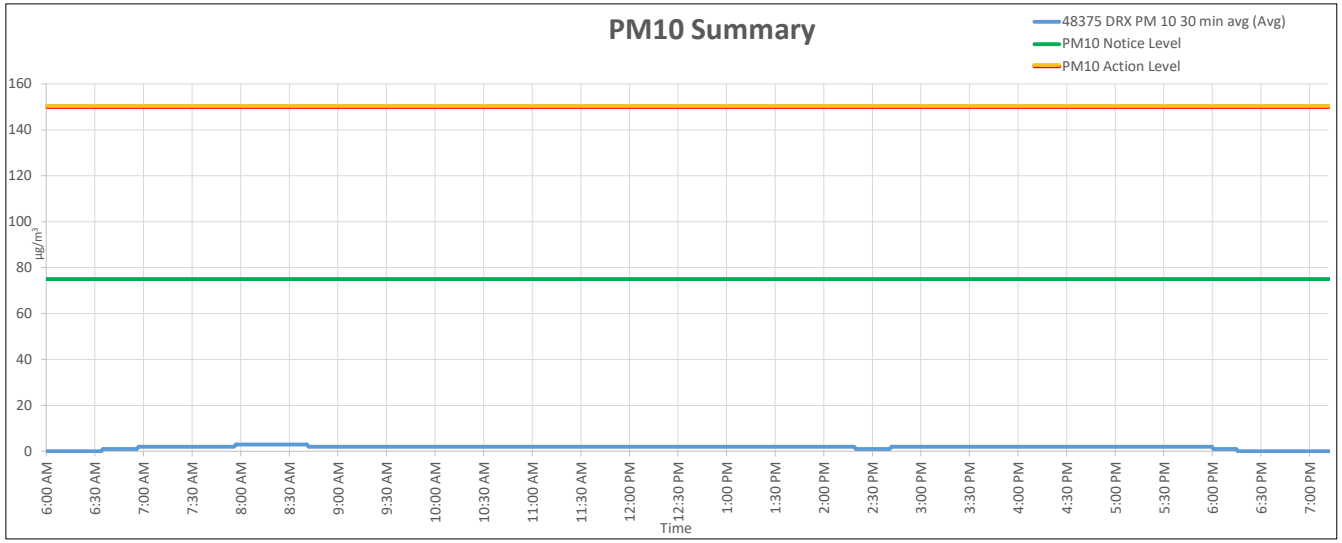
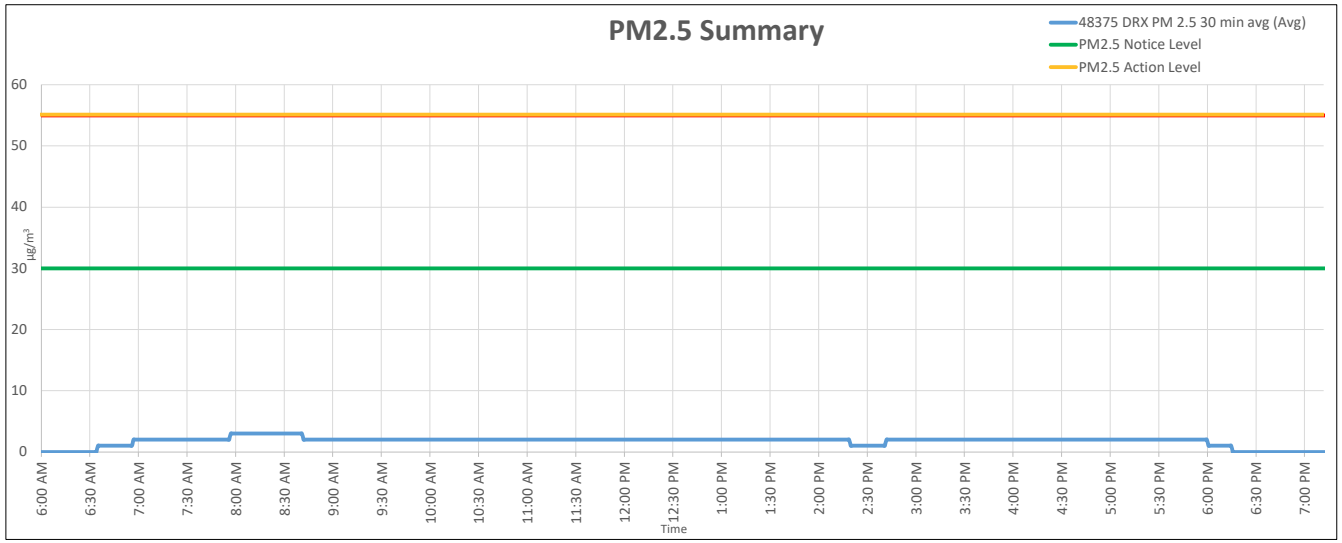
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:35 AM	6:00 PM	1.98	3.00	1.98	3.00





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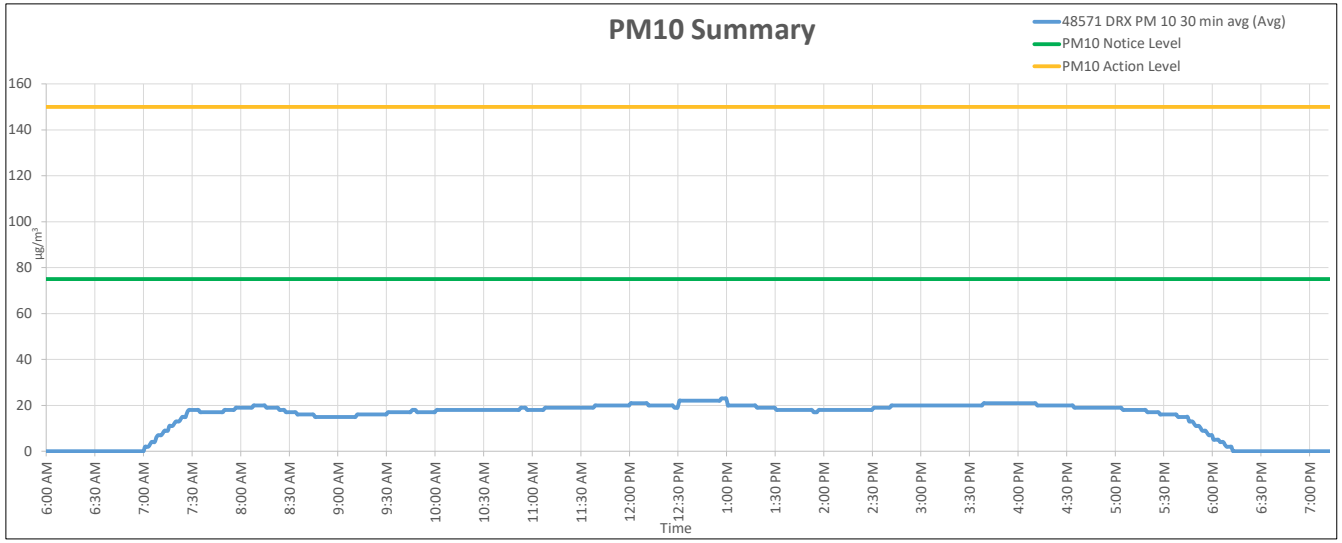
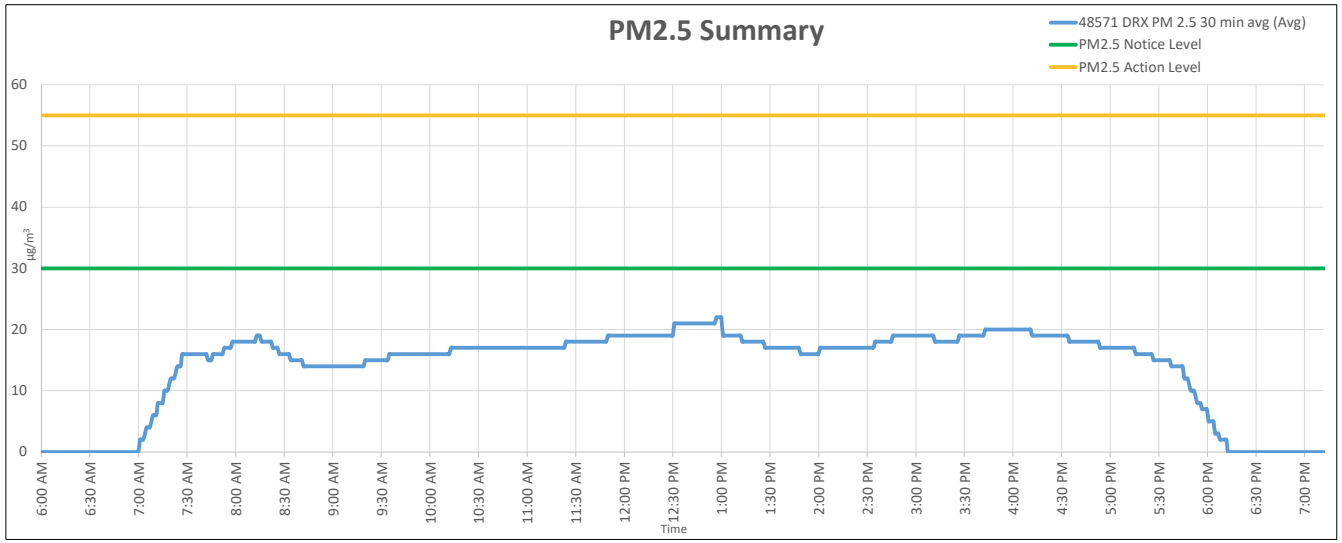
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:01 AM	6:12 PM	17.82	23.00	16.61	22.00





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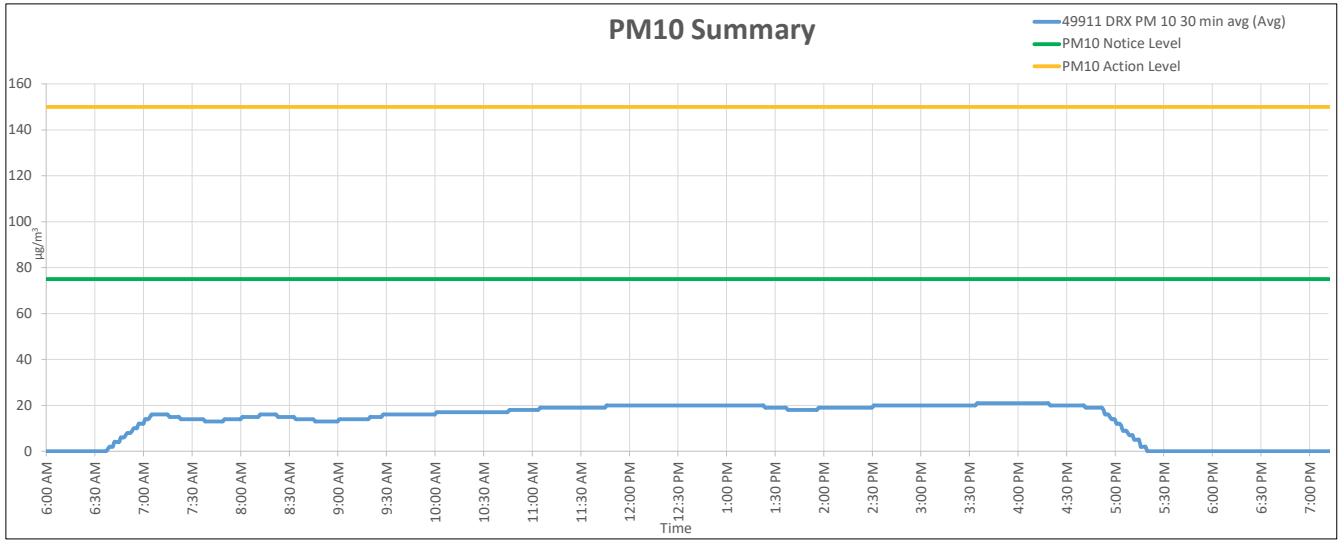
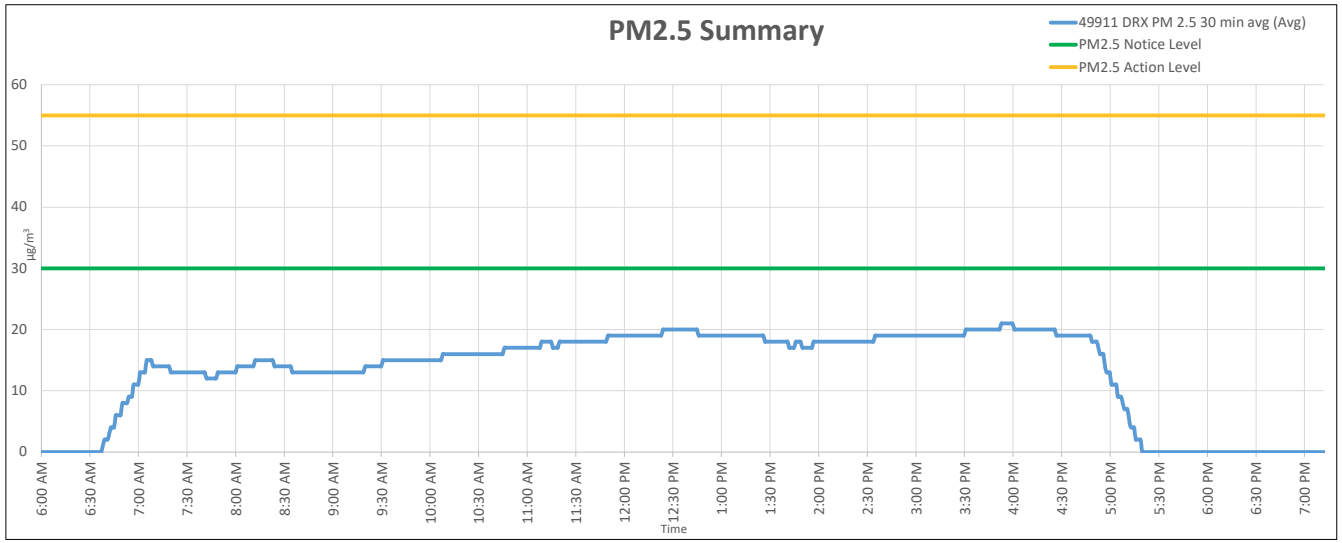
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:38 AM	5:19 PM	17.18	21.00	16.29	21.00





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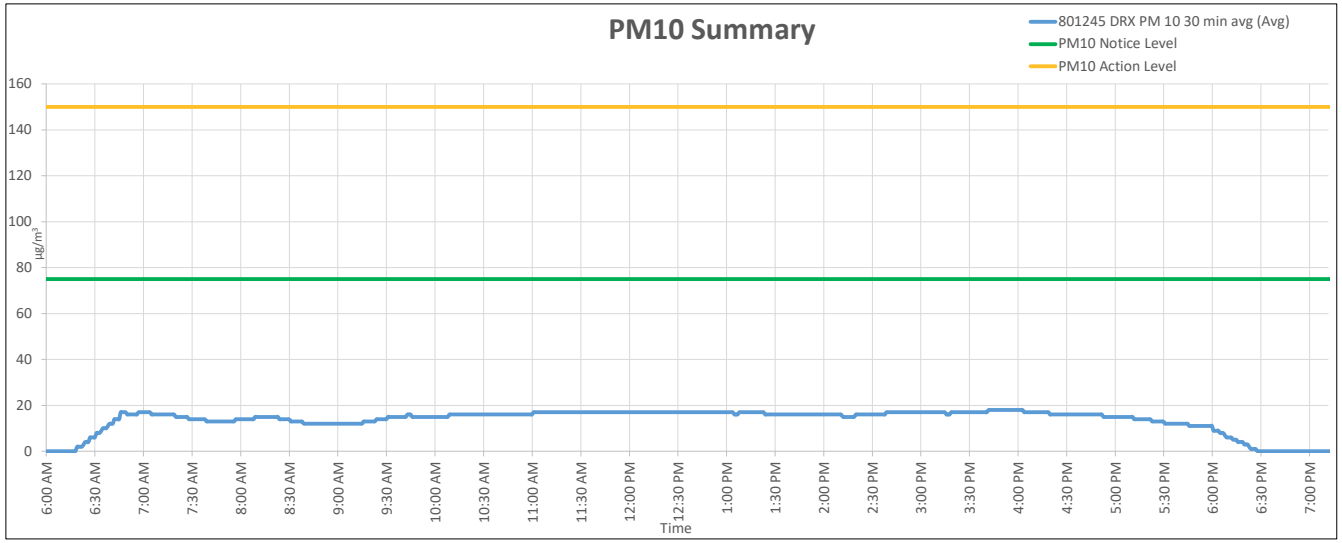
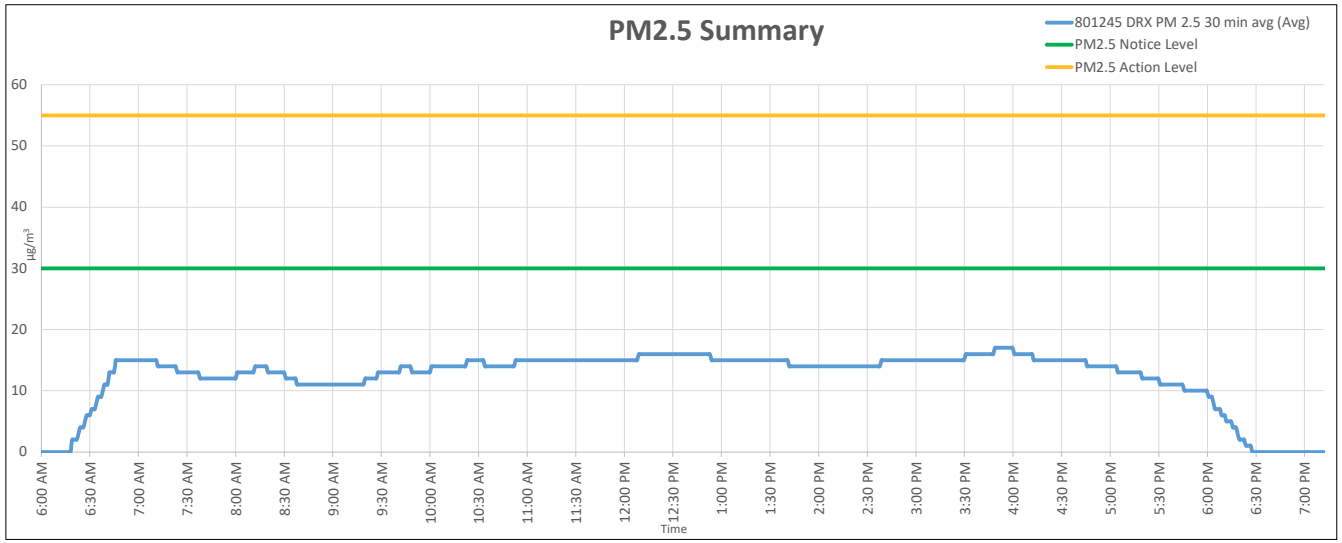
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:19 AM	6:23 PM	14.86	18.00	13.44	17.00





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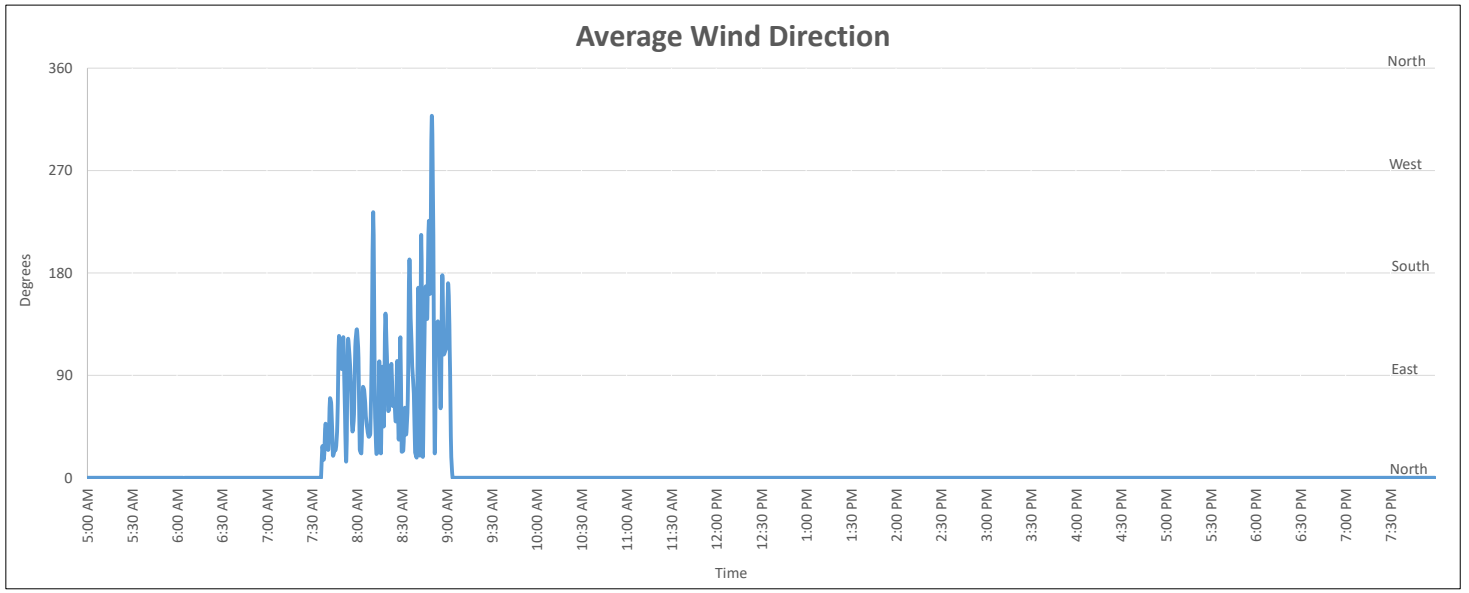

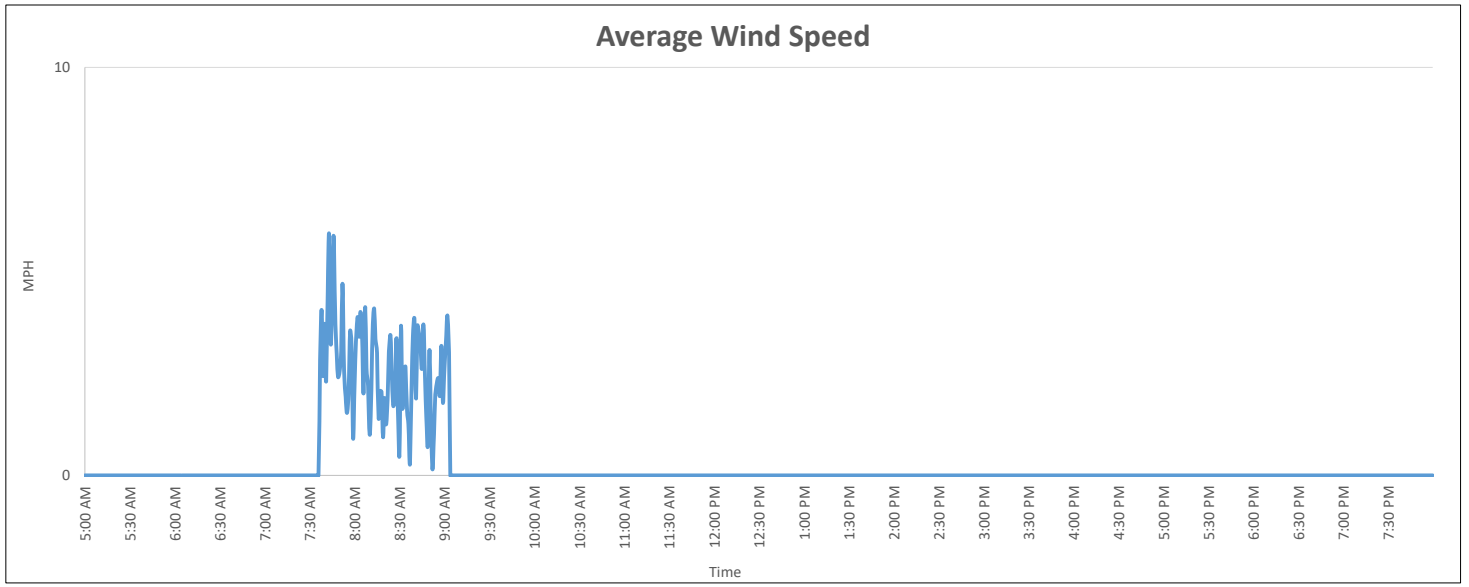

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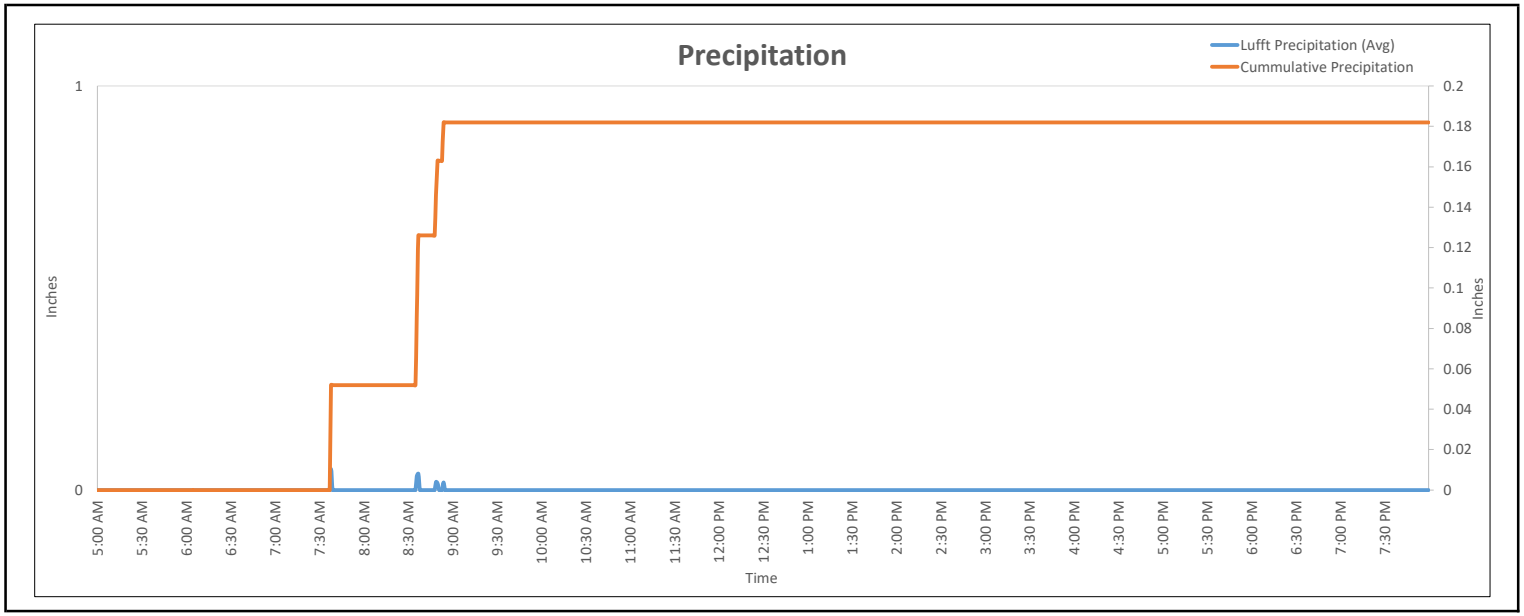

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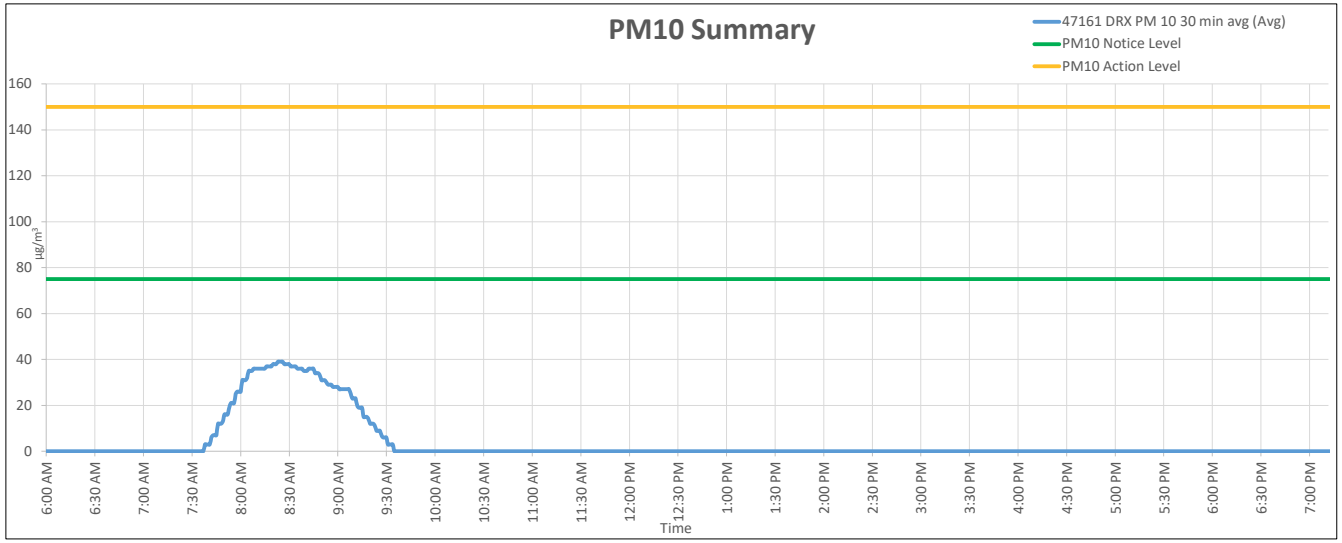
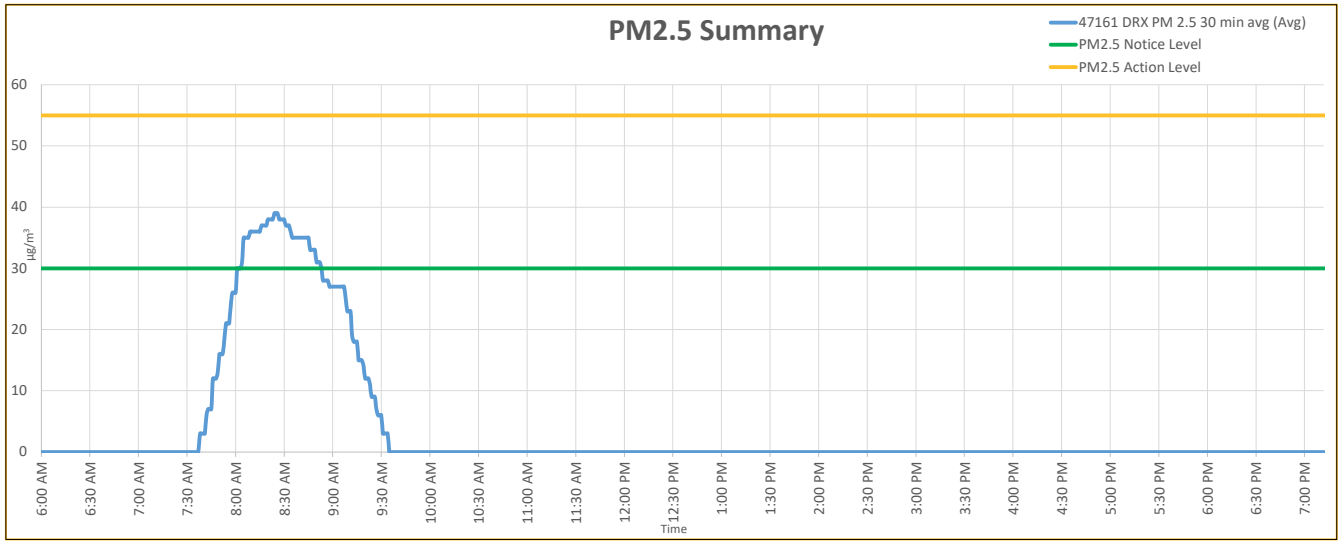
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	7:38 AM	9:34 AM	25.10	39.00	24.85	39.00





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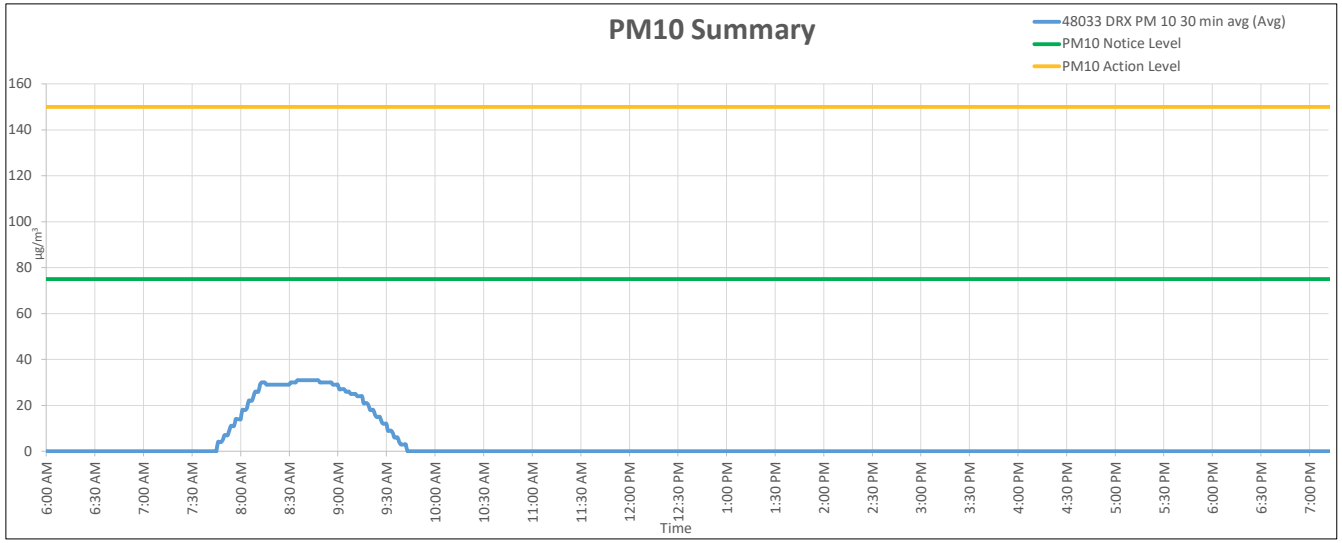
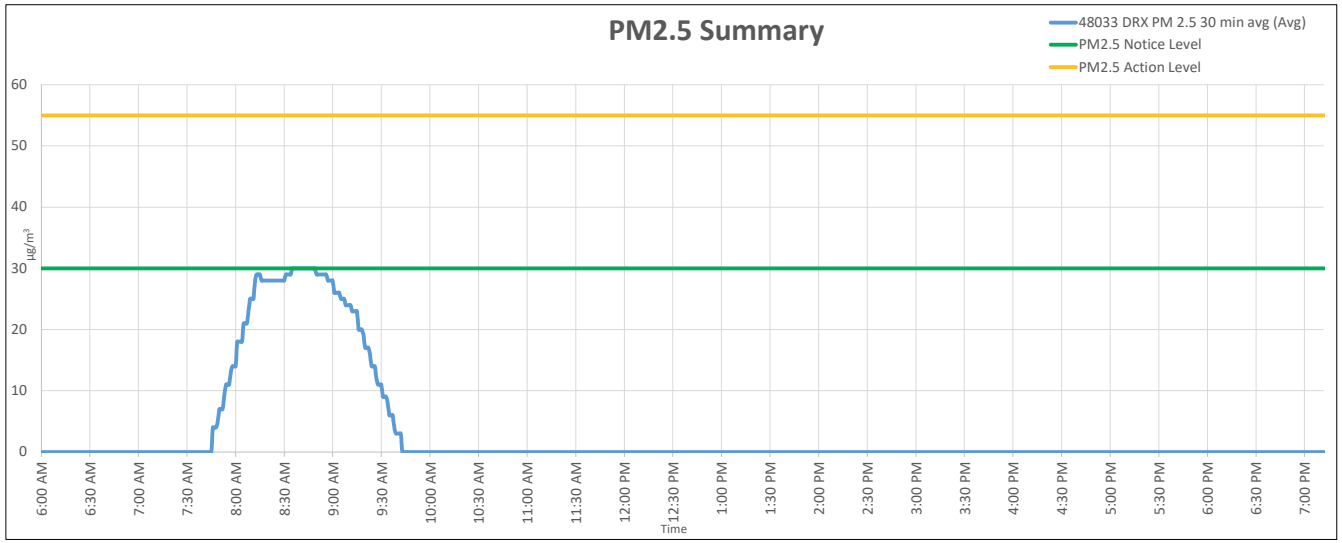
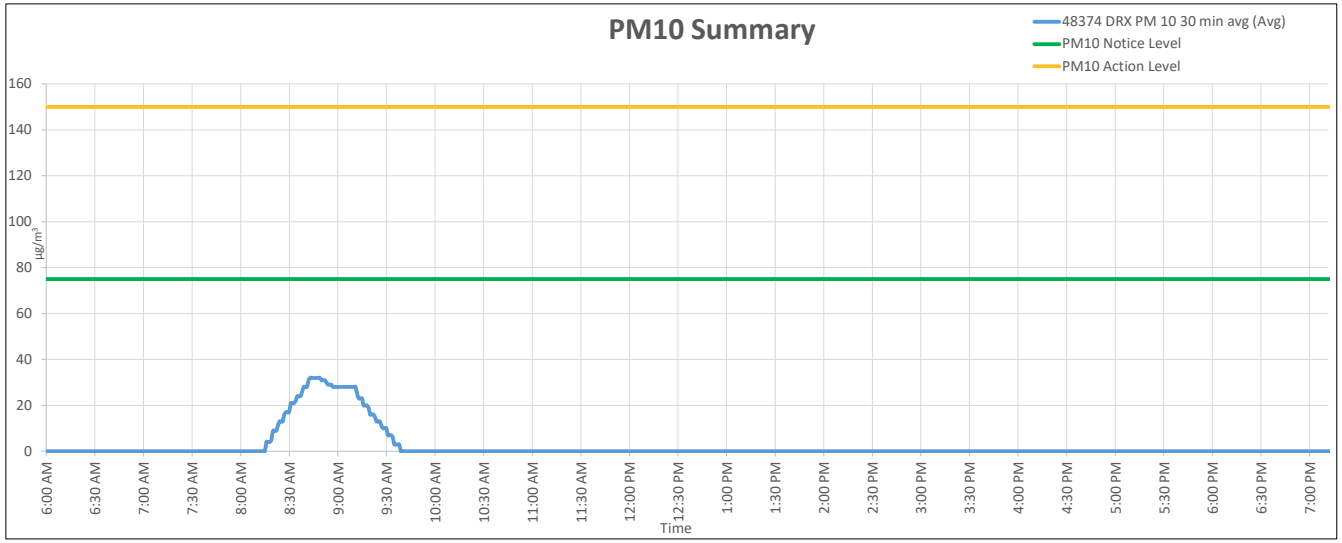
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	7:46 AM	9:42 AM	21.70	31.00	20.97	30.00

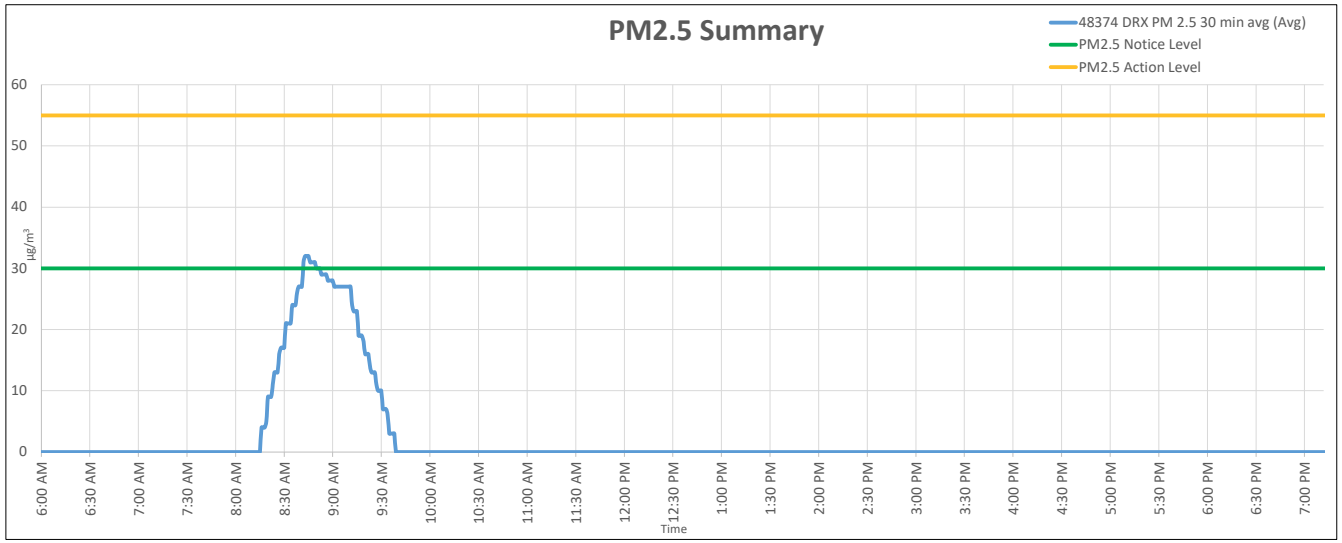




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 2, 2024

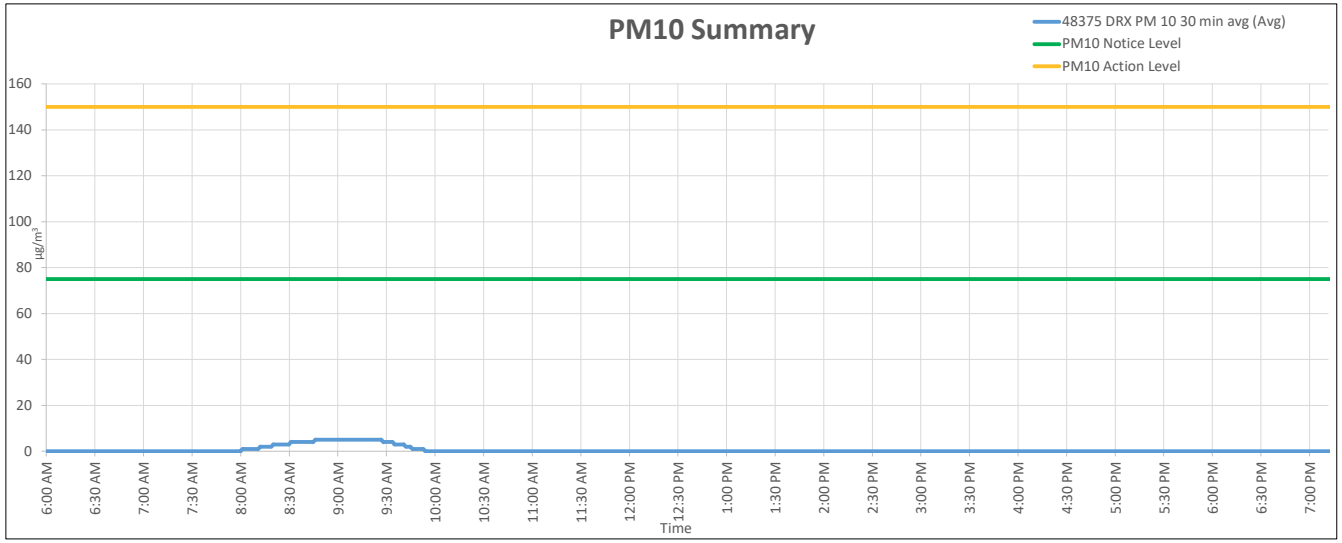
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	8:16 AM	9:38 AM	20.10	32.00	19.75	32.00

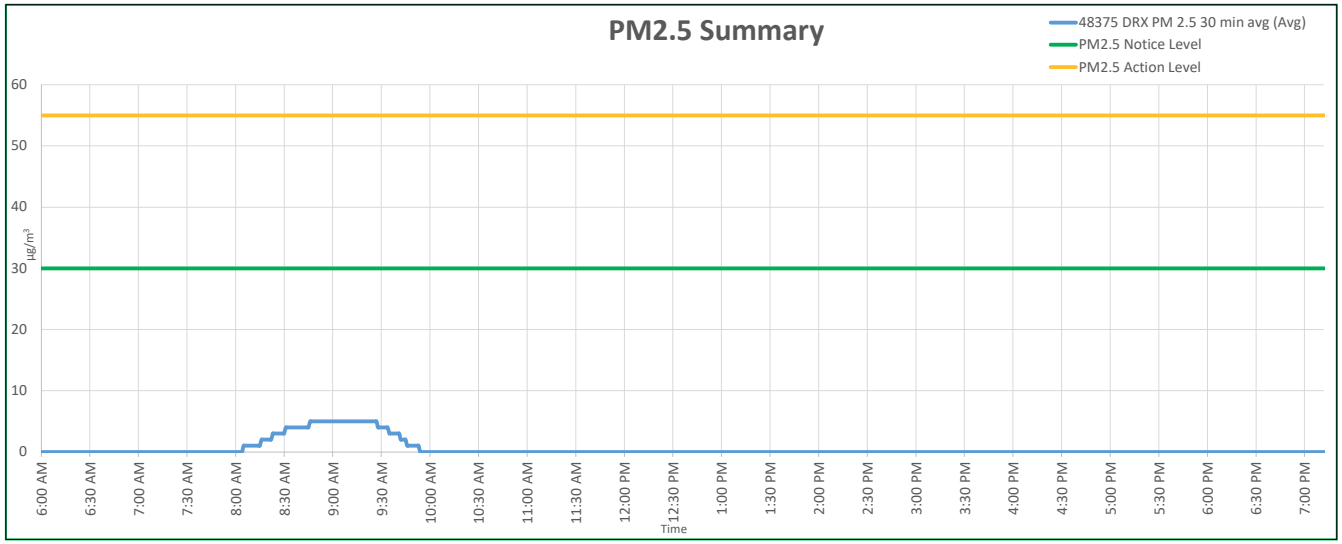




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 2, 2024

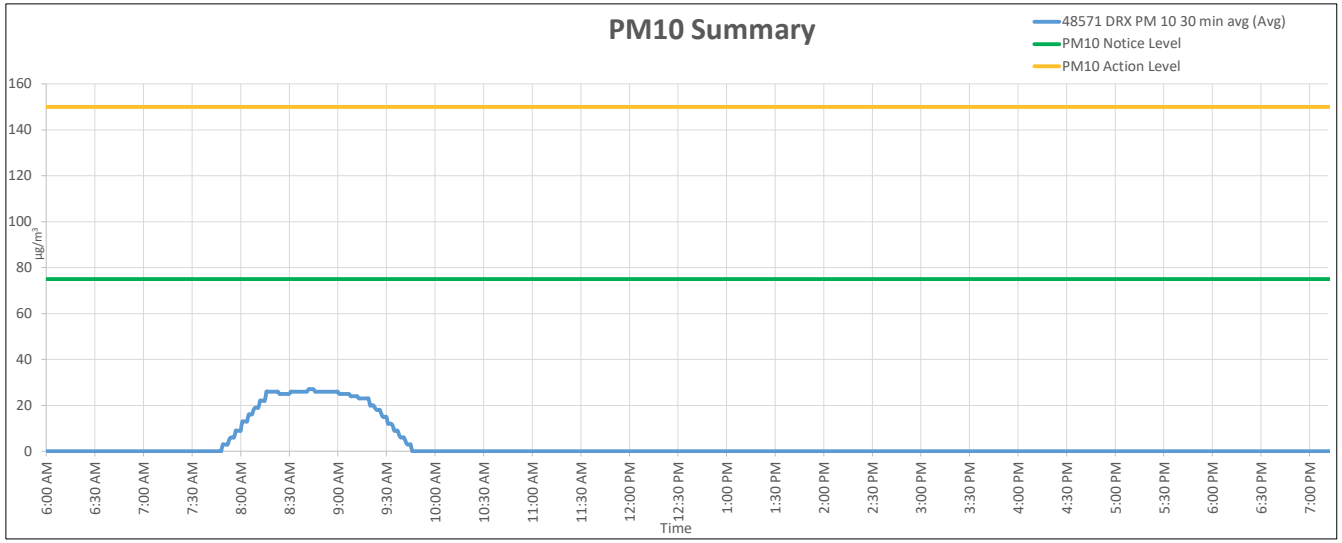
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	8:01 AM	9:45 AM	3.50	5.00	3.52	5.00

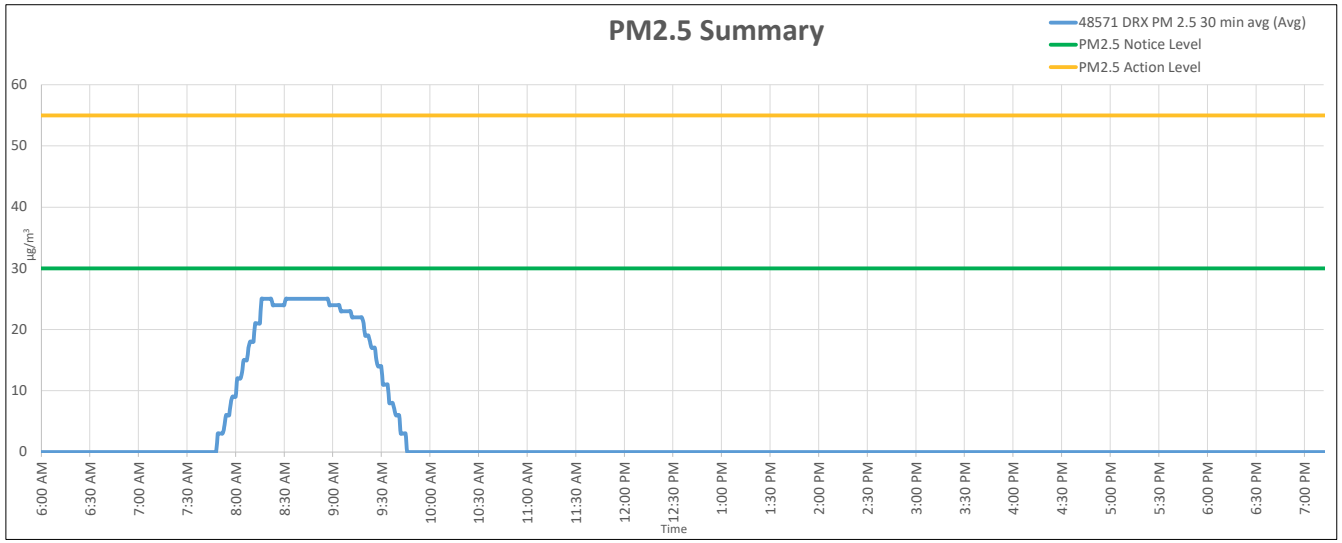




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 2, 2024

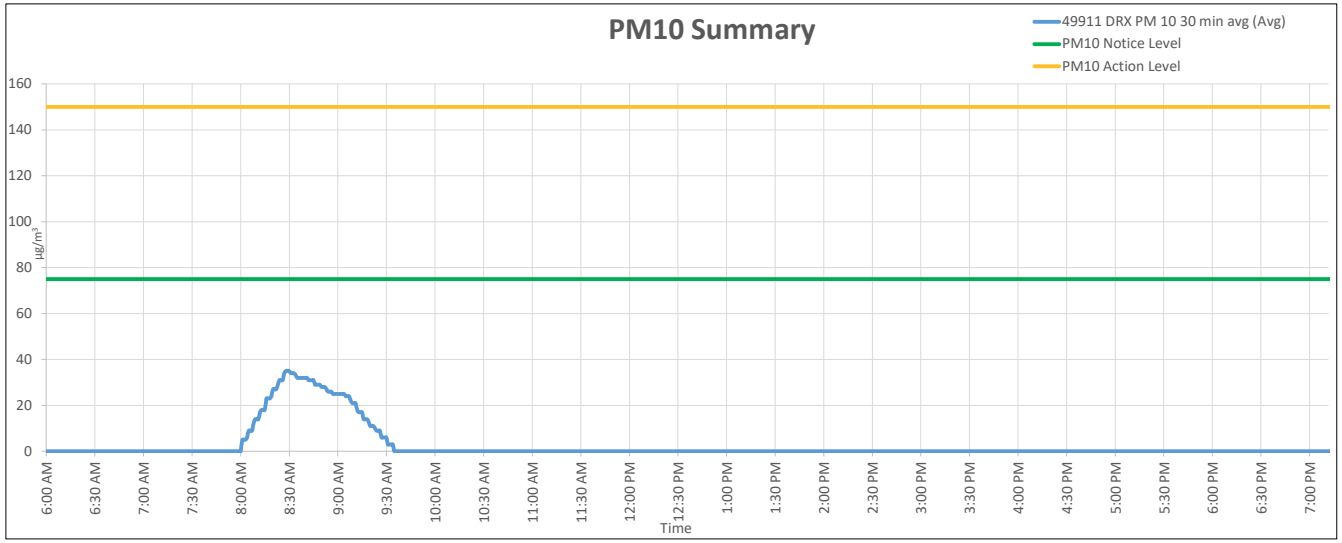
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:49 AM	9:45 AM	19.34	27.00	18.39	25.00

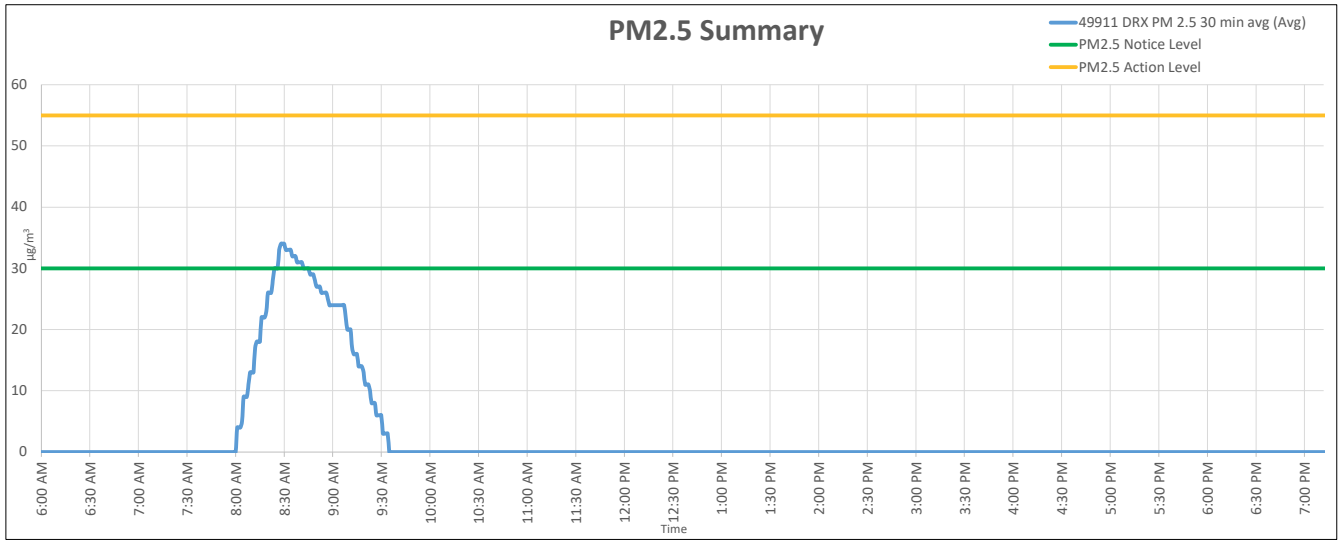




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 2, 2024

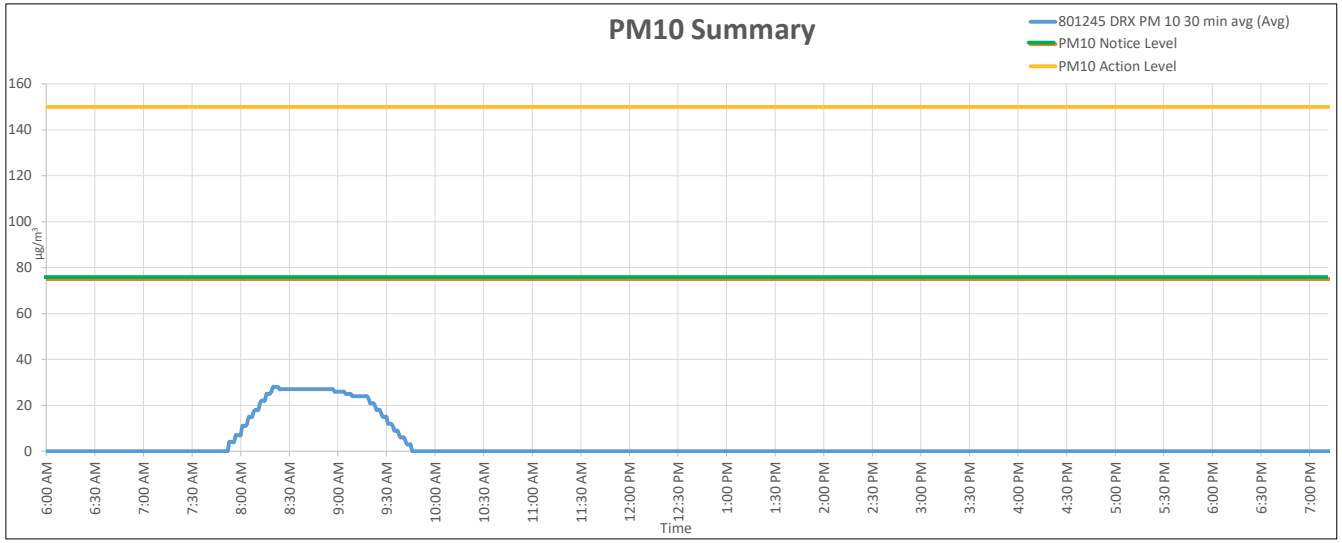
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	8:01 AM	9:34 AM	21.10	35.00	20.50	34.00

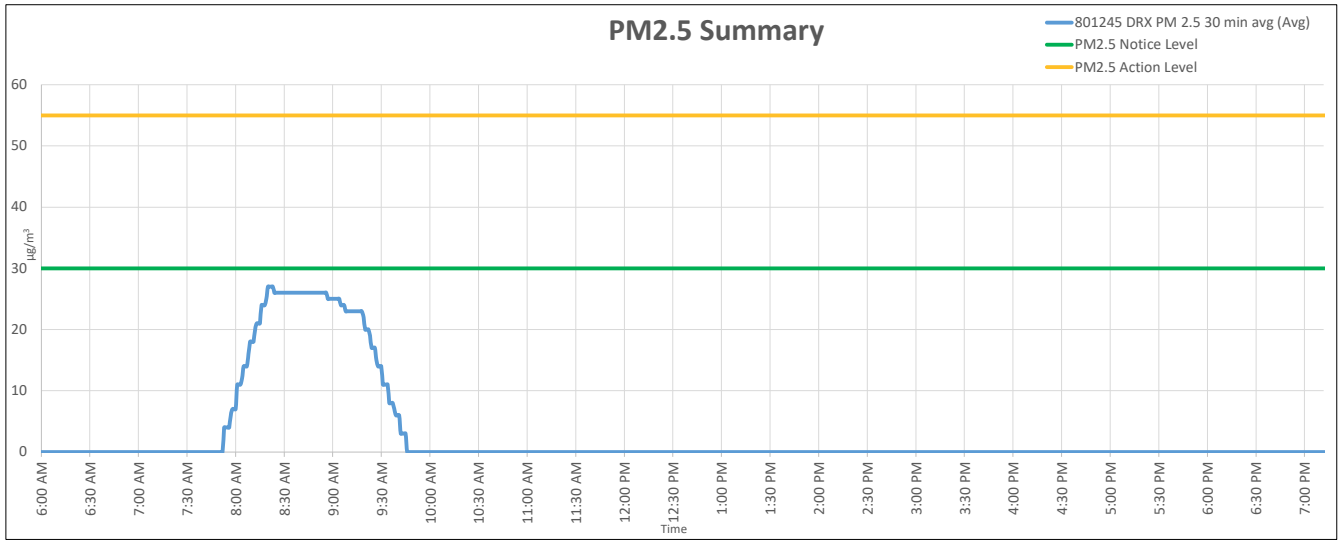




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 2, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	7:53 AM	9:45 AM	20.16	28.00	19.34	27.00





Union Pacific Railroad
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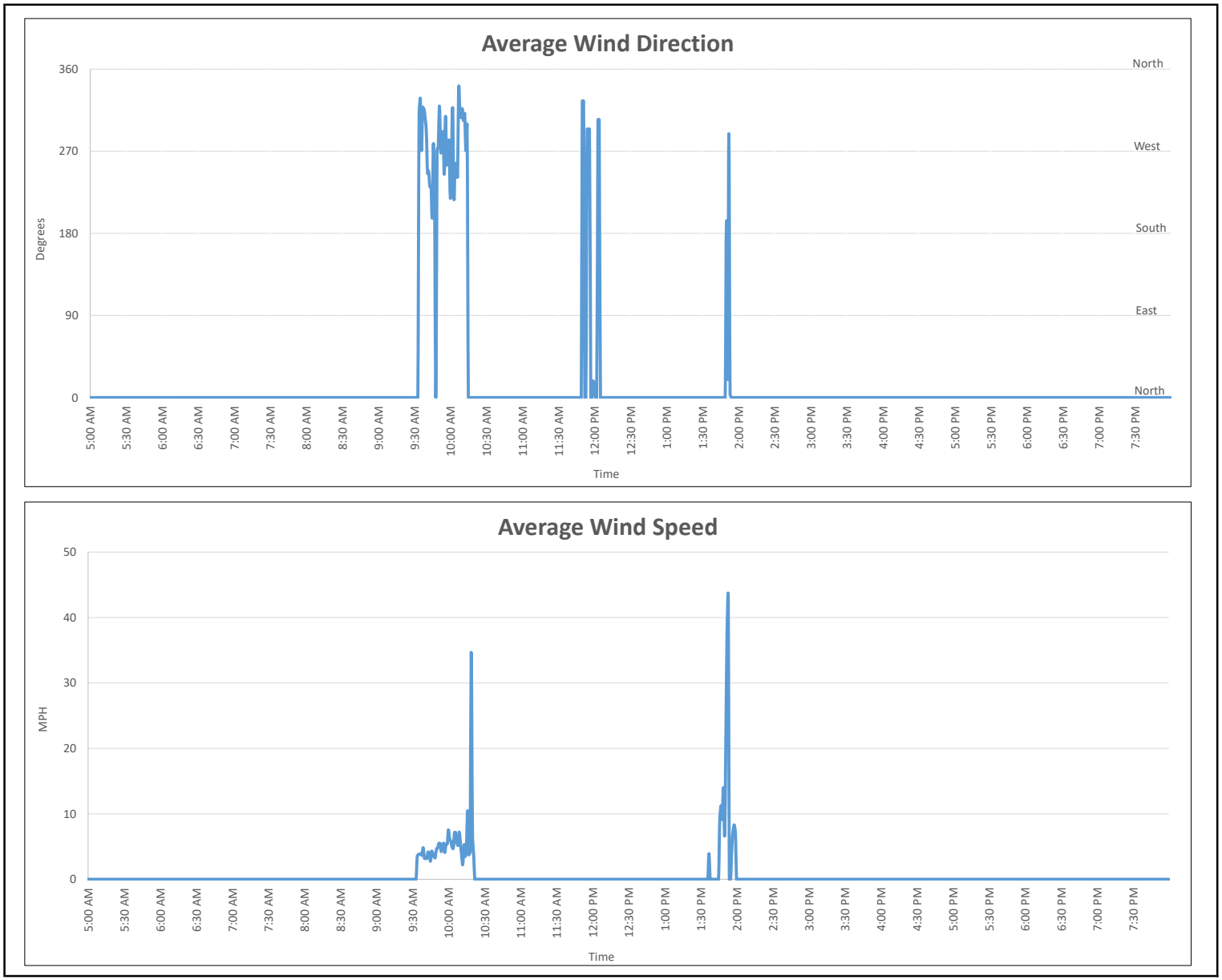
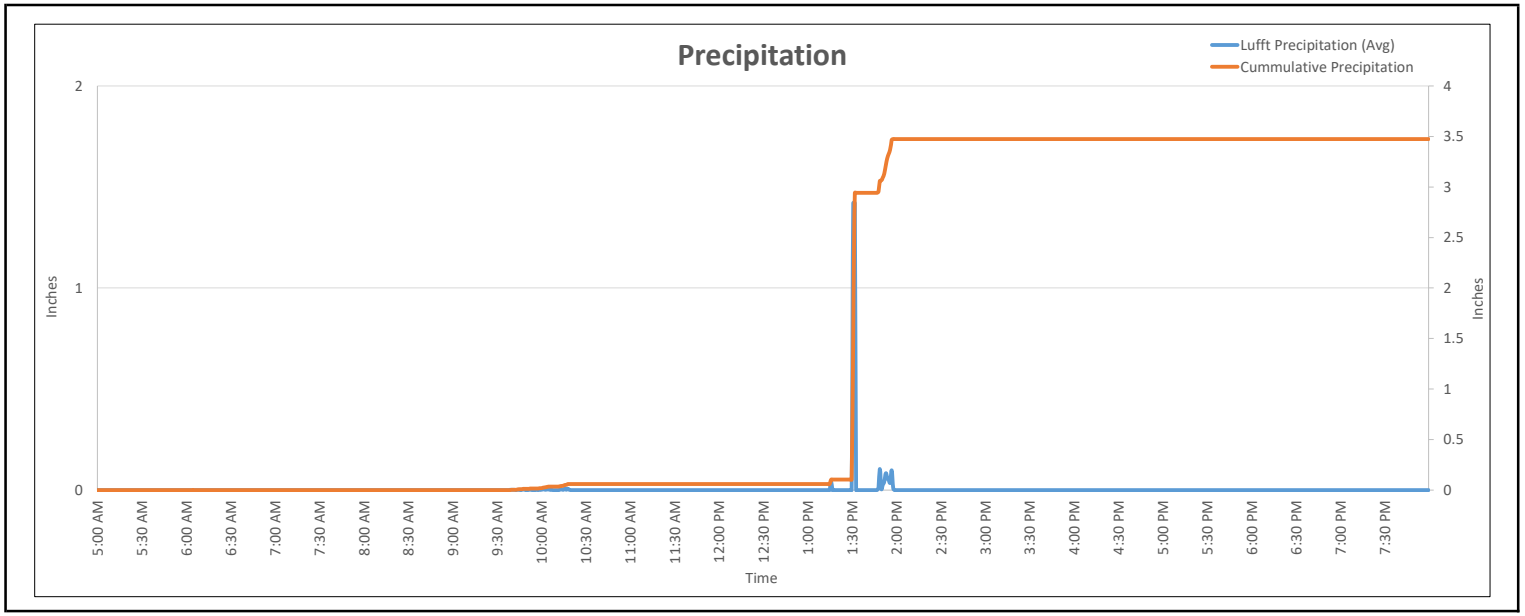
Friday, May 3, 2024

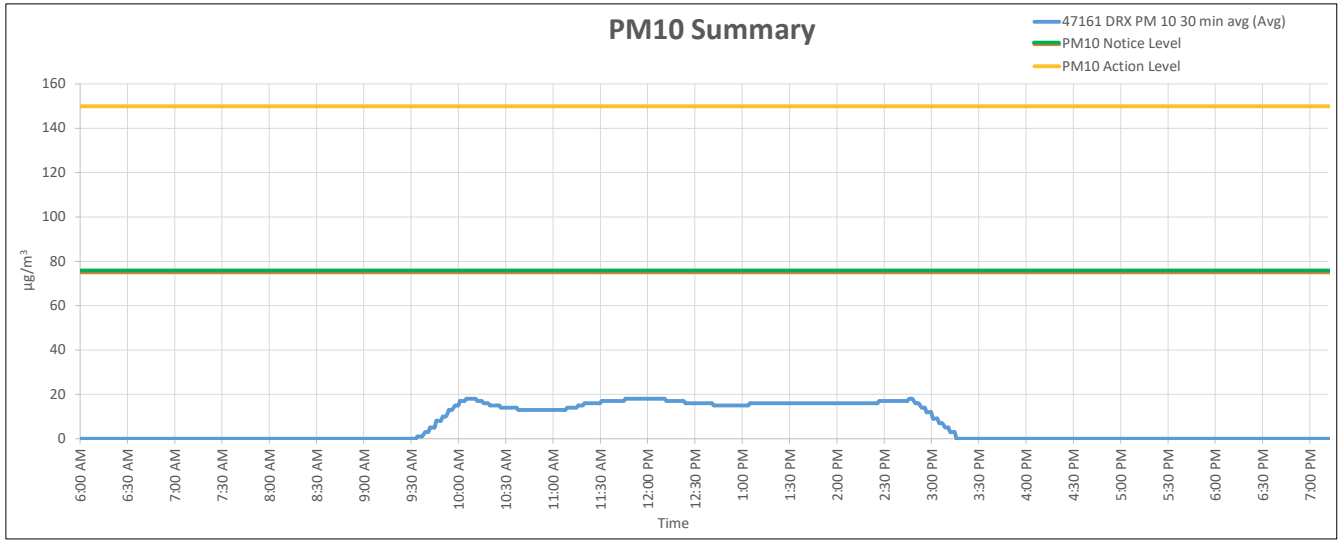


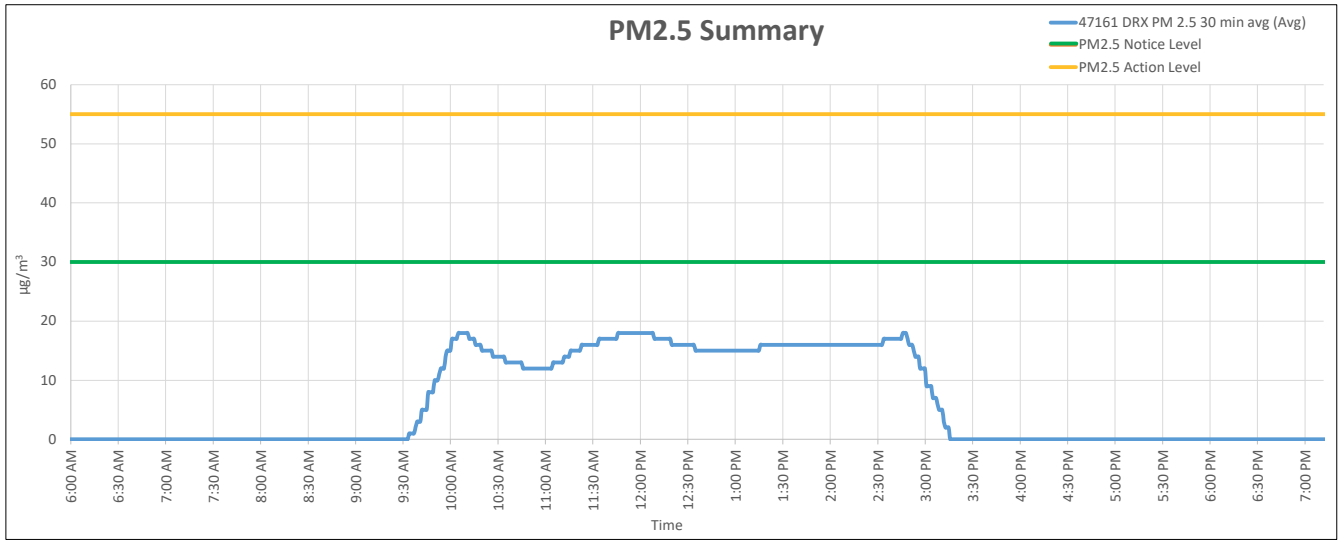
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Friday, May 3, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 3, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	9:34 AM	3:15 PM	14.73	18.00	14.53	18.00





Union Pacific Railroad
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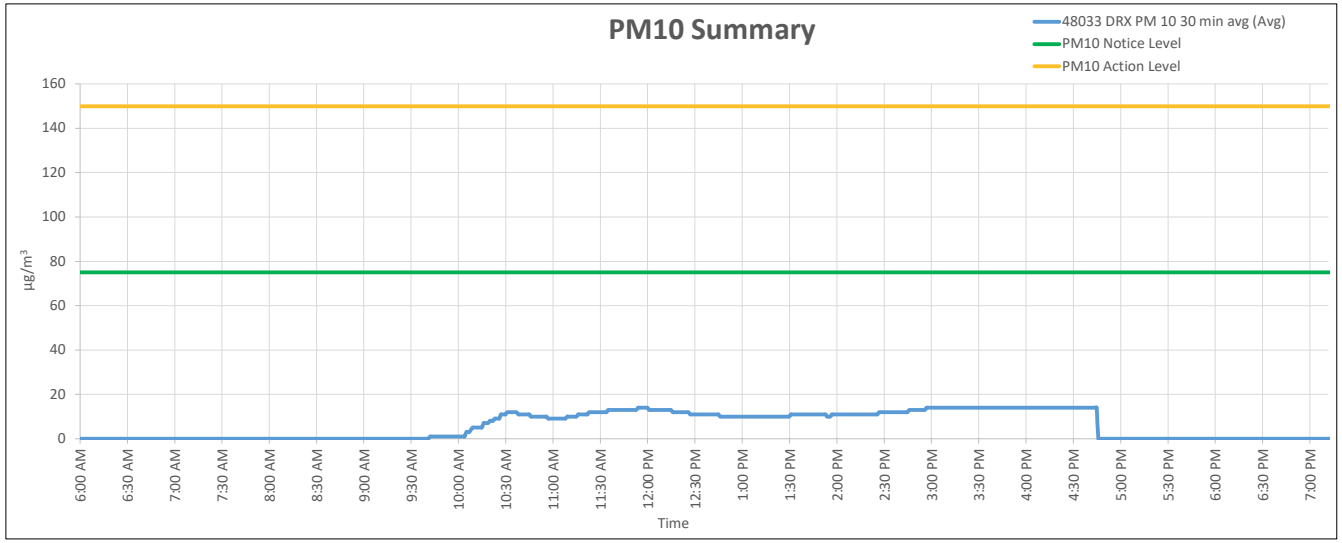
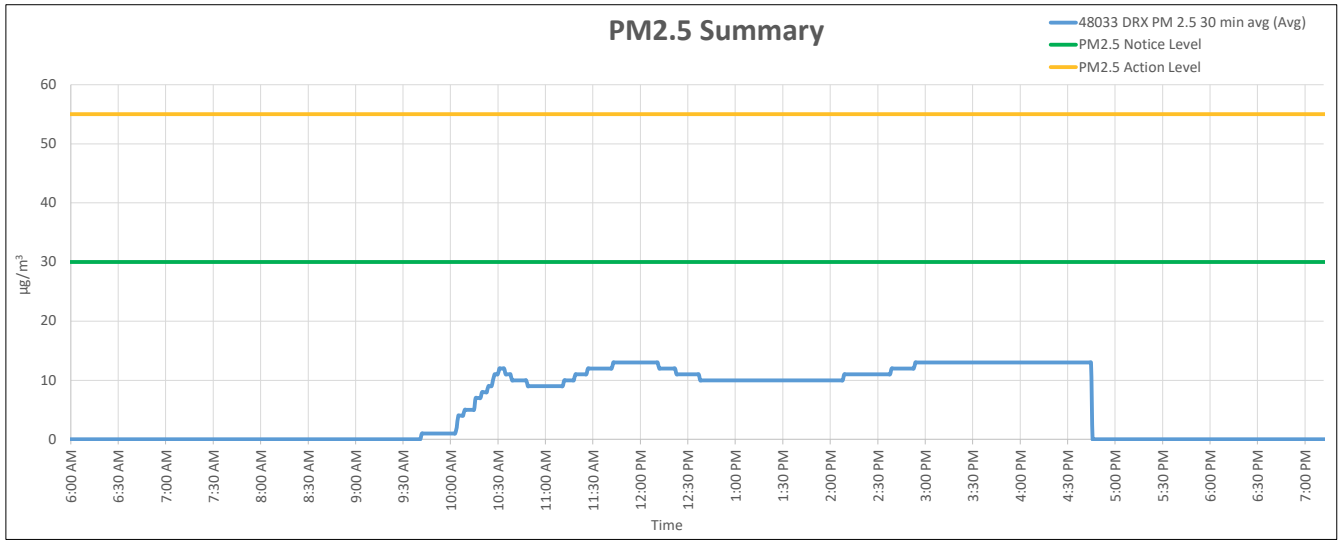
Air Monitoring Values
Friday, May 3, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	9:42 AM	4:45 PM	11.14	14.00	10.62	13.00





Union Pacific Railroad
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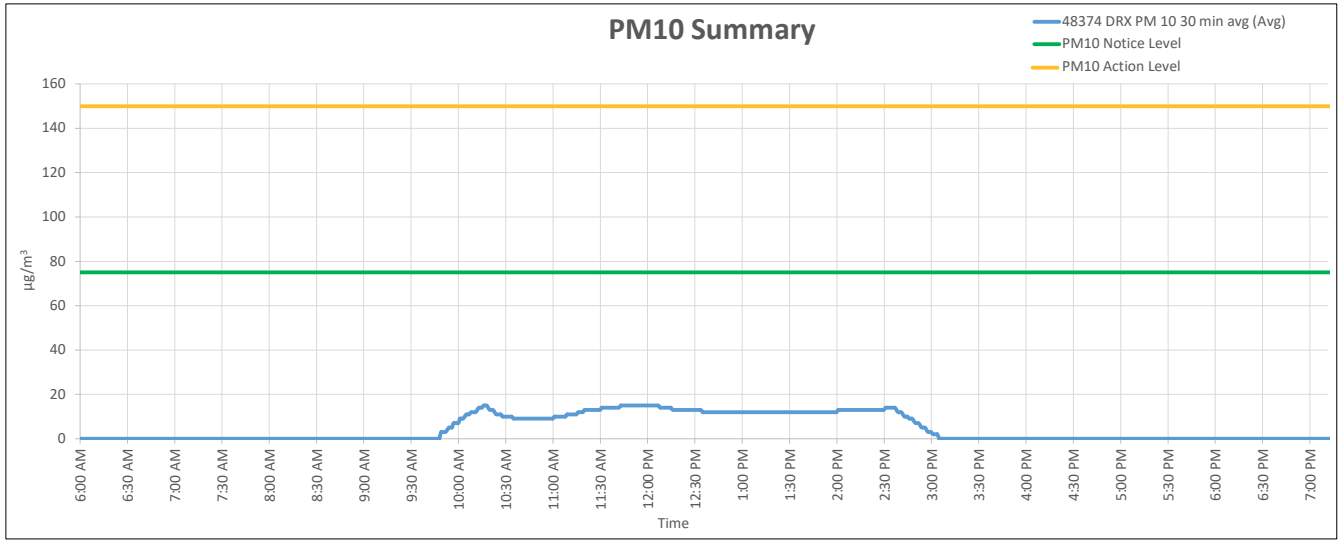
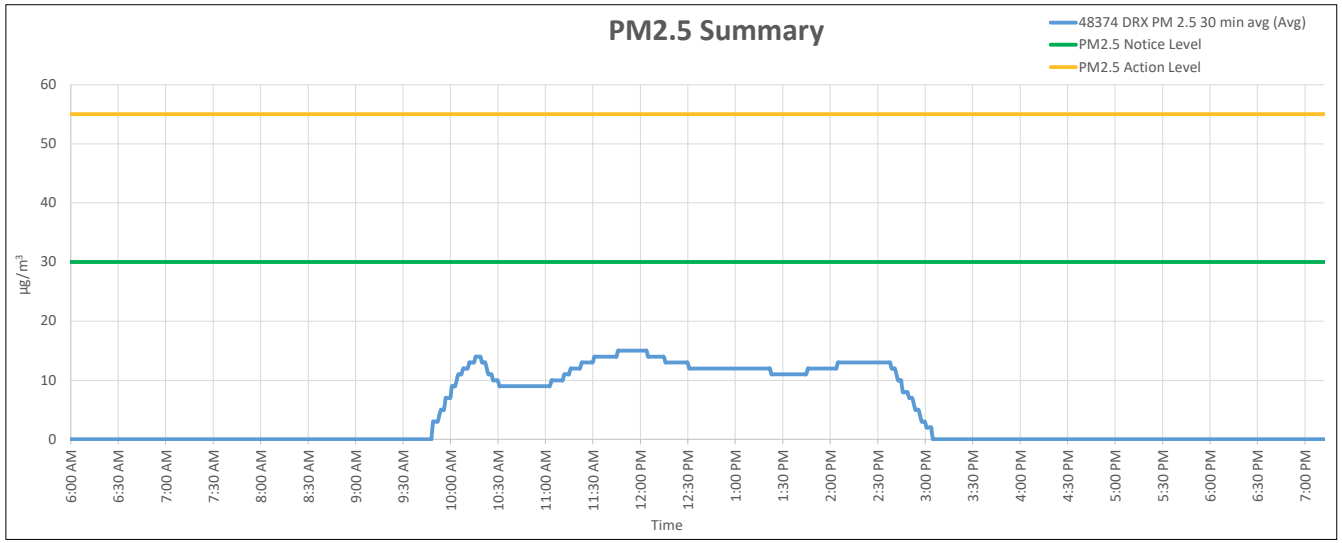
Air Monitoring Values
Friday, May 3, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	9:49 AM	3:04 PM	11.54	15.00	11.33	15.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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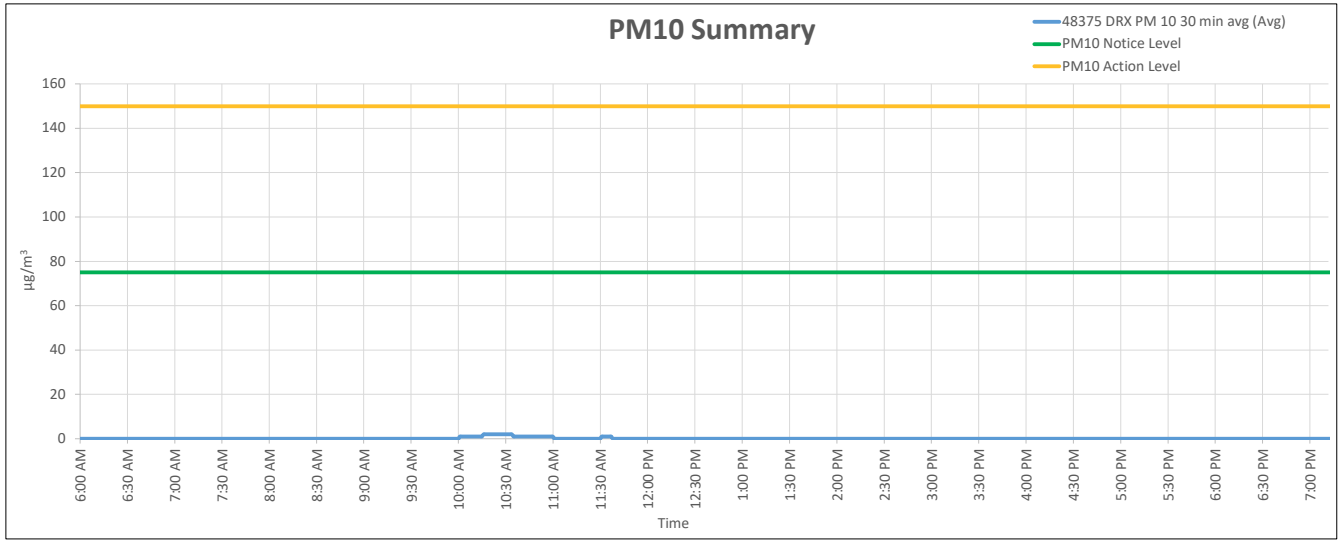
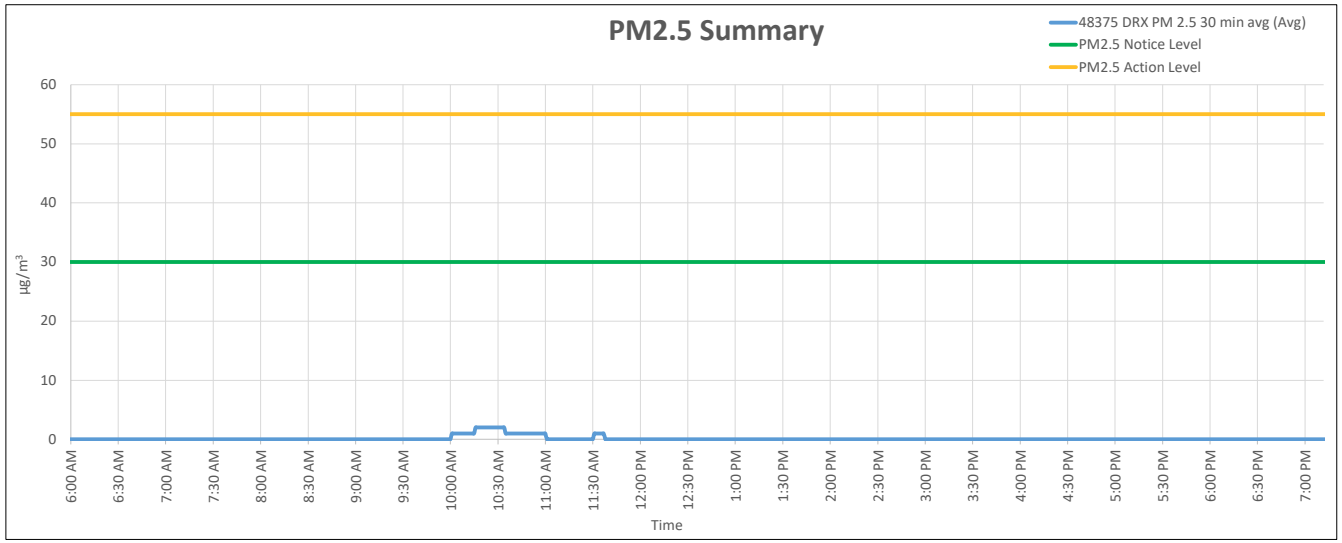
Air Monitoring Values
Friday, May 3, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	10:01 AM	10:34 AM	1.28	2.00	1.28	2.00





Union Pacific Railroad
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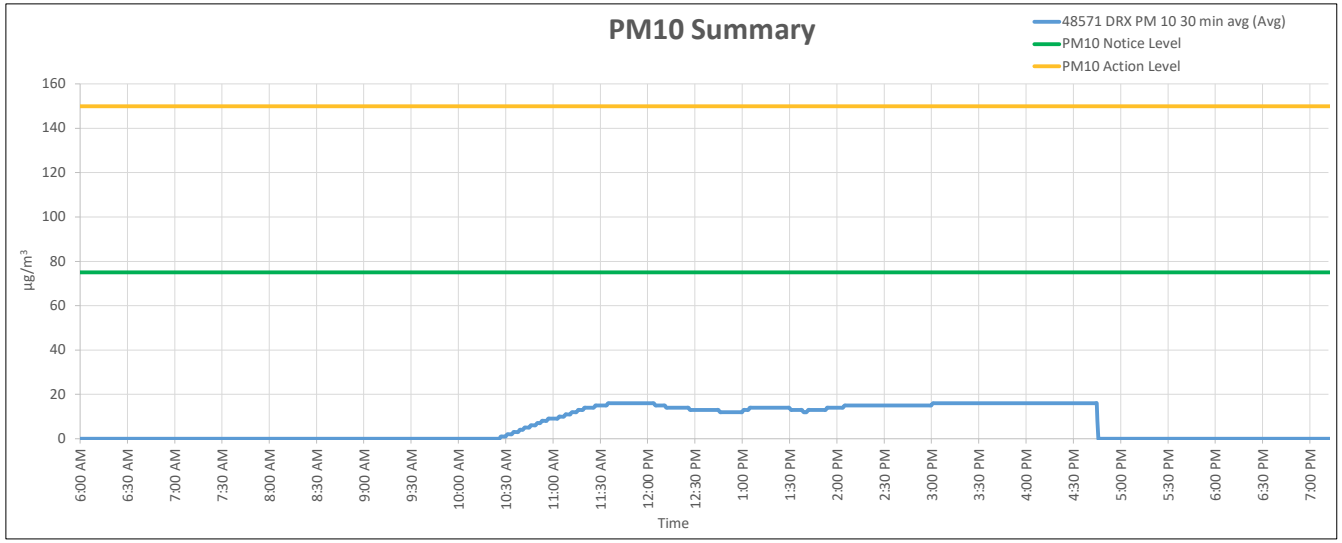
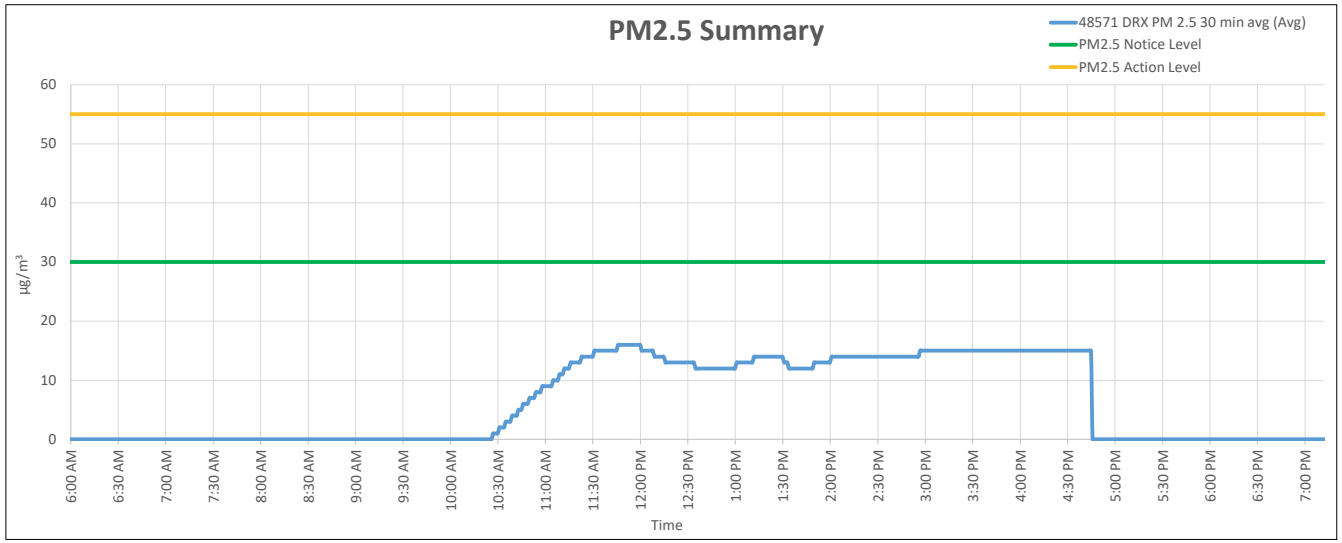
Air Monitoring Values
Friday, May 3, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	10:27 AM	4:45 PM	13.74	16.00	13.11	16.00





Union Pacific Railroad
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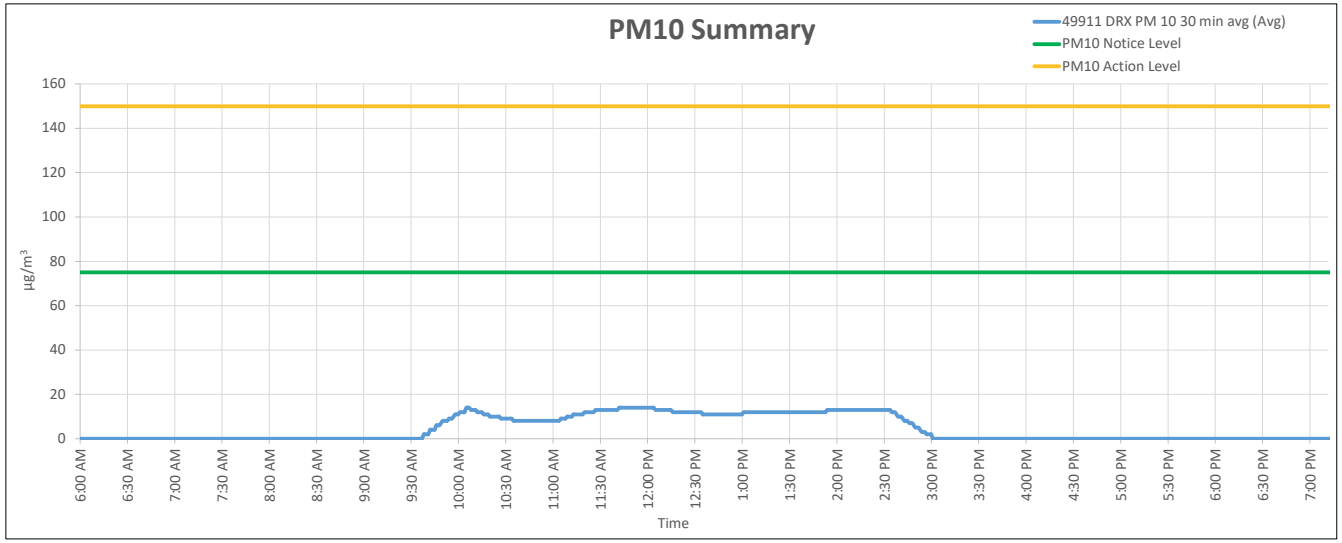
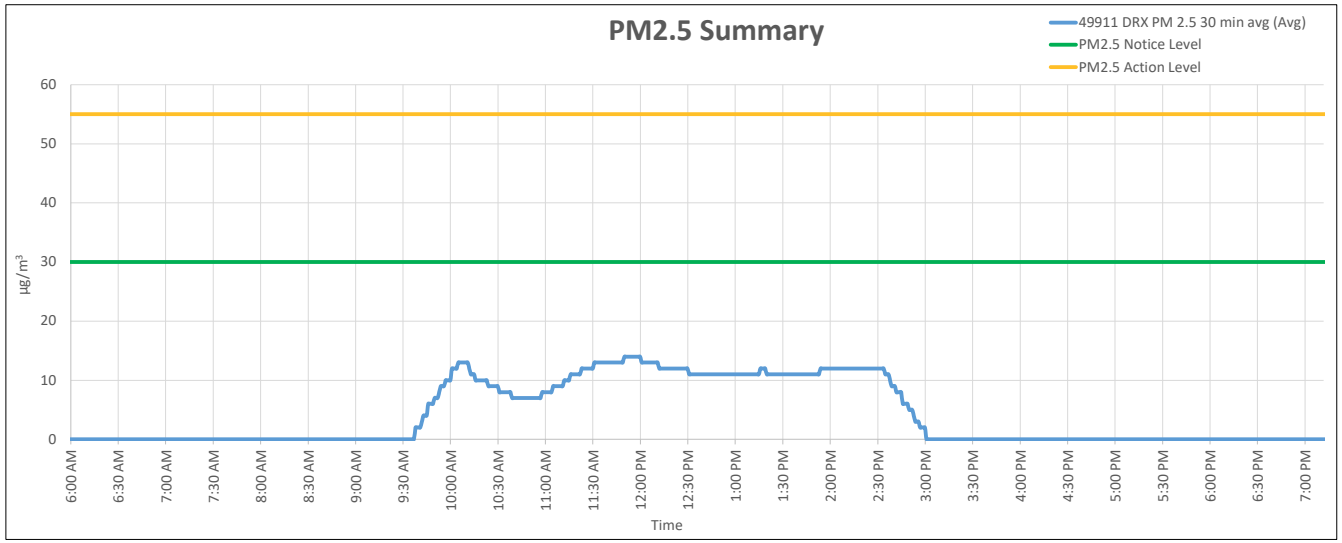
Houston Texas
Air Monitoring Values
Friday, May 3, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	9:38 AM	3:00 PM	10.90	14.00	10.35	14.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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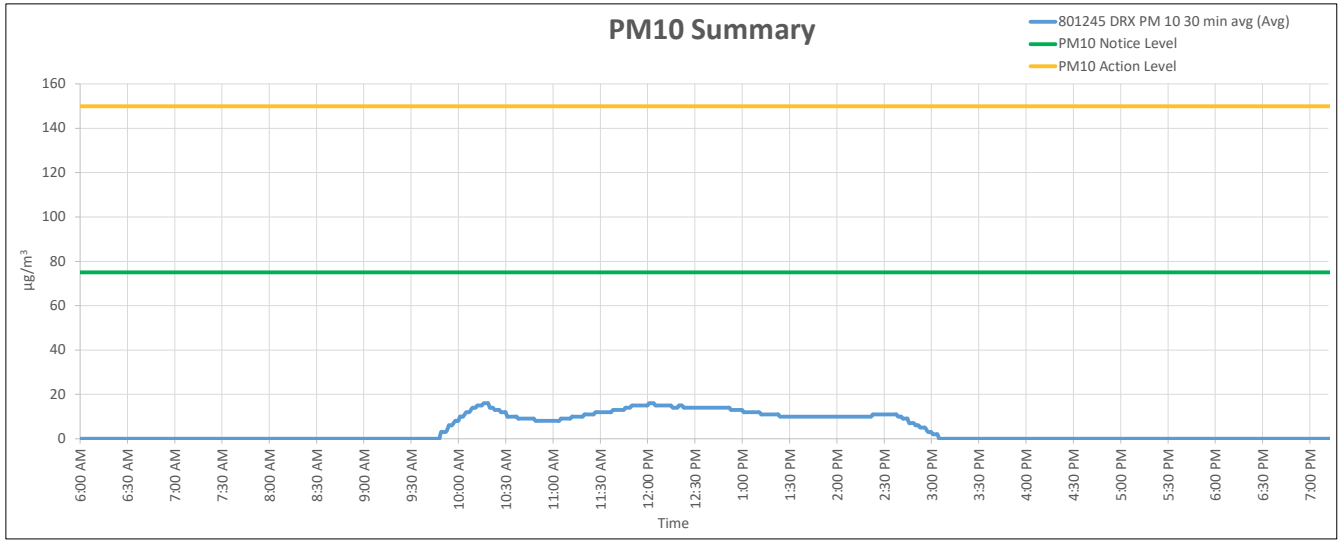
Air Monitoring Values
Friday, May 3, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	9:49 AM	3:04 PM	10.99	16.00	10.48	16.00



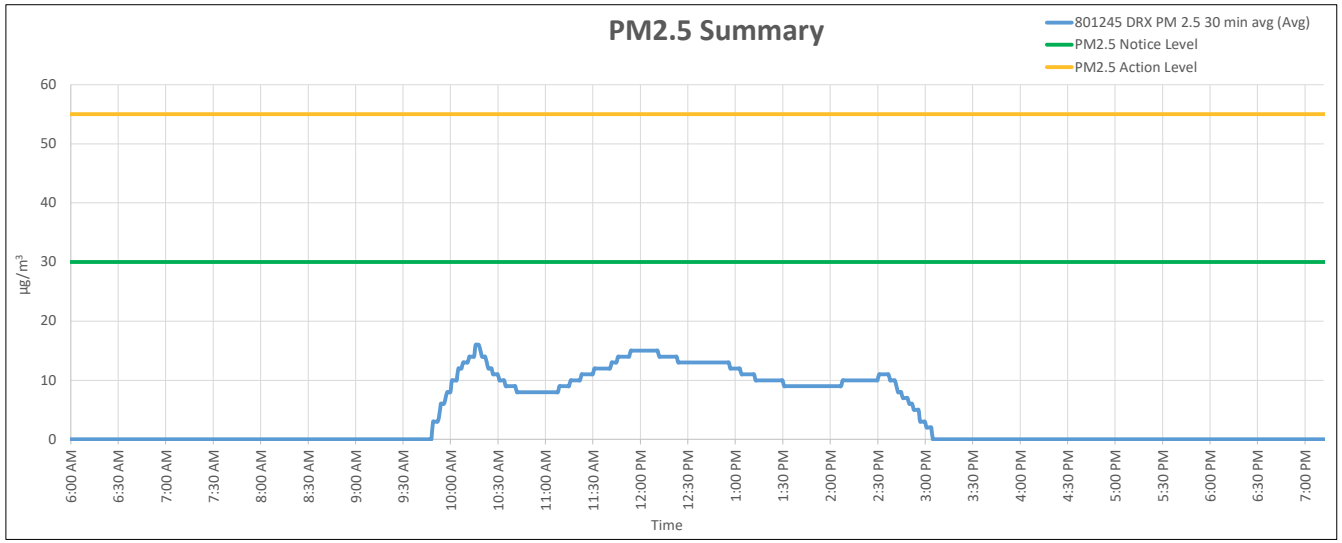


Table 5 – Direct Read Summary Union Pacific Houston Wood Preserving Works Houston, Texas							
Date	Modem #	PM_{10} Concentration ($\mu g/m^3$)			$PM_{2.5}$ Concentration ($\mu g/m^3$)		
		Min	Max	Average	Min	Max	Average
Week 2							
5/6/2024	48374	30	30.00	30.00	30.00	30.00	30.00
	47161	3	47.00	20.22	3.00	46.00	19.82
	48033	2	41.00	16.86	2.00	39.00	16.16
	48571	2	37.00	16.18	2.00	35.00	15.38
	48375	0	5.00	2.99	0.00	5.00	2.99
	801245	0	36.00	14.33	0.00	34.00	13.58
	49911	2	75.00	14.57	2.00	51.00	13.98
	219671						
5/7/2024	48374	0	58.00	39.23	0.00	58.00	38.98
	47161	6	63.00	51.03	6.00	62.00	50.50
	48033	3	58.00	44.42	3.00	57.00	43.72
	48571	6	62.00	47.87	6.00	61.00	46.91
	48375	0	46.00	9.30	0.00	45.00	9.16
	801245	1	60.00	37.85	1.00	59.00	37.08
	49911	5	56.00	44.41	5.00	55.00	43.50
	219671						
5/8/2024	48374	8	100.00	77.43	7.00	100.00	76.99
	47161	6	105.00	78.23	6.00	104.00	77.84
	48033	5	95.00	70.54	5.00	93.00	69.49
	48571	6	134.00	78.58	6.00	133.00	77.54
	48375	6	91.00	69.71	6.00	90.00	68.97
	801245	5	92.00	67.88	5.00	90.00	66.97
	49911	7	87.00	68.79	7.00	86.00	67.92
	219671						
5/9/2024	48374	15	149.00	130.45	15.00	148.00	129.59
	47161	0	154.00	135.42	0.00	153.00	134.81
	48033	9	141.00	121.81	9.00	140.00	120.92
	48571	15	154.00	135.40	15.00	152.00	134.05
	48375	14	152.00	130.32	14.00	151.00	128.89
	801245	14	146.00	126.71	13.00	145.00	125.25
	49911	14	129.00	115.44	13.00	129.00	114.44
	219671						
5/10/2024	48374	3	39.00	25.62	3.00	38.00	24.76
	47161	3	42.00	25.85	3.00	41.00	24.84
	48033	2	37.00	20.43	2.00	36.00	18.56
	48571	2	41.00	19.13	2.00	40.00	18.12
	48375	2	59.00	24.36	2.00	56.00	22.27
	801245	2	44.00	25.17	2.00	43.00	23.93
	49911	0	75.00	42.05	0.00	51.00	31.86
	219671						

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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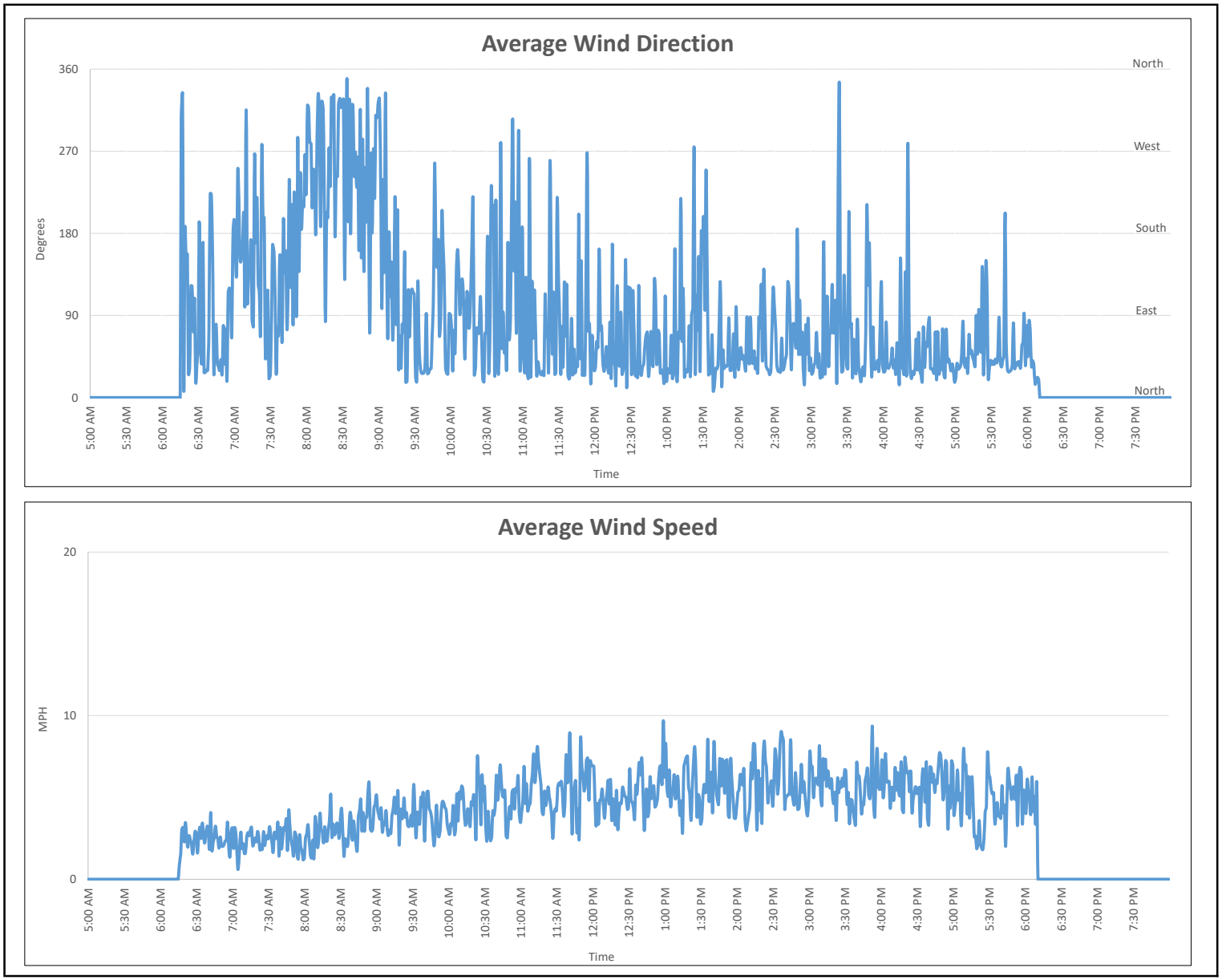
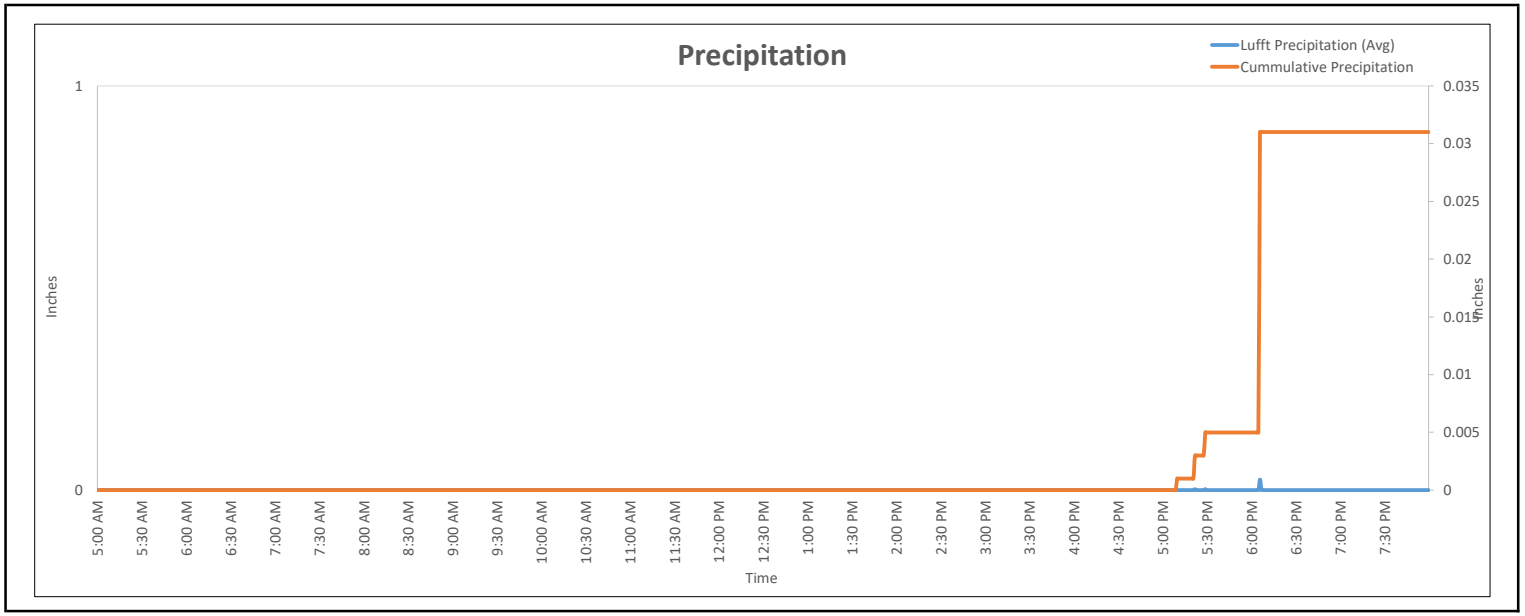


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Monday, May 6, 2024



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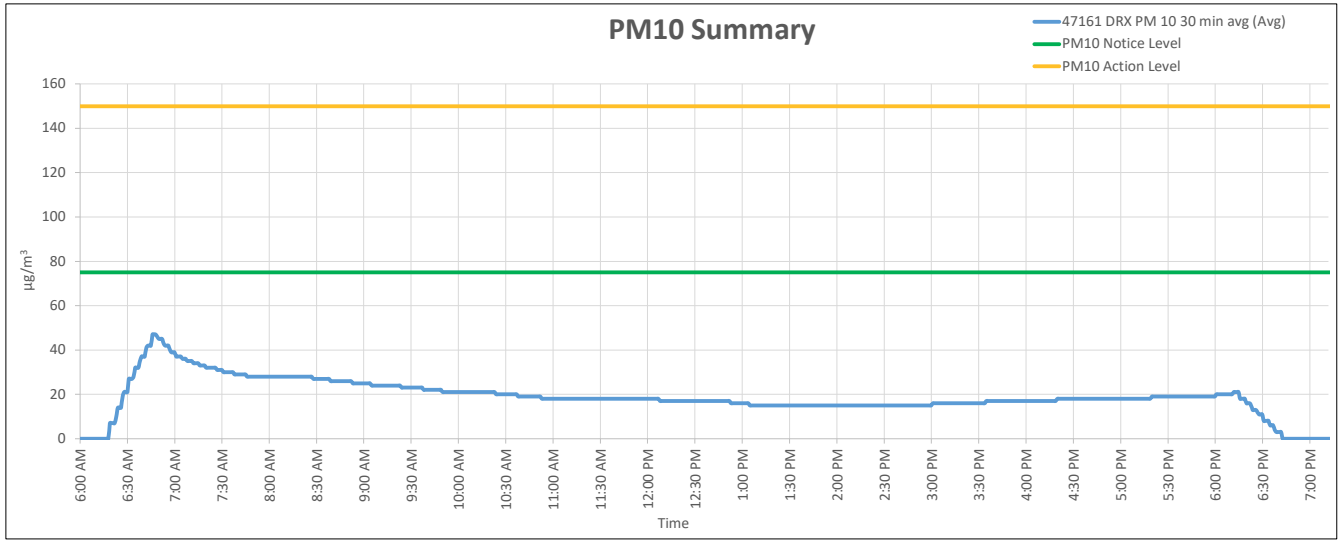
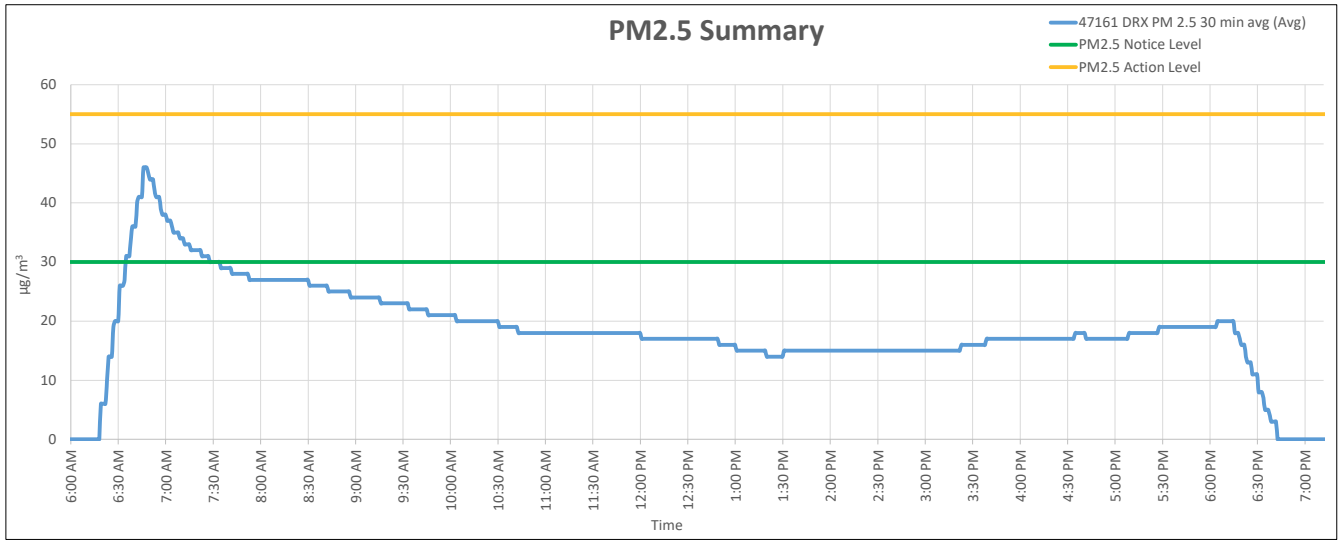
Air Monitoring Values
Monday, May 6, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:19 AM	6:42 PM	20.22	47.00	19.82	46.00





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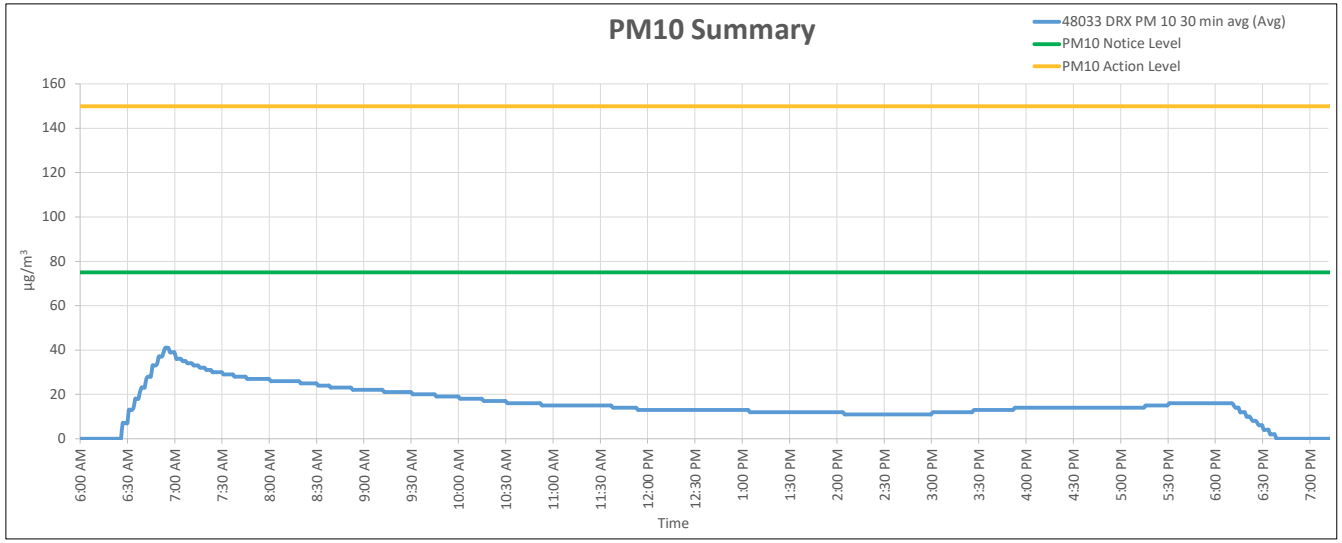
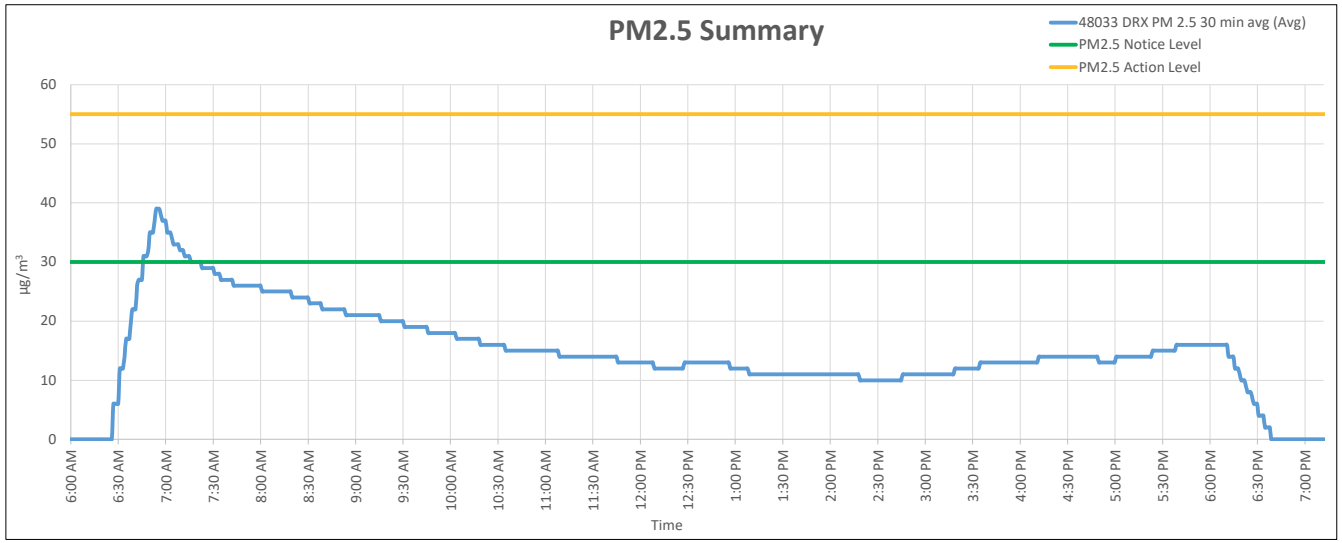
Air Monitoring Values
Monday, May 6, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:27 AM	6:38 PM	16.86	41.00	16.16	39.00





Union Pacific Railroad
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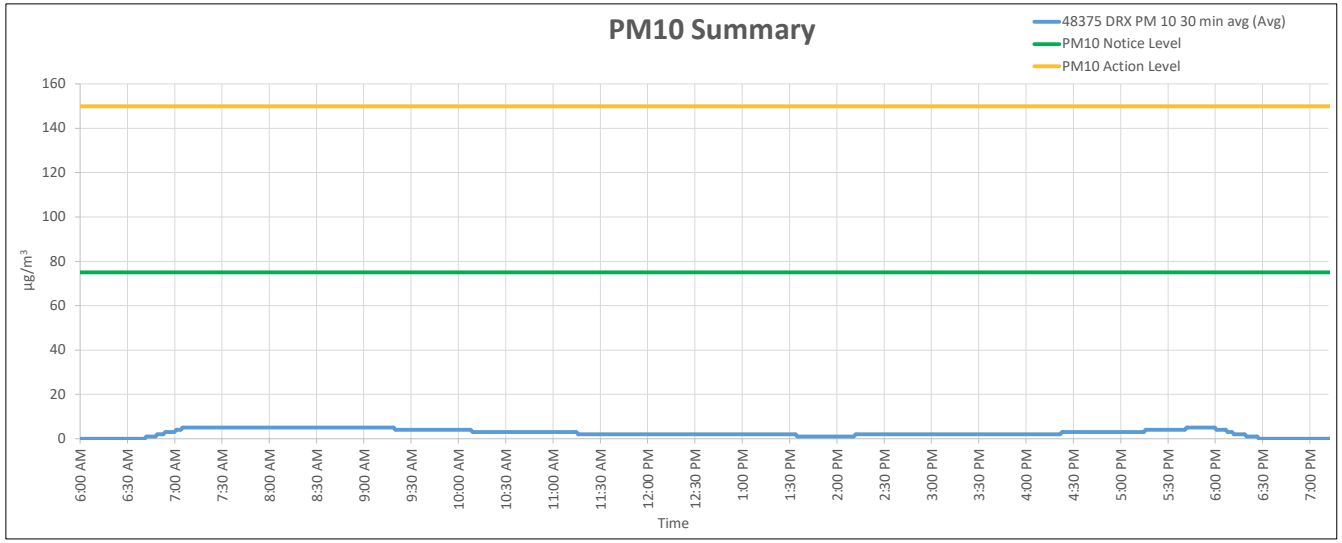
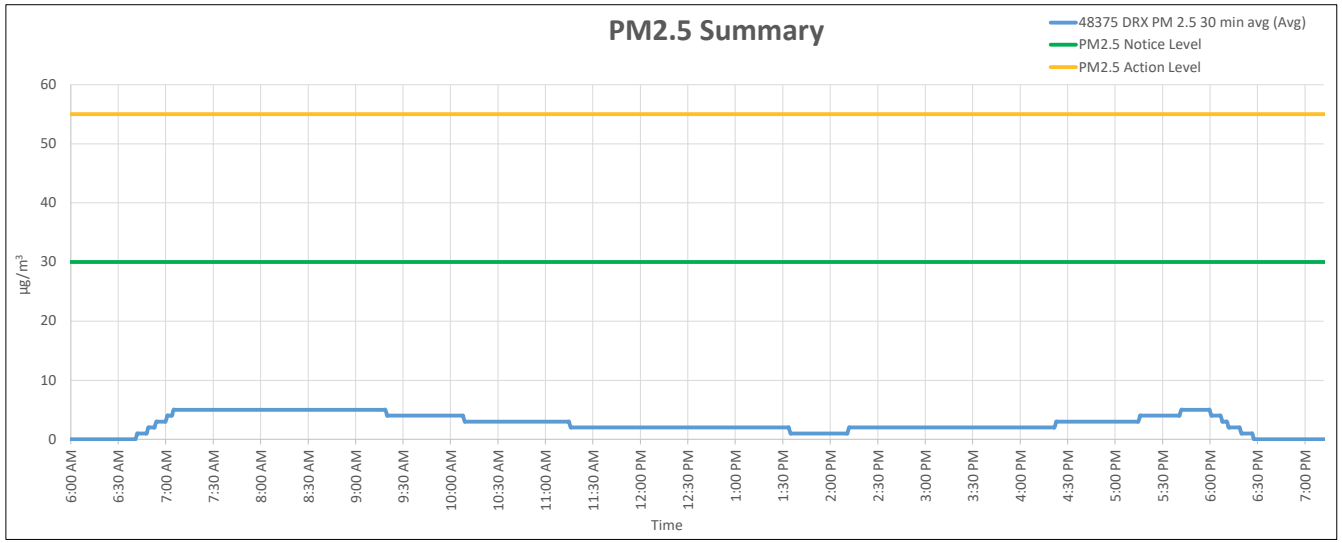
Air Monitoring Values
Monday, May 6, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:42 AM	6:19 PM	3.01	5.00	3.01	5.00





Union Pacific Railroad
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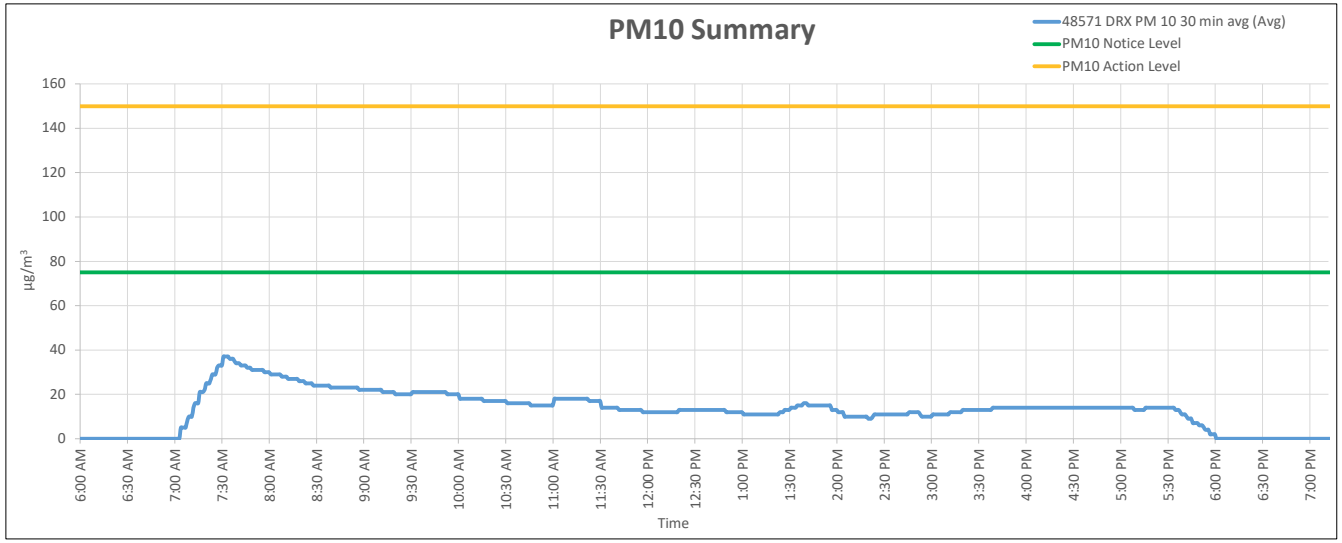
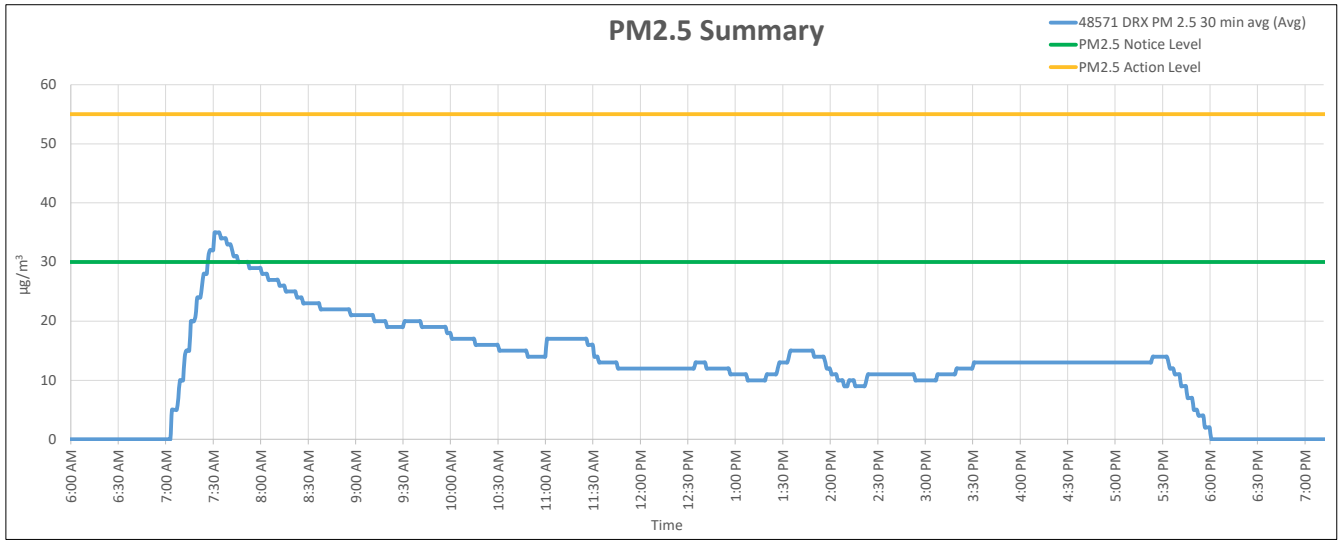
Air Monitoring Values
Monday, May 6, 2024

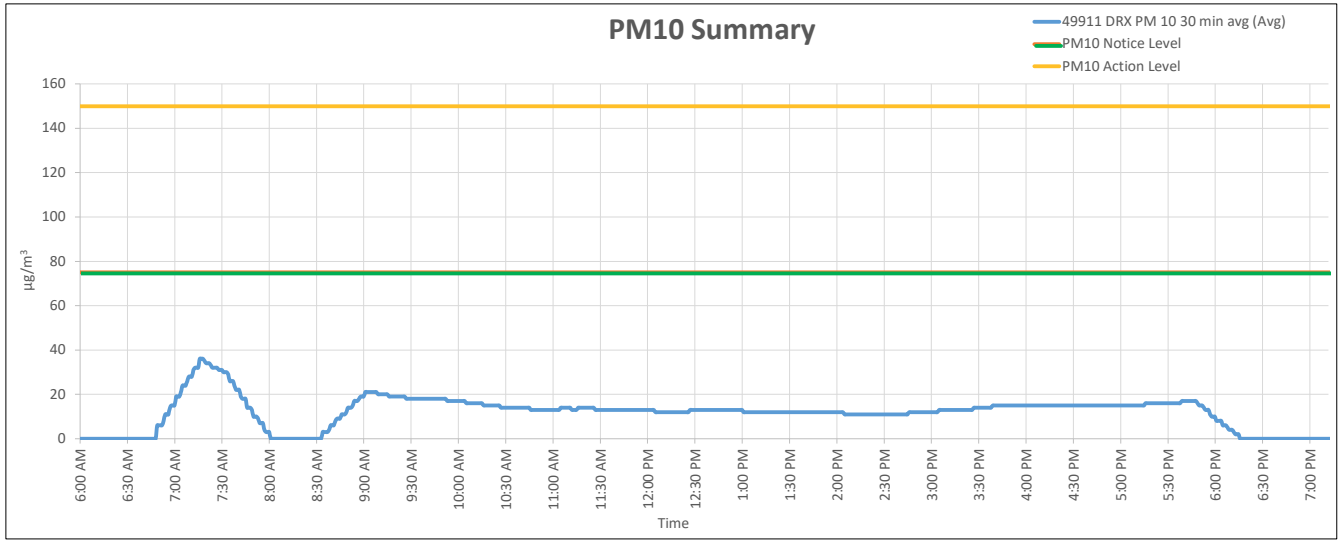
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:04 AM	6:00 PM	16.18	37.00	15.39	35.00

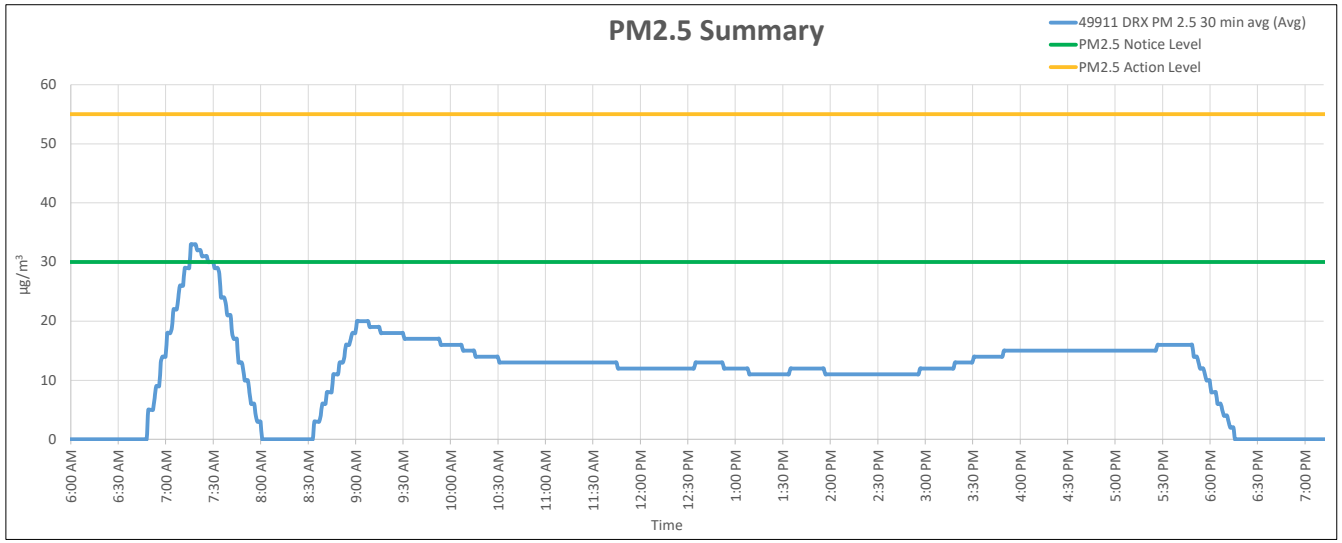




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 6, 2024

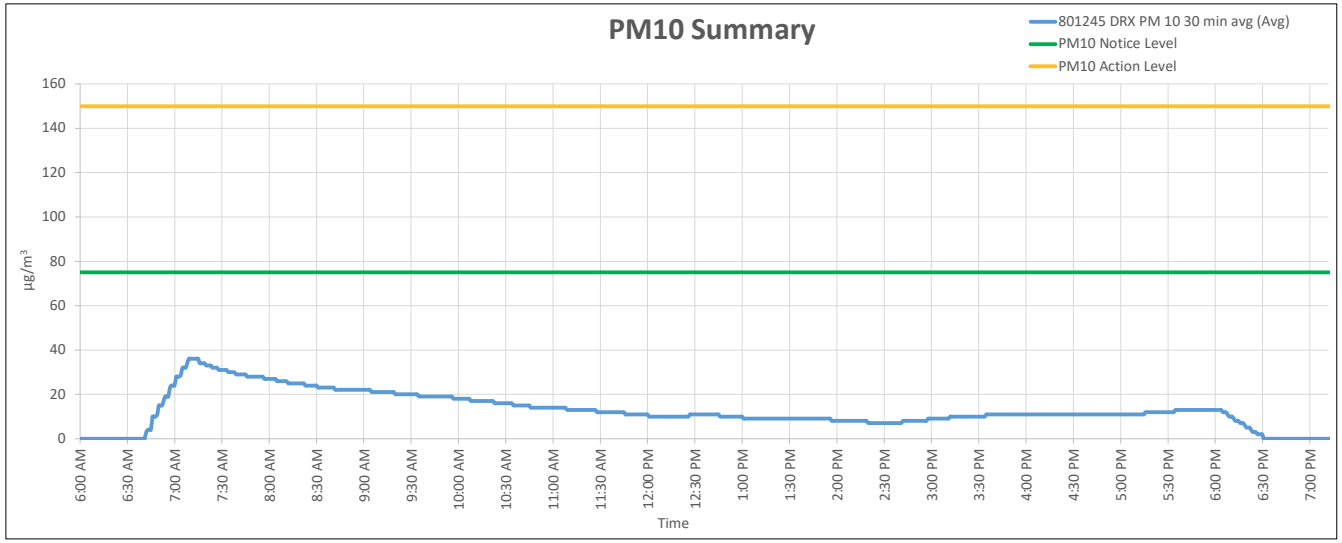
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:49 AM	6:15 PM	14.48	36.00	13.92	33.00

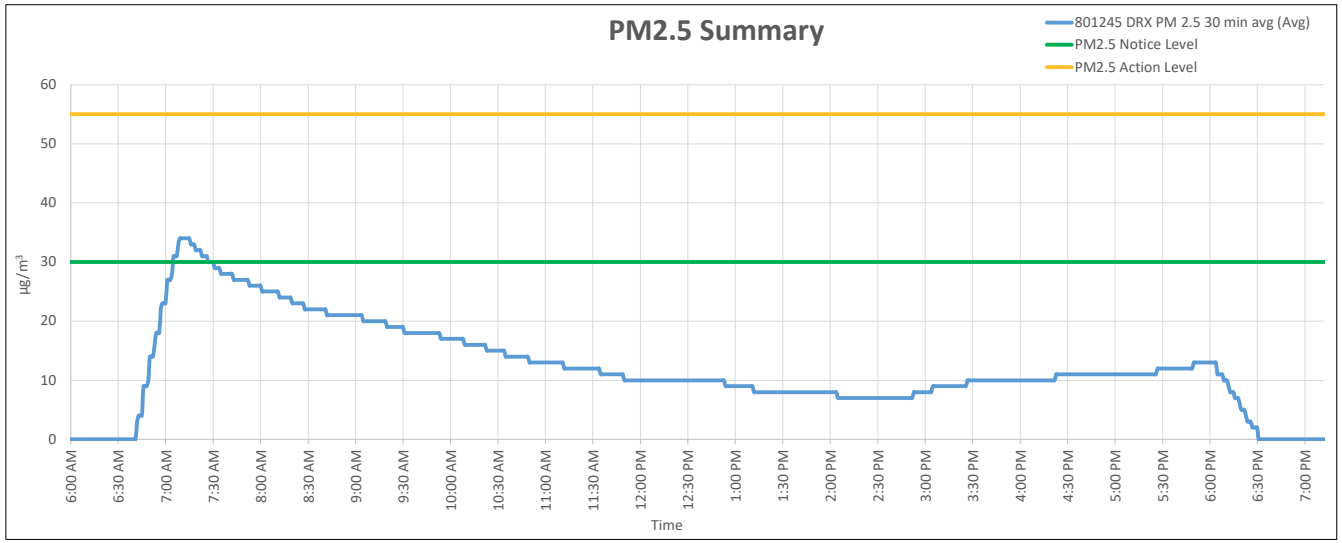




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 6, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:42 AM	6:30 PM	14.49	36.00	13.74	34.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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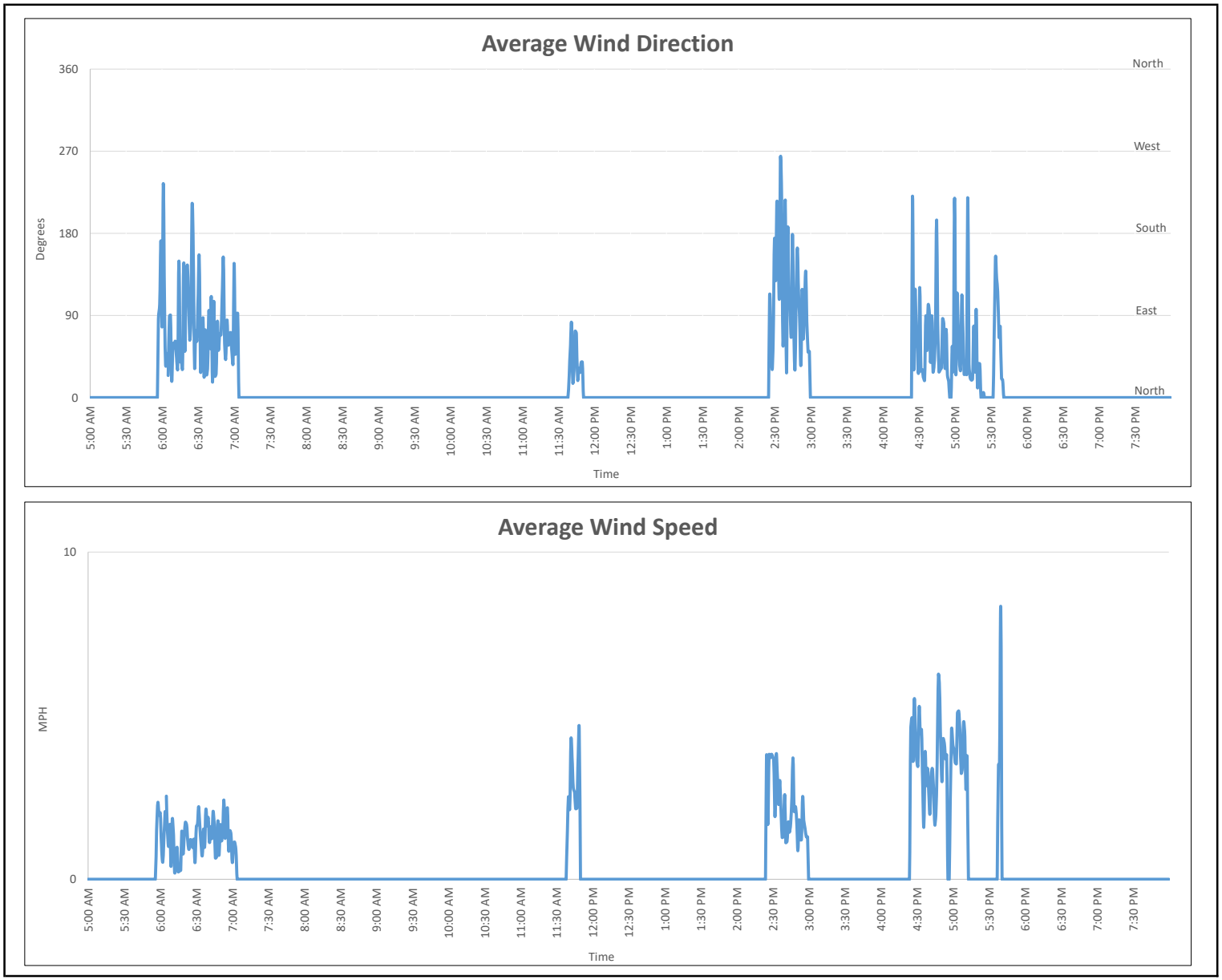

Union Pacific Railroad
Houston Wood Preserving Works Site
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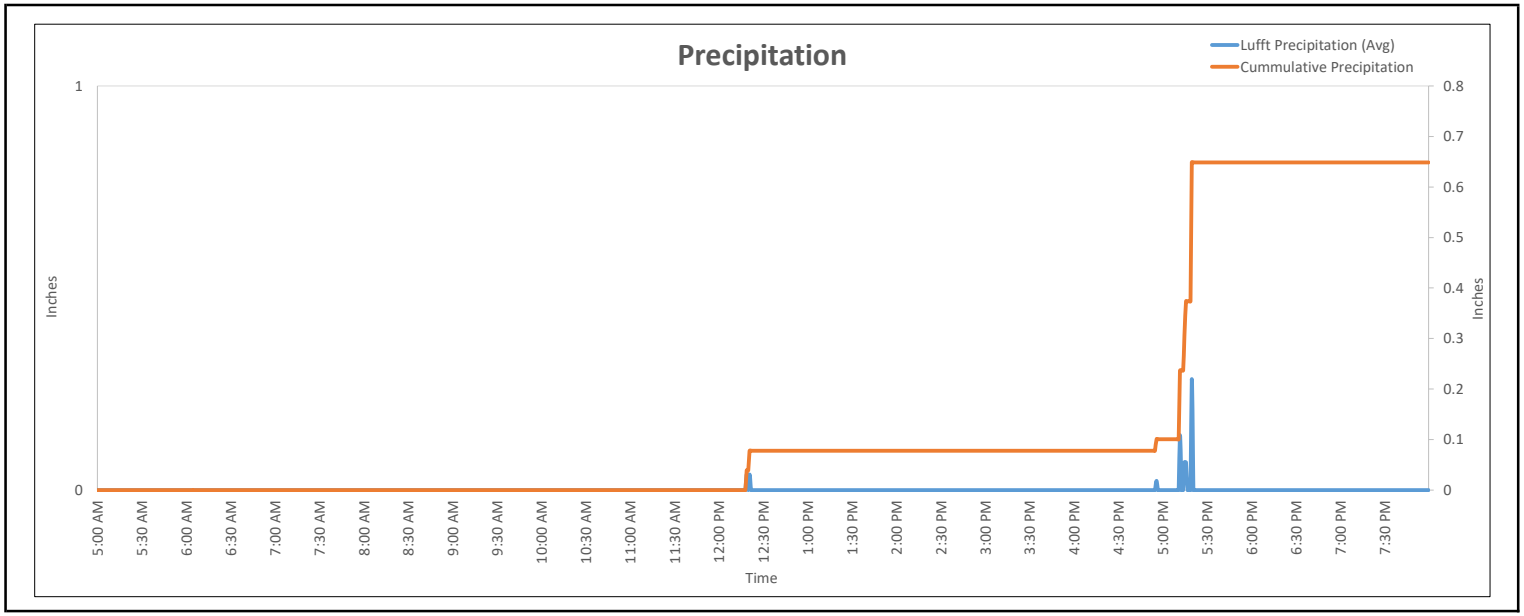
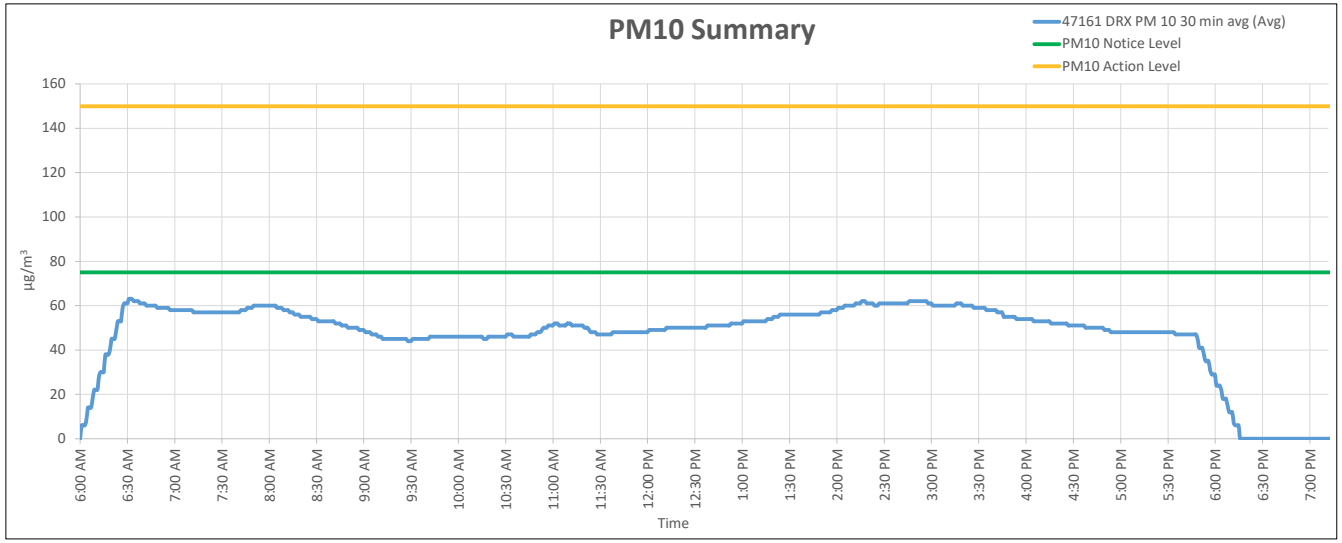
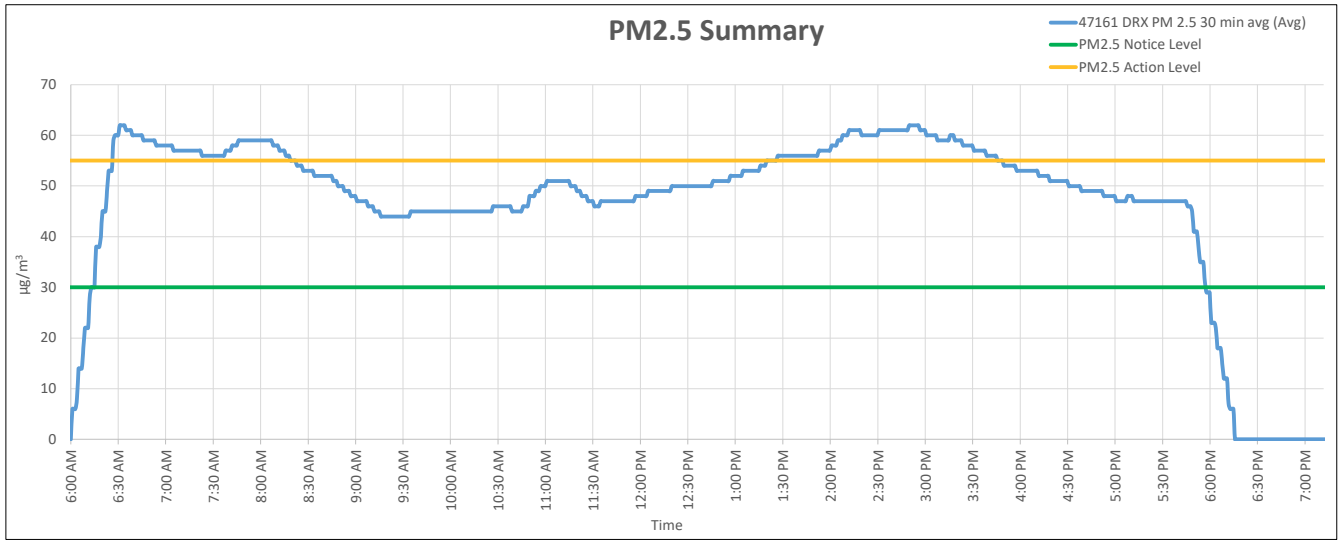
Weather Daily Summary
Tuesday, May 7, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 7, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:01 AM	6:15 PM	51.03	63.00	50.50	62.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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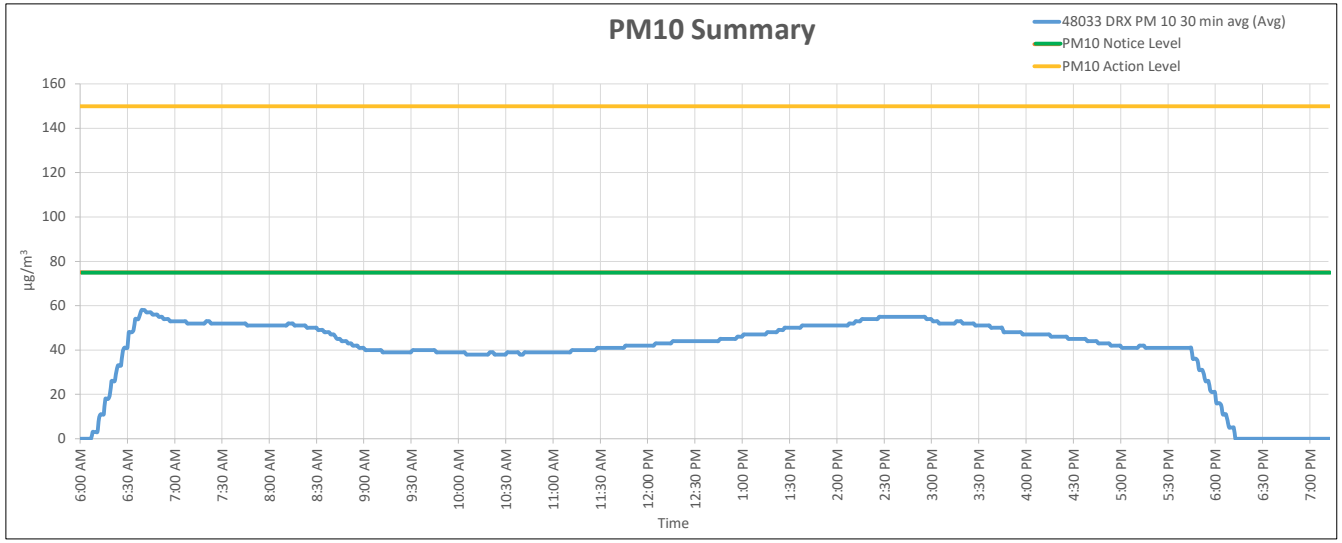
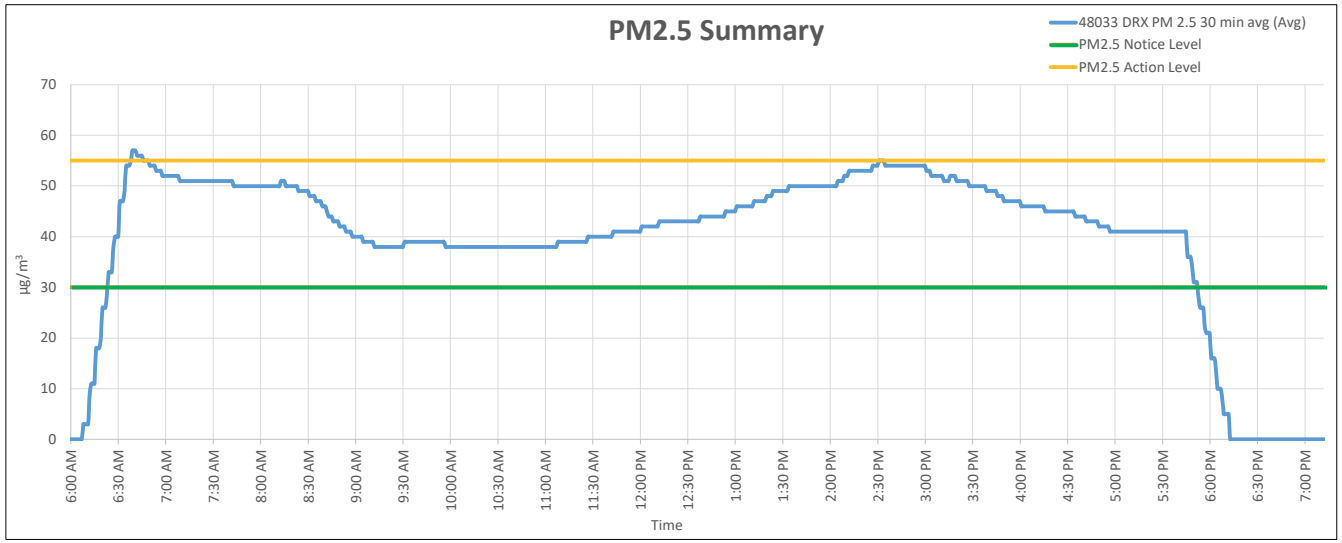
Air Monitoring Values
Tuesday, May 7, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:08 AM	6:12 PM	44.42	58.00	43.72	57.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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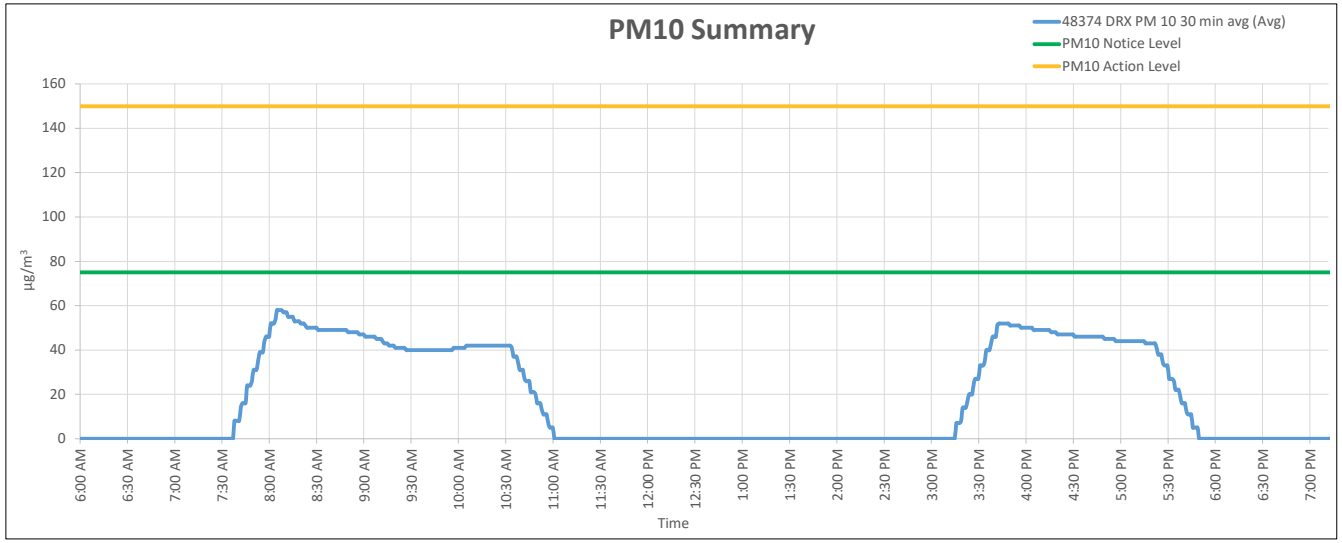
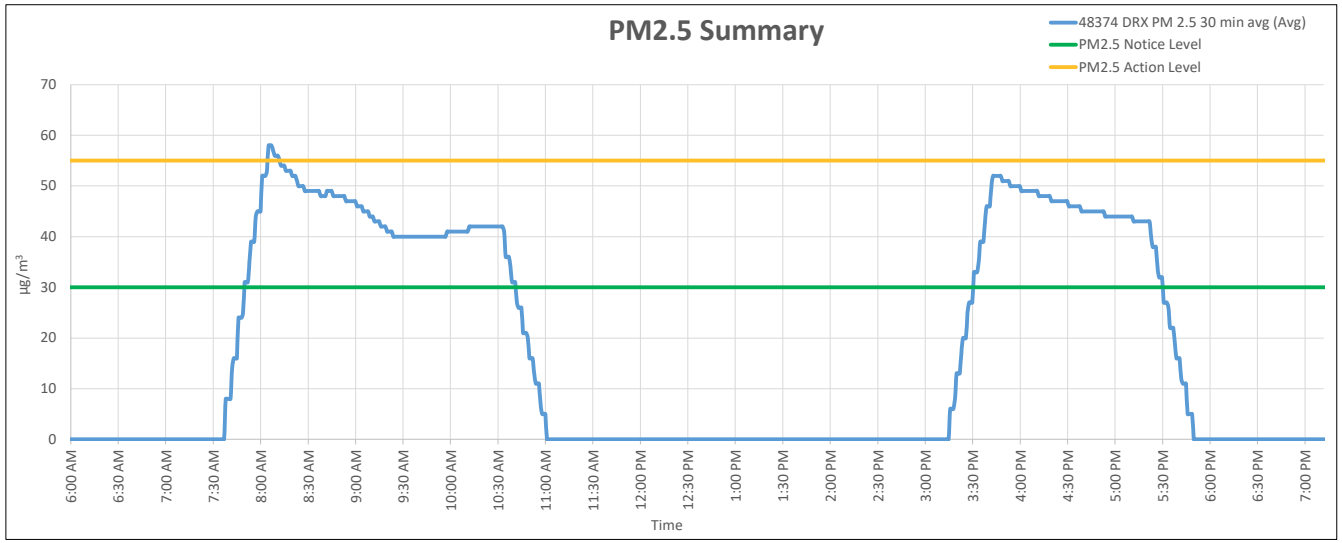
Air Monitoring Values
Tuesday, May 7, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	7:38 AM	5:49 PM	39.67	58.00	39.42	58.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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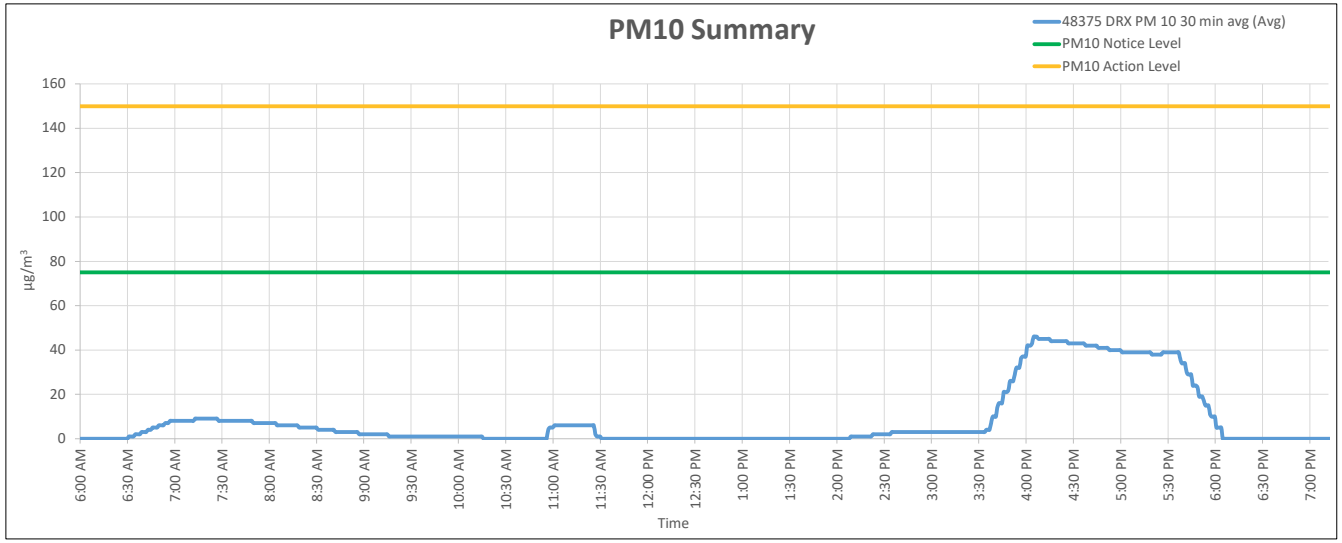
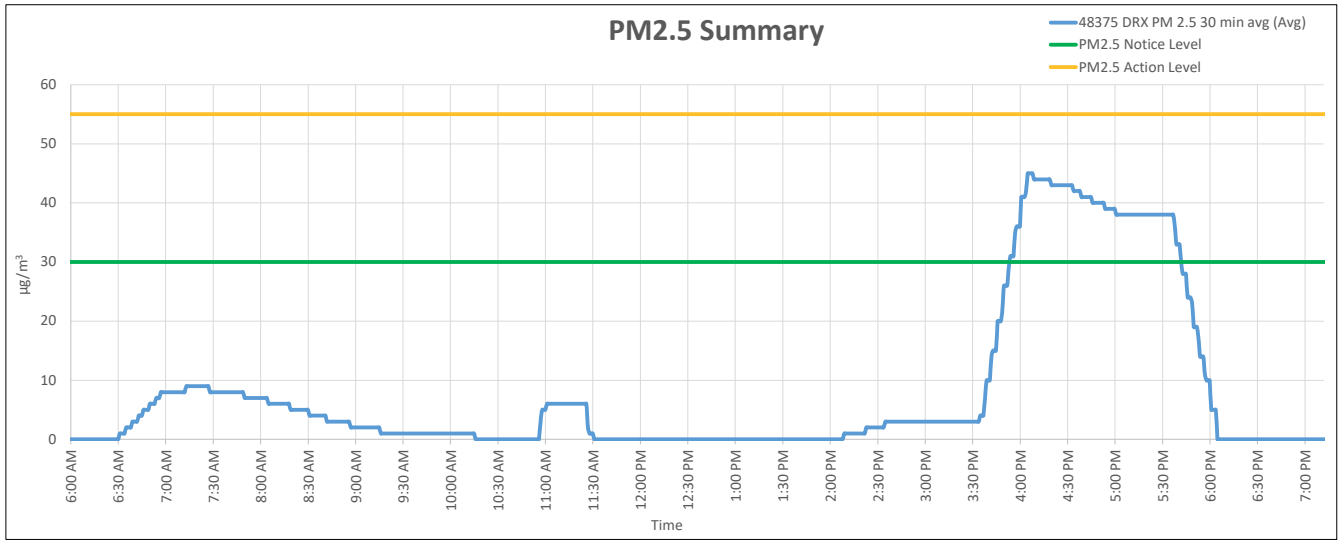
Air Monitoring Values
Tuesday, May 7, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:31 AM	6:04 PM	13.04	46.00	12.84	45.00





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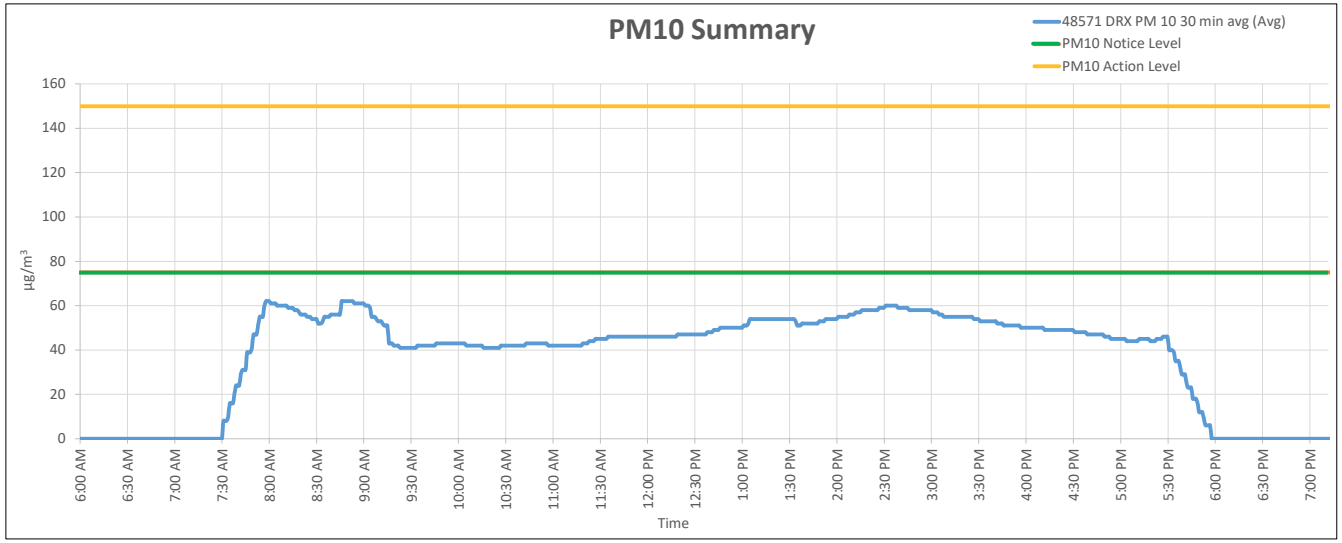
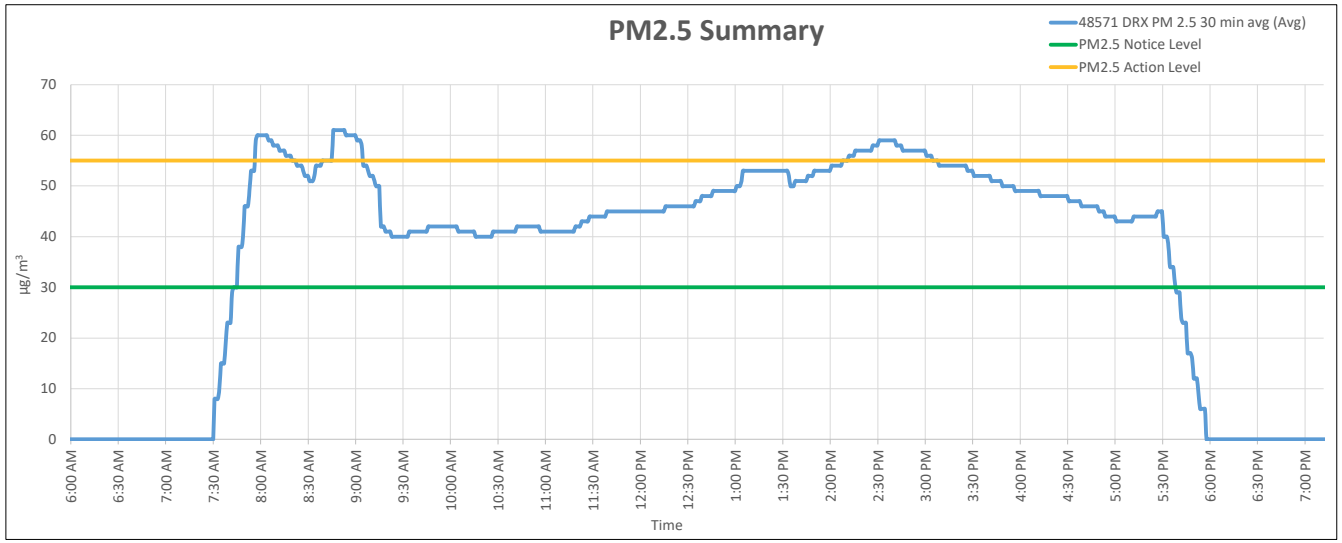
Air Monitoring Values
Tuesday, May 7, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:31 AM	5:57 PM	47.87	62.00	46.91	61.00





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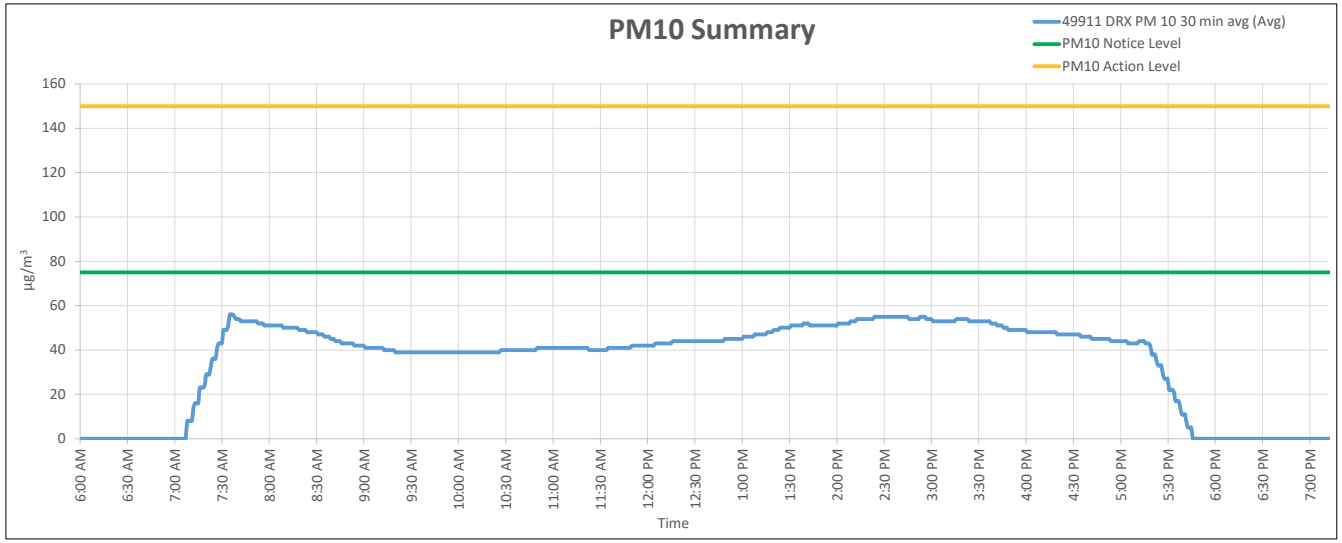
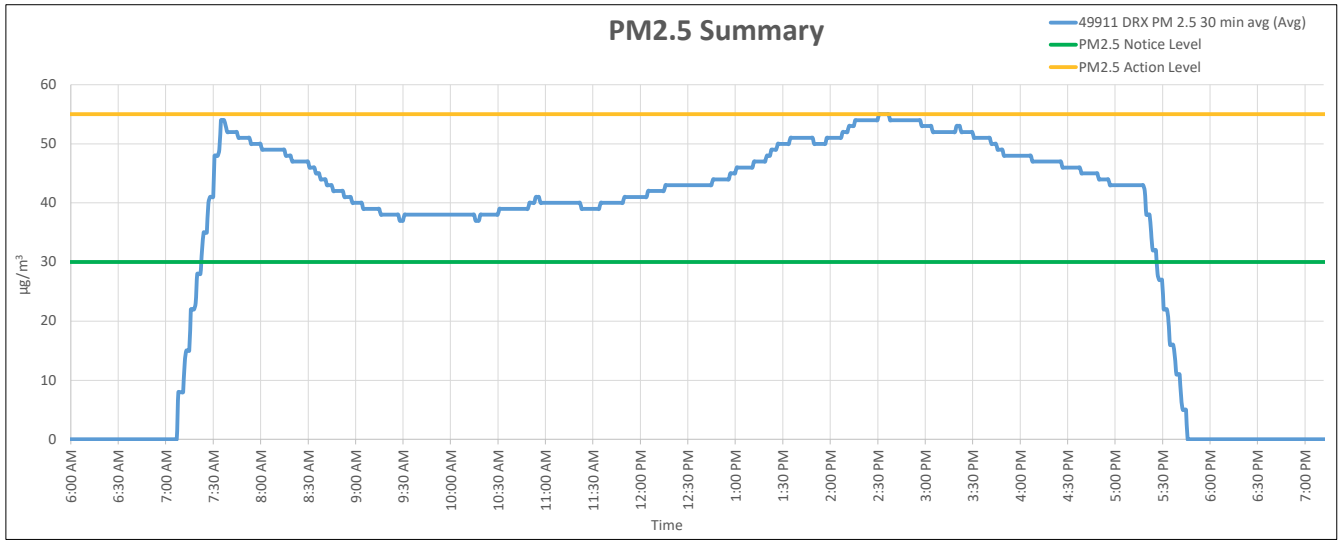
Air Monitoring Values
Tuesday, May 7, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	7:08 AM	5:45 PM	44.41	56.00	43.50	55.00





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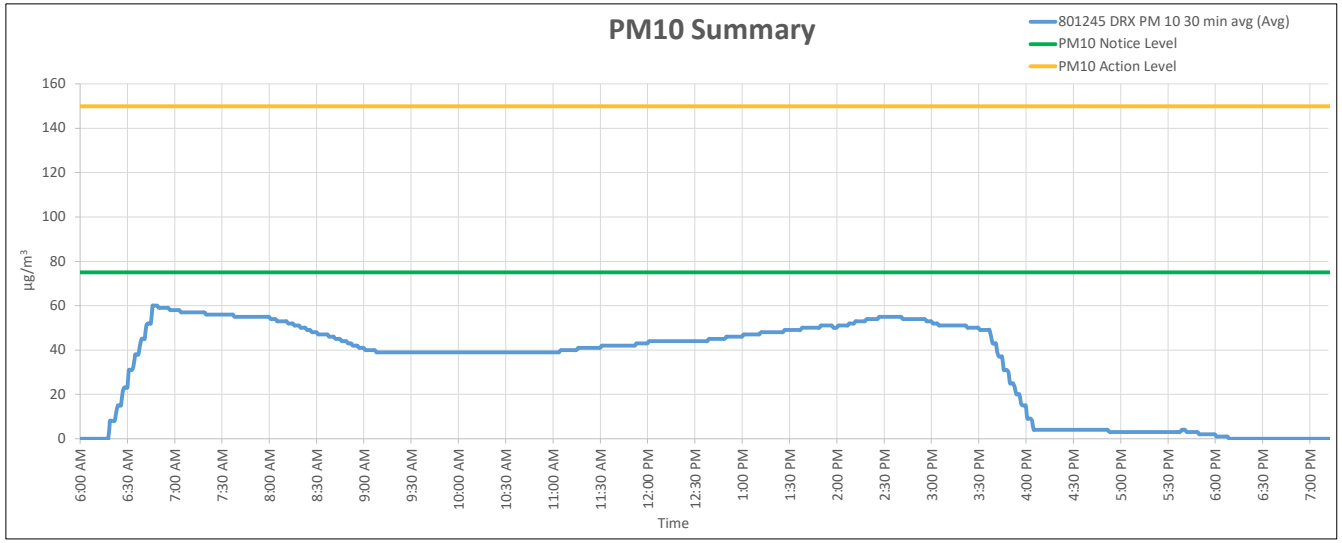
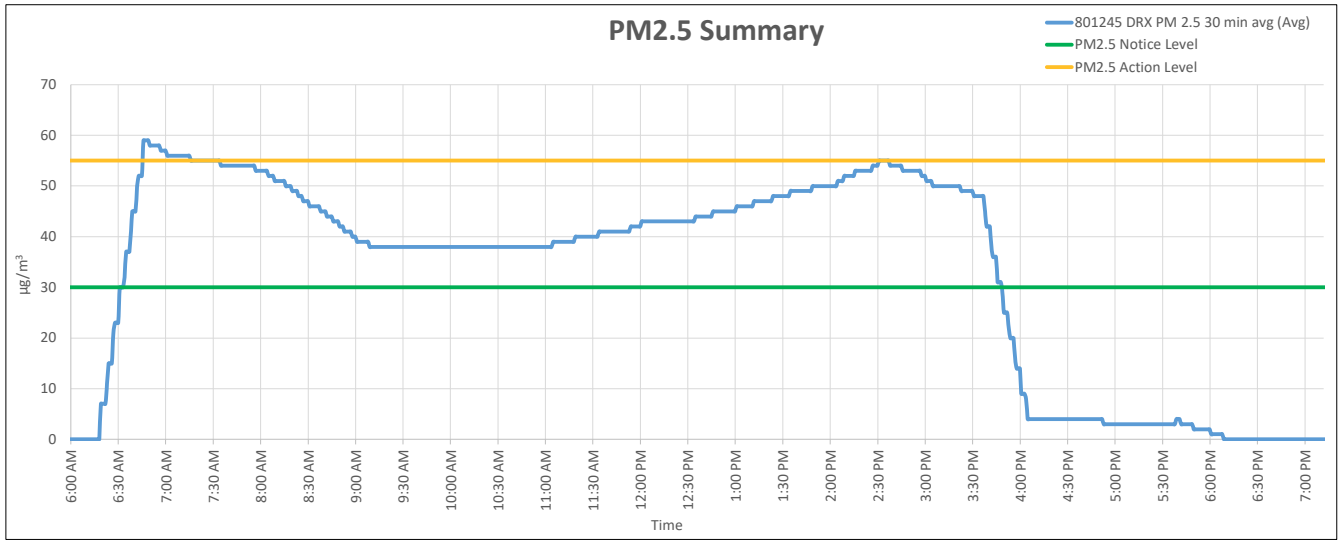
Tuesday, May 7, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:19 AM	6:00 PM	37.85	60.00	37.08	59.00





Union Pacific Railroad
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Weather Daily Summary
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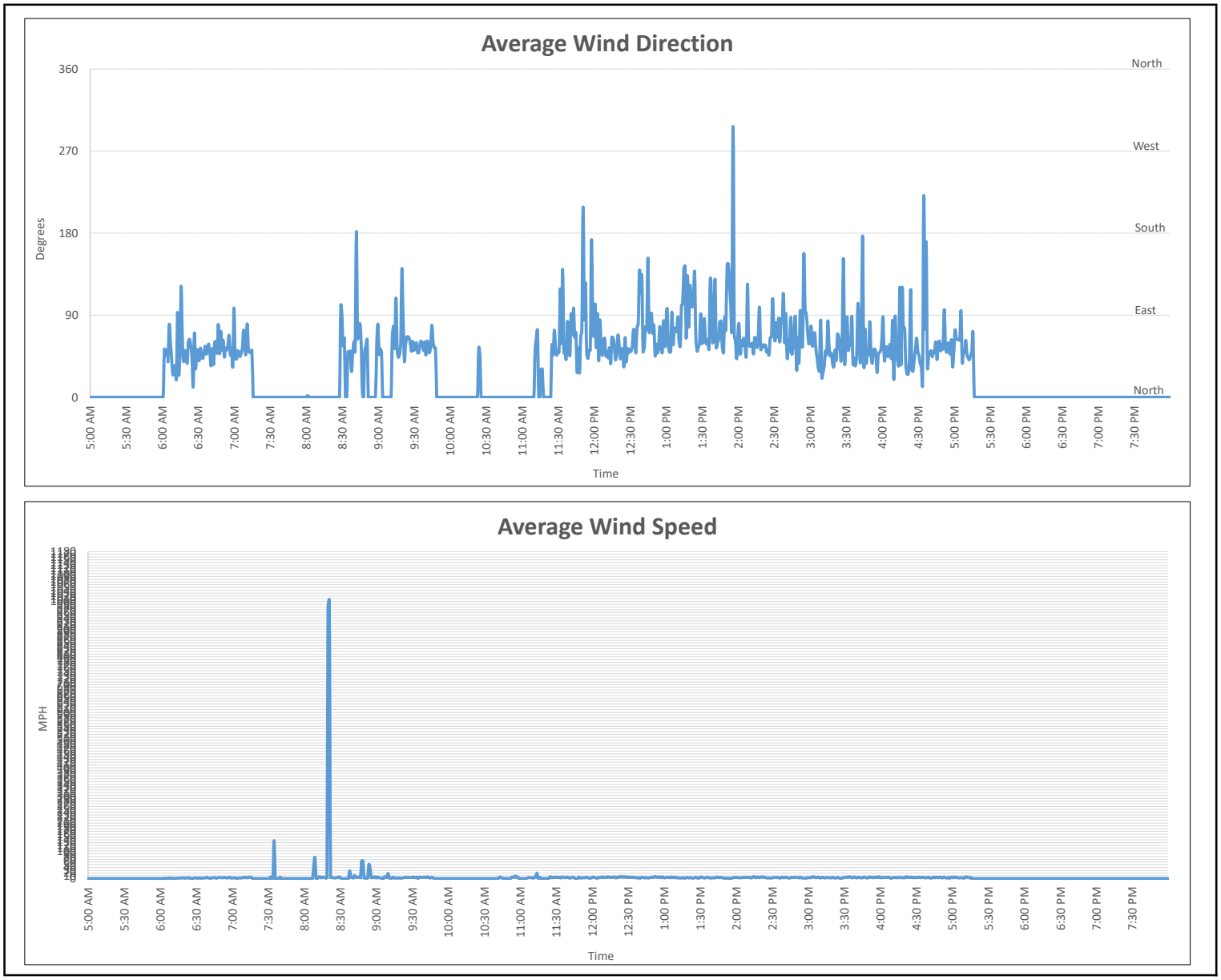

It is suspected the instrument gave incorrect readings during the extreme average wind speed timeframe because the data well outside typical wind speed bounds observed onsite. The spike in wind speed is outside the norm for the day and outside physical possibilities for the area.

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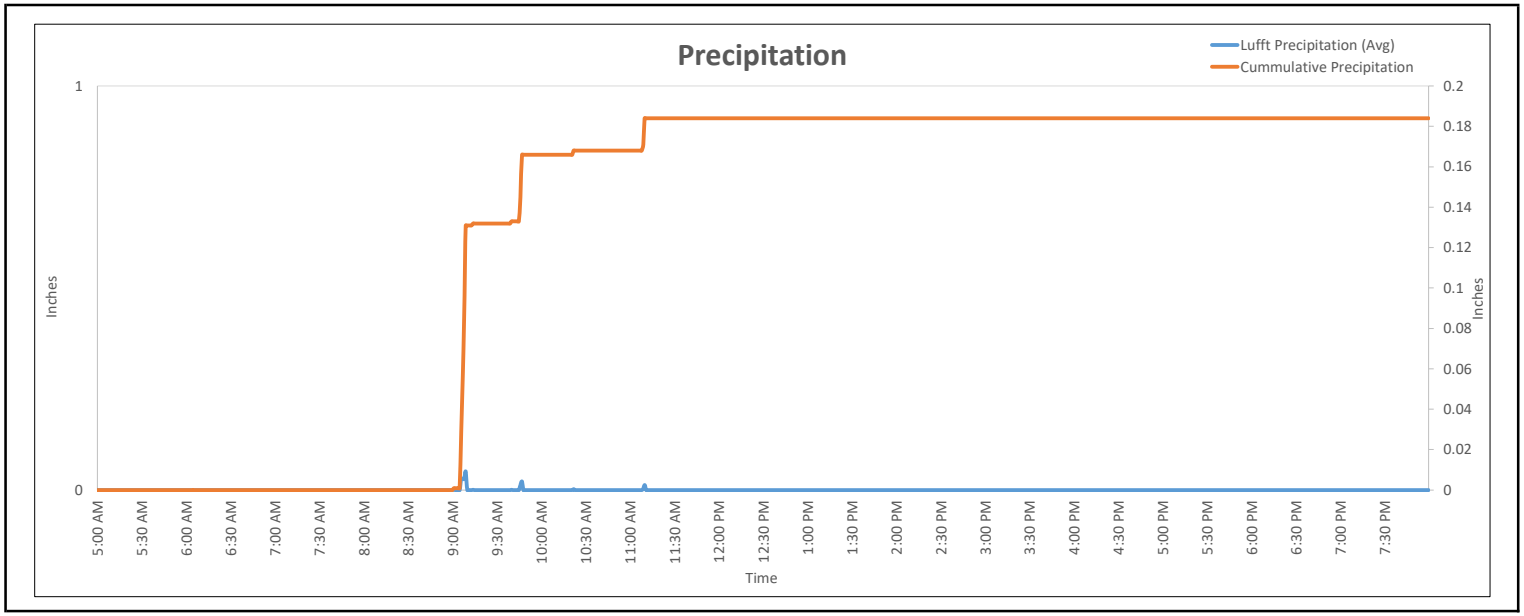

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Houston Wood Preserving Works Site
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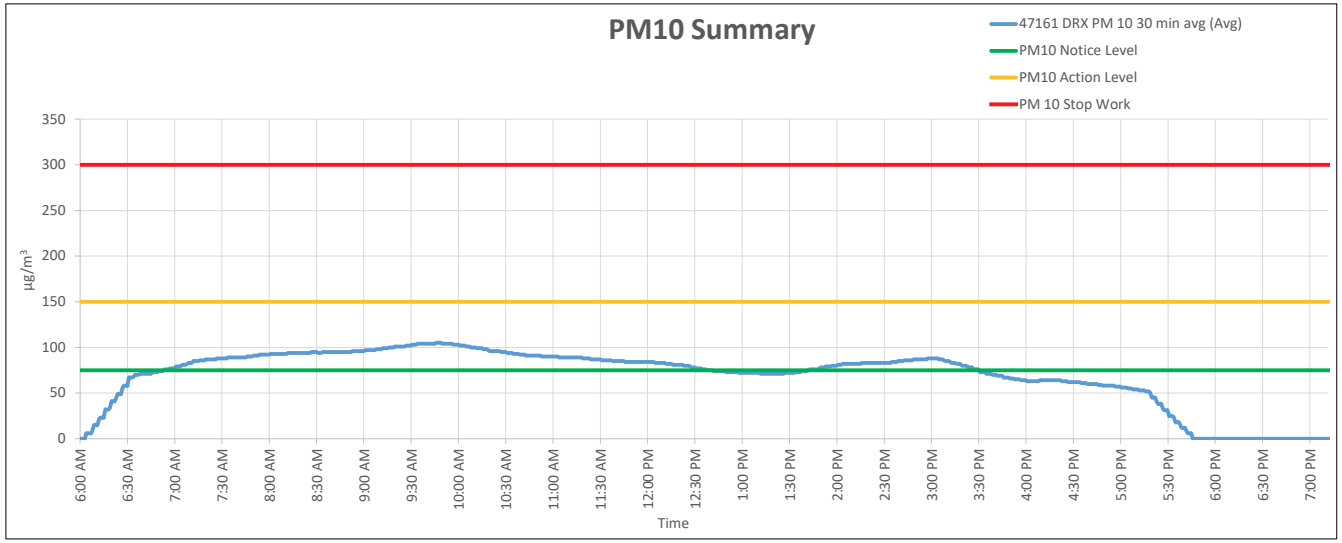
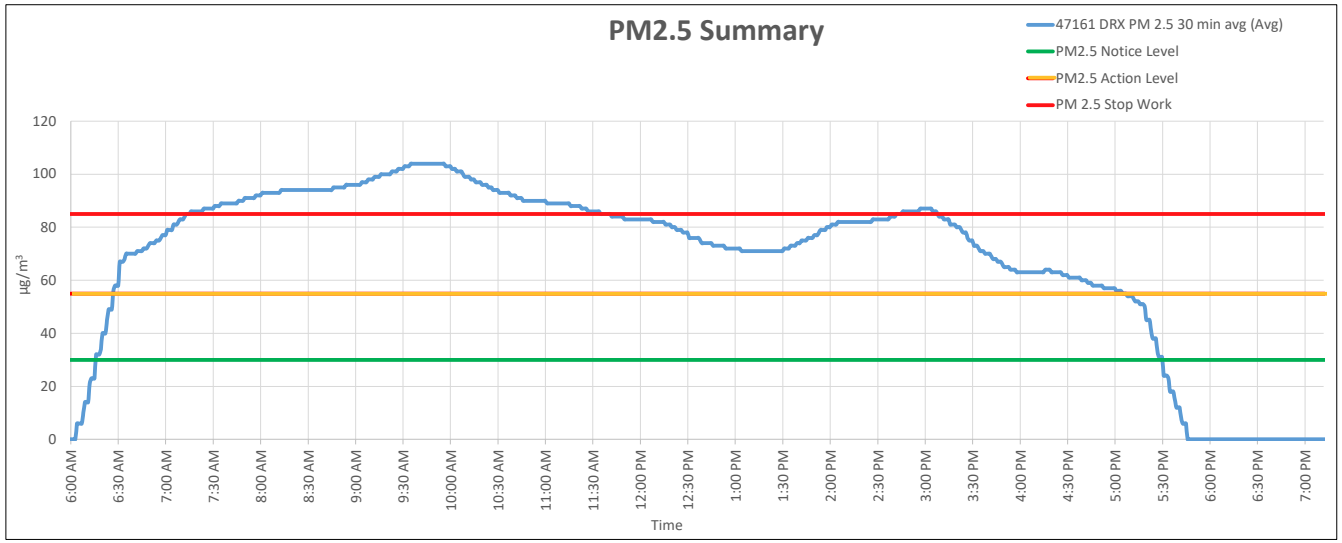
Air Monitoring Values
Wednesday, May 8, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:04 AM	5:45 PM	78.23	105.00	77.84	104.00





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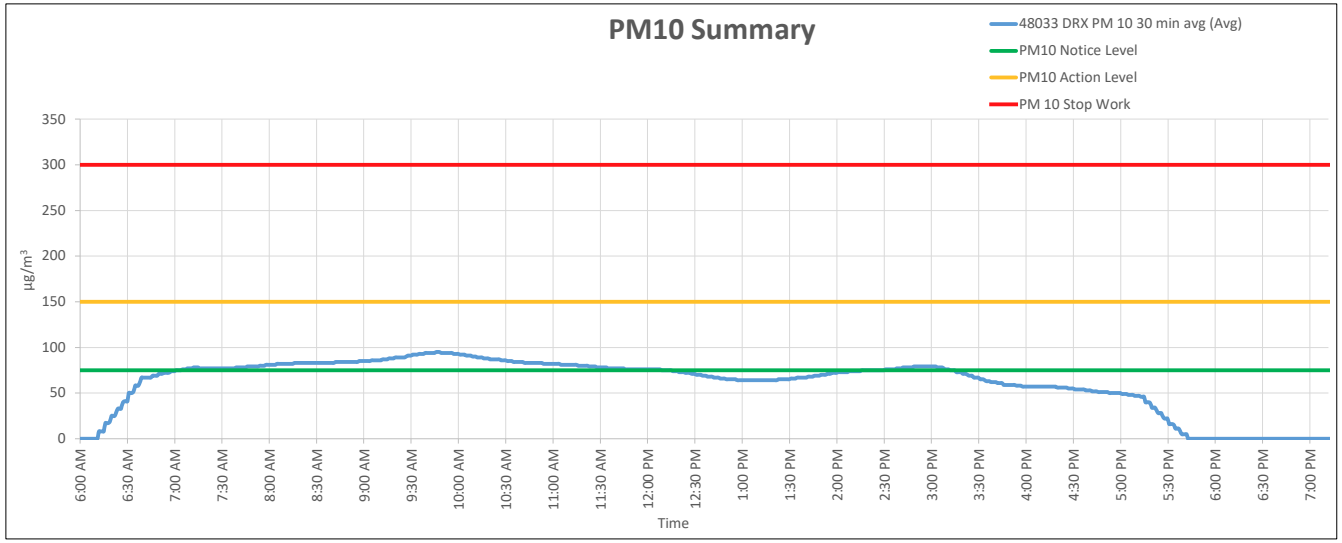
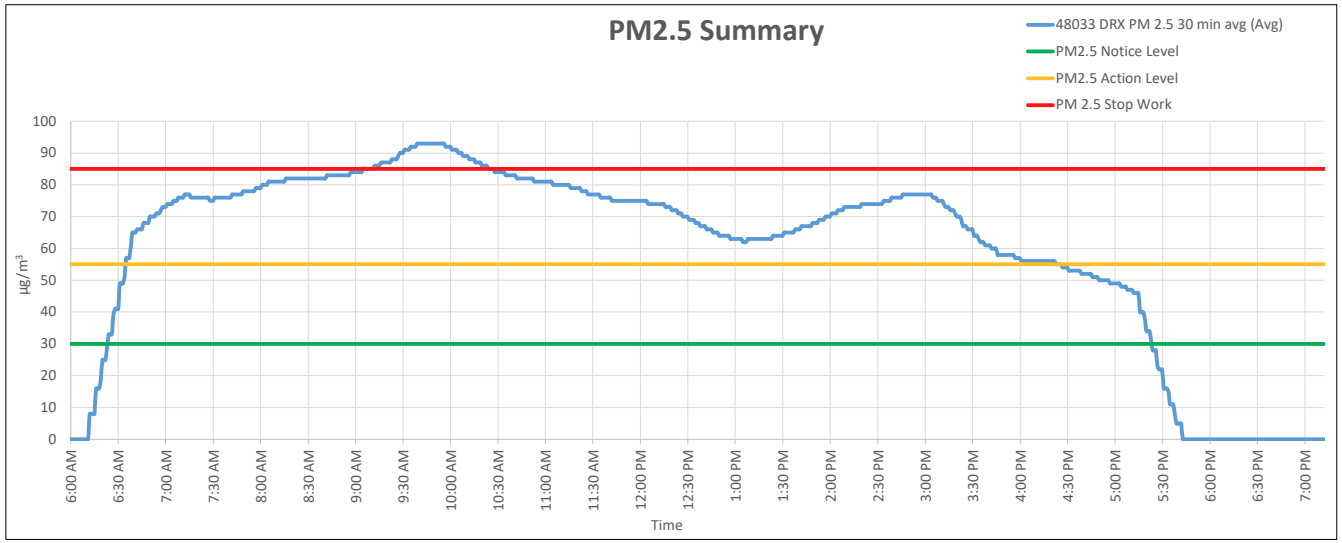
Wednesday, May 8, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:12 AM	5:42 PM	70.54	95.00	69.49	93.00





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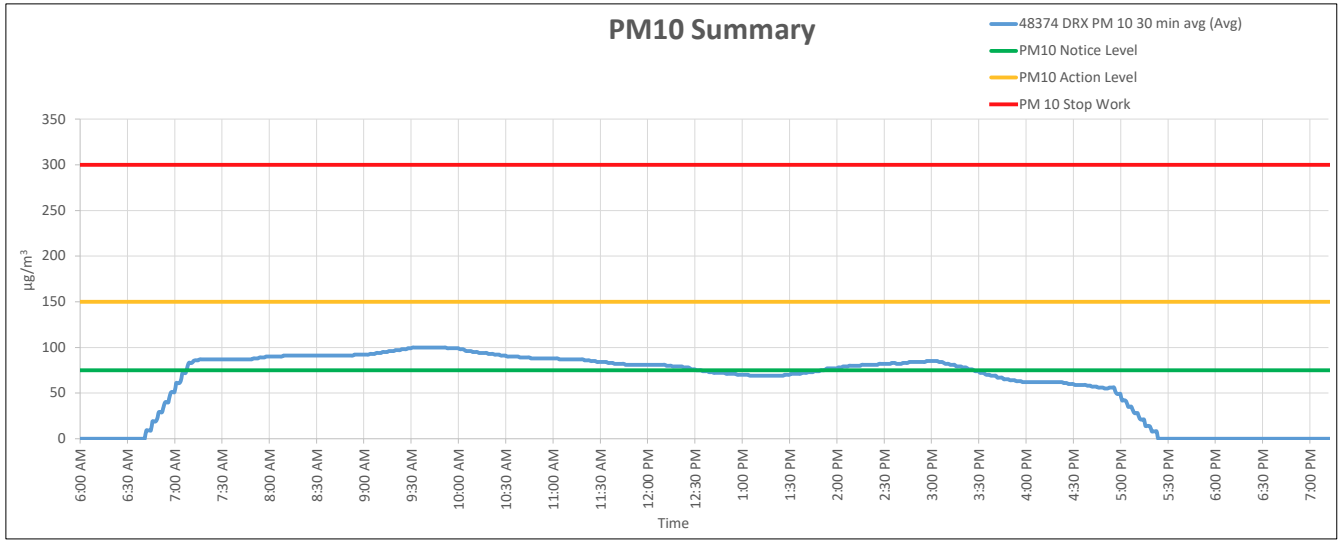
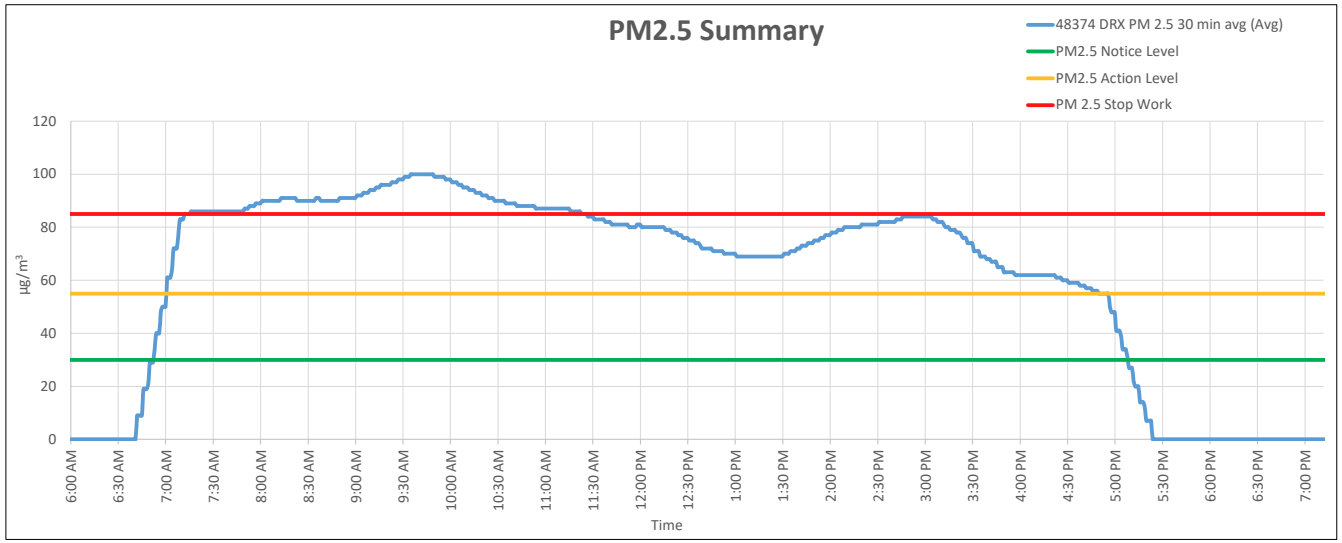
Air Monitoring Values
Wednesday, May 8, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:42 AM	5:23 PM	77.43	100.00	76.99	100.00





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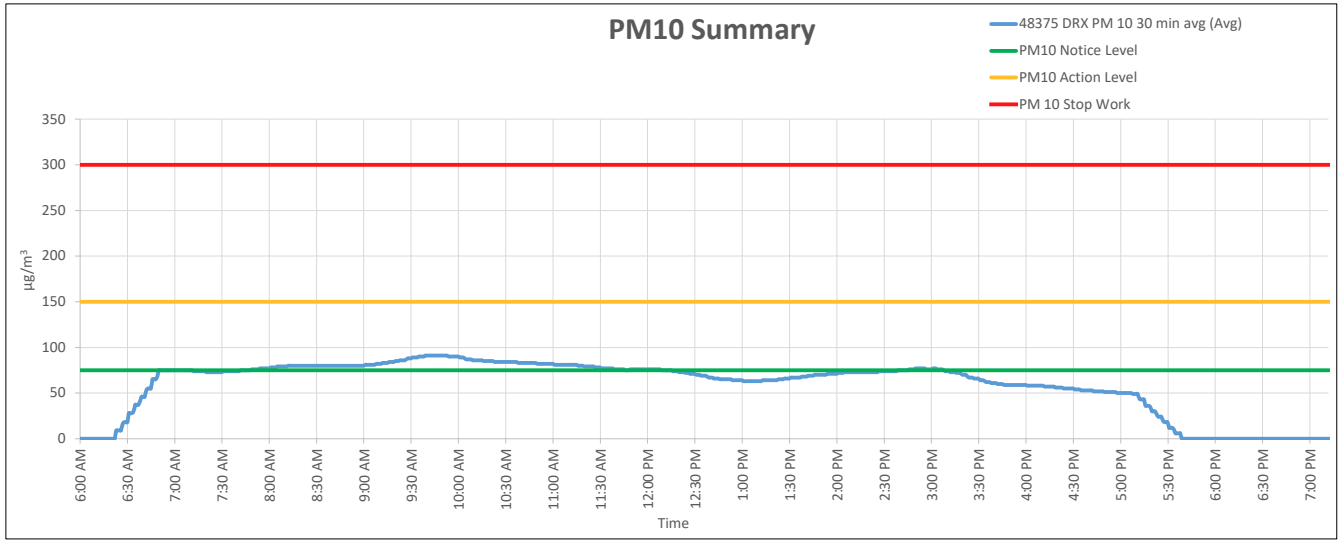
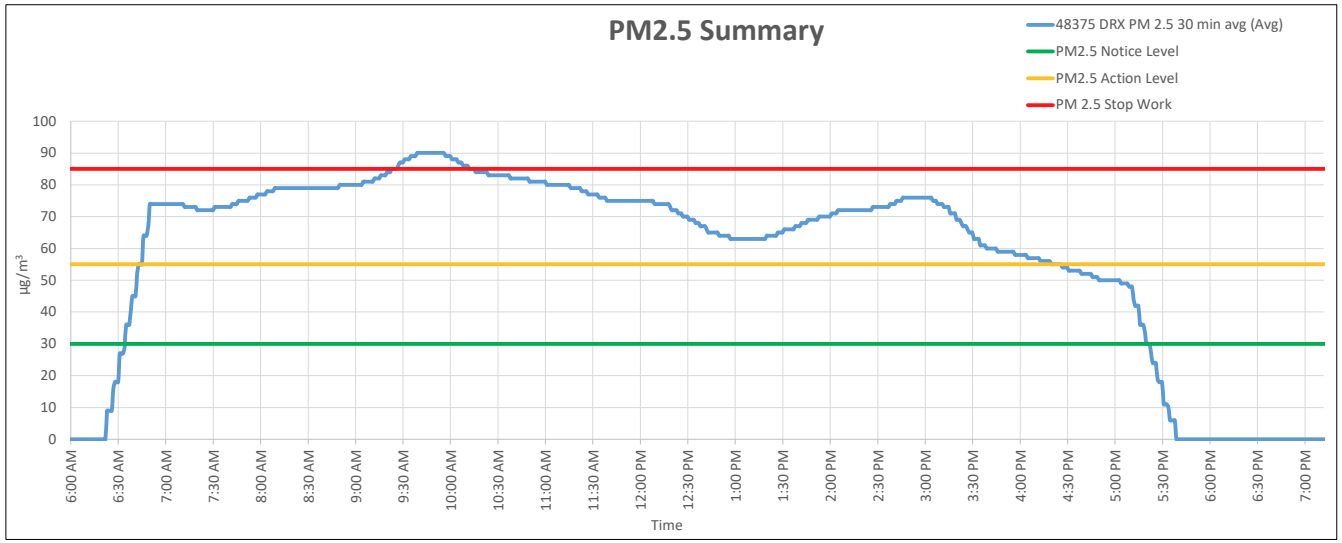
Wednesday, May 8, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:23 AM	5:38 PM	69.71	91.00	68.97	90.00





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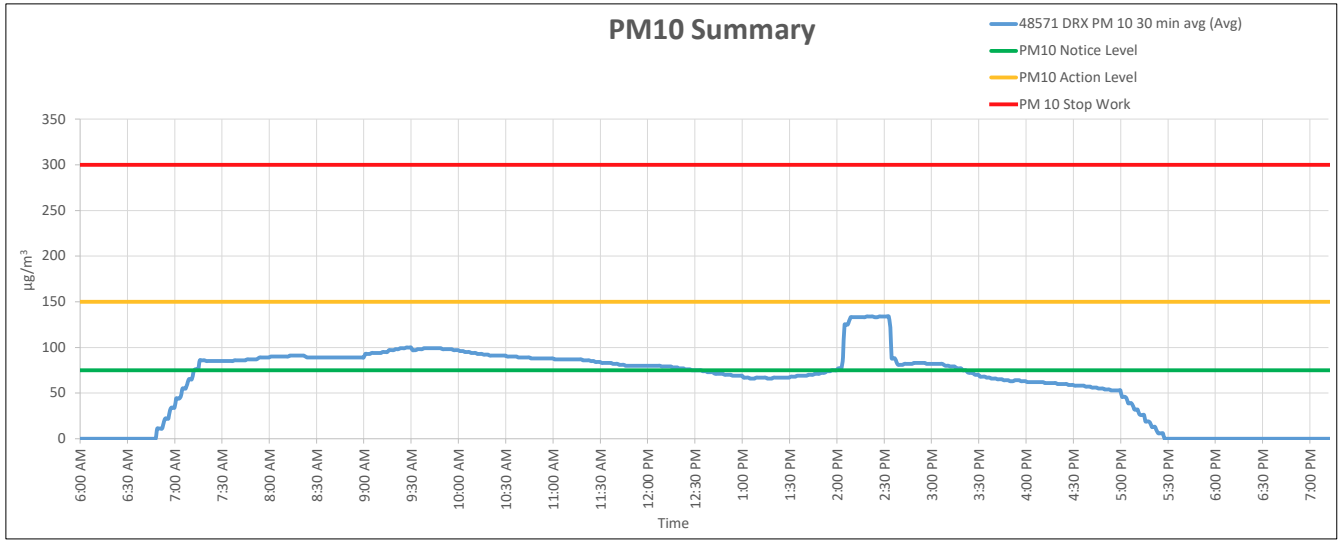
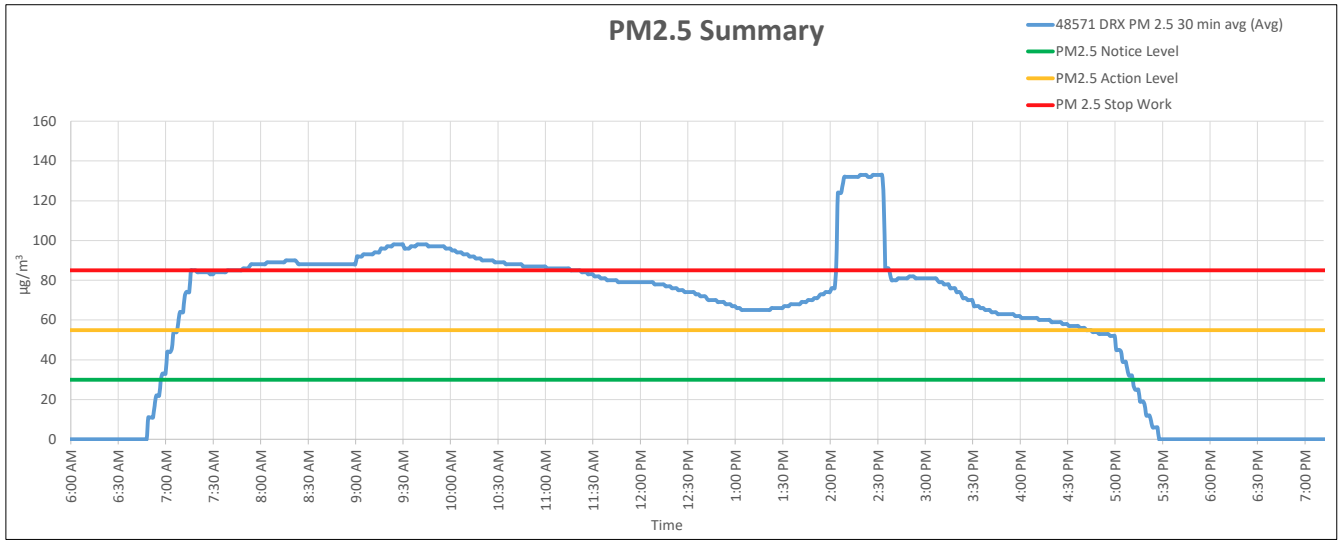
Wednesday, May 8, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	6:49 AM	5:27 PM	78.58	134.00	77.54	133.00





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Air Monitoring Values
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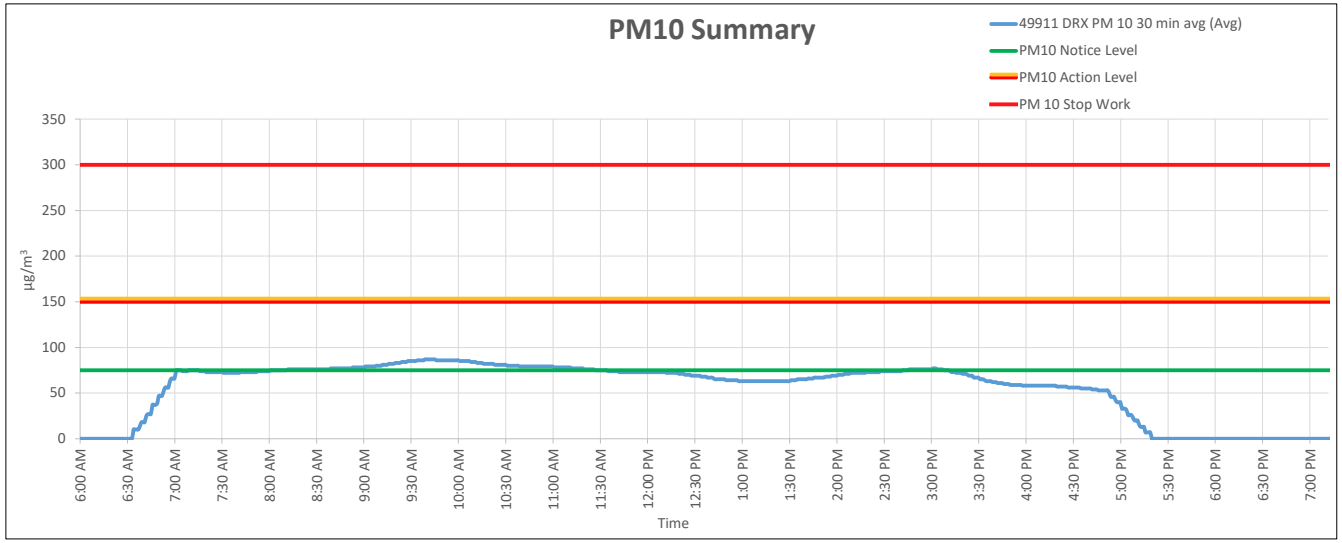
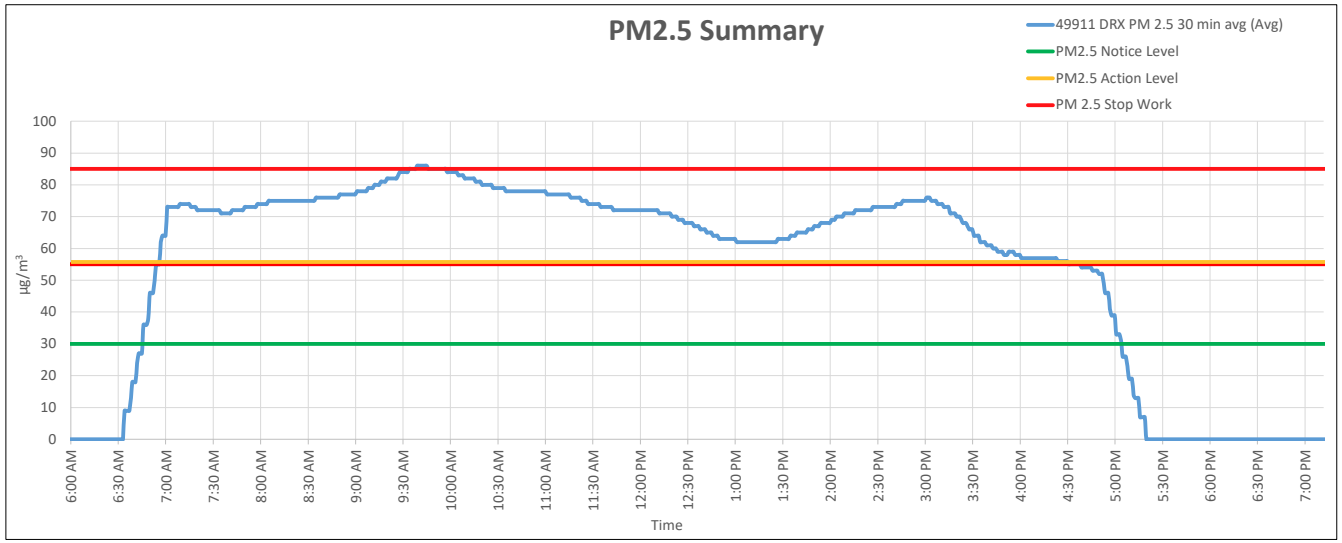
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:34 AM	5:19 PM	68.79	87.00	67.92	86.00





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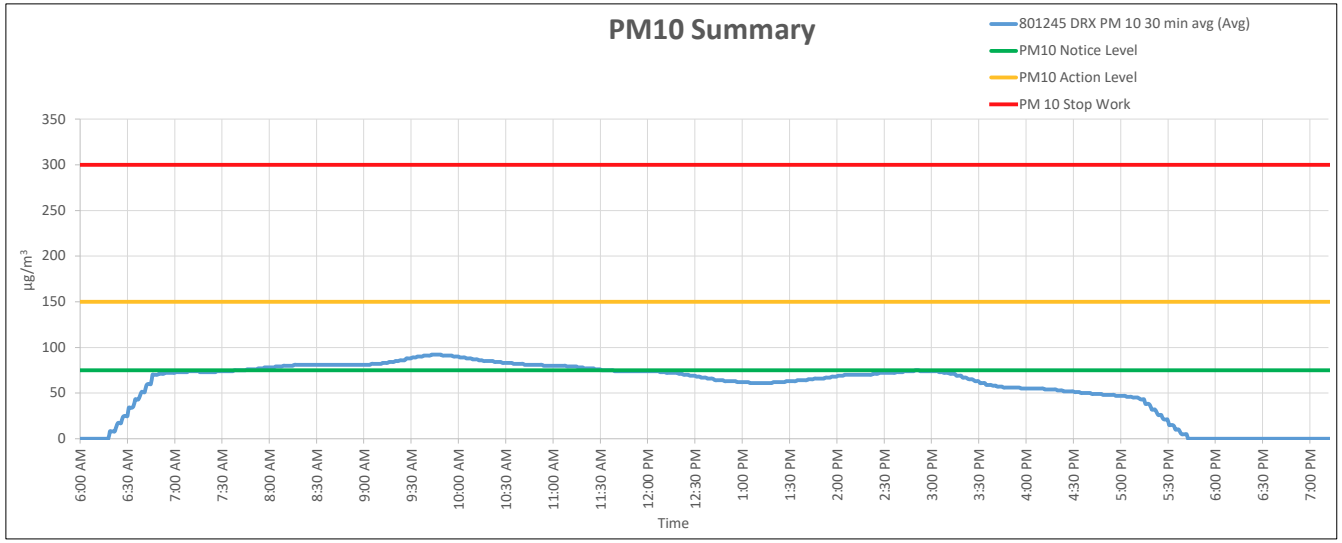
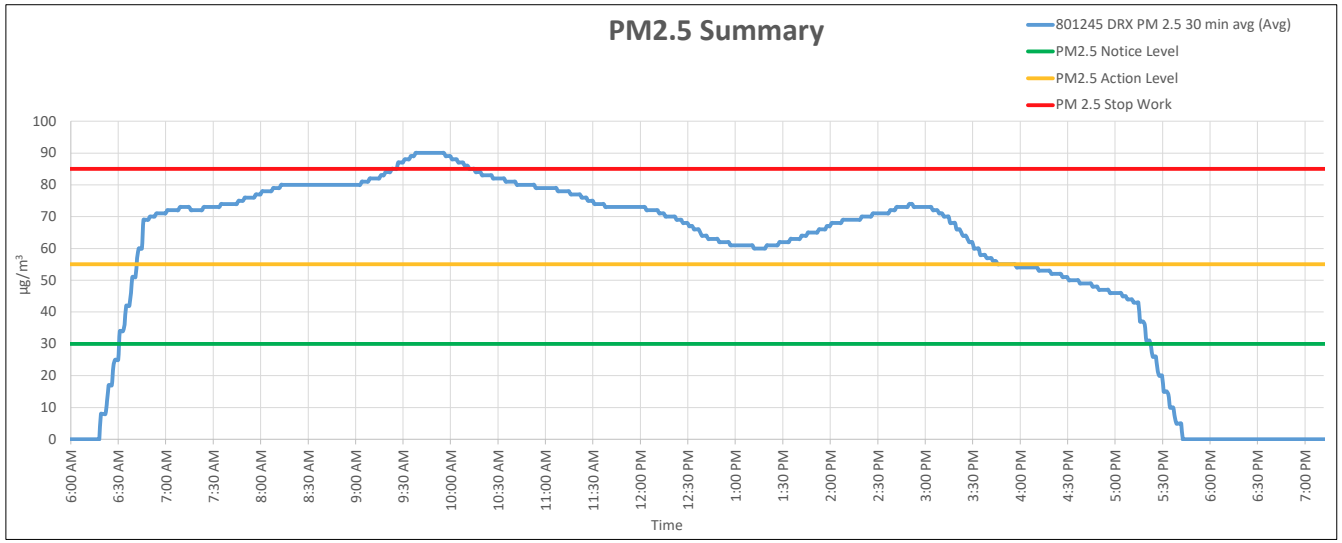
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:19 AM	5:42 PM	67.88	92.00	66.97	90.00





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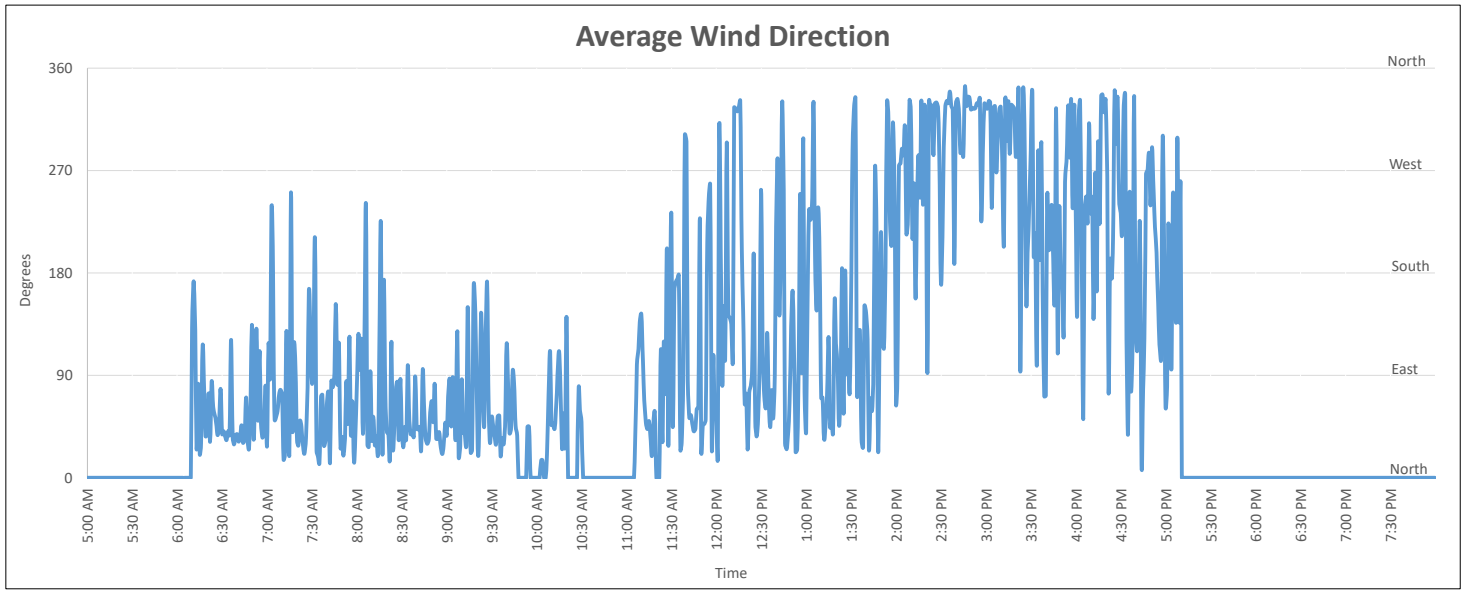

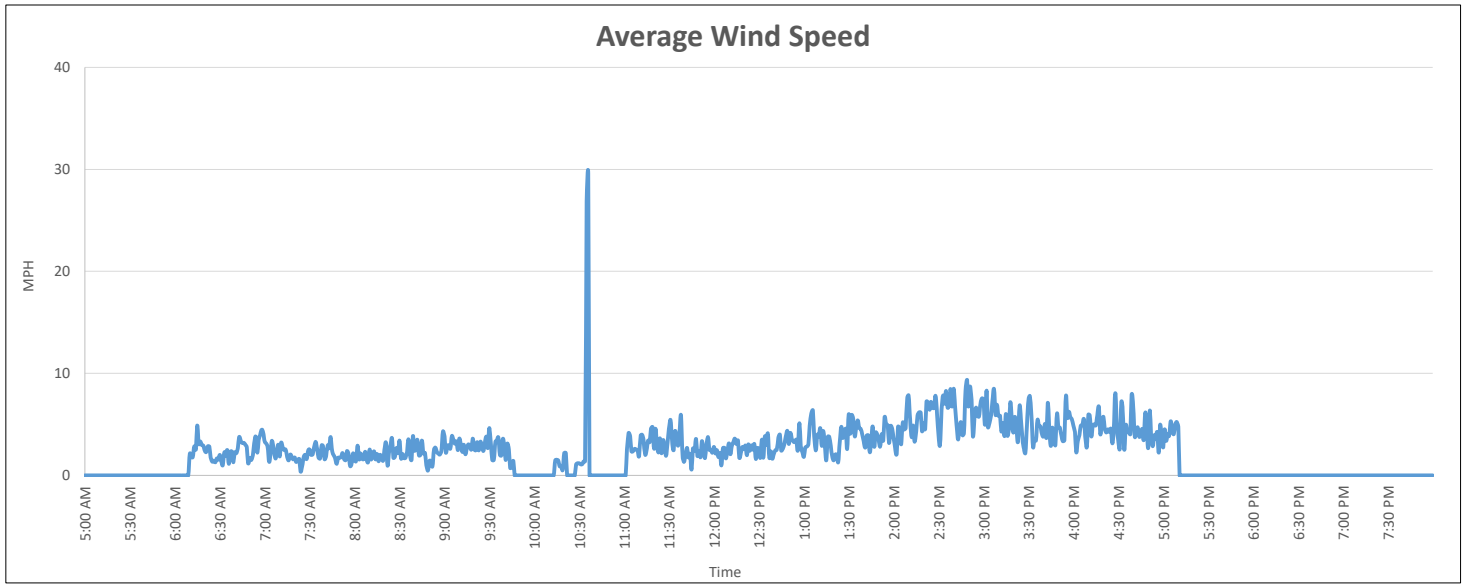

Union Pacific Railroad
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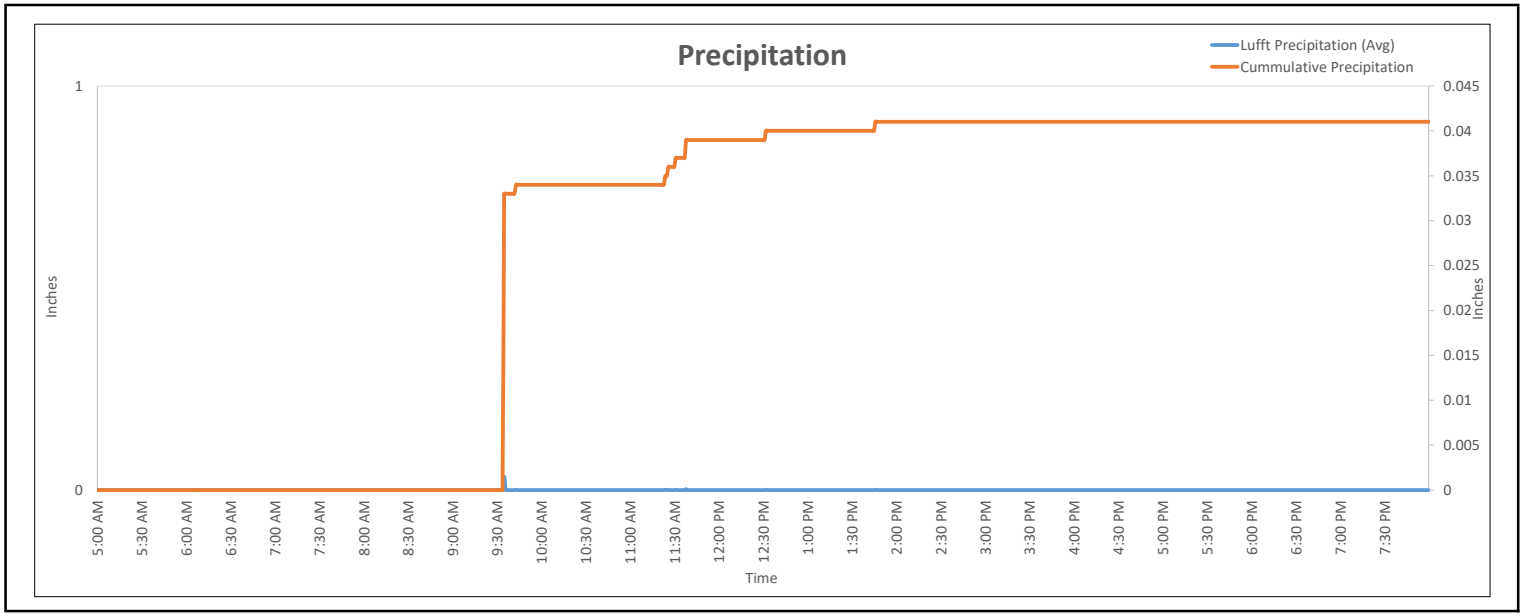

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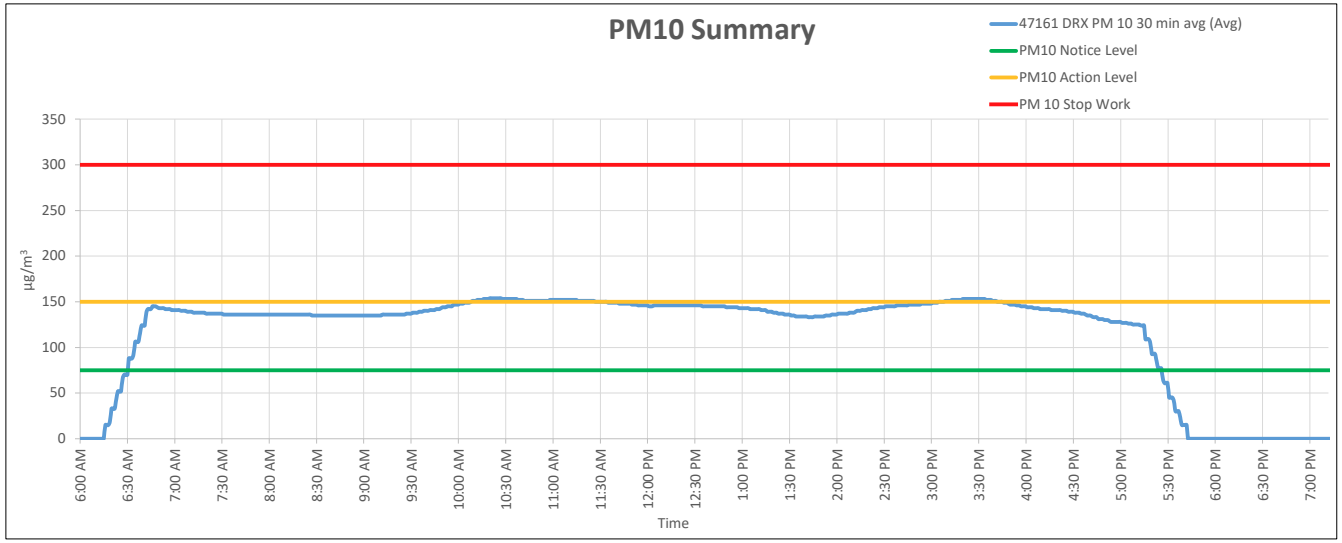
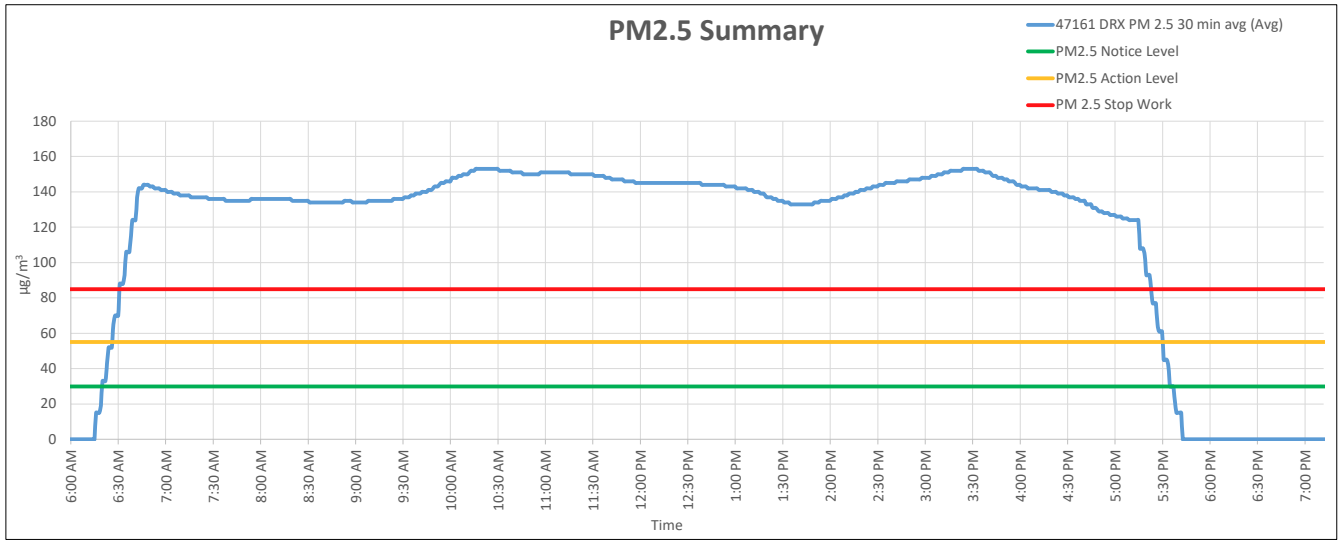
Air Monitoring Values
Thursday, May 9, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:16 AM	5:42 PM	136.20	154.00	135.60	153.00





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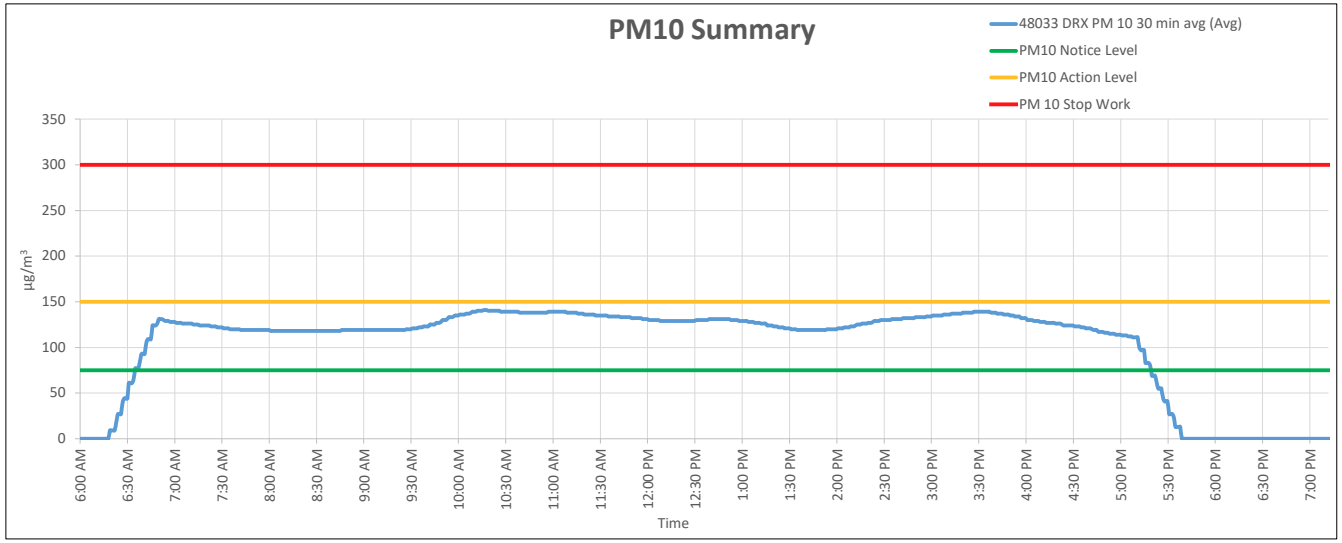
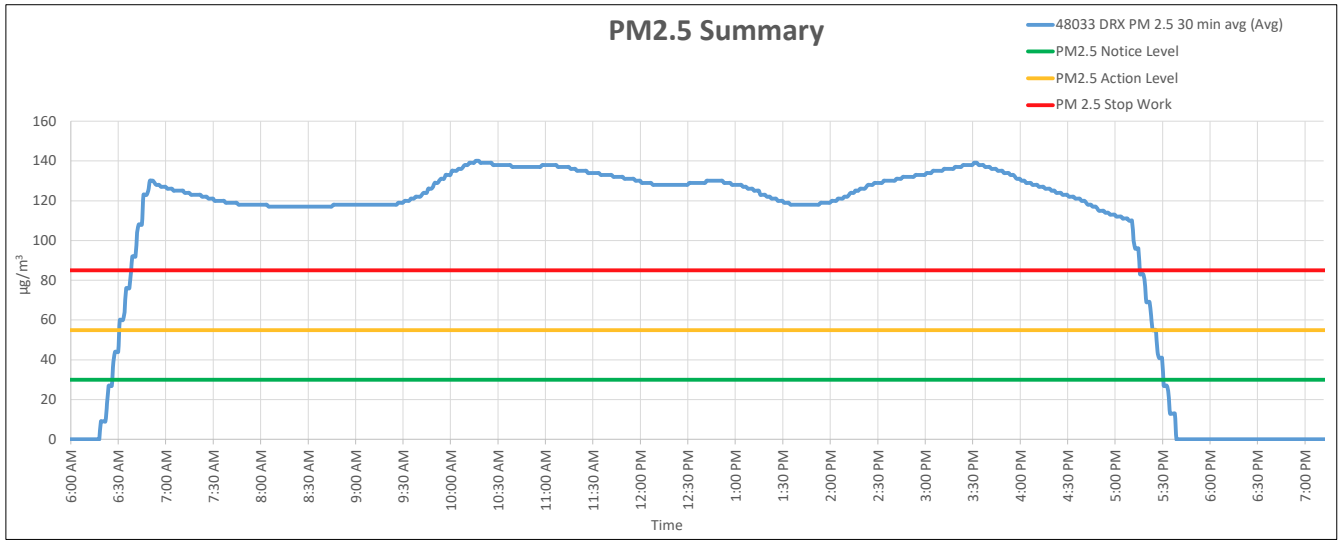
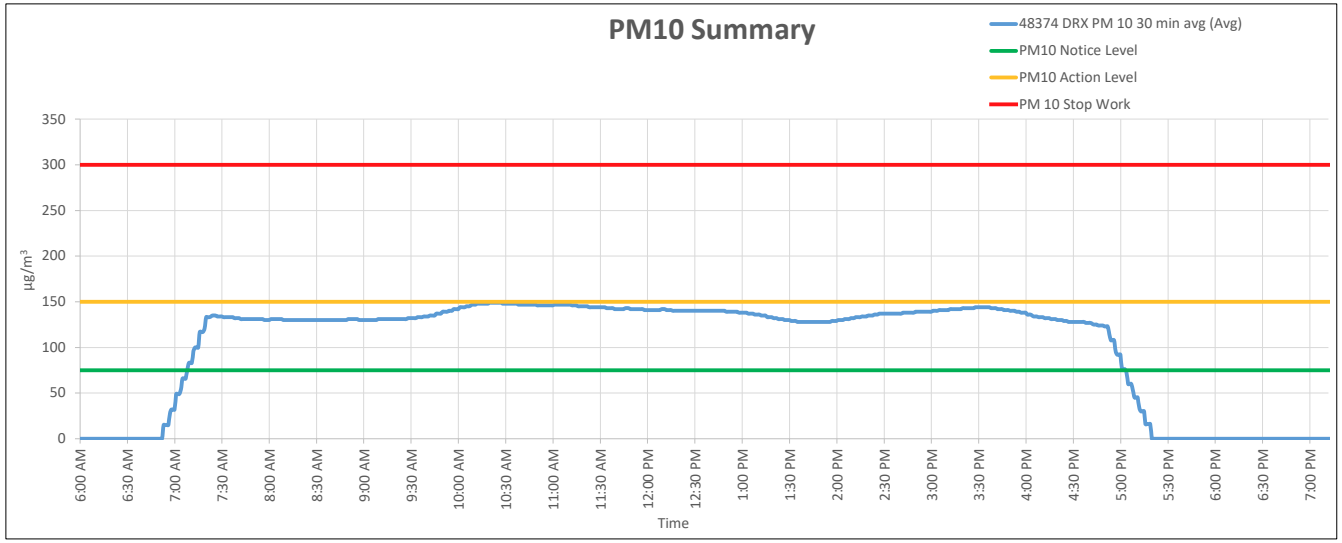
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:19 AM	5:38 PM	121.81	141.00	120.92	140.00

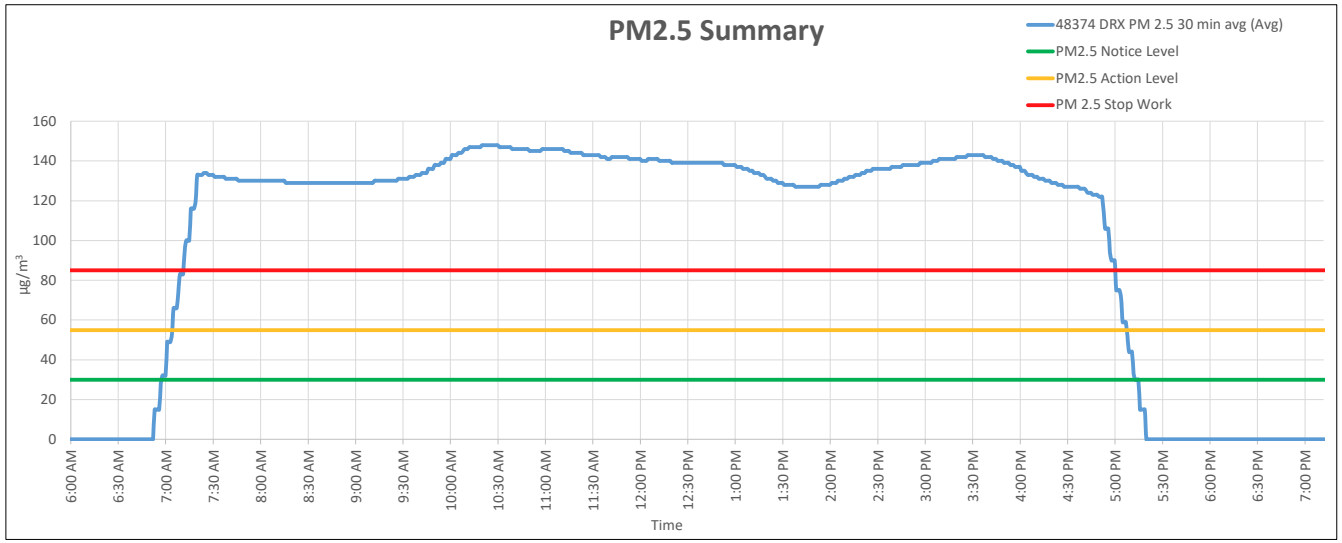




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 9, 2024

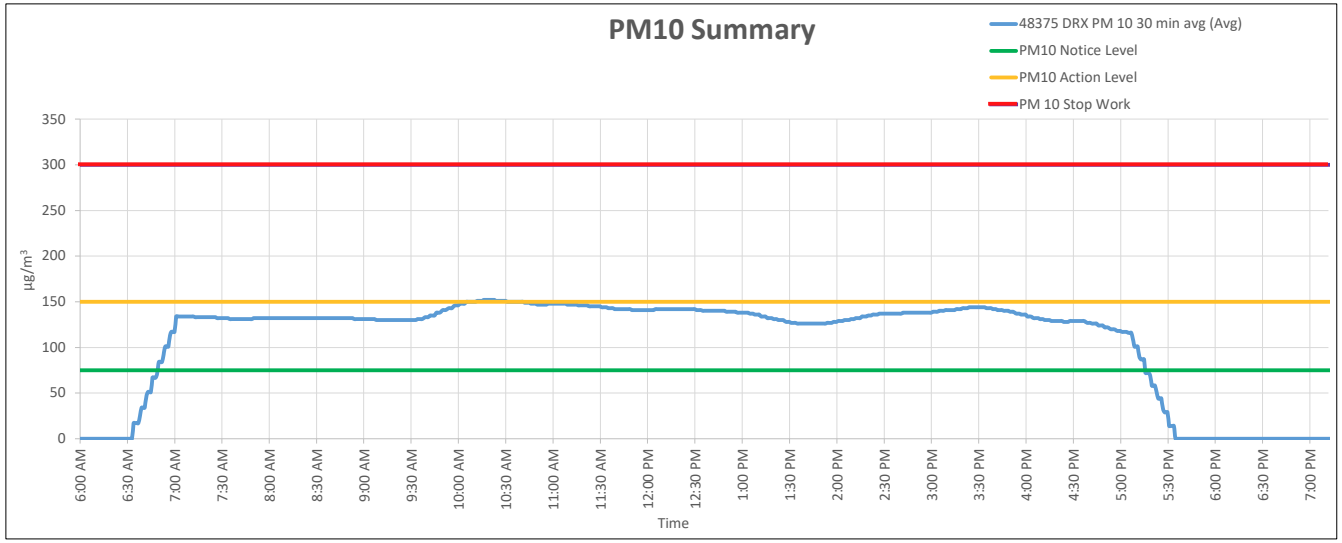
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:53 AM	5:19 PM	130.45	149.00	129.59	148.00

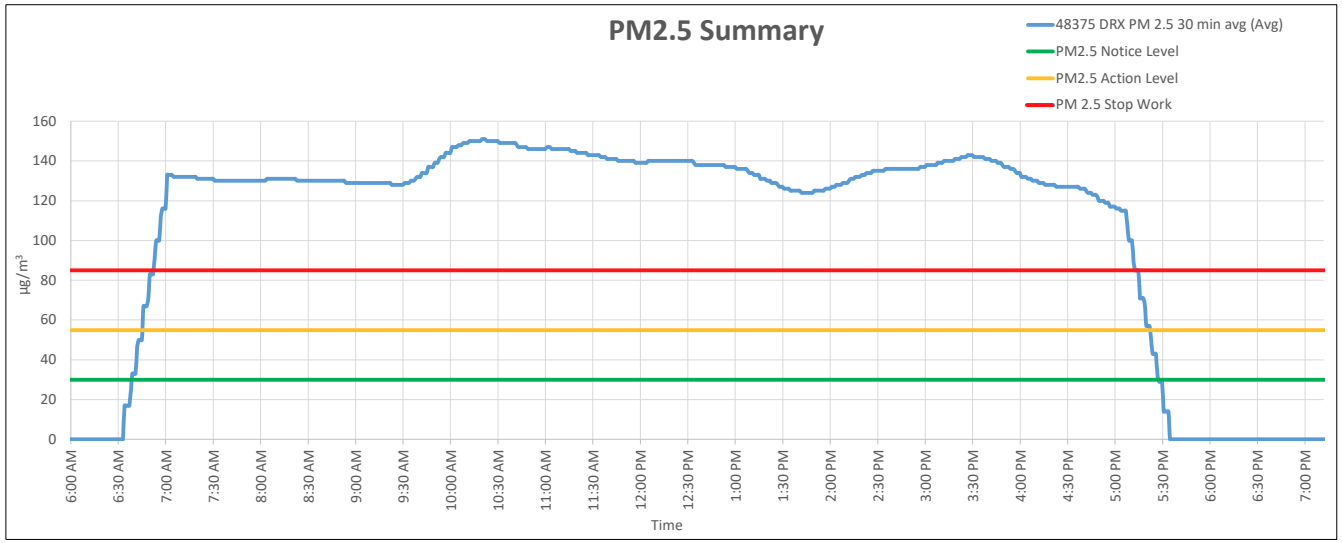




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 9, 2024

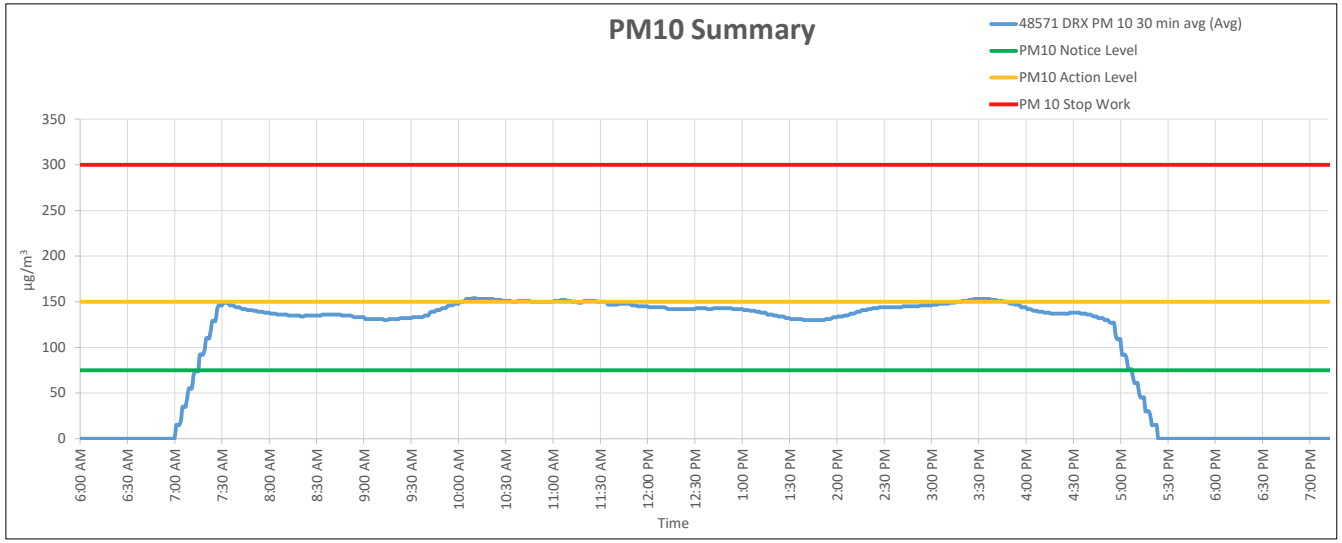
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:34 AM	5:34 PM	130.32	152.00	128.89	151.00

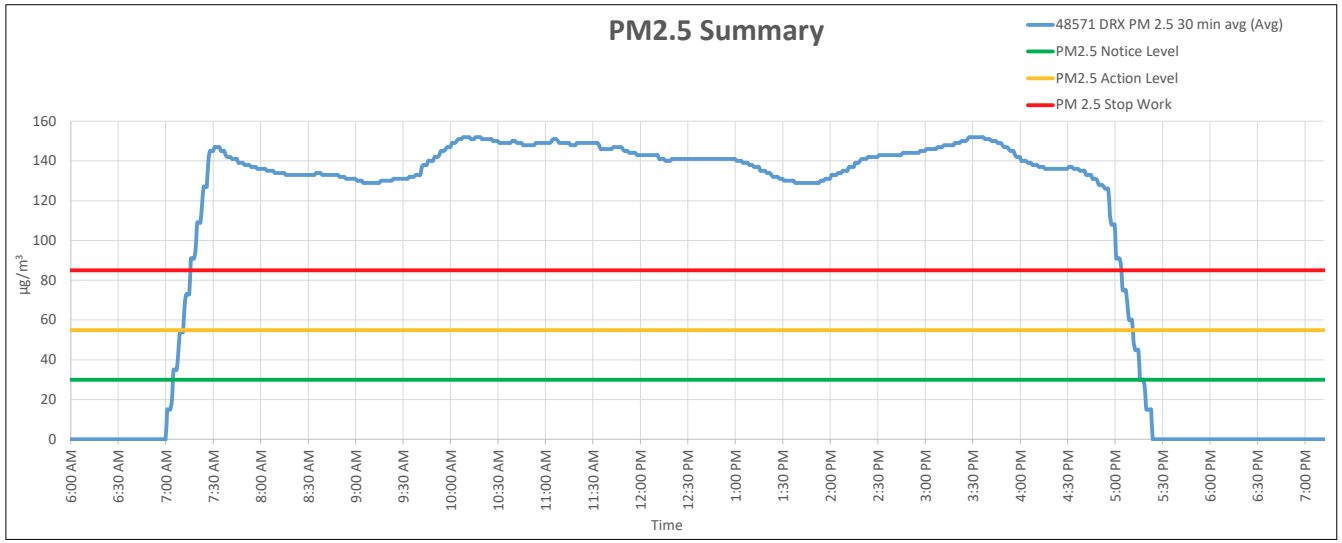




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 9, 2024

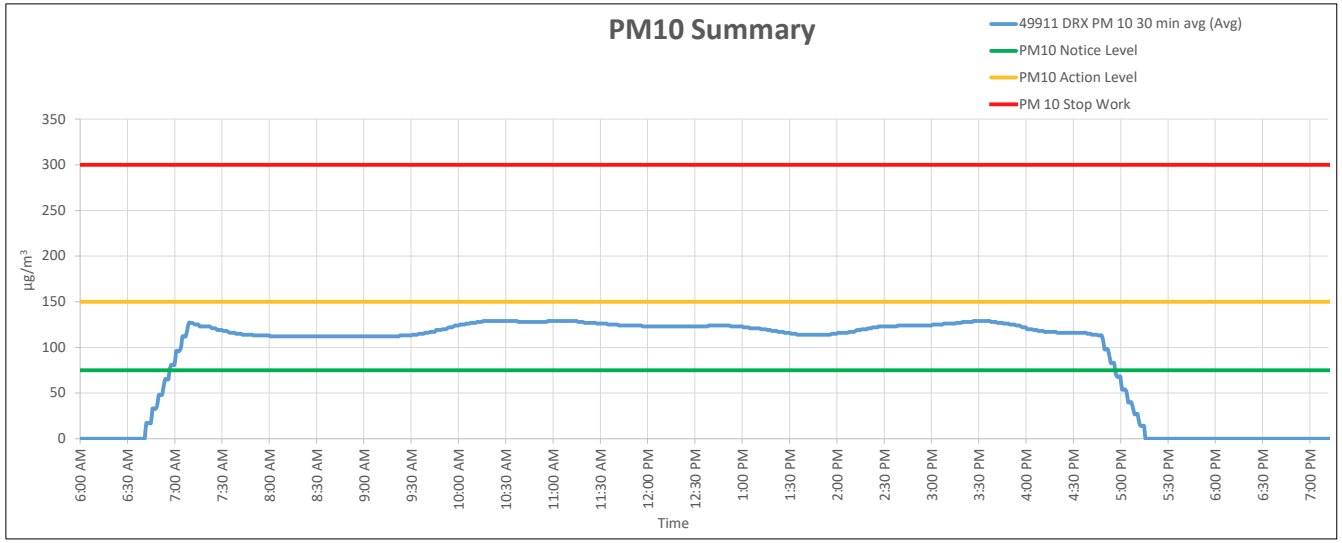
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:01 AM	5:23 PM	135.40	154.00	134.05	152.00

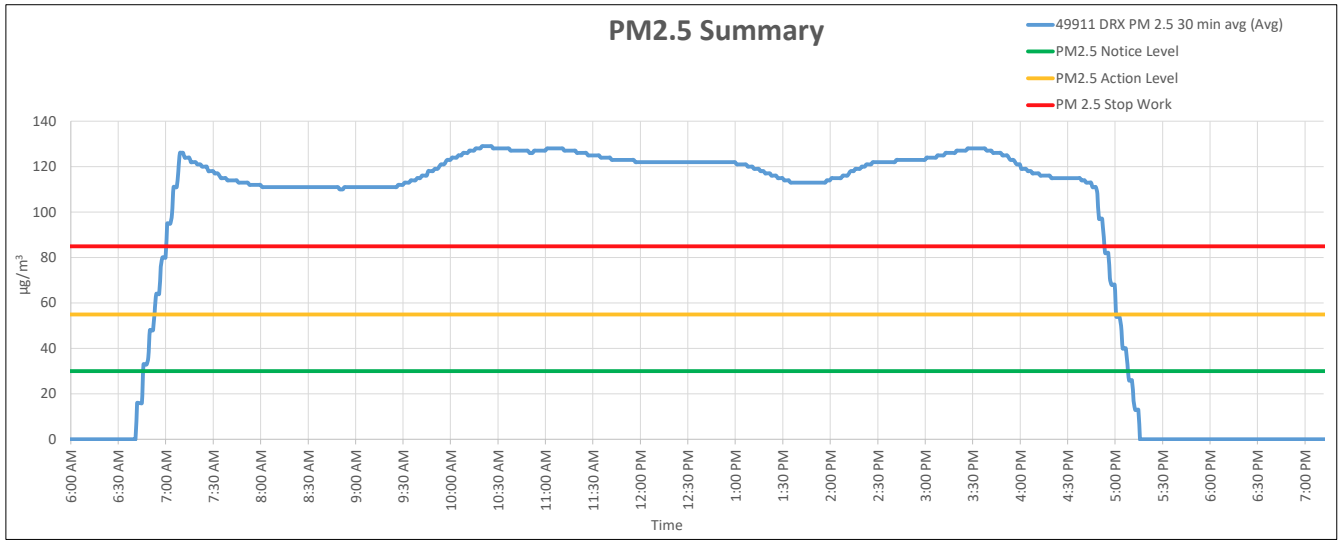




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 9, 2024

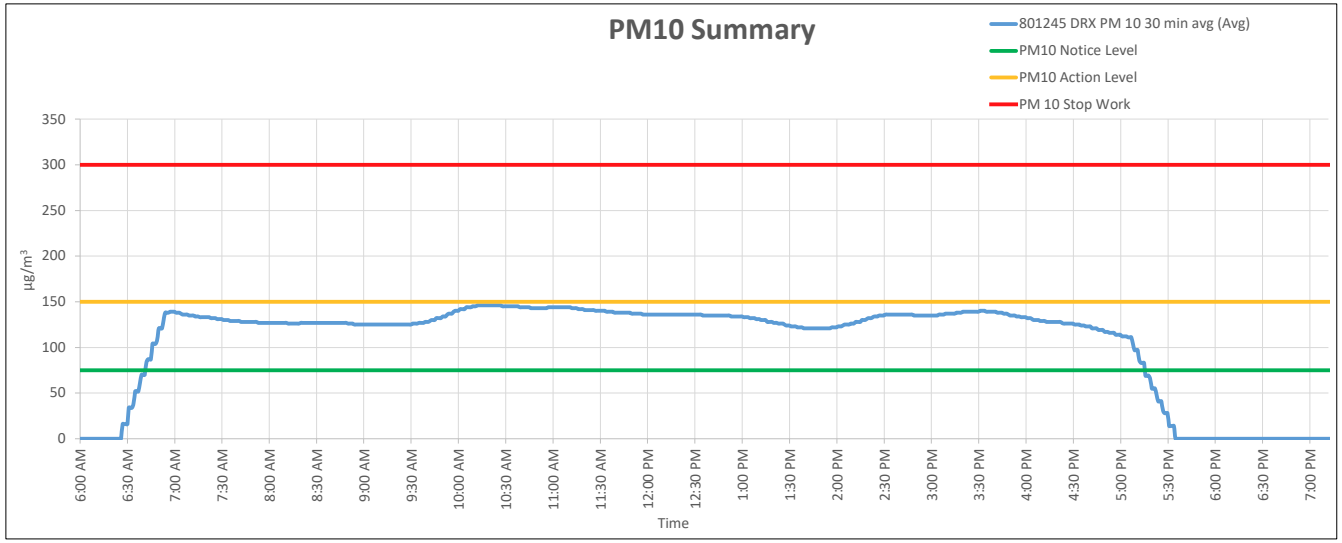
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:42 AM	5:15 PM	115.44	129.00	114.44	129.00

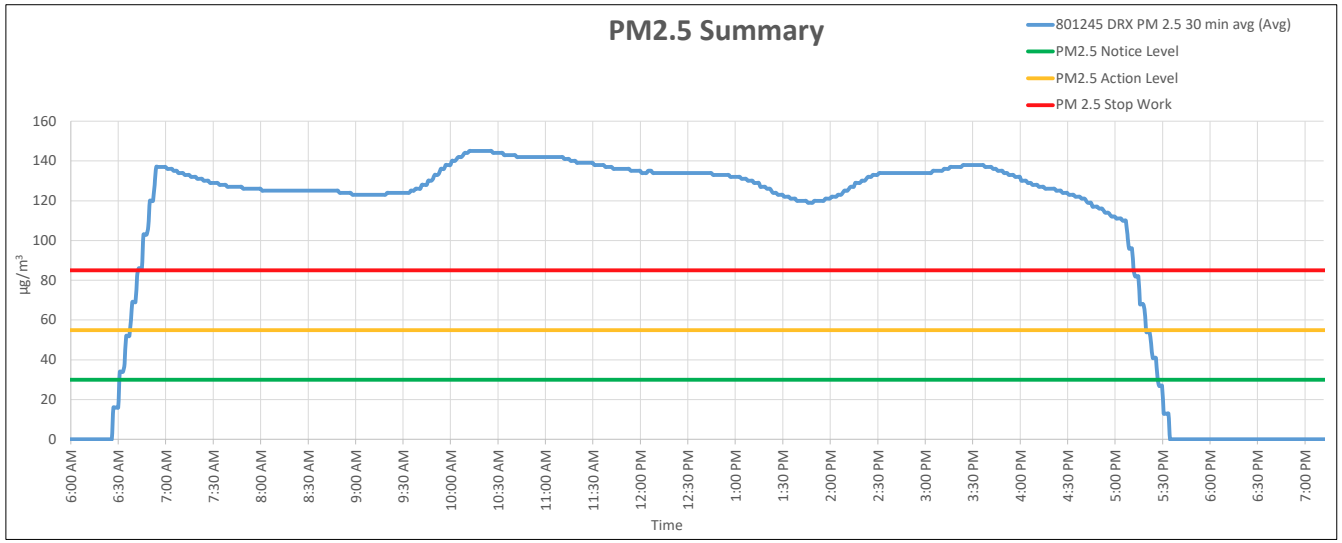




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 9, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:27 AM	5:34 PM	126.71	146.00	125.25	145.00



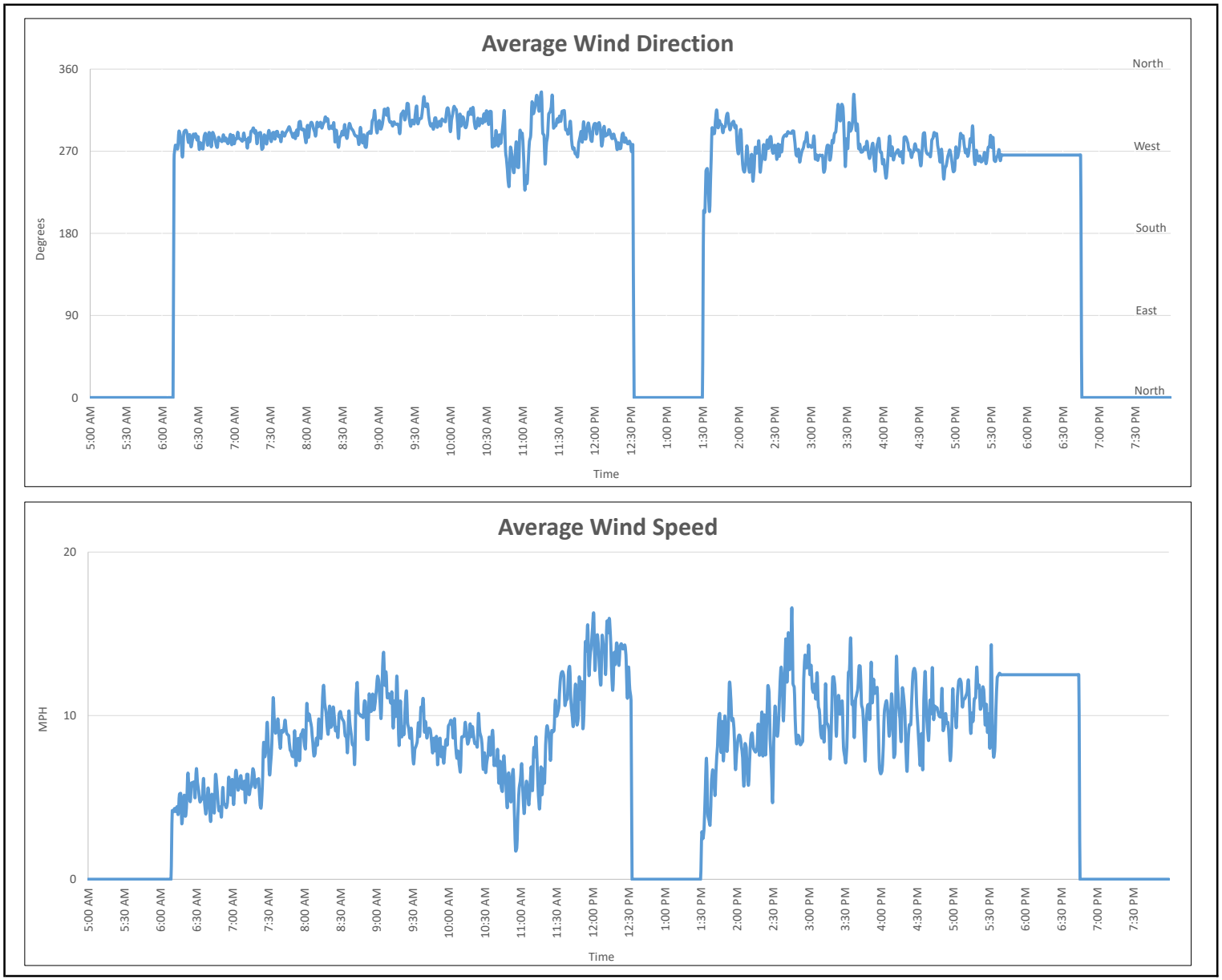


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston, Texas
TCEQ Air Monitor Values
Houston North Wayside C405/C1033
May 9, 2024

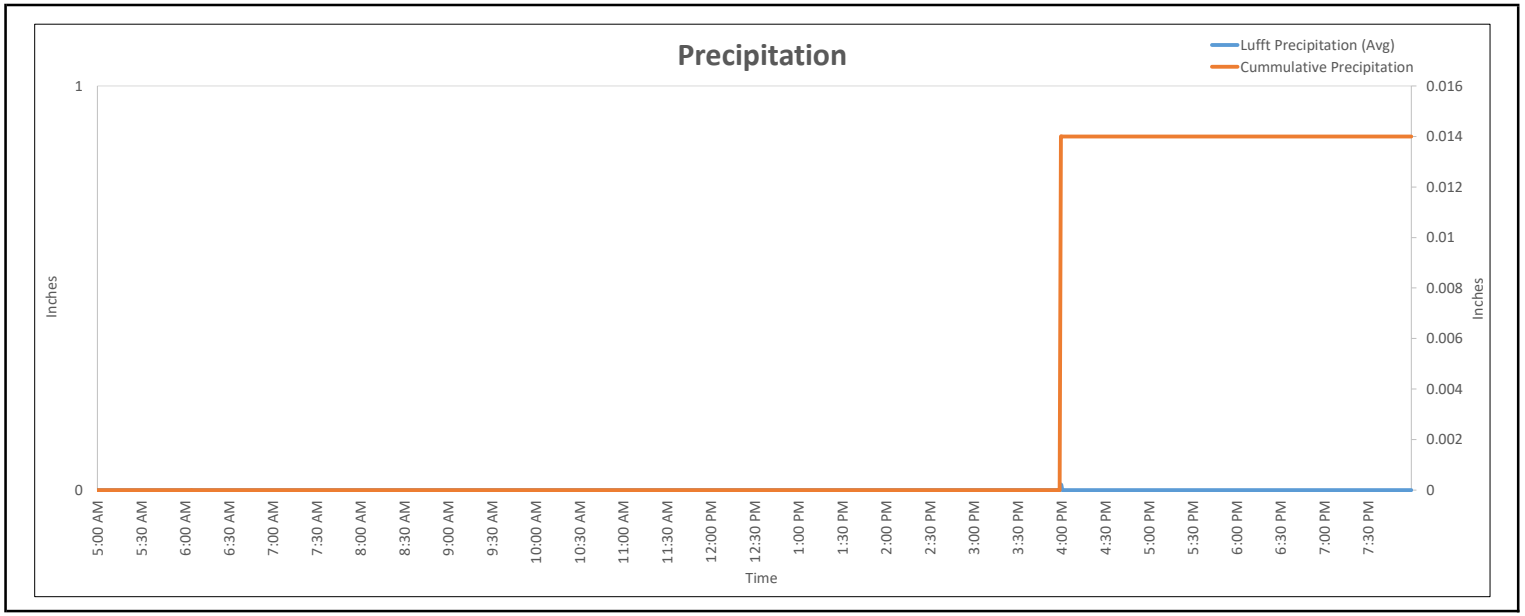
Parameter Measured	Morning												Afternoon												Parameter Measured	POC
	Mid	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	Noon	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00		
PM-10 (Standard Conditions)	26.4	30.1	36.8	52.4	77	103.9	76.3	79.8	82.6	98.9	107.9	**172.5**	172.4	160.2	142.3	115.8	93	55.4	44.9	52.5	49	46	24	***18***	PM-10 (Standard Conditions)	2 N MDL
PM-2.5 (Local Conditions)	***17***	22	22	26	35	47	52	51	62	75	78	72	85	**90**	67	68	41	36	21	26	18	24	19	19	PM-2.5 (Local Conditions)	1 R MDL
Parameter Measured	**Mid**	**1:00**	**2:00**	**3:00**	**4:00**	**5:00**	**6:00**	**7:00**	**8:00**	**9:00**	**10:00**	**11:00**	**Noon**	**1:00**	**2:00**	**3:00**	**4:00**	**5:00**	**6:00**	**7:00**	**8:00**	**9:00**	**10:00**	**11:00**	**Parameter Measured**	POC
	Morning												**Afternoon**													

Data from: https://www.tceq.texas.gov/cgi-bin/compliance/monops/daily_summary.pl

Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Friday, May 10, 2024

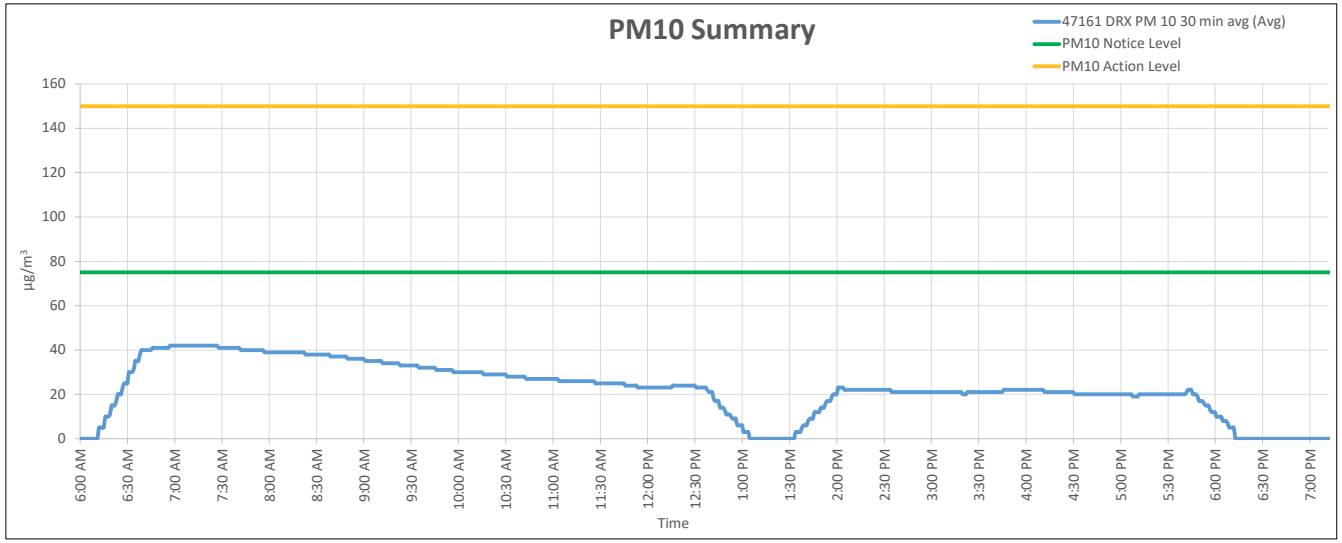


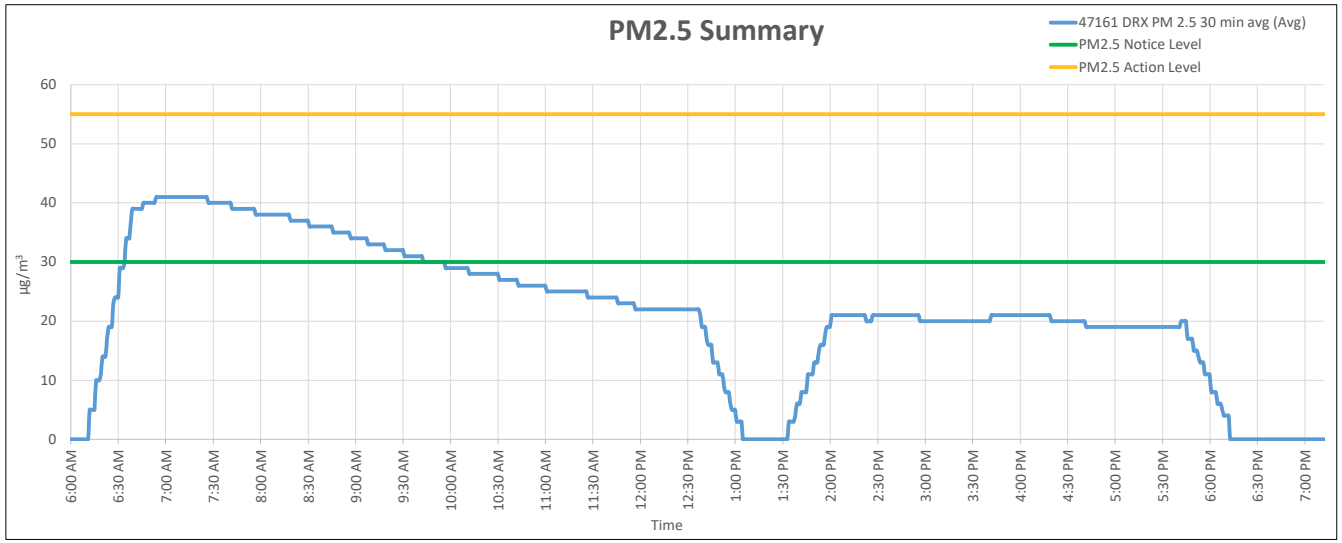
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Friday, May 10, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 10, 2024

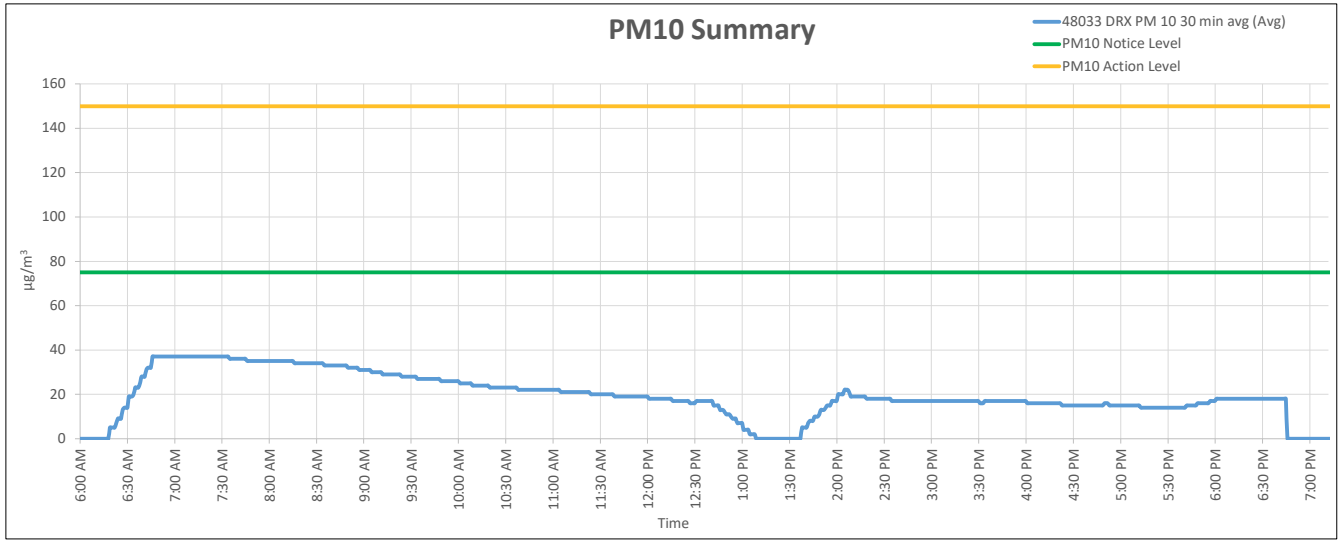
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:12 AM	6:12 PM	25.85	42.00	24.84	41.00

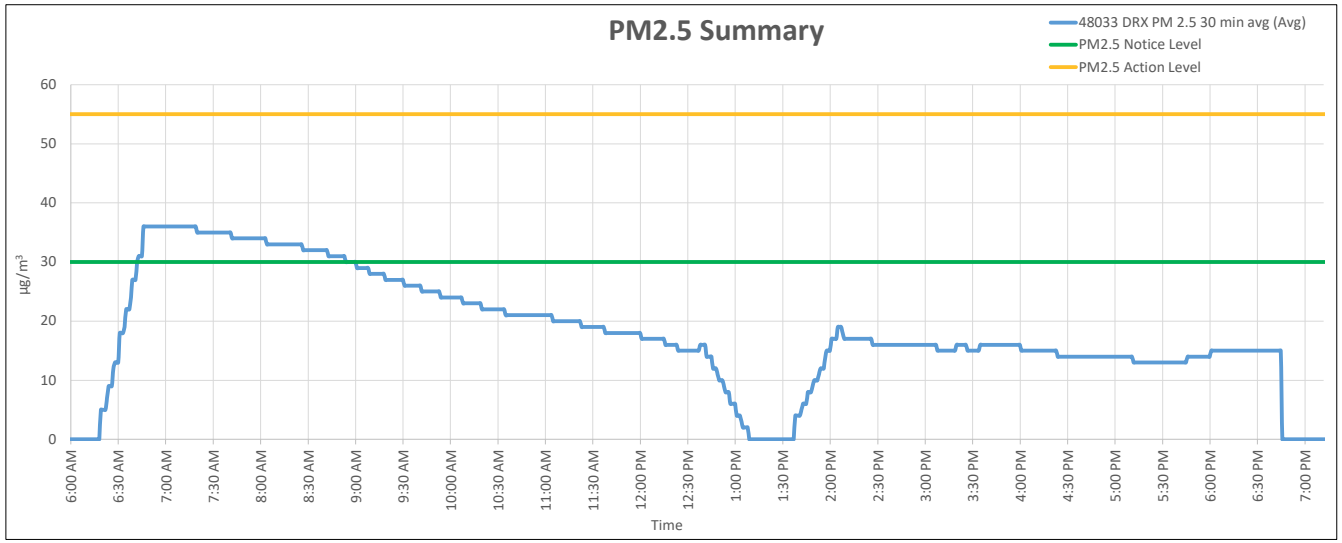




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 10, 2024

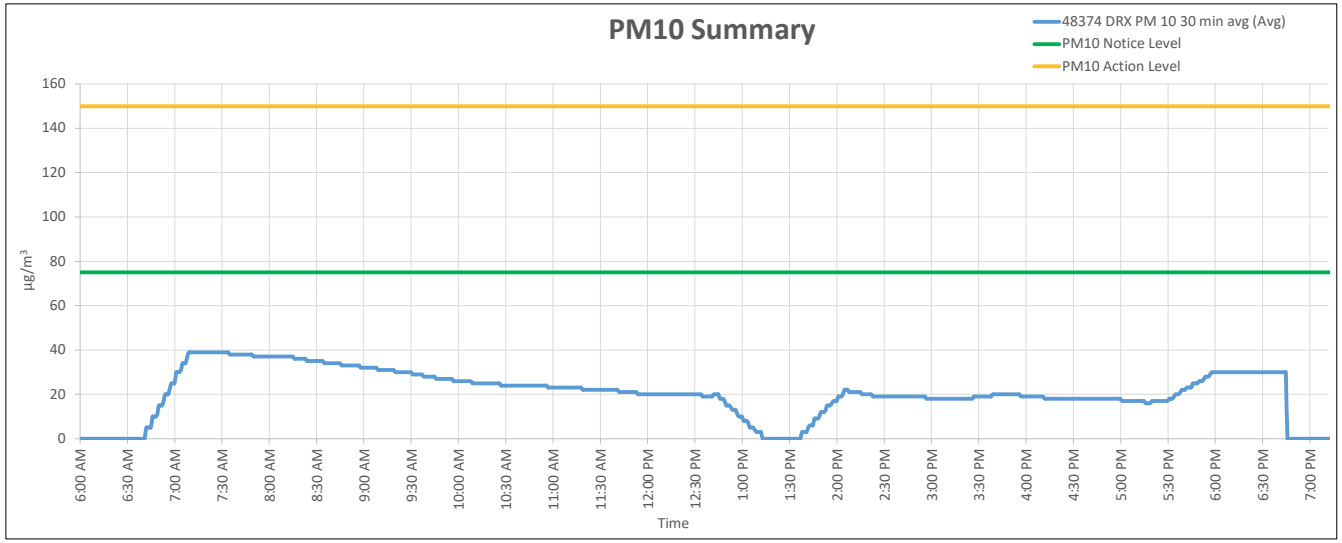
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:19 AM	6:45 PM	21.49	37.00	20.12	36.00

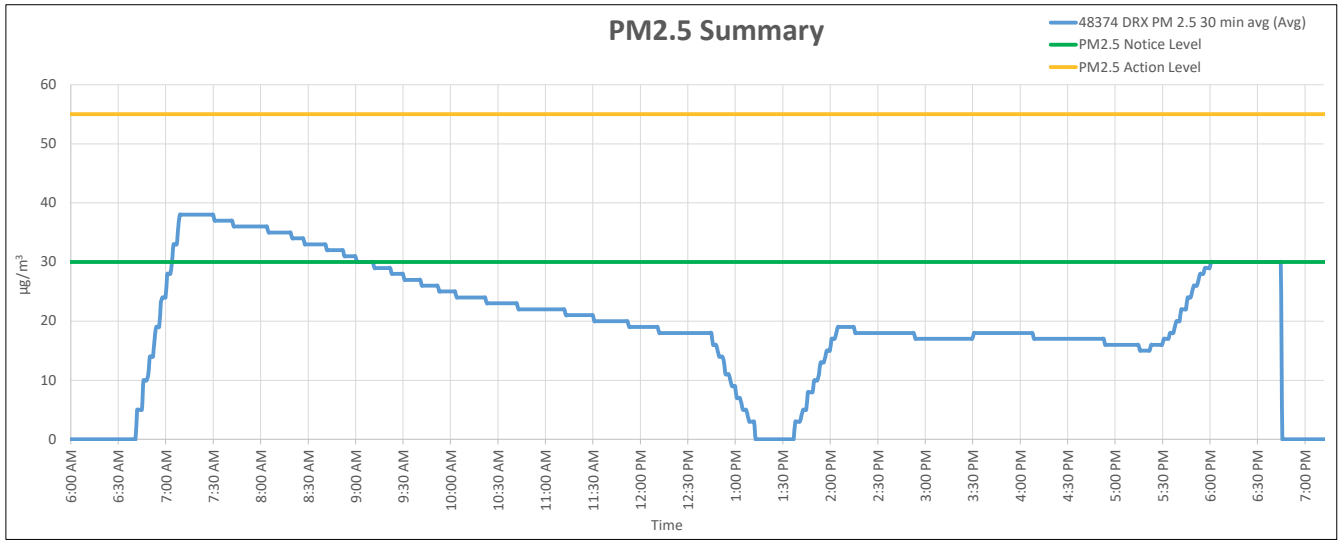




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 10, 2024

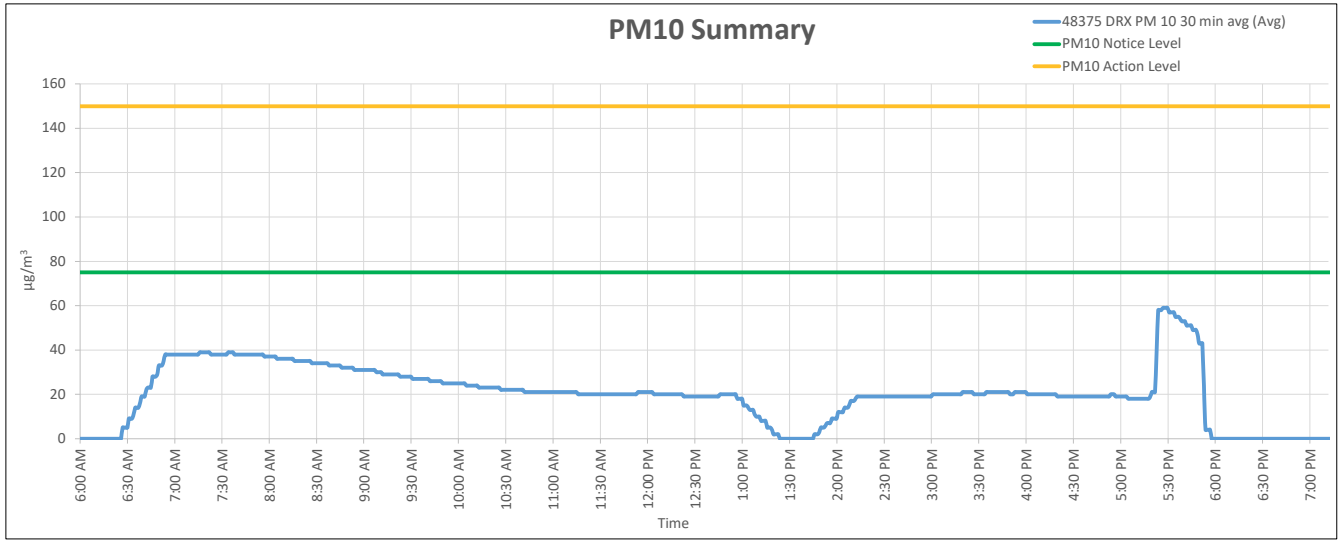
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:42 AM	6:45 PM	23.65	39.00	22.41	38.00

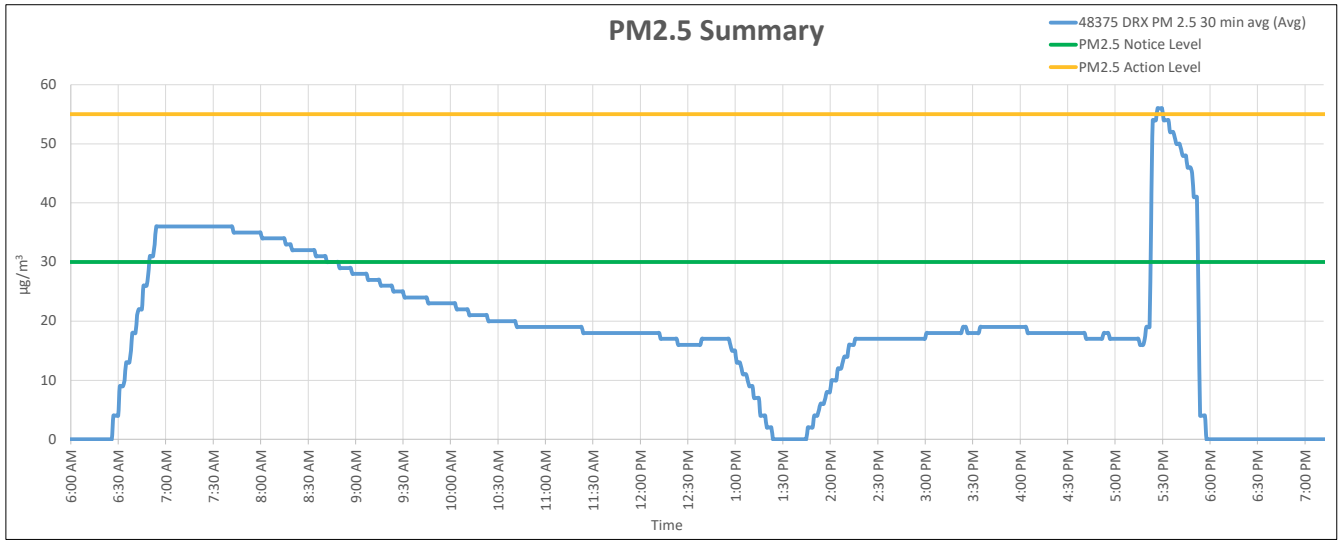




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 10, 2024

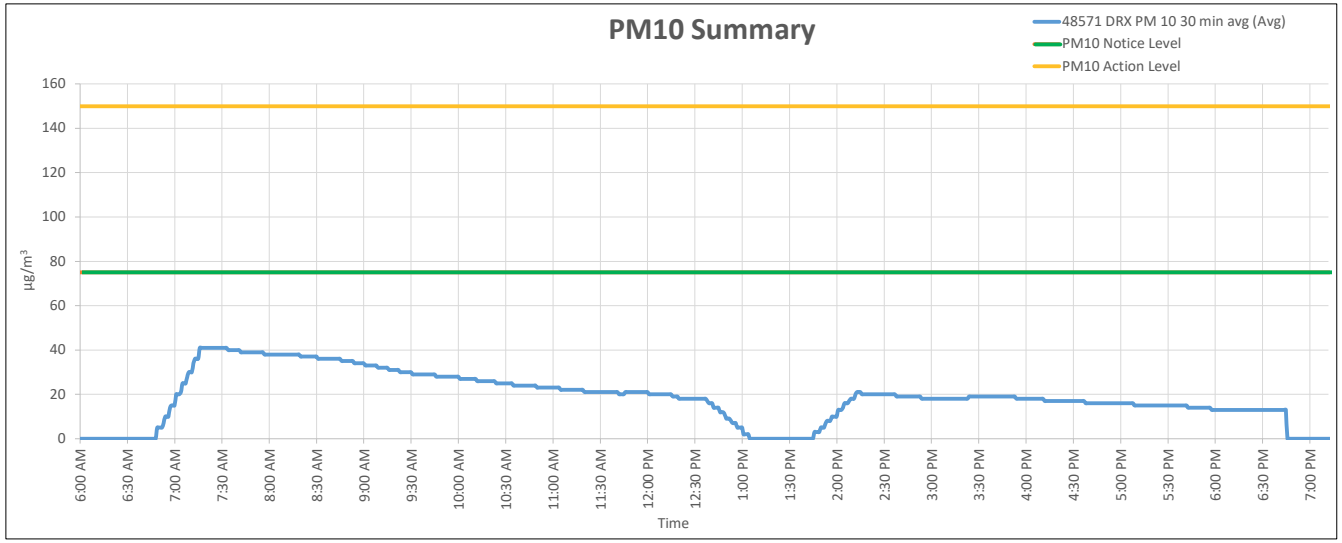
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:27 AM	5:57 PM	24.36	59.00	22.27	56.00

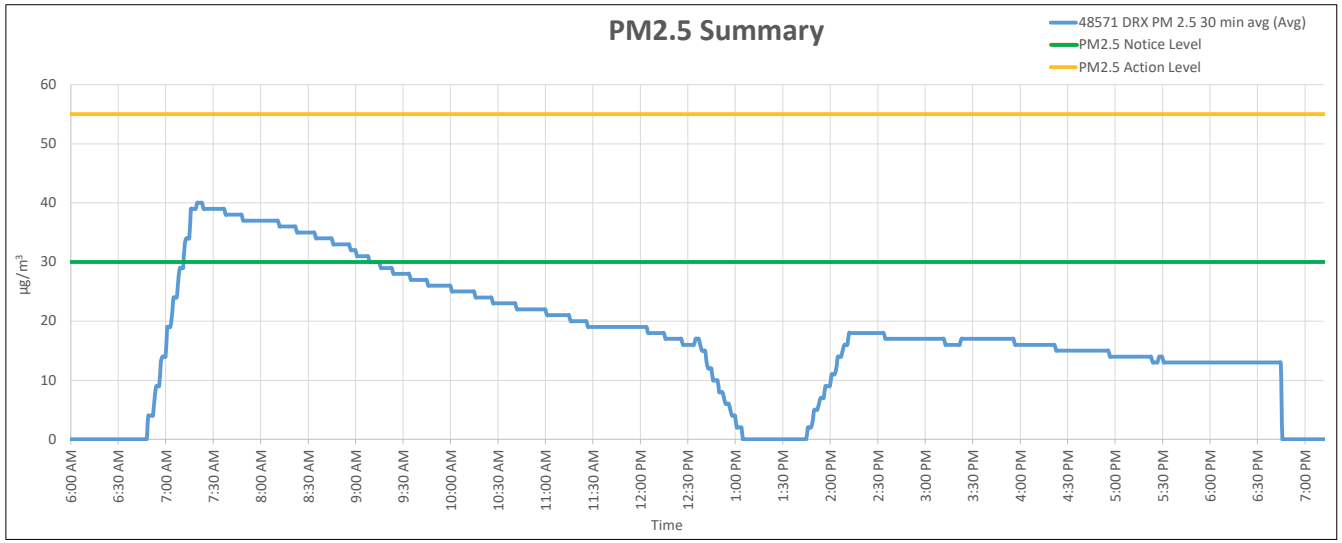




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 10, 2024

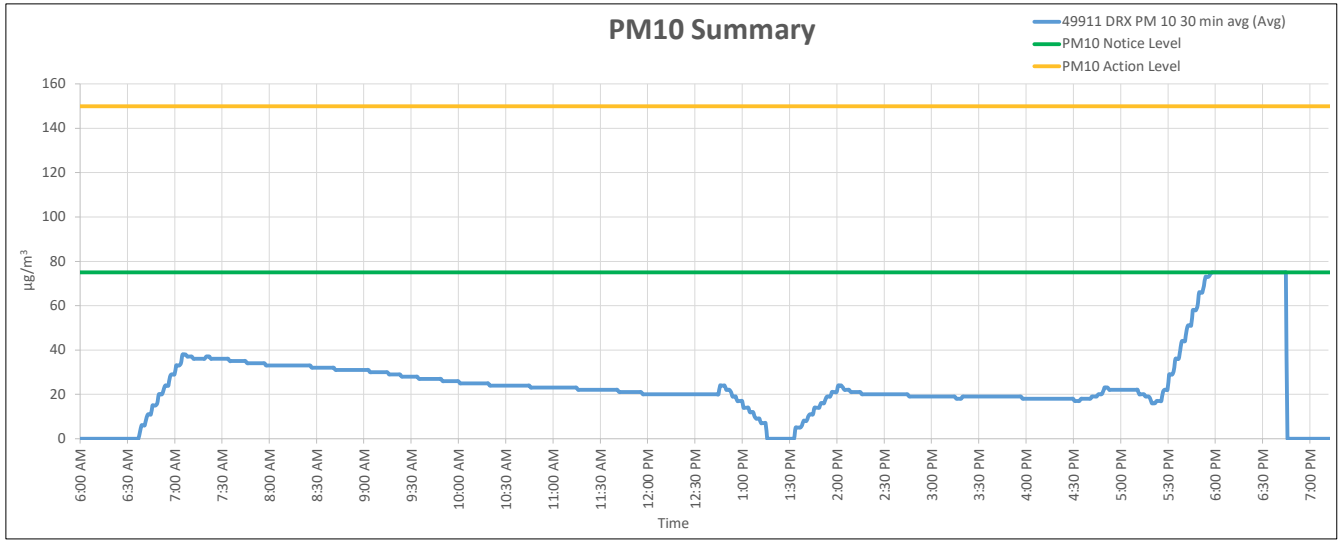
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	6:49 AM	6:45 PM	21.97	41.00	20.50	40.00

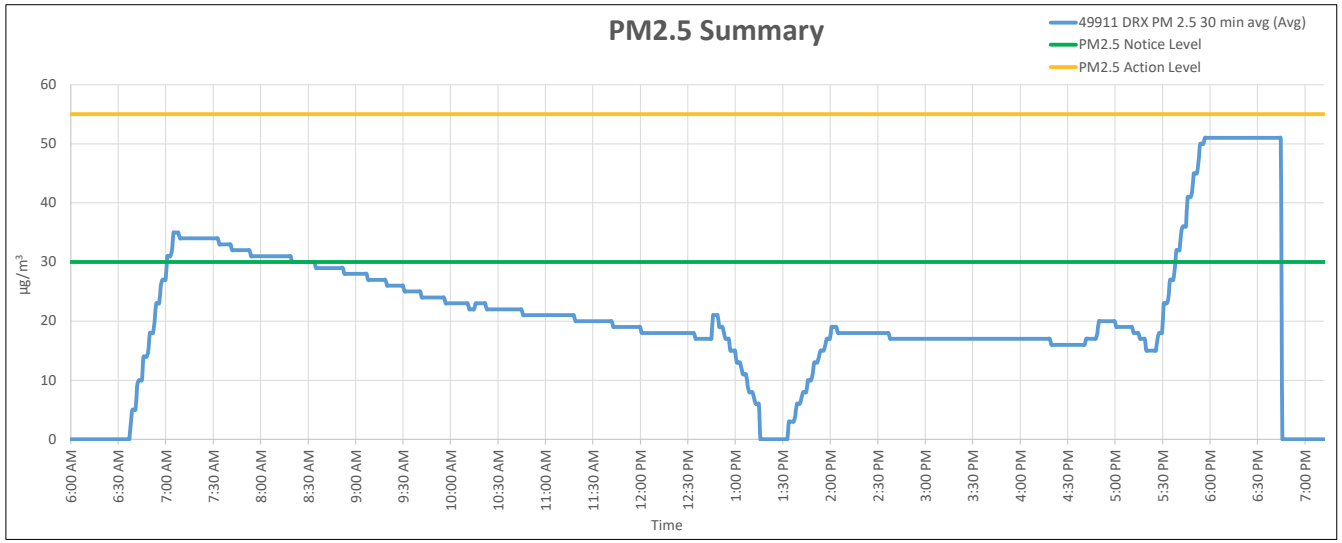




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 10, 2024

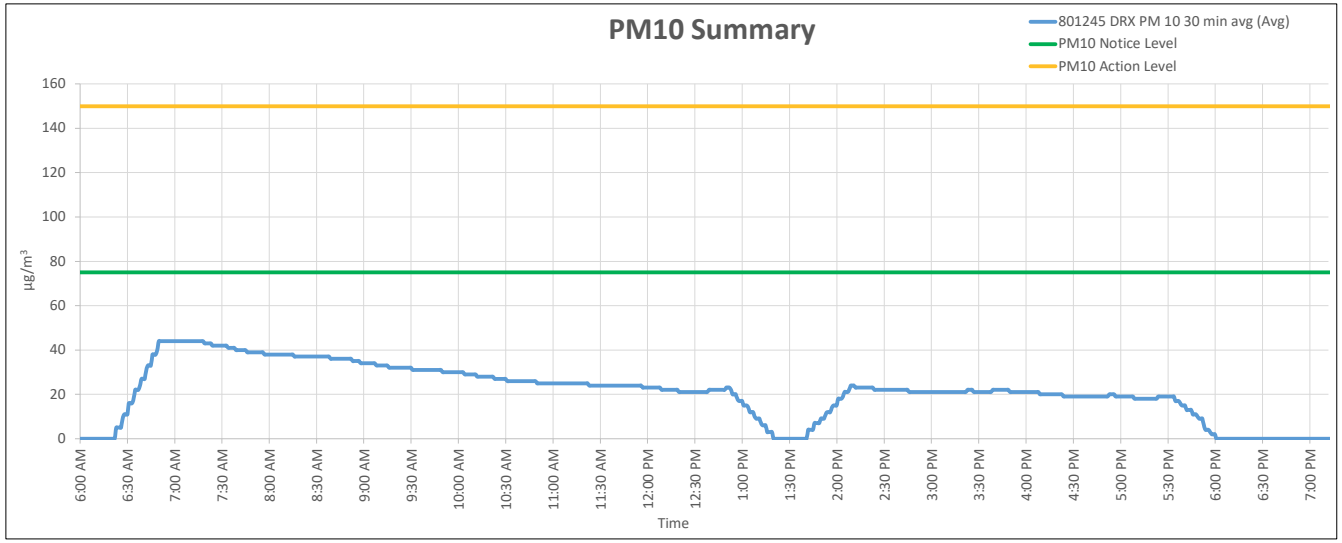
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:38 AM	6:45 PM	27.71	75.00	23.58	51.00





Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 10, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:23 AM	6:00 PM	25.17	44.00	23.93	43.00



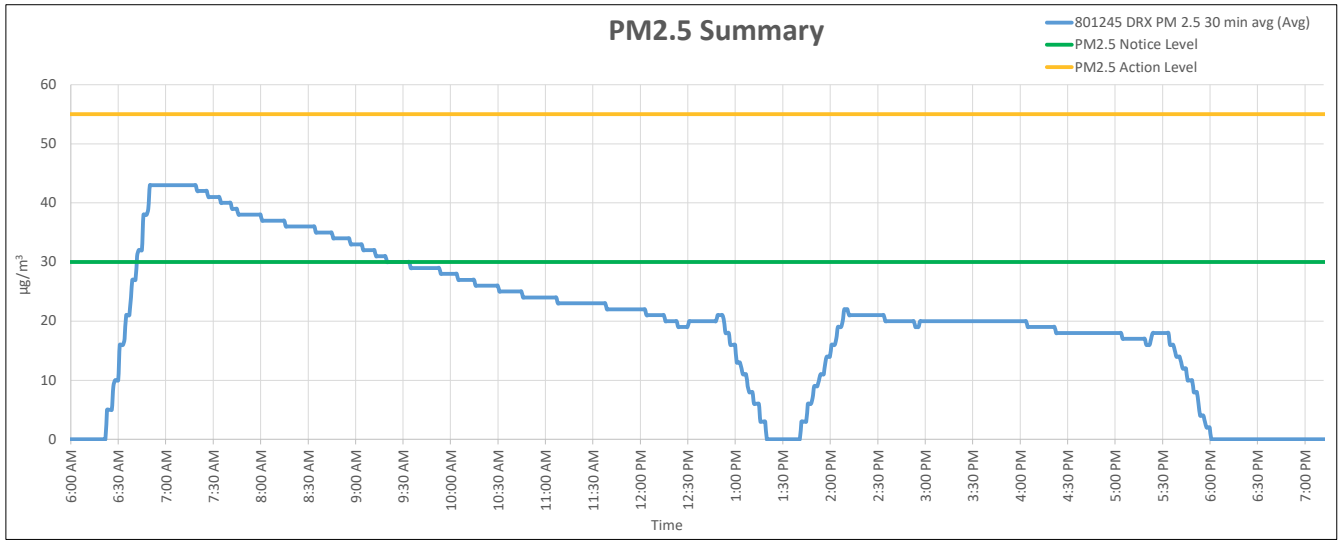


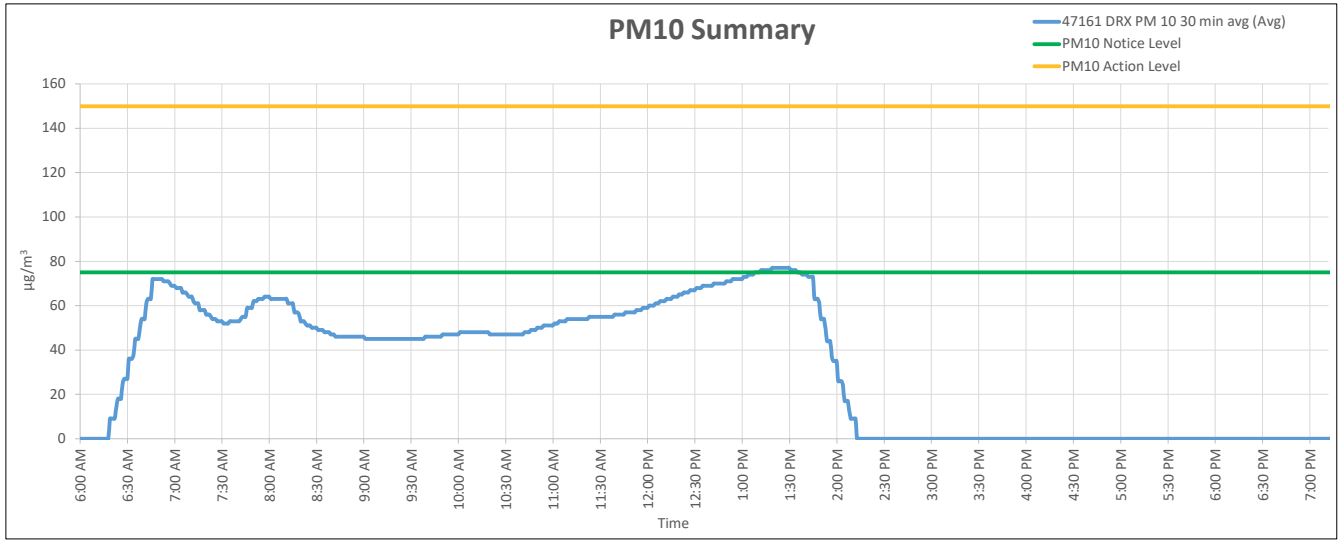
Table 5 – Direct Read Summary Union Pacific Houston Wood Preserving Works Houston, Texas							
Date	Modem #	PM_{10} Concentration ($\mu g/m^3$)			$PM_{2.5}$ Concentration ($\mu g/m^3$)		
		Min	Max	Average	Min	Max	Average
Week 3							
5/13/2024	48374	7.00	71.00	49.68	7.00	70.00	48.55
	47161	9.00	77.00	54.75	9.00	76.00	53.84
	48033	8.00	73.00	48.98	8.00	71.00	47.52
	48571	7.00	67.00	47.27	7.00	65.00	45.48
	48375	8.00	68.00	49.03	8.00	66.00	47.55
	801245	10.00	88.00	64.09	9.00	85.00	62.23
	49911	7.00	63.00	45.87	7.00	61.00	43.54
5/14/2024	48374	3.00	50.00	17.04	3.00	49.00	16.25
	47161	0.00	44.00	16.83	0.00	44.00	16.57
	48033	1.00	39.00	14.59	1.00	37.00	13.97
	48571	1.00	49.00	14.35	1.00	48.00	13.68
	48375	2.00	31.00	12.74	1.00	30.00	12.26
	801245	1.00	58.00	19.84	1.00	56.00	19.08
	49911	0.00	45.00	14.11	0.00	43.00	13.20
5/15/2024	48374	3.00	44.00	18.98	2.00	41.00	17.82
	47161	2.00	43.00	21.28	2.00	41.00	20.49
	48033	2.00	45.00	18.18	1.00	40.00	16.60
	48571	1.00	48.00	16.04	1.00	42.00	14.51
	48375	2.00	57.00	23.18	2.00	51.00	21.60
	801245	0.00	74.00	25.51	0.00	66.00	23.59
	49911	2.00	70.00	20.79	2.00	60.00	18.36
5/16/2024	48374	4.00	48.00	24.78	3.00	47.00	23.82
	47161	3.00	50.00	25.95	3.00	49.00	24.98
	48033	0.00	47.00	23.89	0.00	45.00	22.35
	48571	4.00	48.00	23.79	4.00	47.00	22.43
	48375	3.00	54.00	27.90	3.00	52.00	26.45
	801245	5.00	62.00	32.34	4.00	60.00	30.48
	49911	4.00	40.00	21.30	4.00	38.00	20.04
5/17/2024	48374	3.00	37.00	31.08	3.00	36.00	30.29
	47161	3.00	38.00	28.66	3.00	38.00	28.17
	48033	3.00	38.00	32.40	3.00	38.00	32.03
	48571	3.00	40.00	32.25	3.00	39.00	31.82
	48375	0.00	35.00	22.84	0.00	31.00	20.14
	801245	0.00	56.00	37.99	0.00	55.00	37.00
	49911	0.00	35.00	22.88	0.00	34.00	21.75

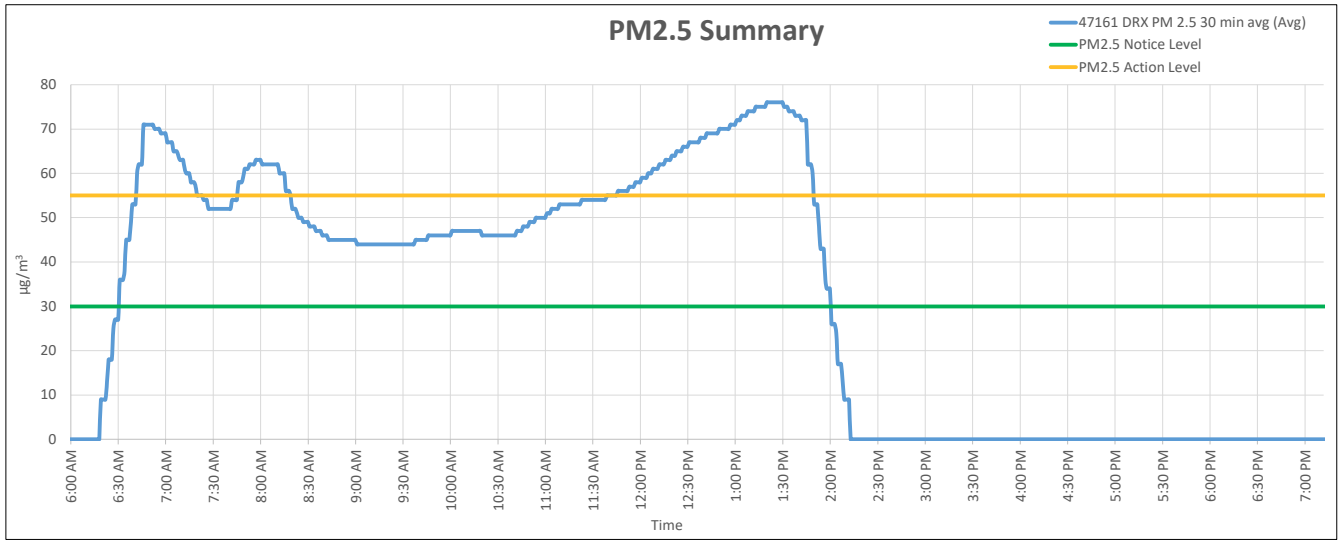
Note:

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
Houston Texas
Air Monitoring Values
Monday, May 13, 2024

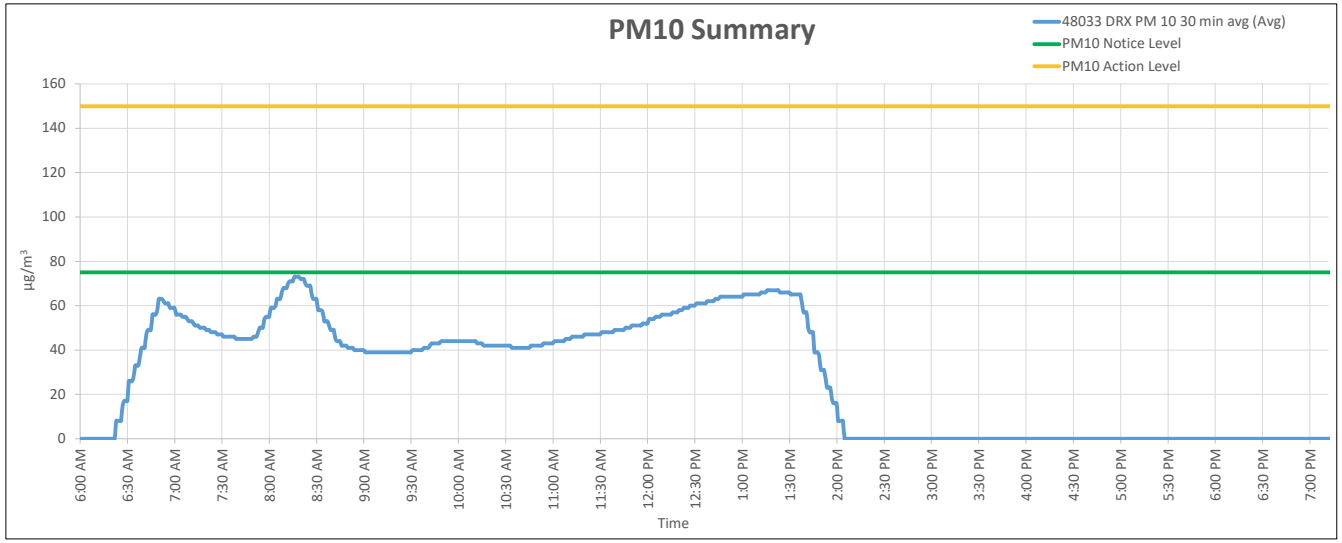
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:19 AM	2:12 PM	54.75	77.00	53.84	76.00

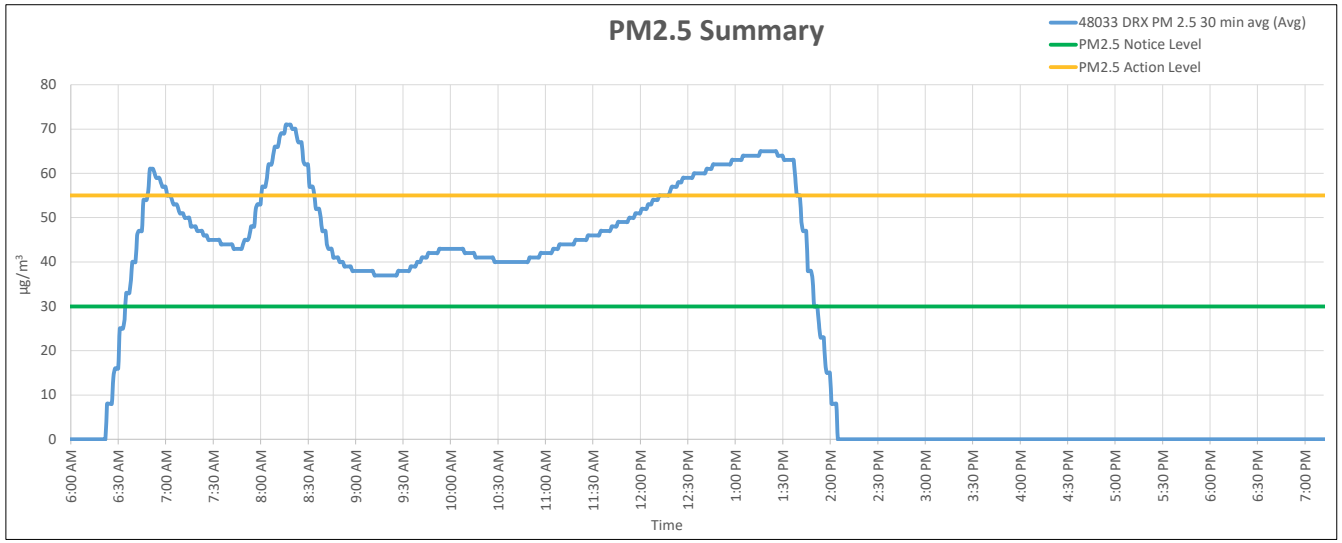




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 13, 2024

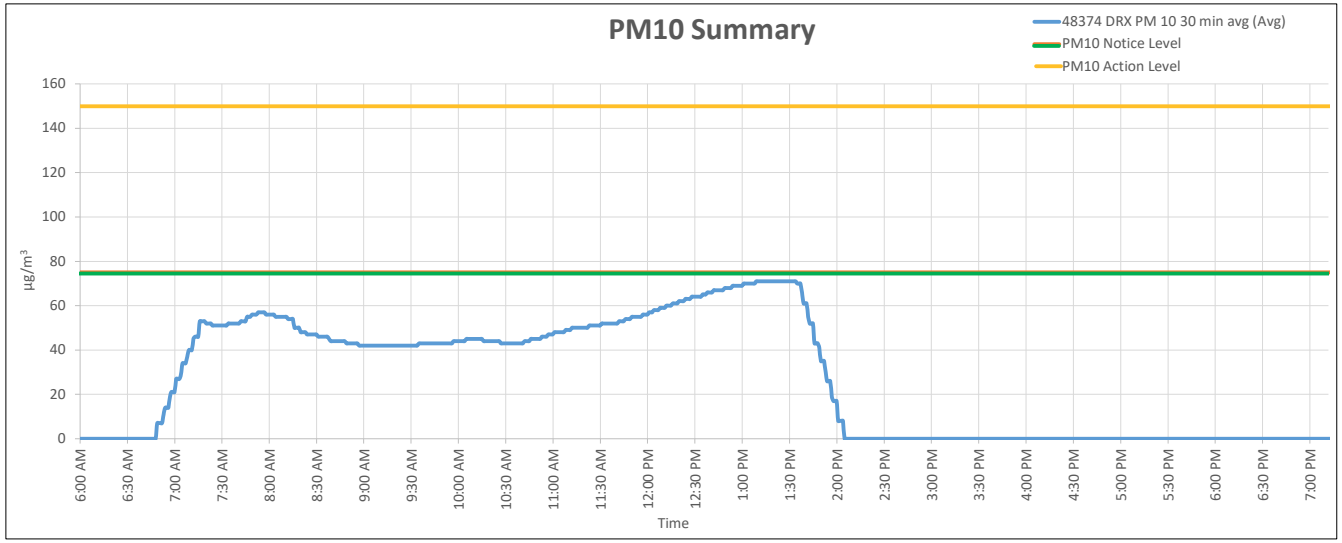
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:23 AM	2:04 PM	49.00	73.00	47.54	71.00

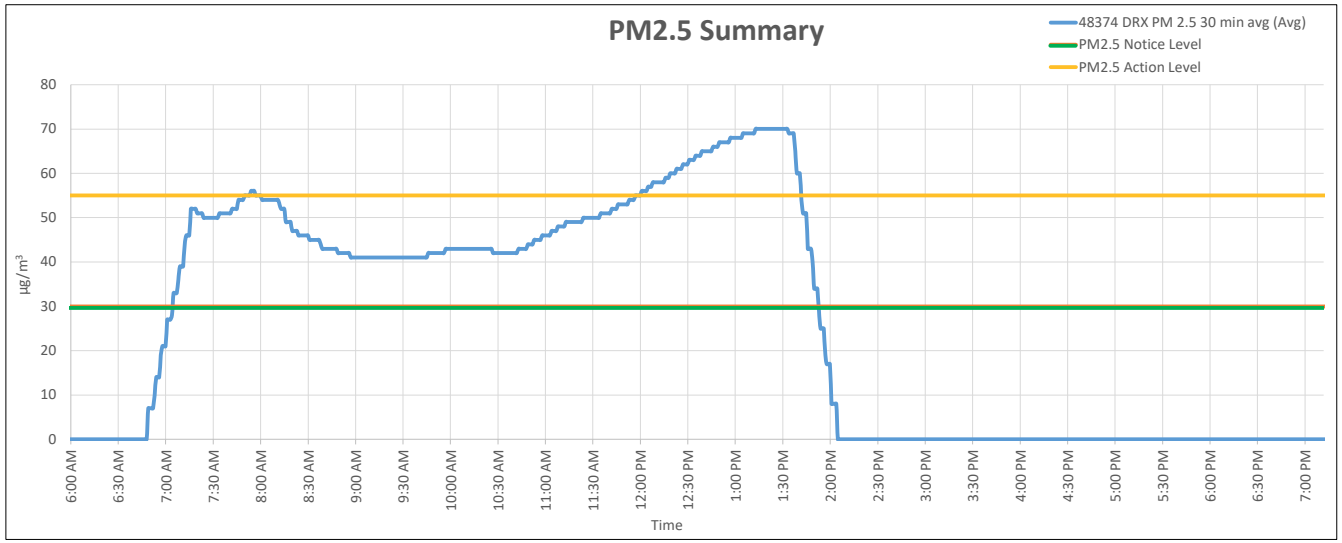




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 13, 2024

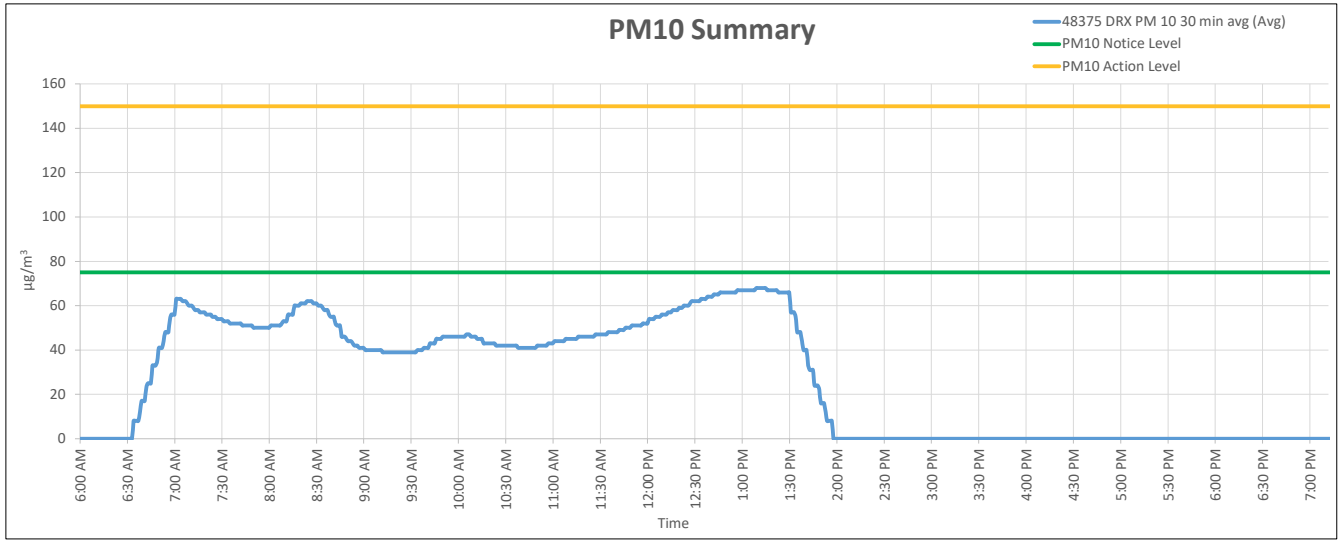
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:49 AM	2:04 PM	49.71	71.00	48.58	70.00

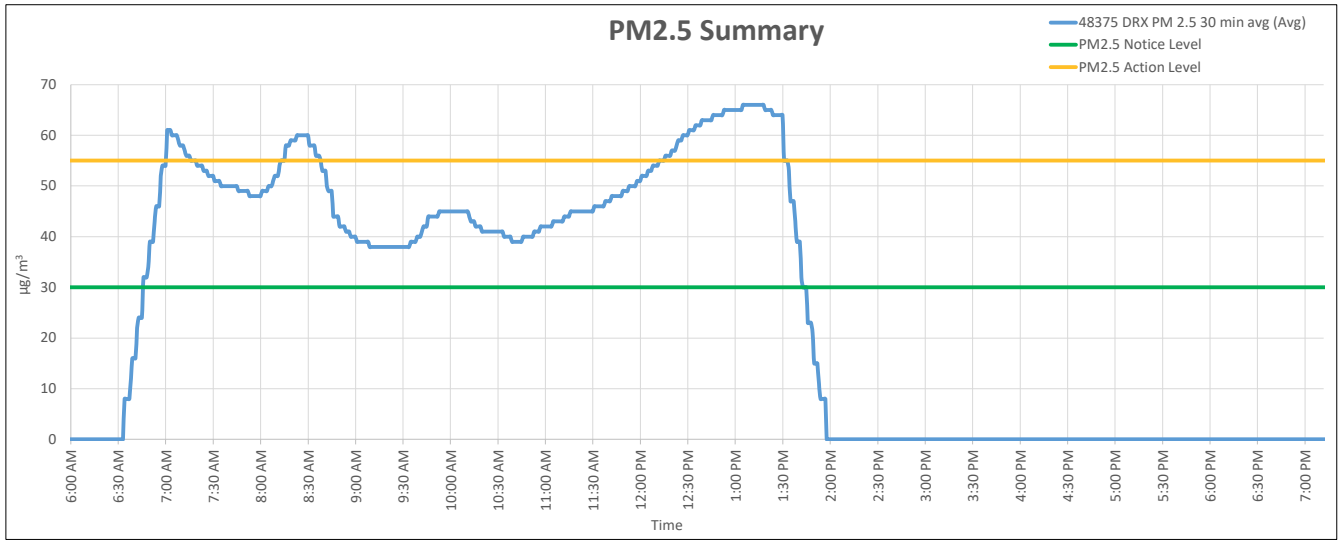




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 13, 2024

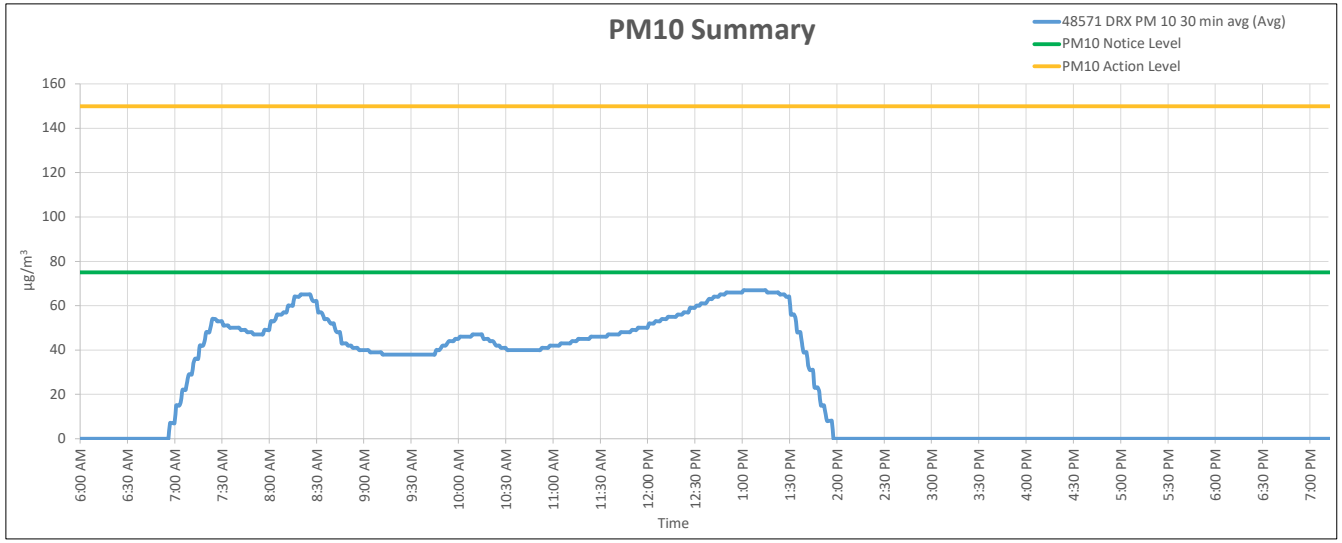
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:34 AM	1:57 PM	49.03	68.00	47.55	66.00

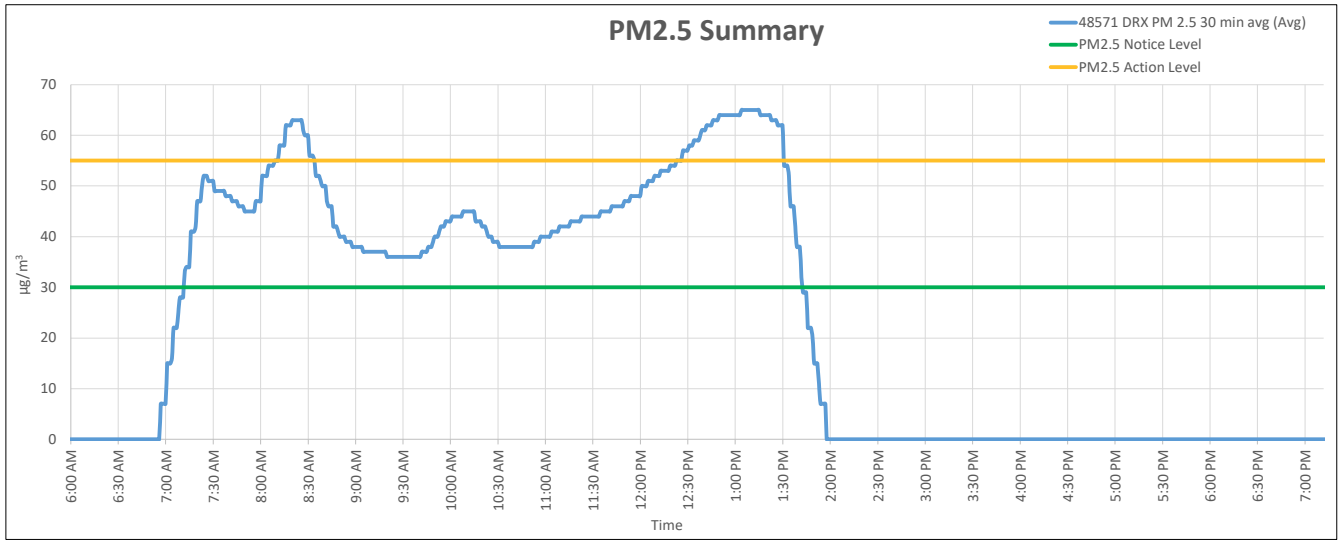




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 13, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	6:57 AM	1:57 PM	47.29	67.00	45.50	65.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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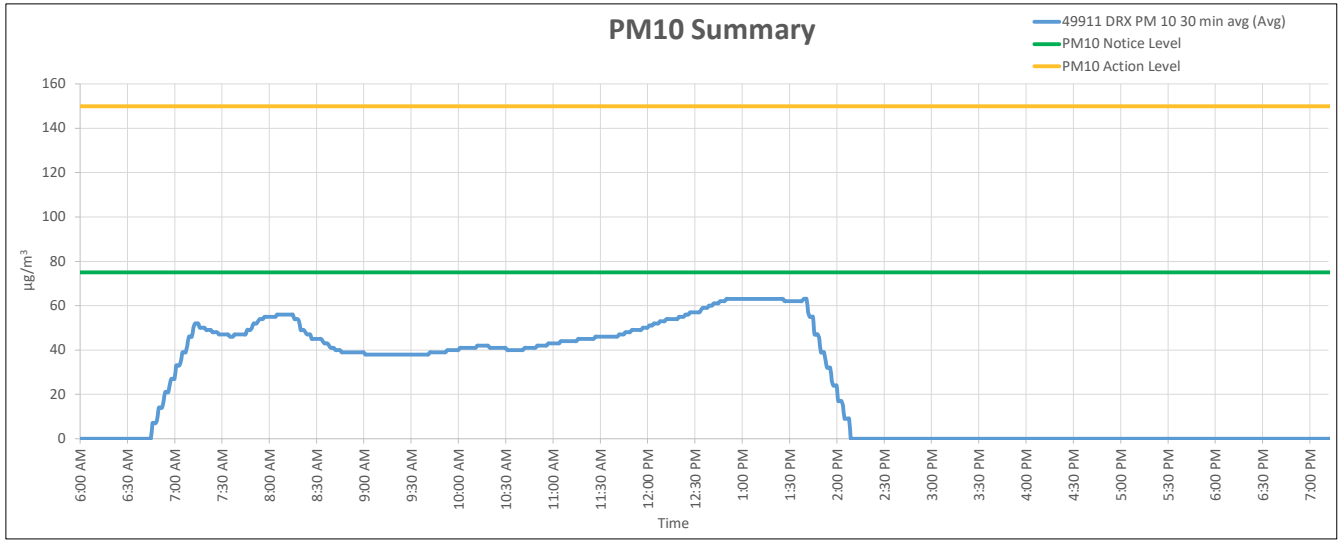
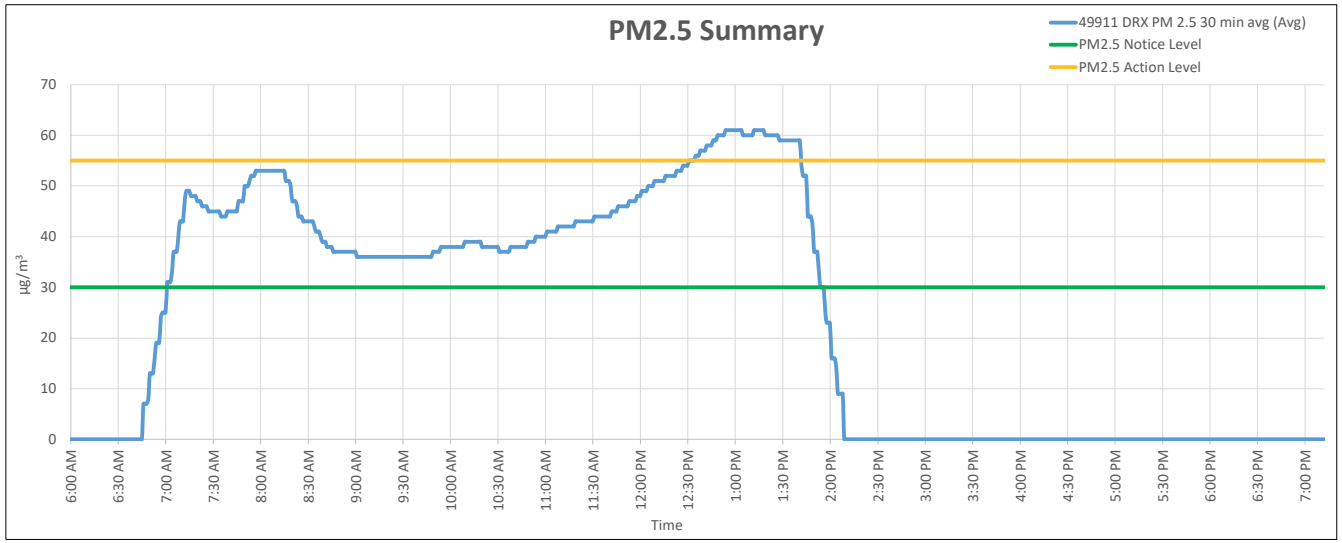
Air Monitoring Values
Monday, May 13, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:46 AM	2:08 PM	45.87	63.00	43.54	61.00





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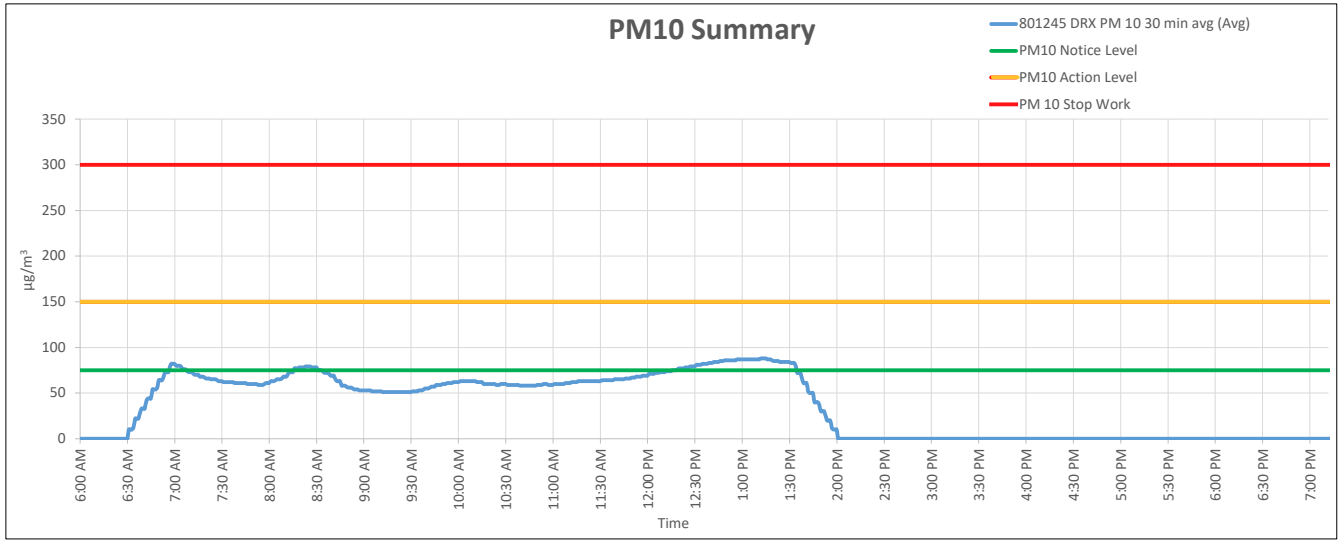
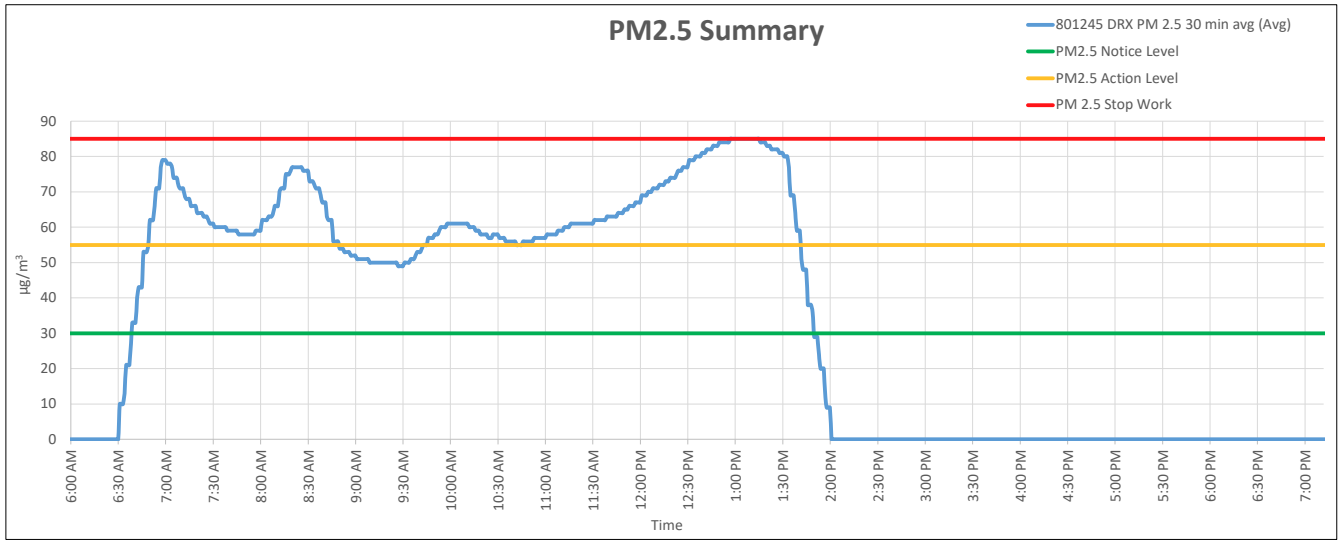
Air Monitoring Values
Monday, May 13, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:31 AM	2:00 PM	64.09	88.00	62.23	85.00





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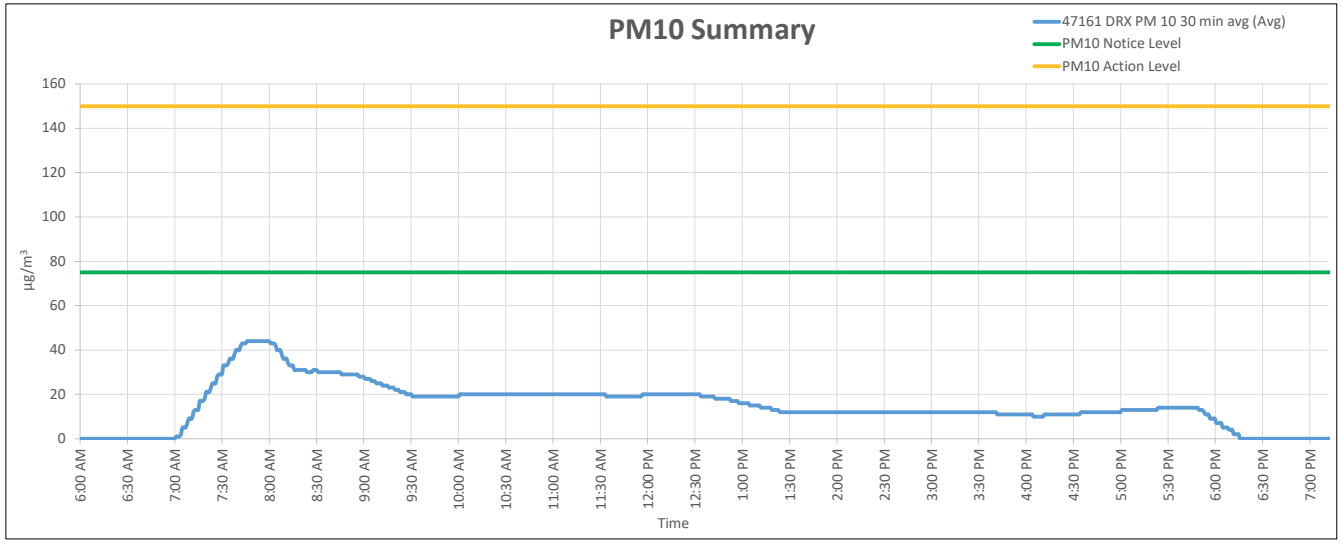
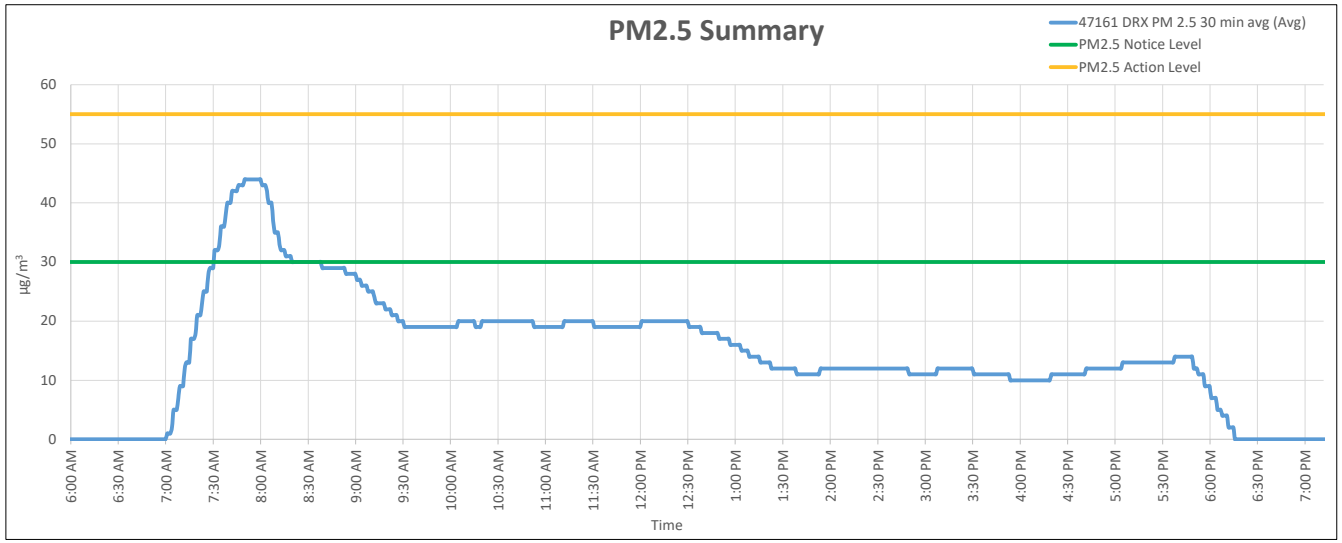
Air Monitoring Values
Tuesday, May 14, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	7:01 AM	6:15 PM	17.95	44.00	17.67	44.00





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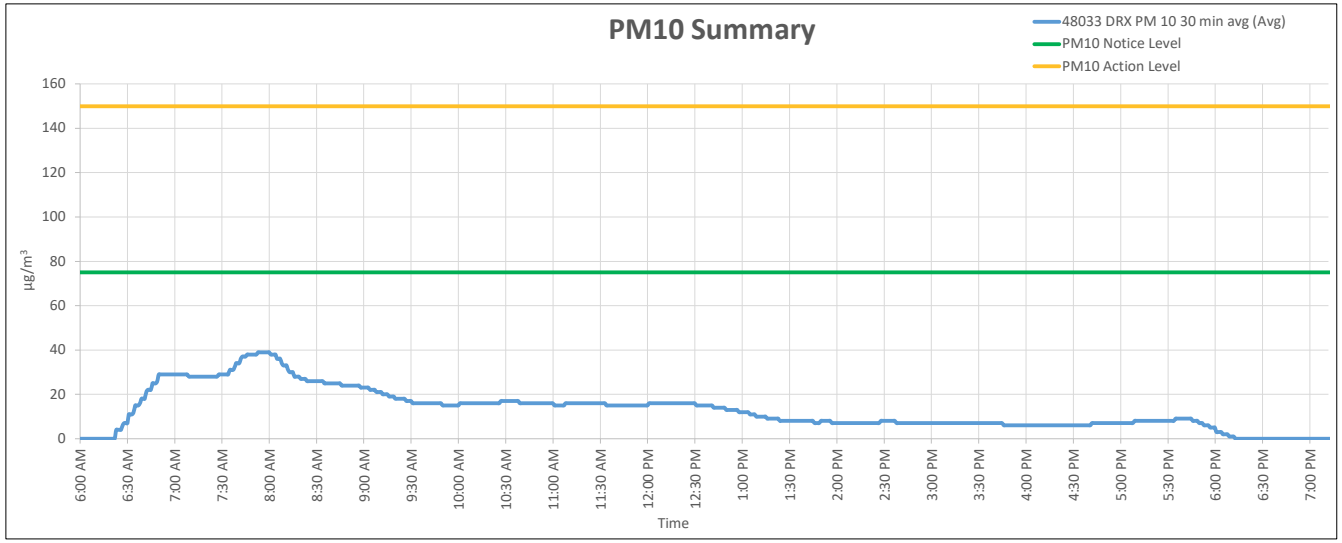
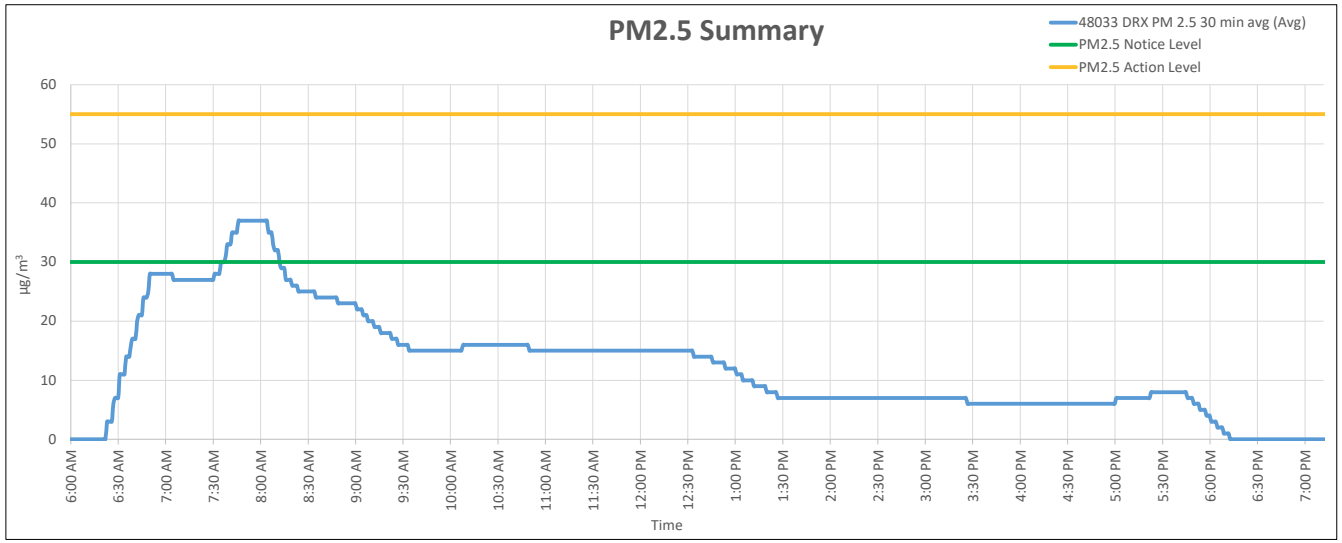
Air Monitoring Values
Tuesday, May 14, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:23 AM	6:08 PM	14.59	39.00	13.97	37.00





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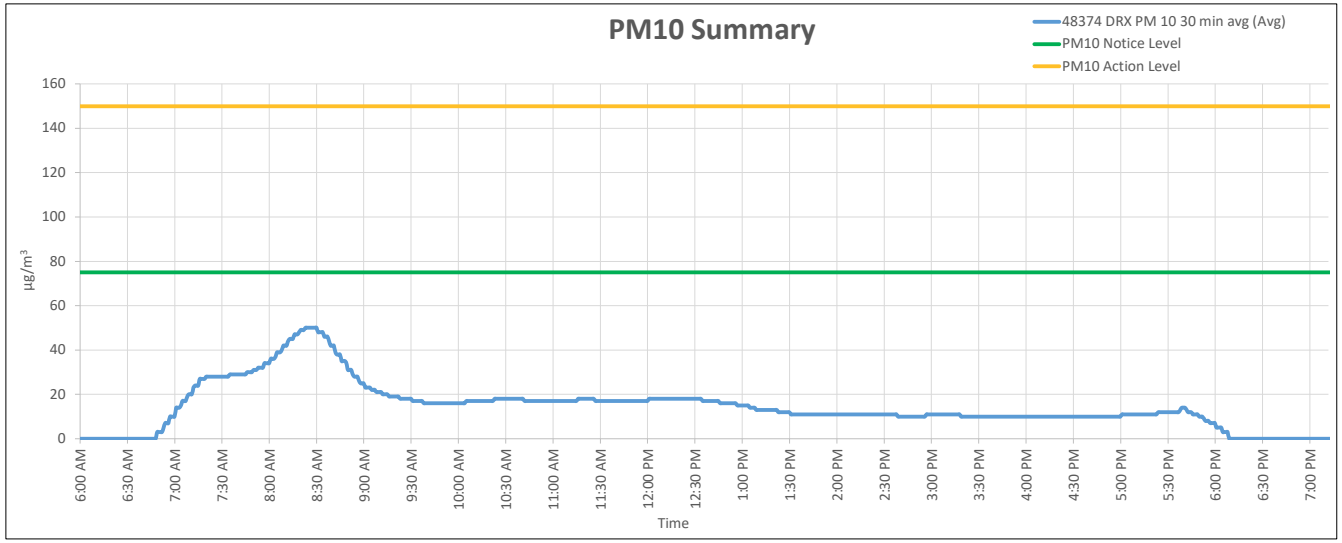
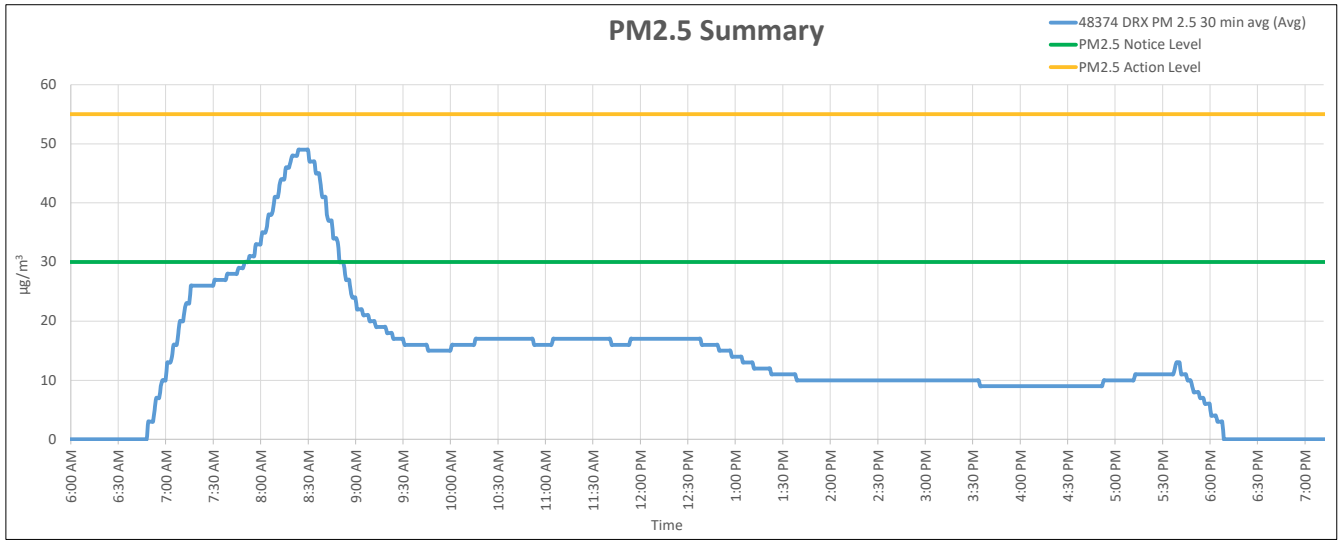
Air Monitoring Values
Tuesday, May 14, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:49 AM	6:08 PM	17.04	50.00	16.25	49.00





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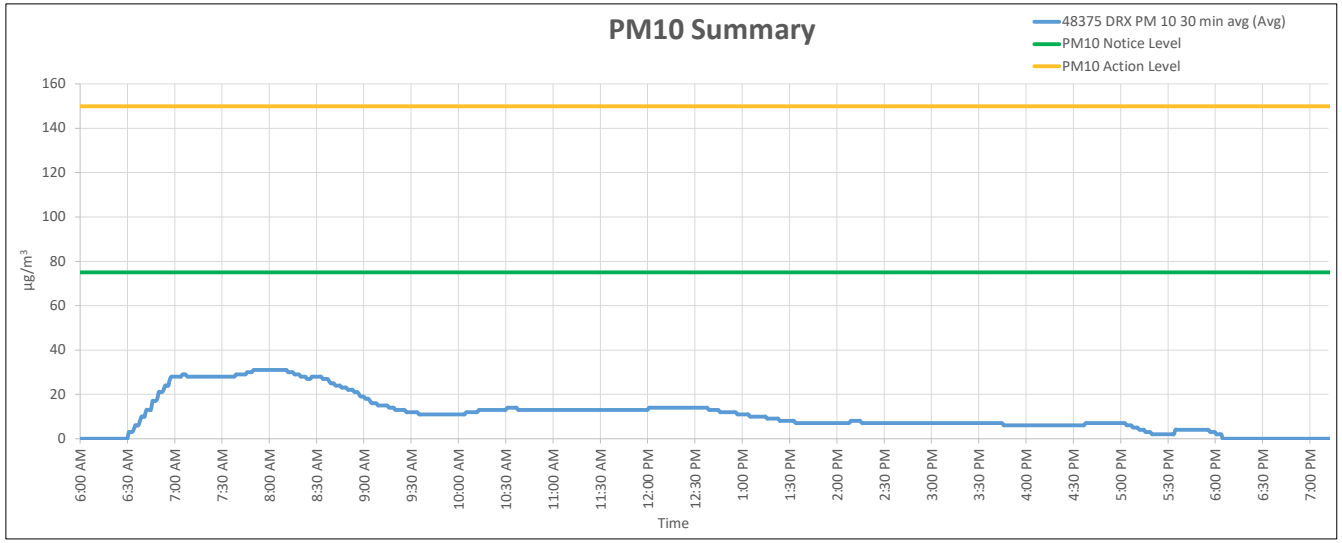
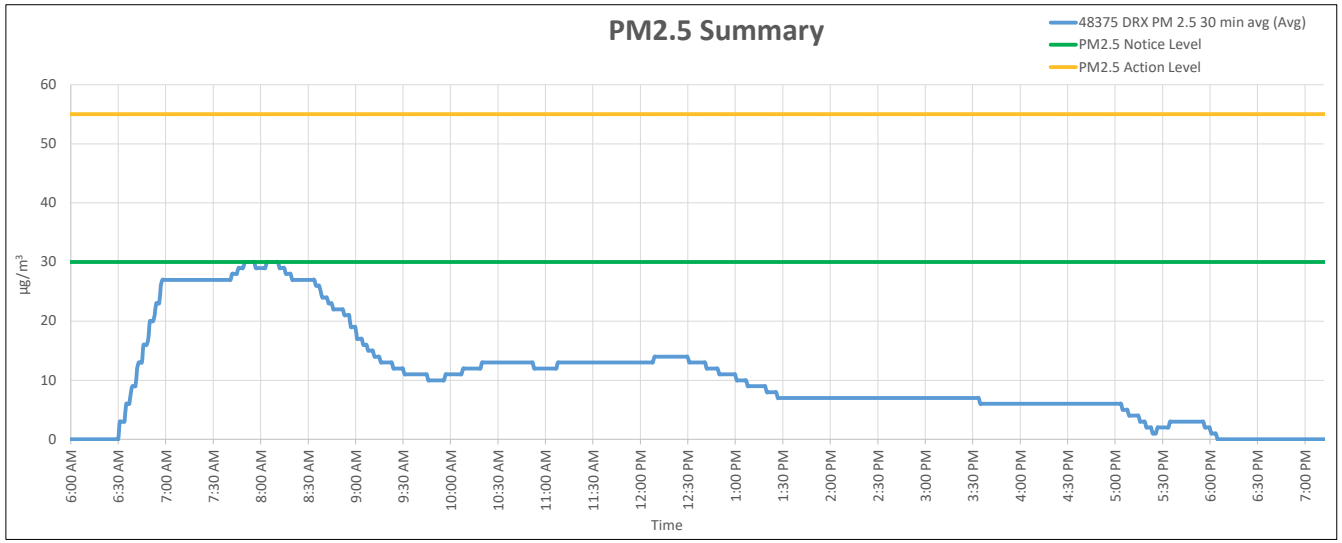
Tuesday, May 14, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:31 AM	6:04 PM	12.74	31.00	12.26	30.00





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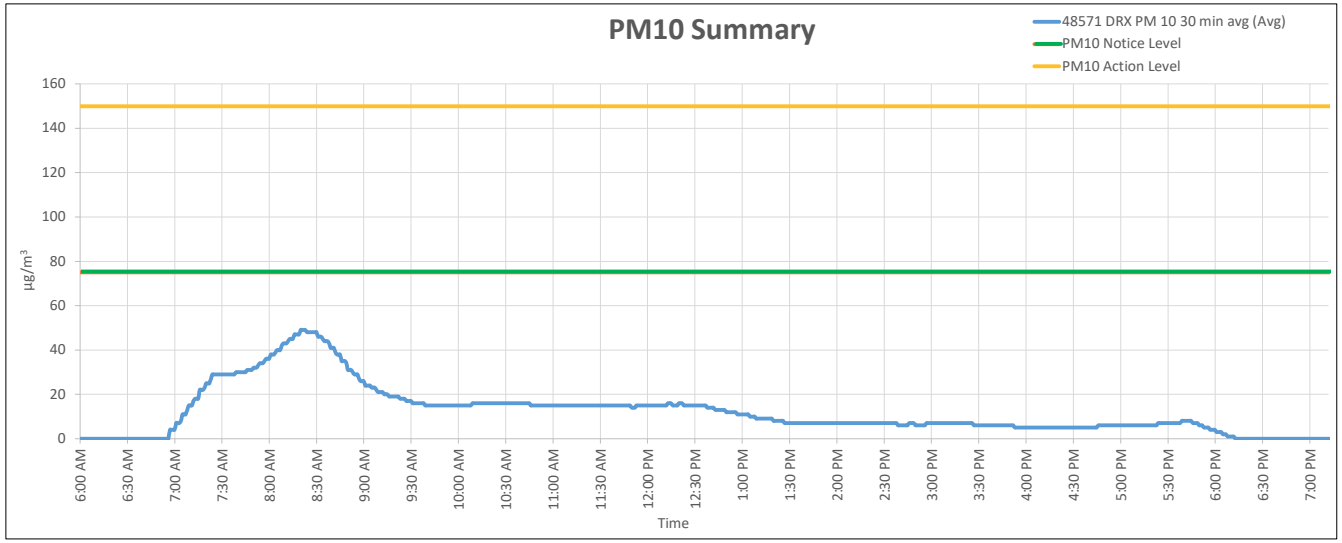
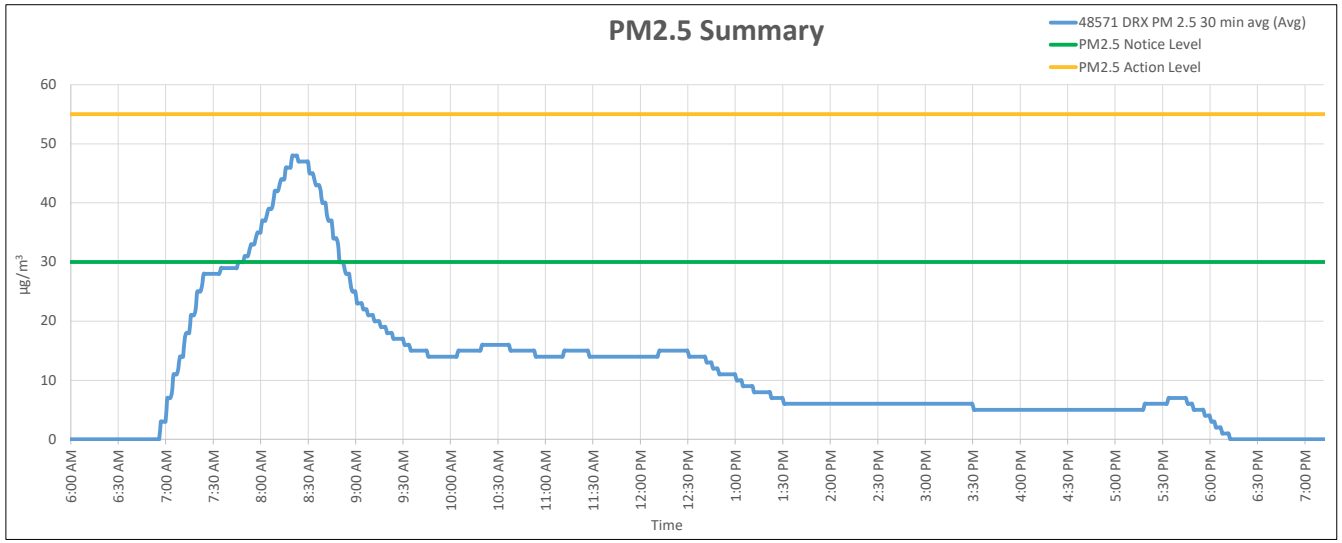
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	6:57 AM	6:07 PM	14.35	49.00	13.68	48.00





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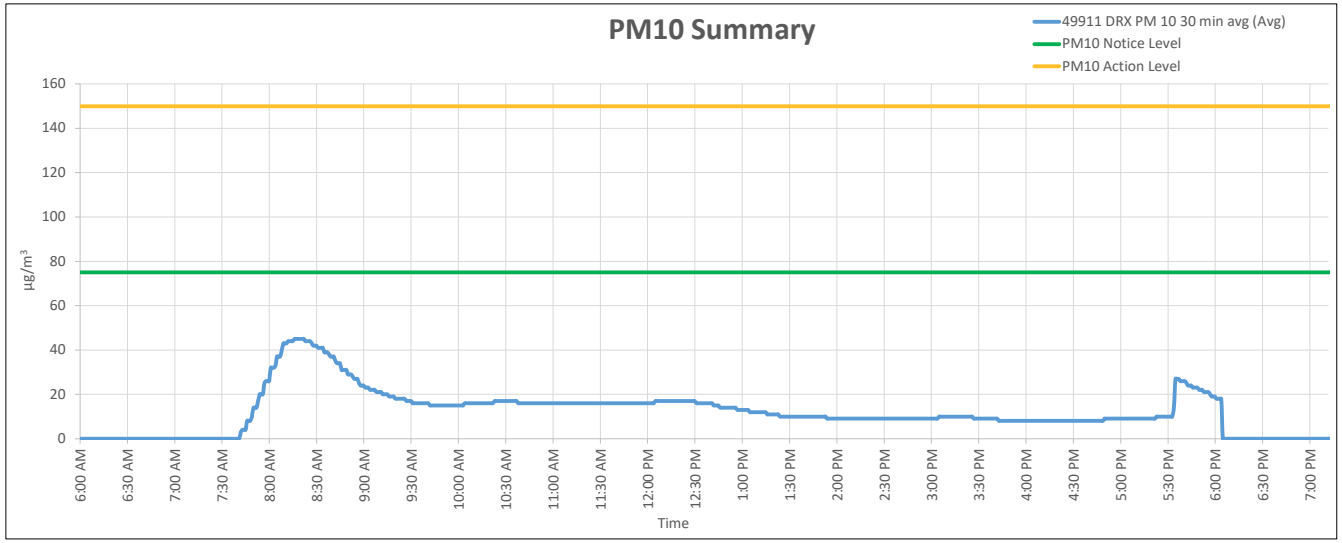
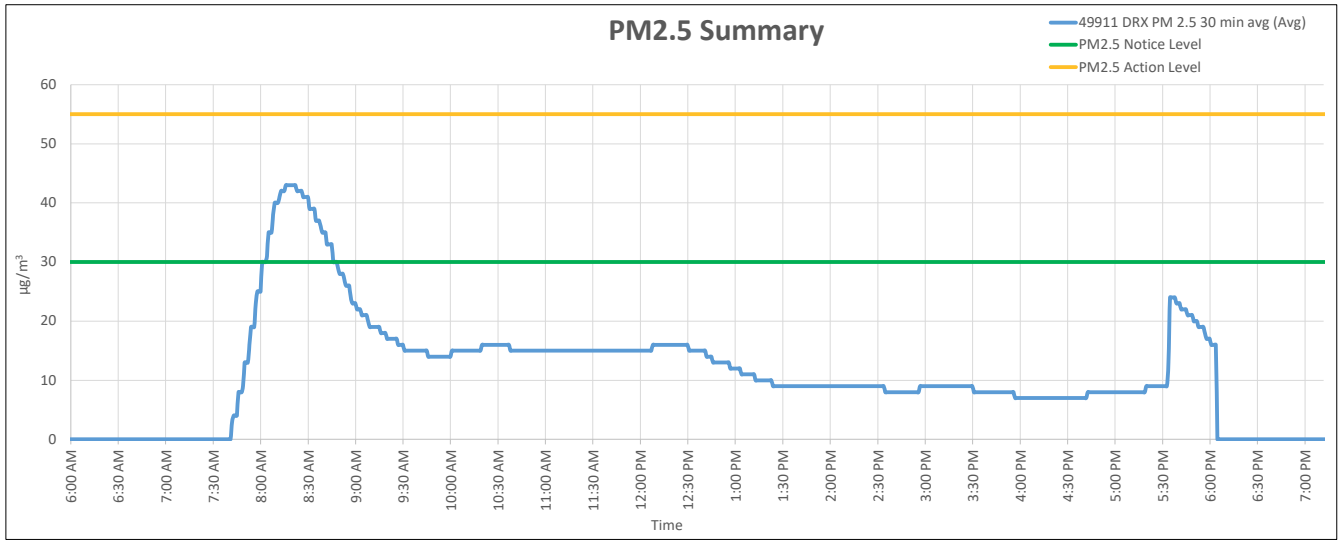
Air Monitoring Values
Tuesday, May 14, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	7:42 AM	6:04 PM	15.47	45.00	14.47	43.00





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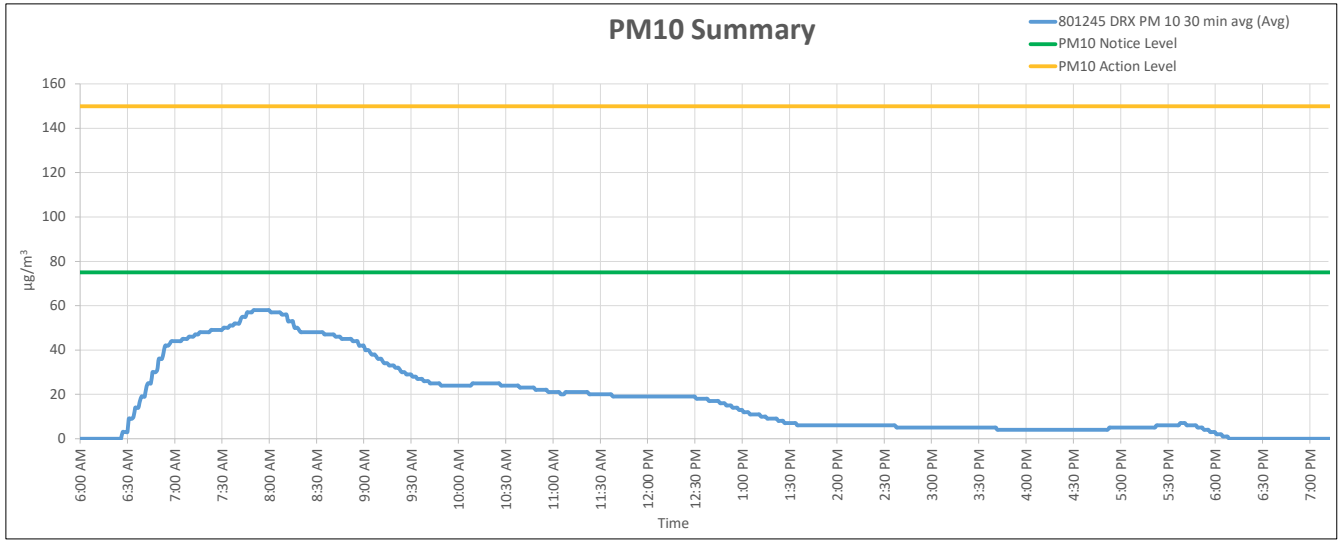
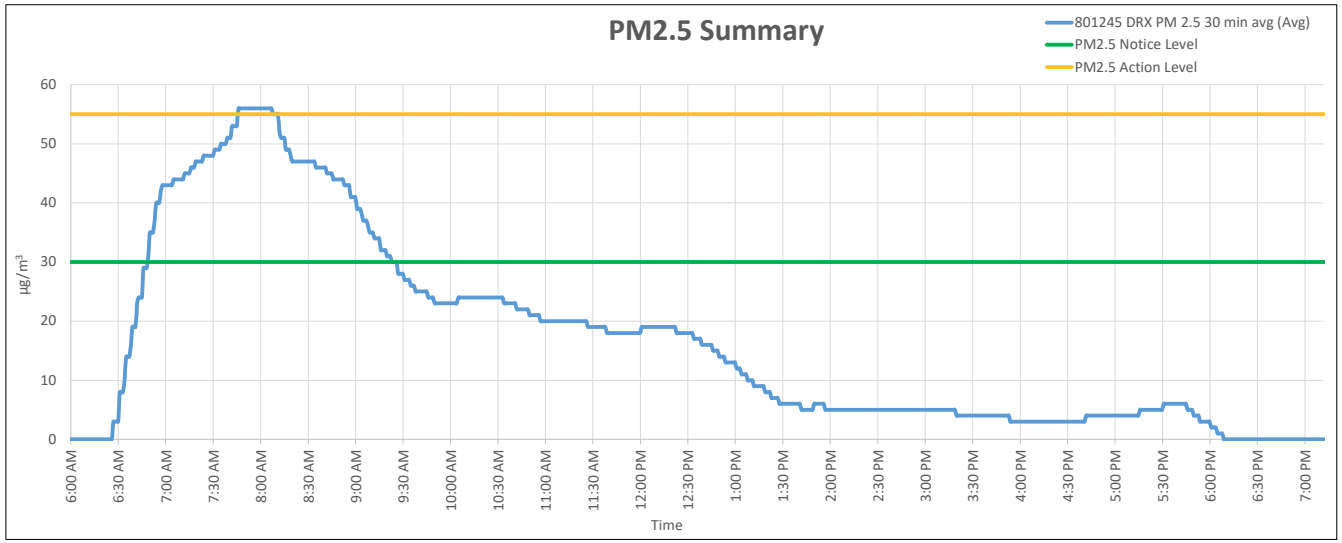
Air Monitoring Values
Tuesday, May 14, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:27 AM	6:04 PM	19.84	58.00	19.08	56.00





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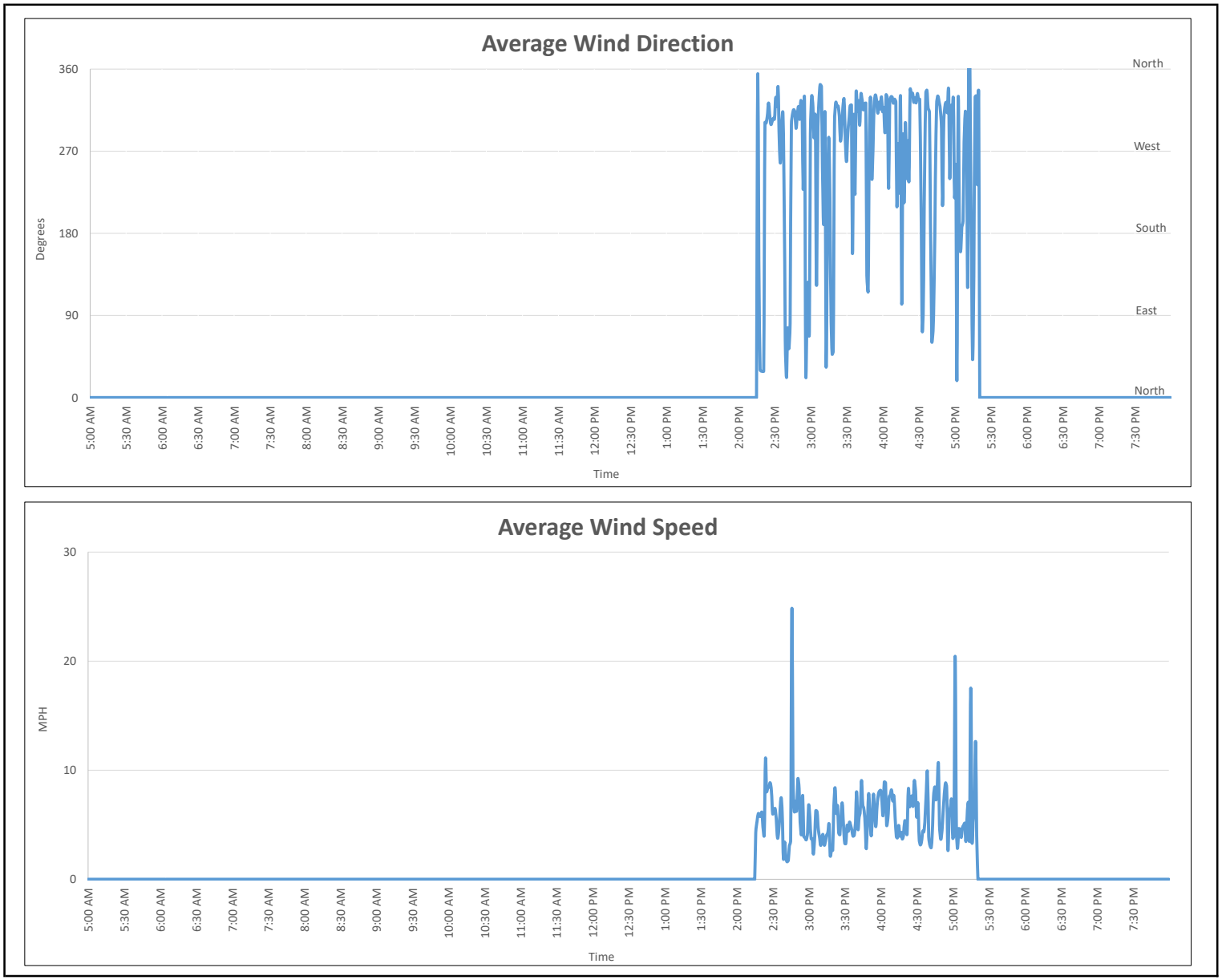
Wednesday, May 15, 2024



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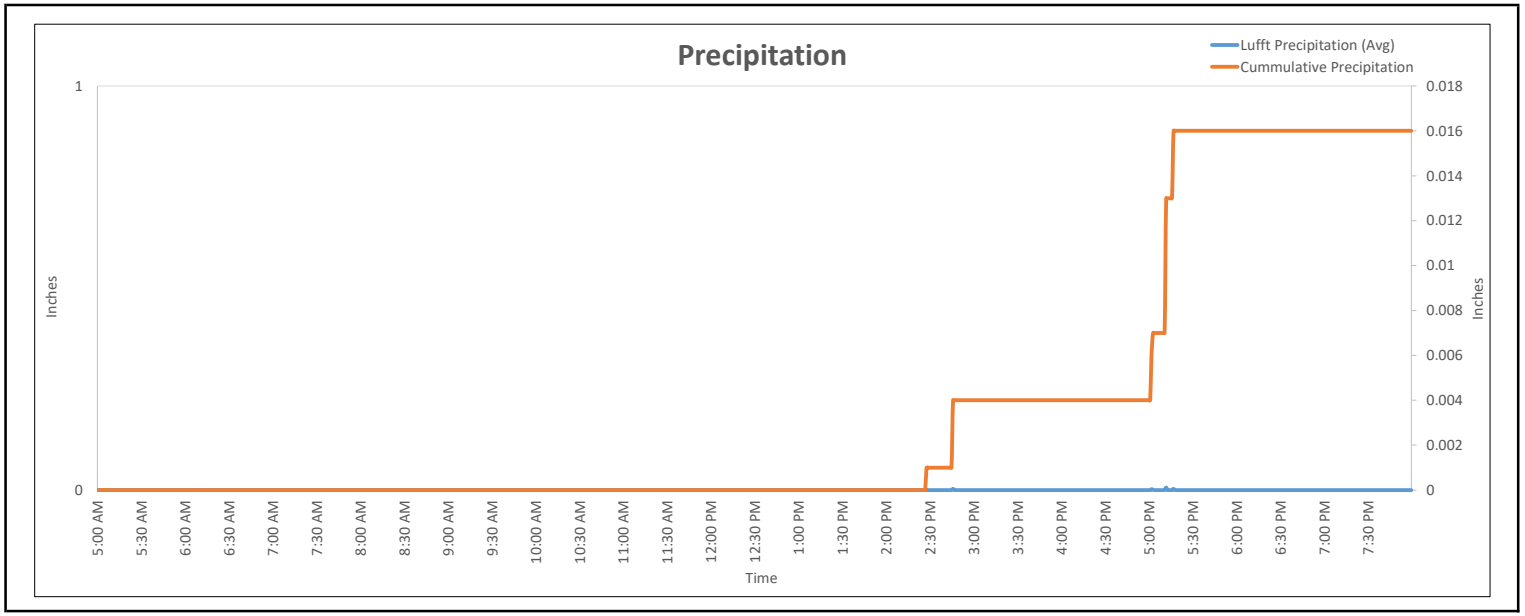
Weather Daily Summary
Wednesday, May 15, 2024



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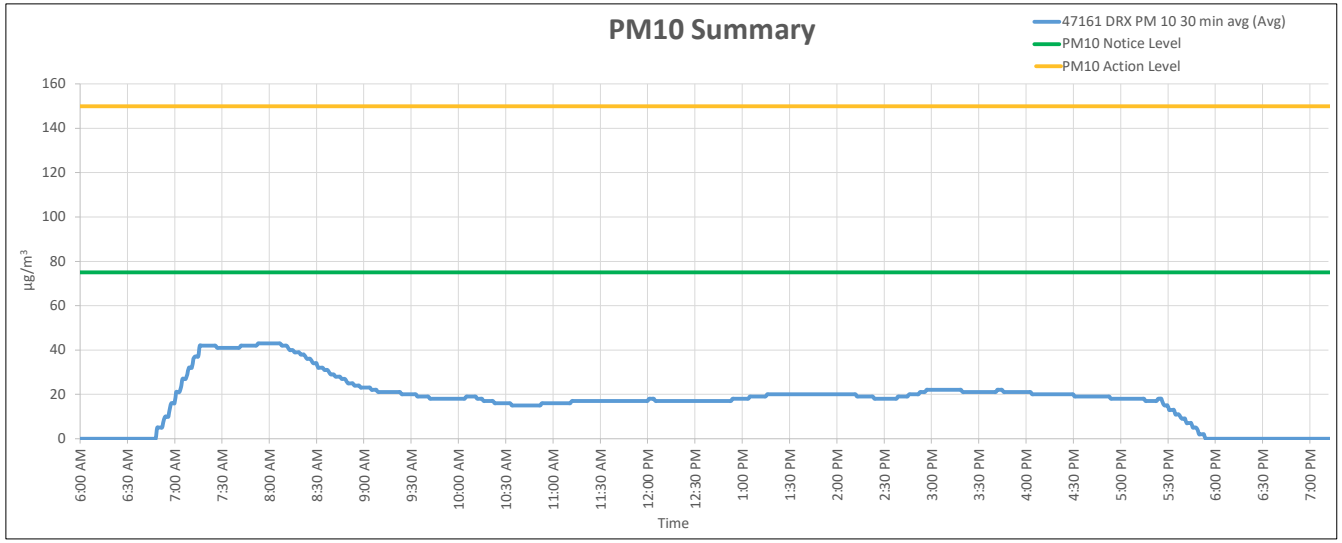
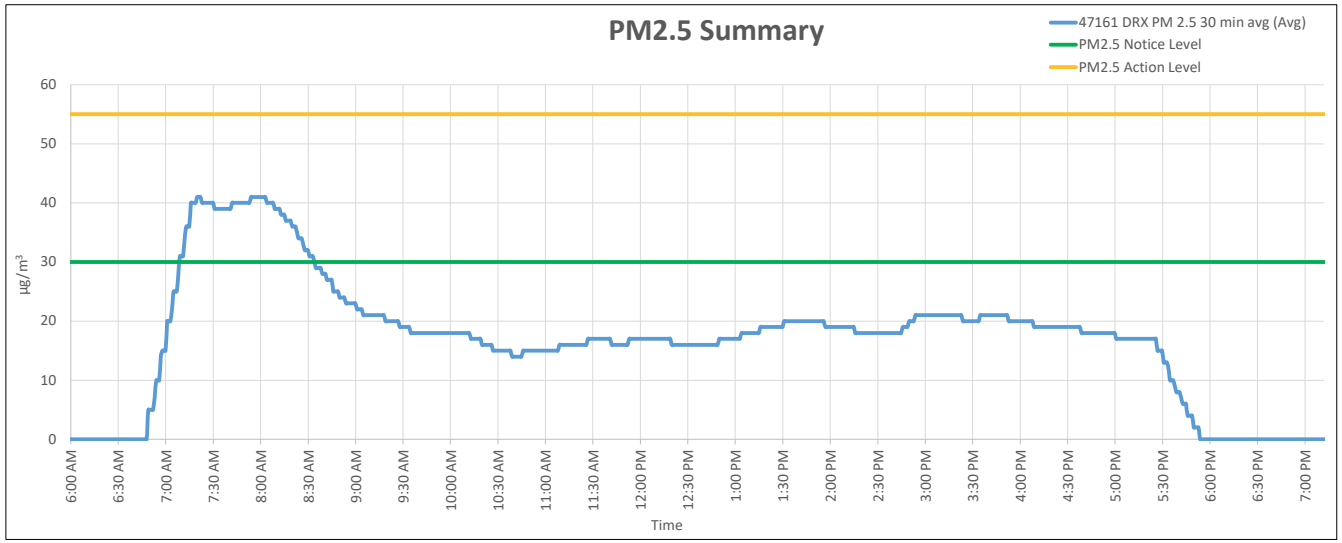
Air Monitoring Values
Wednesday, May 15, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:49 AM	5:53 PM	21.28	43.00	20.49	41.00





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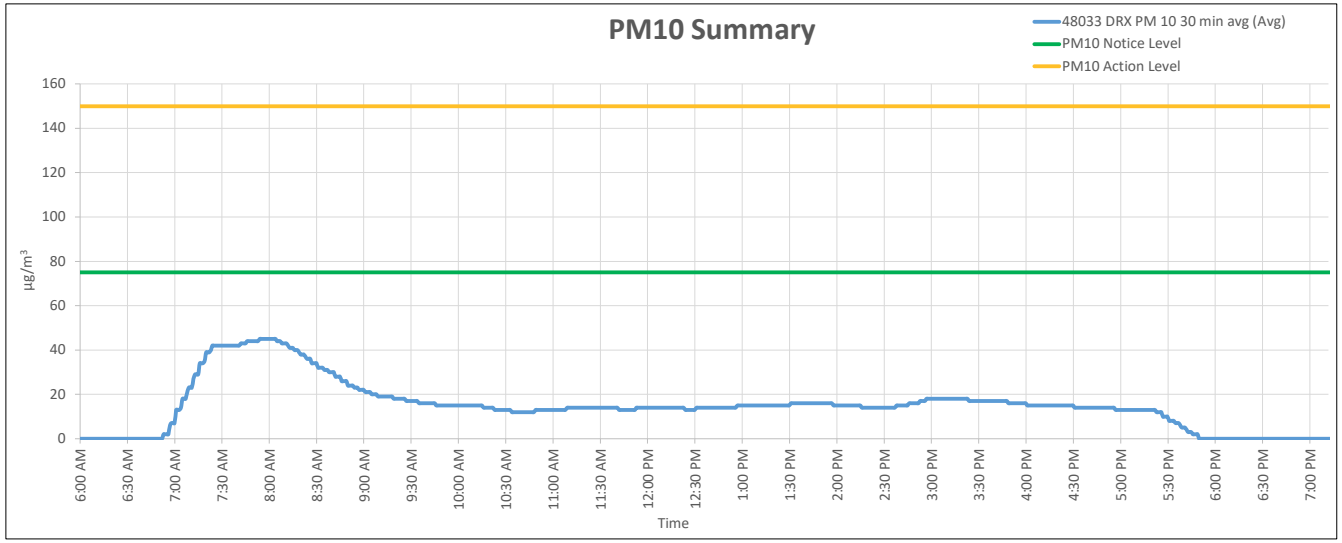
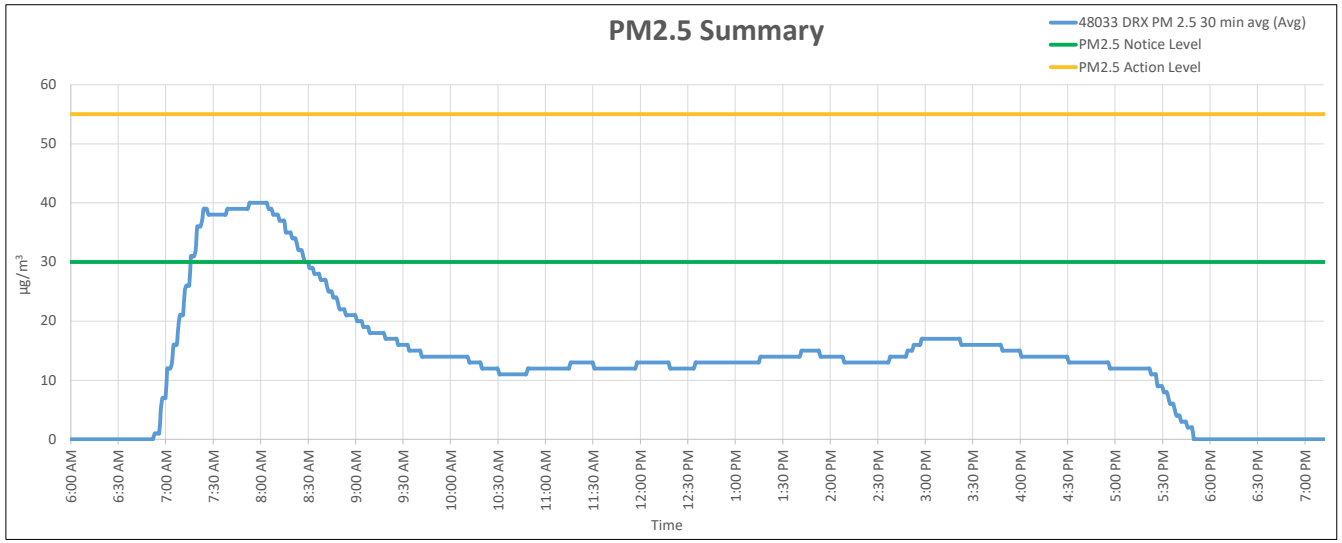
Air Monitoring Values
Wednesday, May 15, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:53 AM	5:49 PM	18.18	45.00	16.60	40.00





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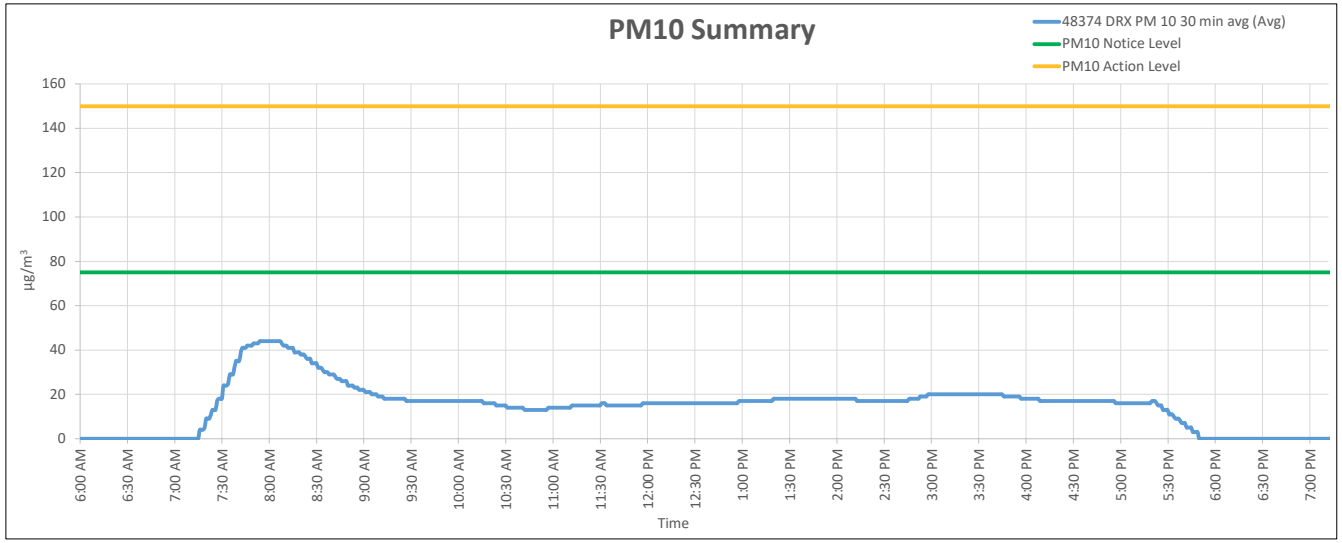
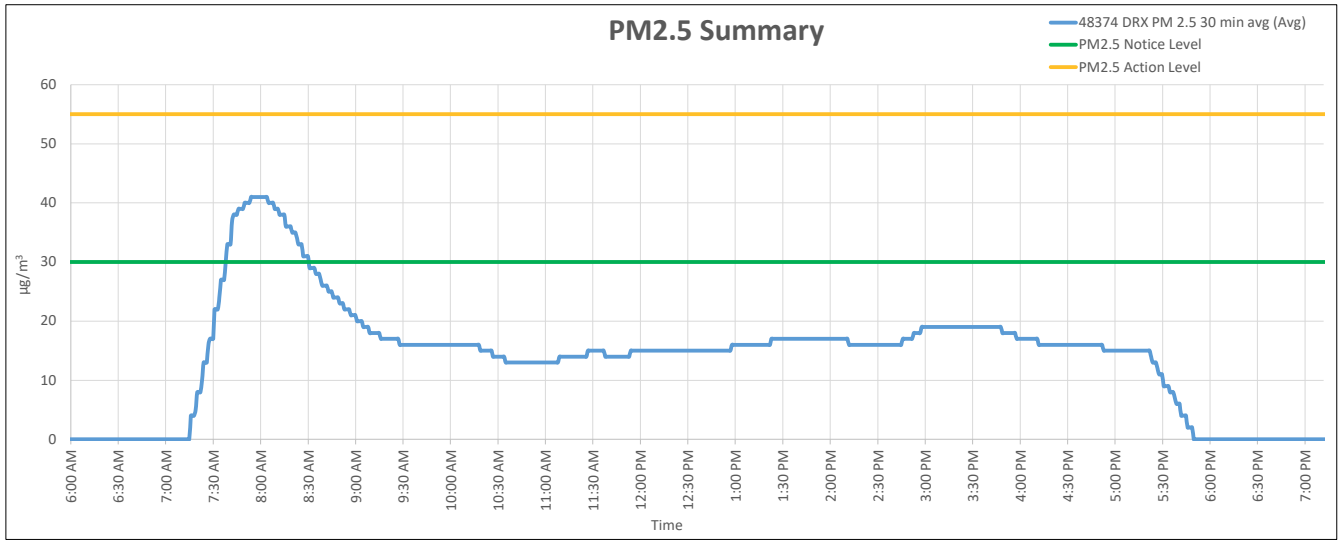
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	7:16 AM	5:49 PM	18.98	44.00	17.82	41.00





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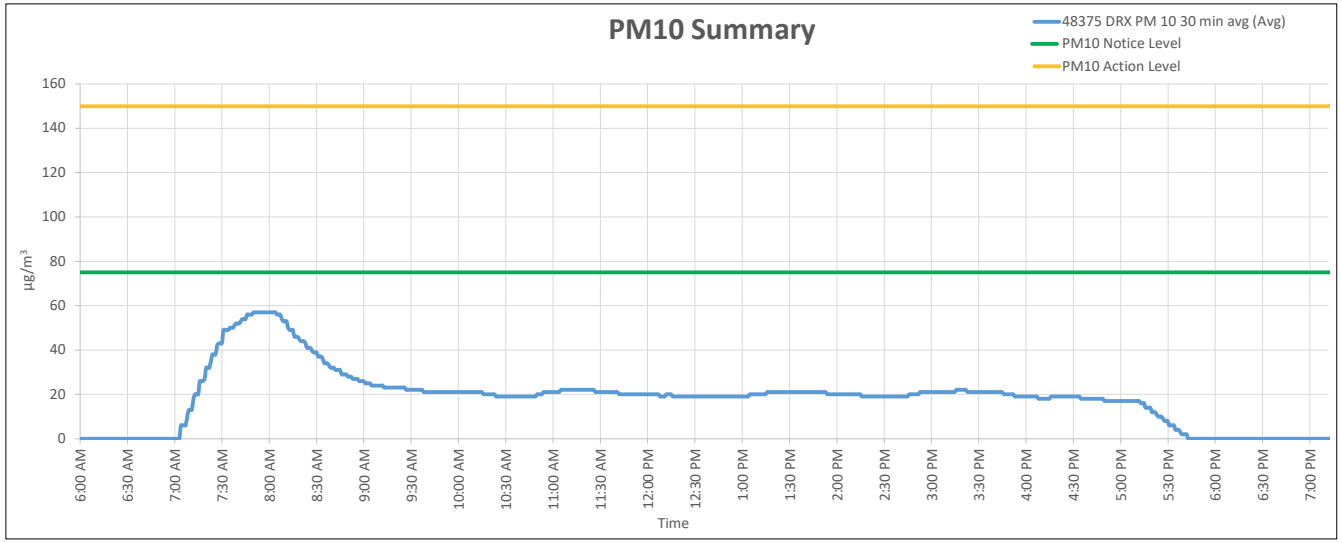
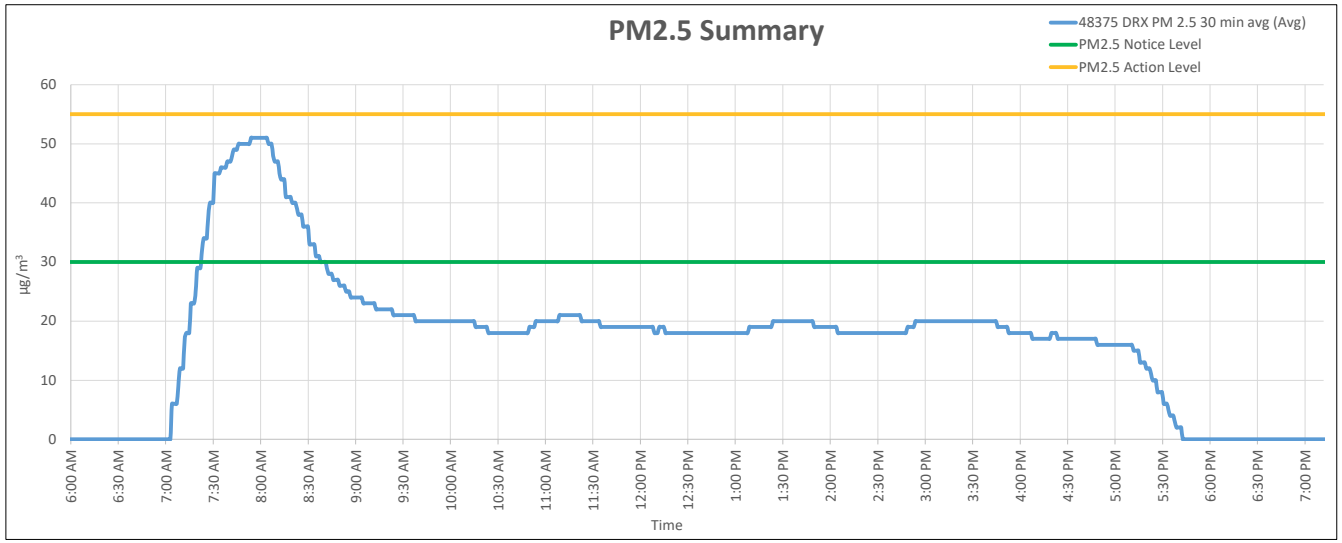
Wednesday, May 15, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	7:04 AM	5:42 PM	23.18	57.00	21.60	51.00





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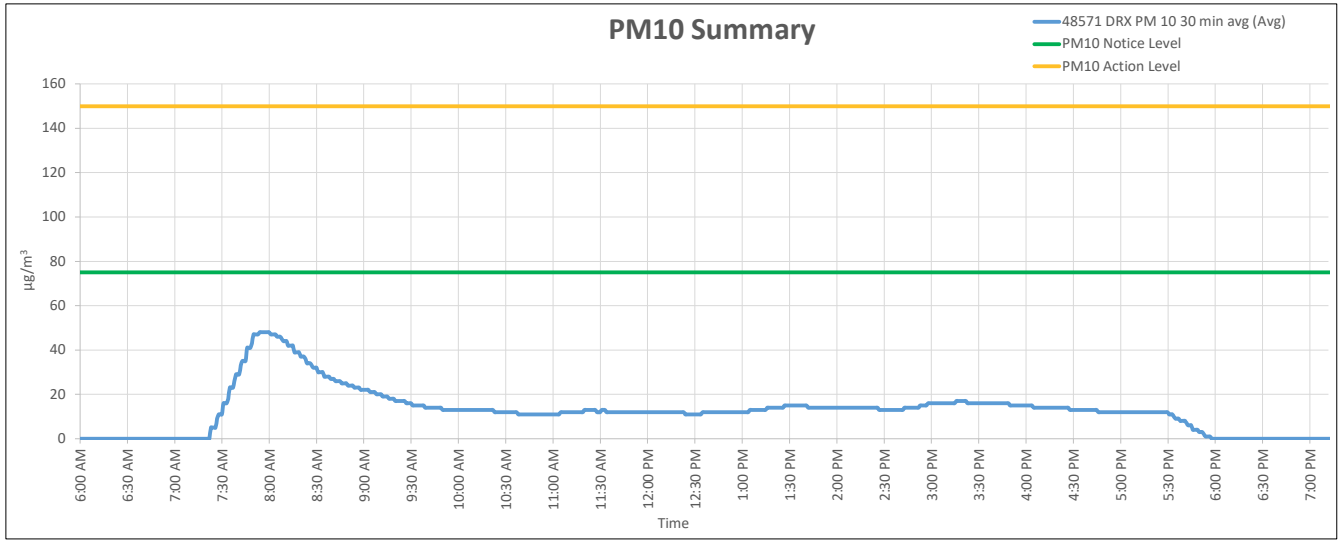
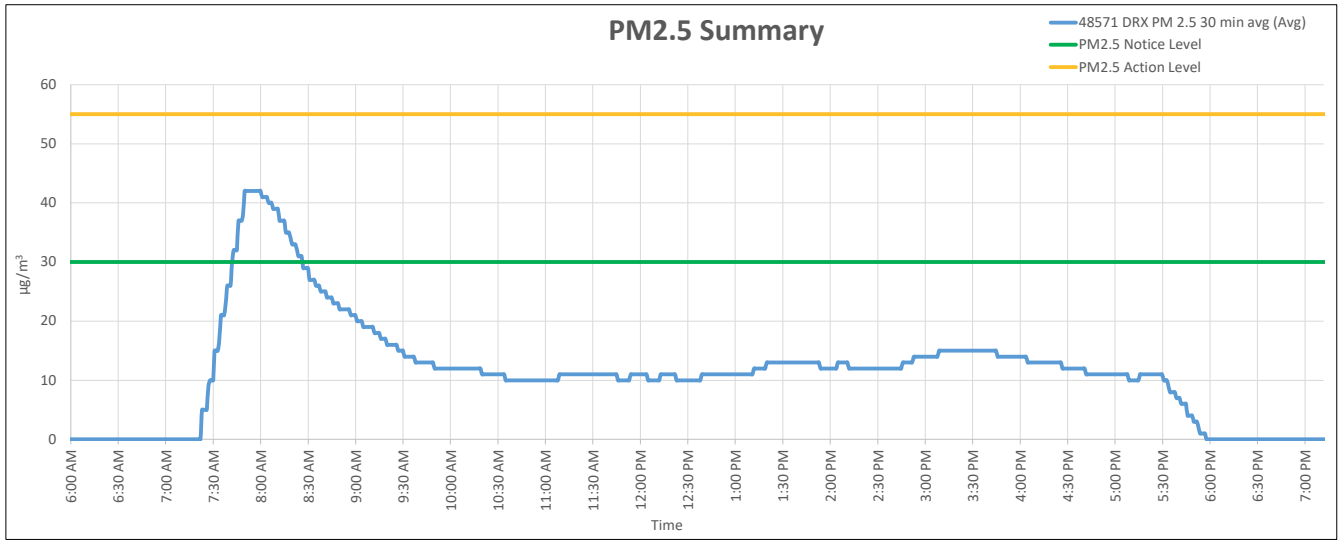
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:23 AM	5:53 PM	16.04	48.00	14.51	42.00





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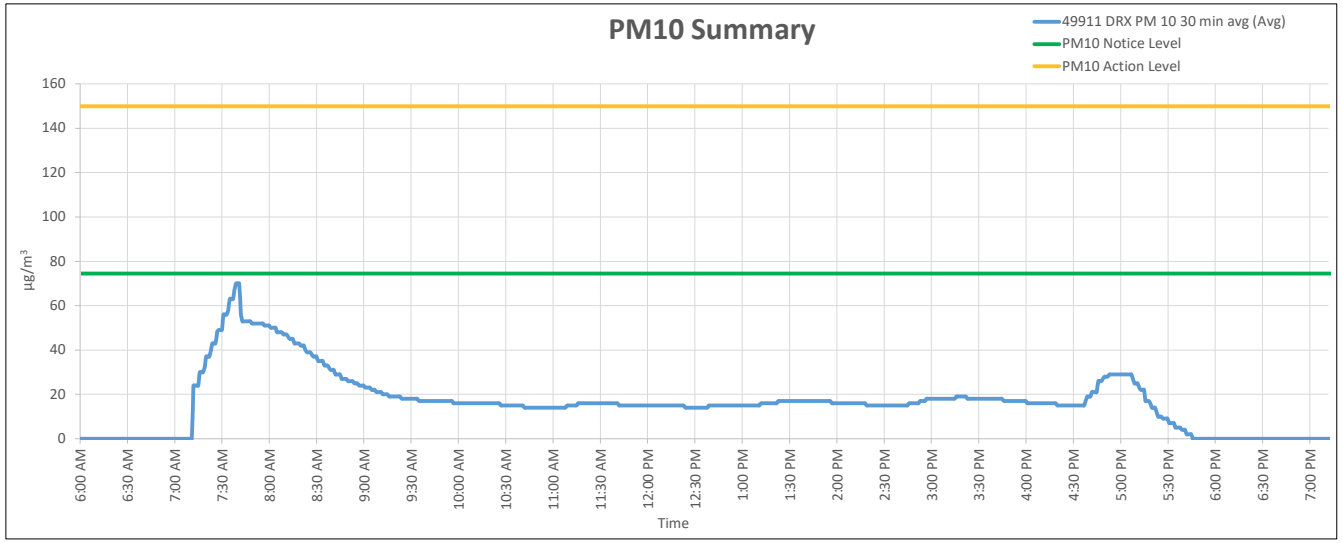
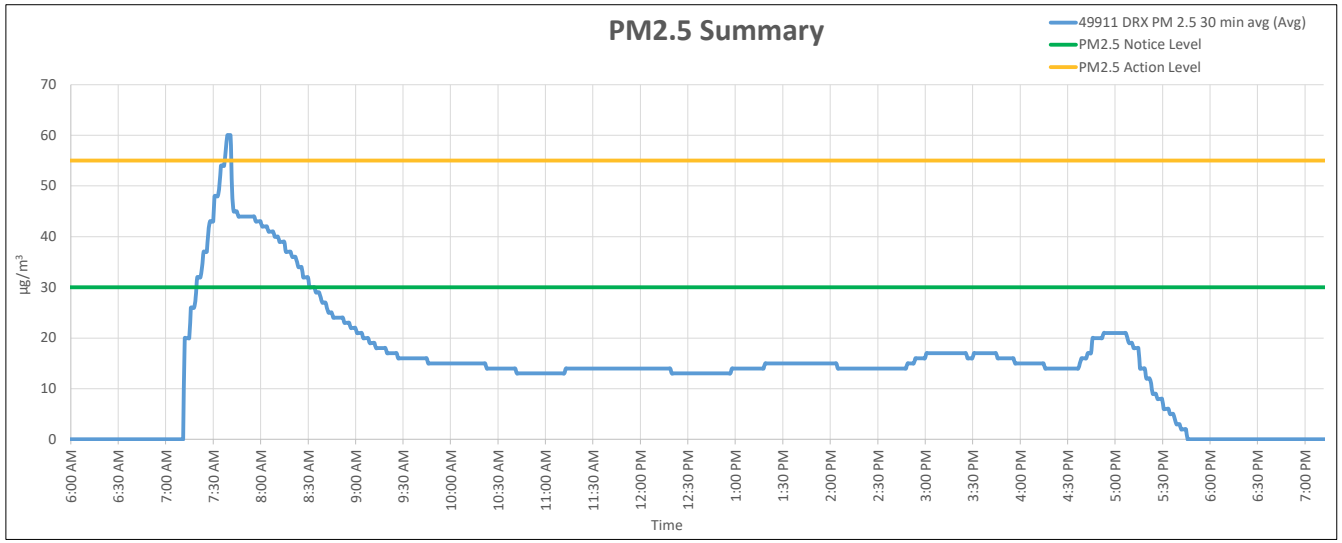
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	7:12 AM	5:45 PM	20.79	70.00	18.36	60.00





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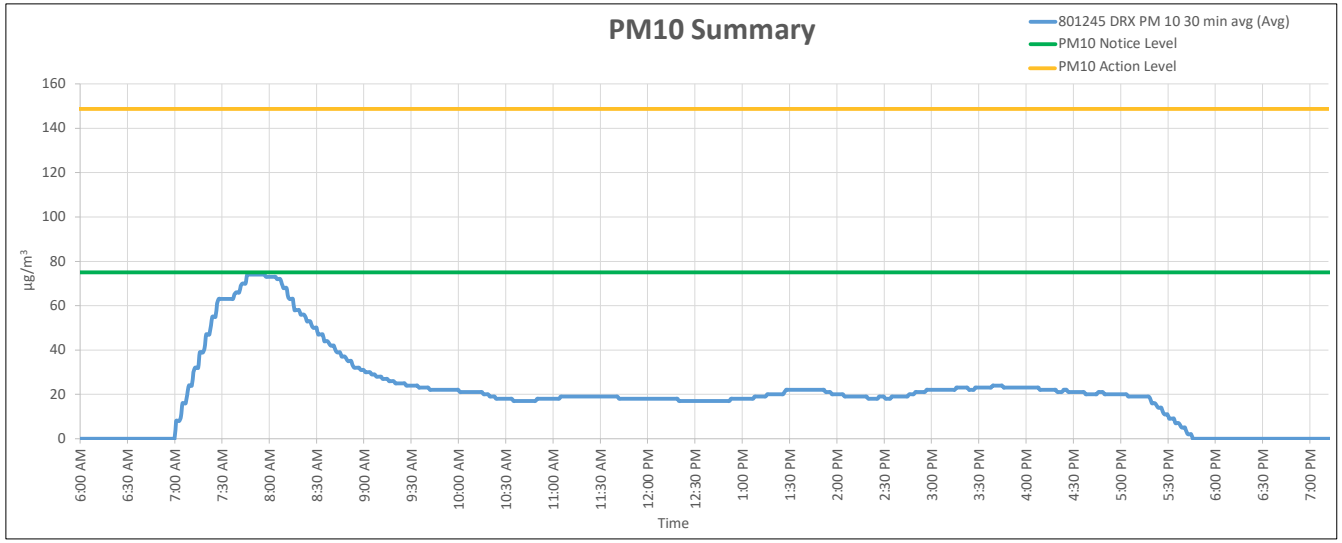
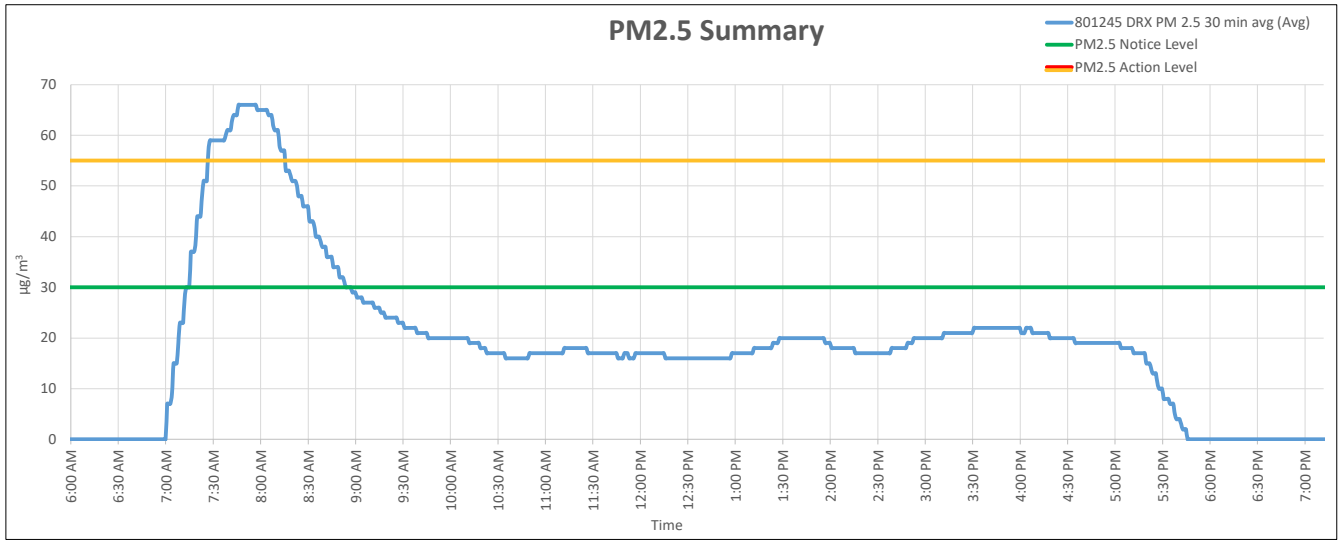
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	7:01 AM	5:45 PM	25.67	74.00	23.74	66.00





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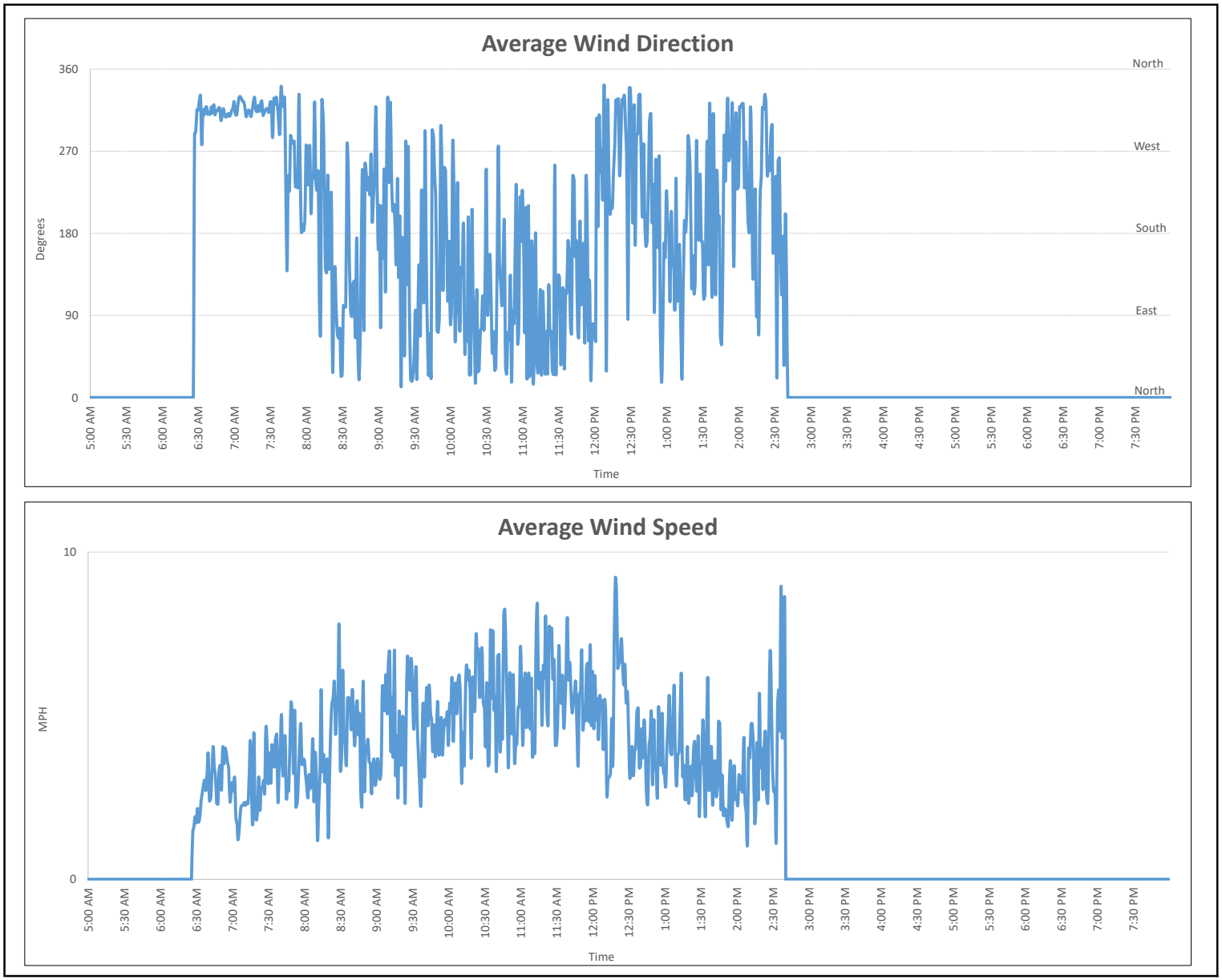

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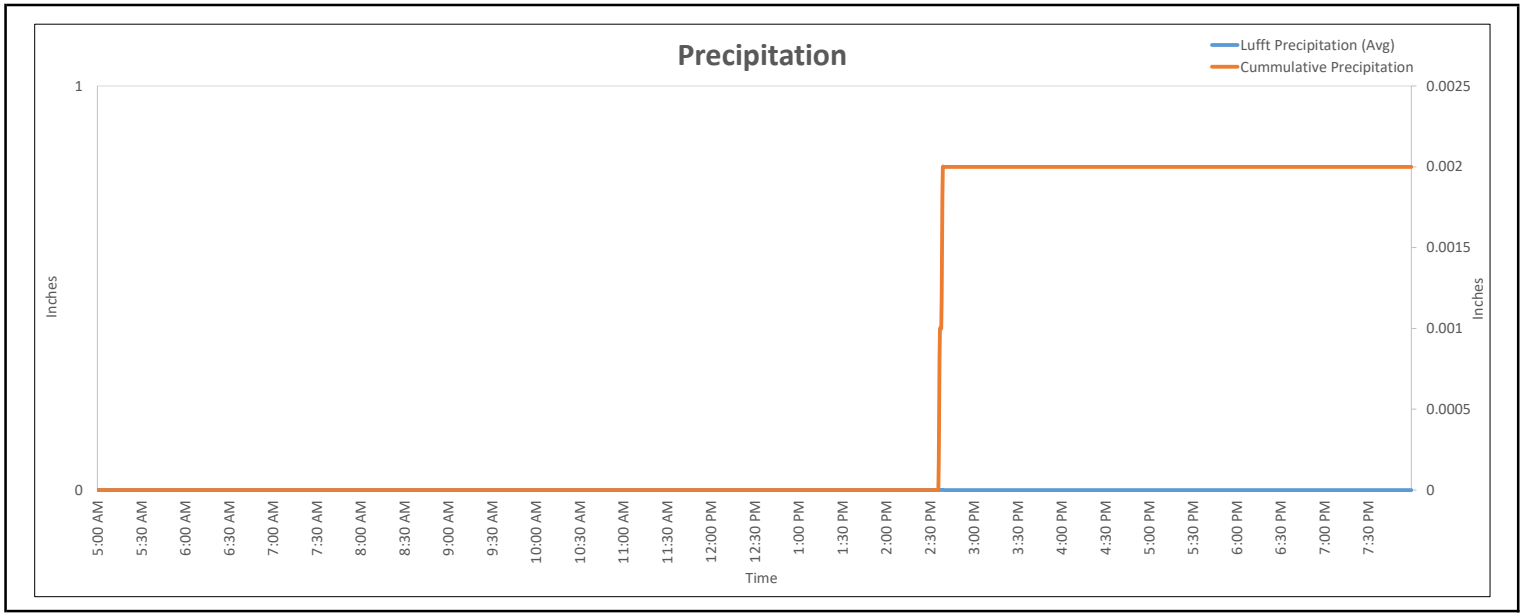
Weather Daily Summary
Thursday, May 16, 2024



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Air Monitoring Values
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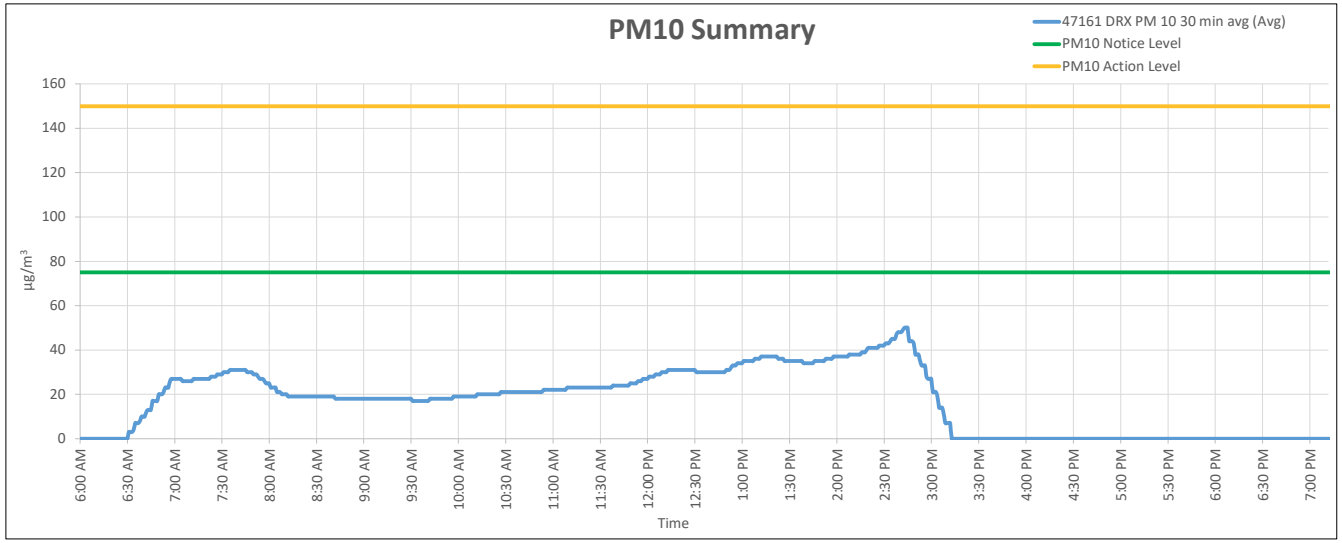
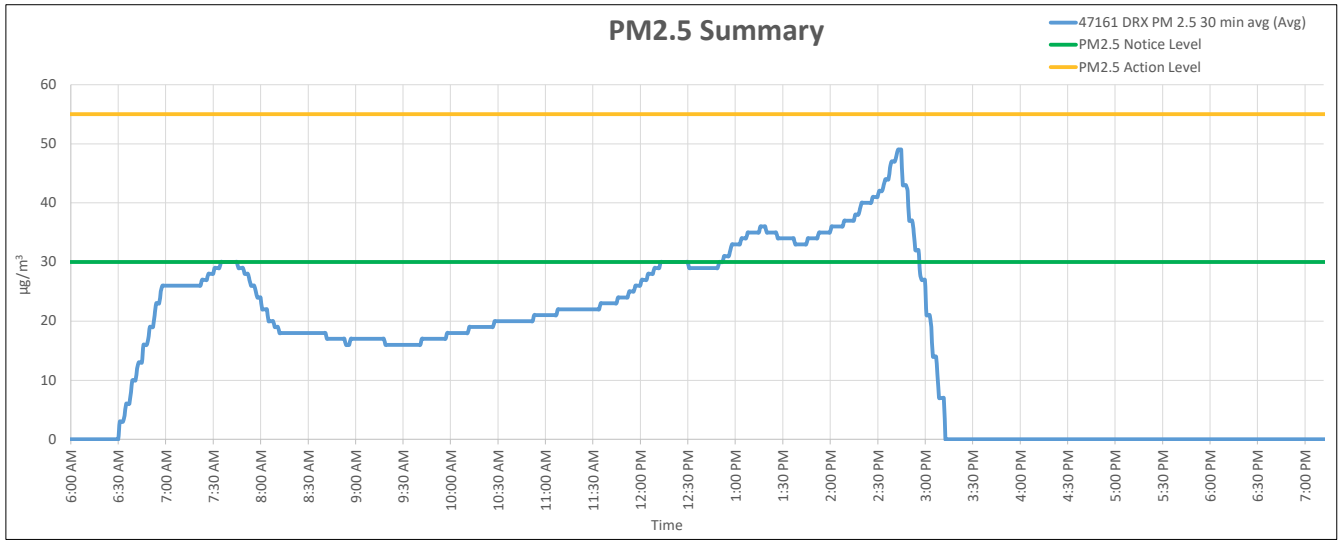
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:31 AM	3:12 PM	25.95	50.00	24.98	49.00





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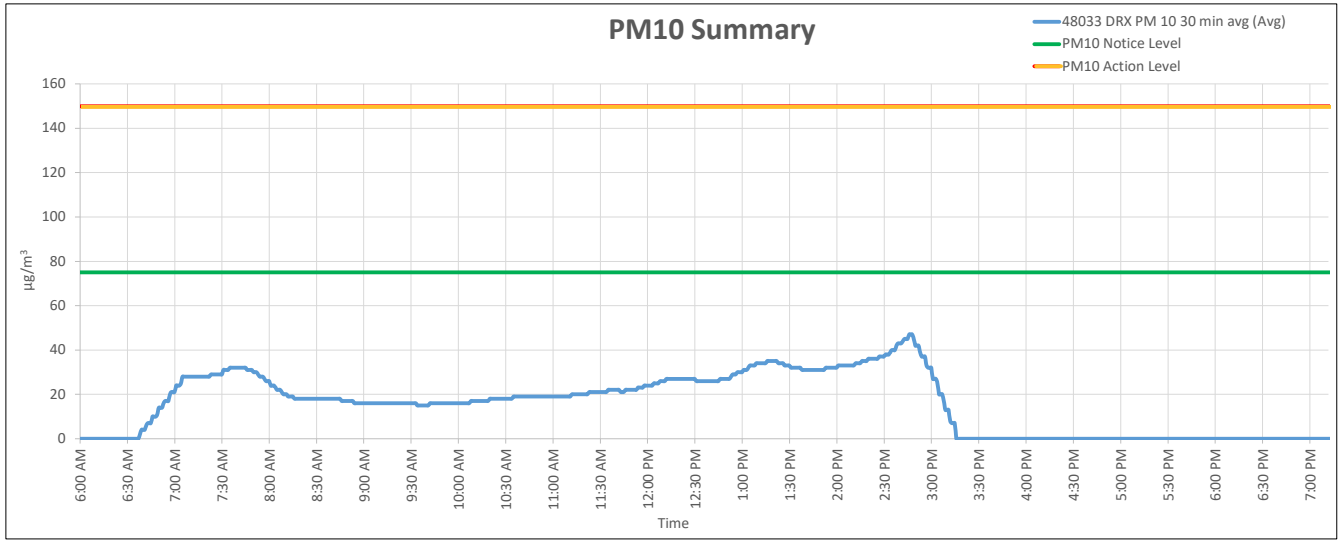
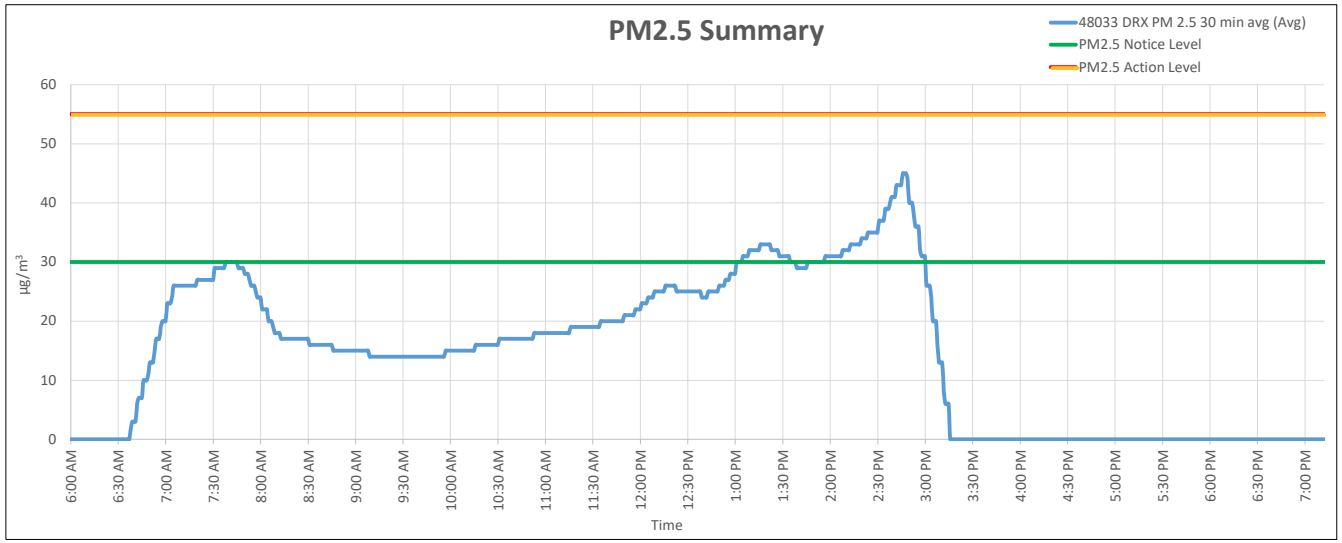
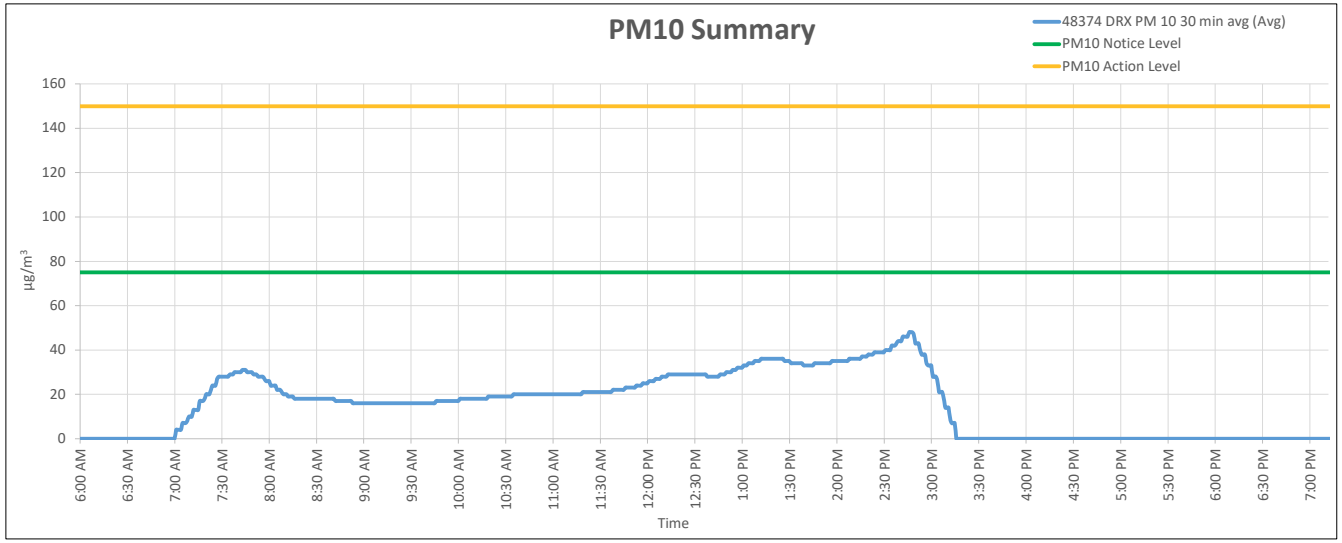
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:38 AM	3:15 PM	24.08	47.00	22.52	45.00

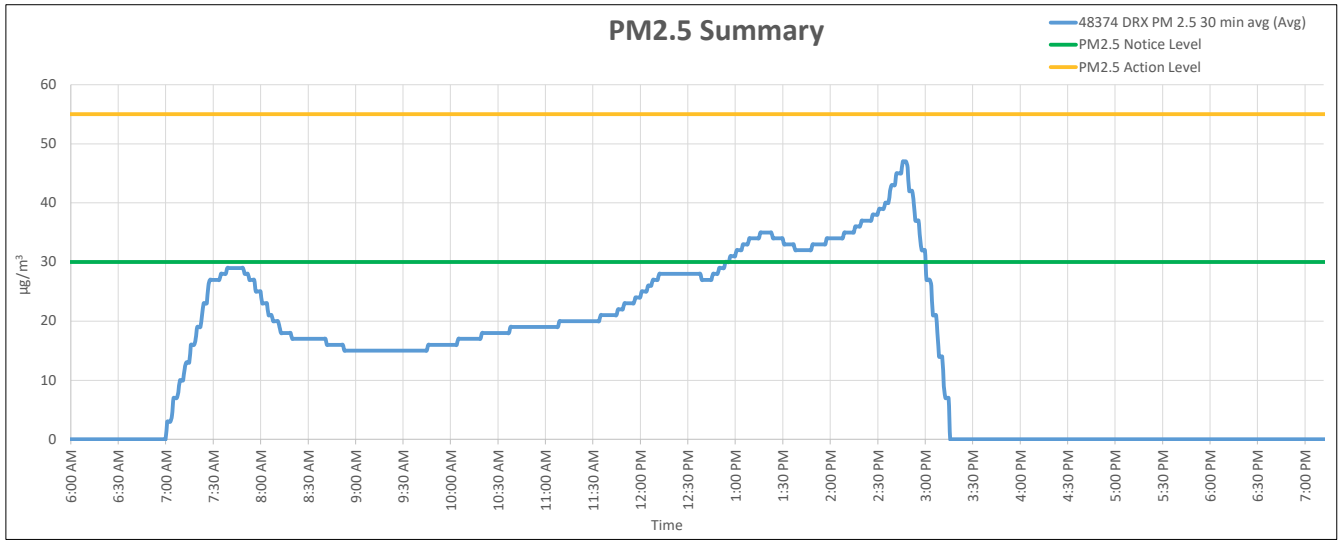




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 16, 2024

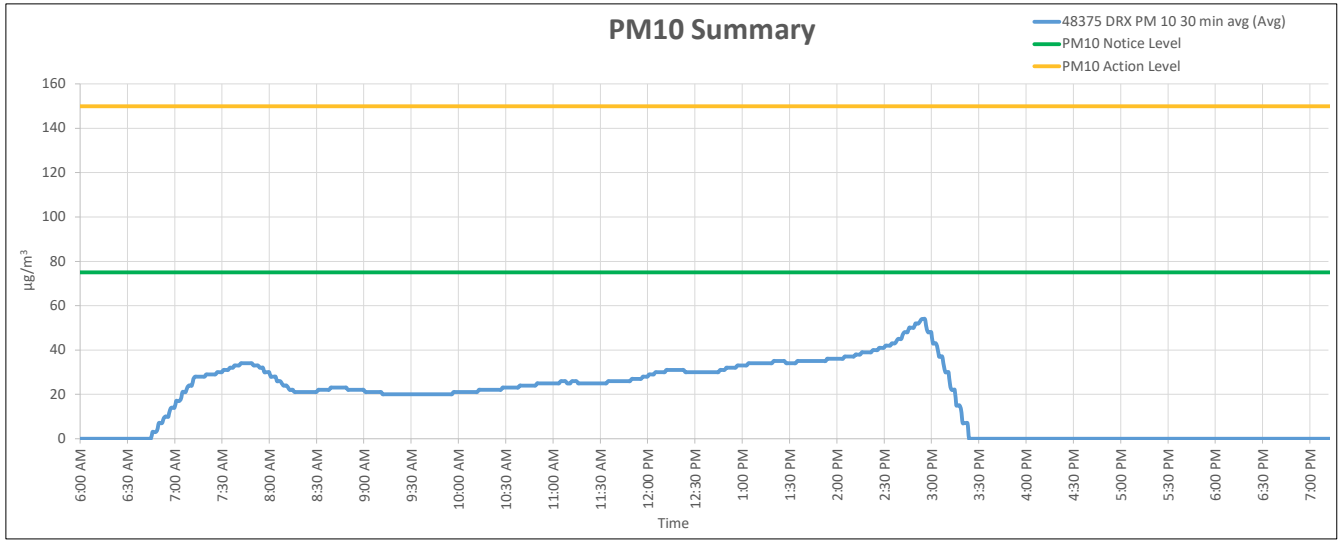
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	7:01 AM	3:15 PM	24.78	48.00	23.82	47.00

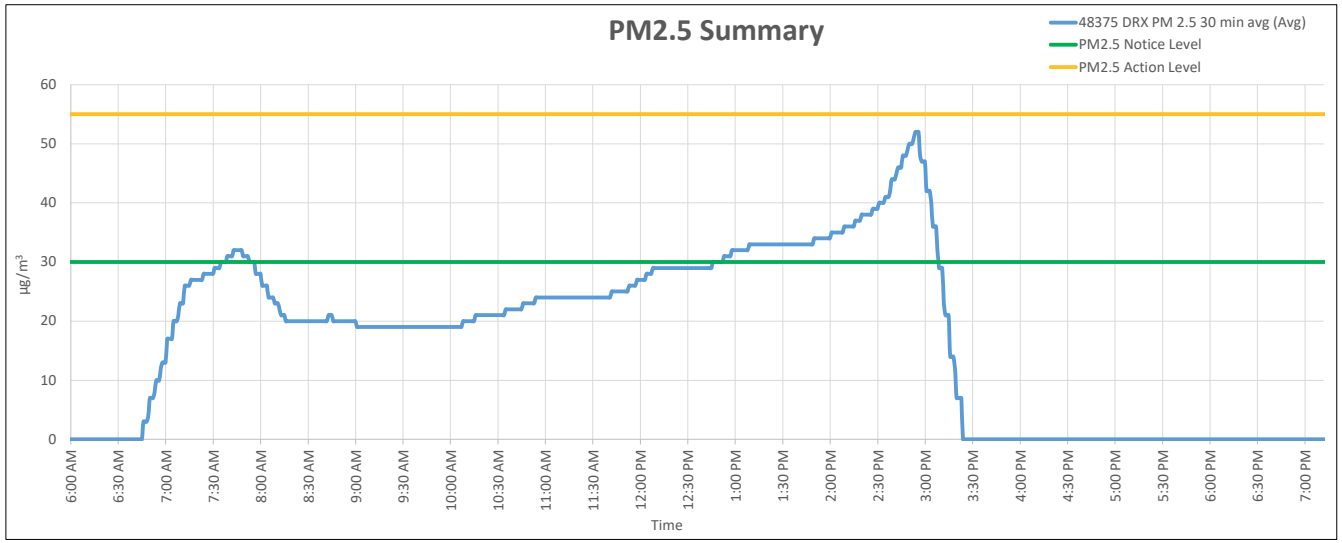




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 16, 2024

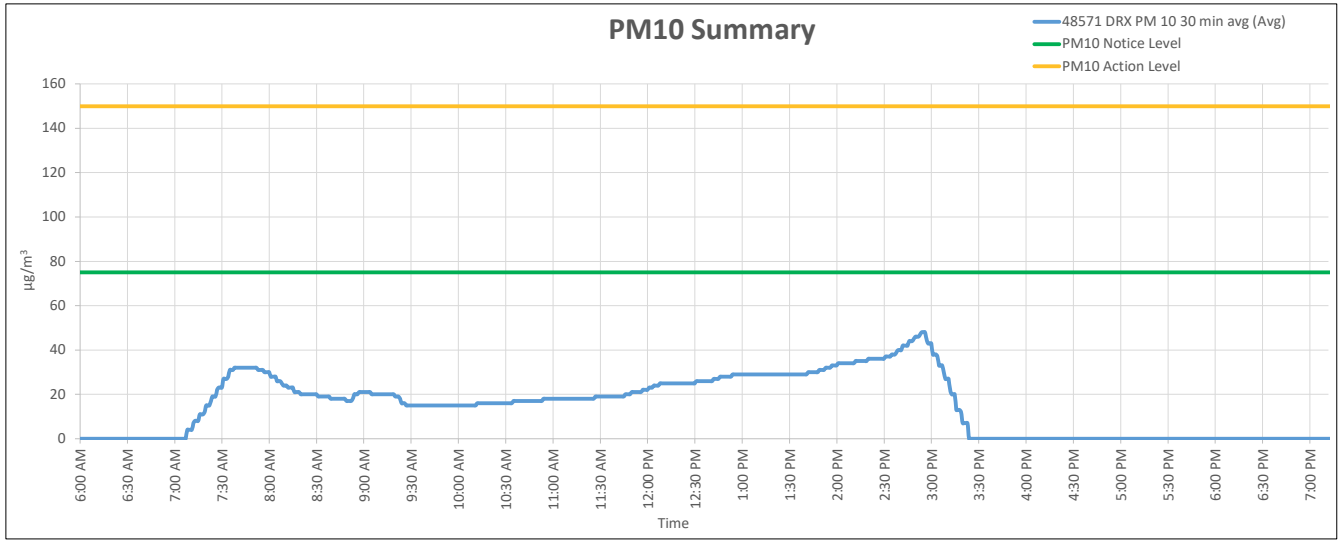
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:46 AM	3:23 PM	27.90	54.00	26.45	52.00

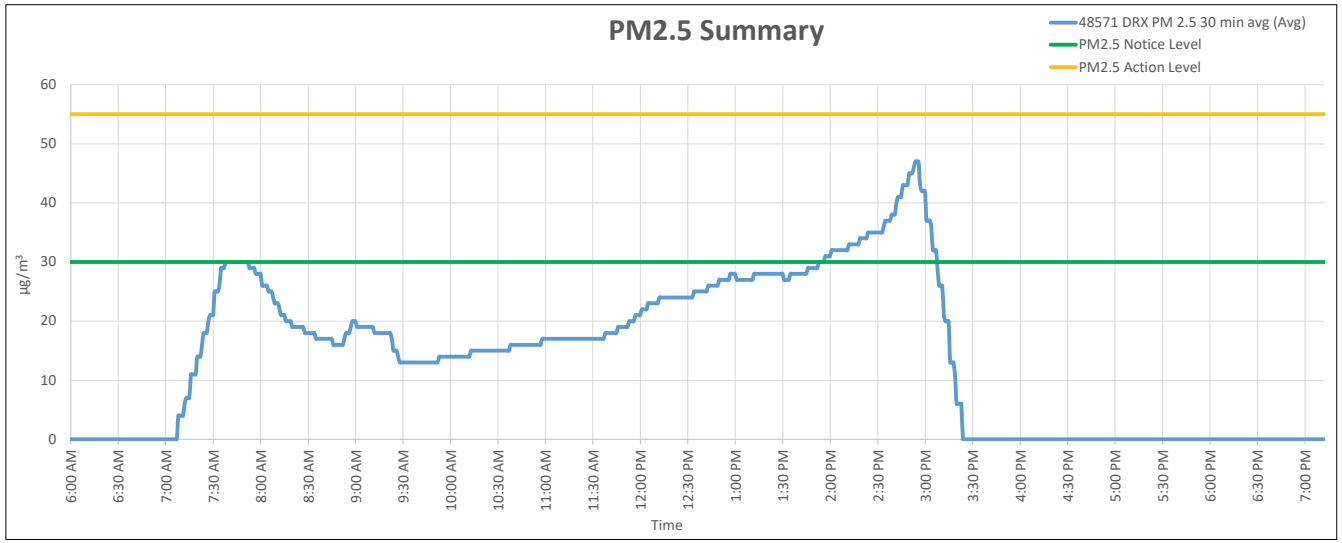




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 16, 2024

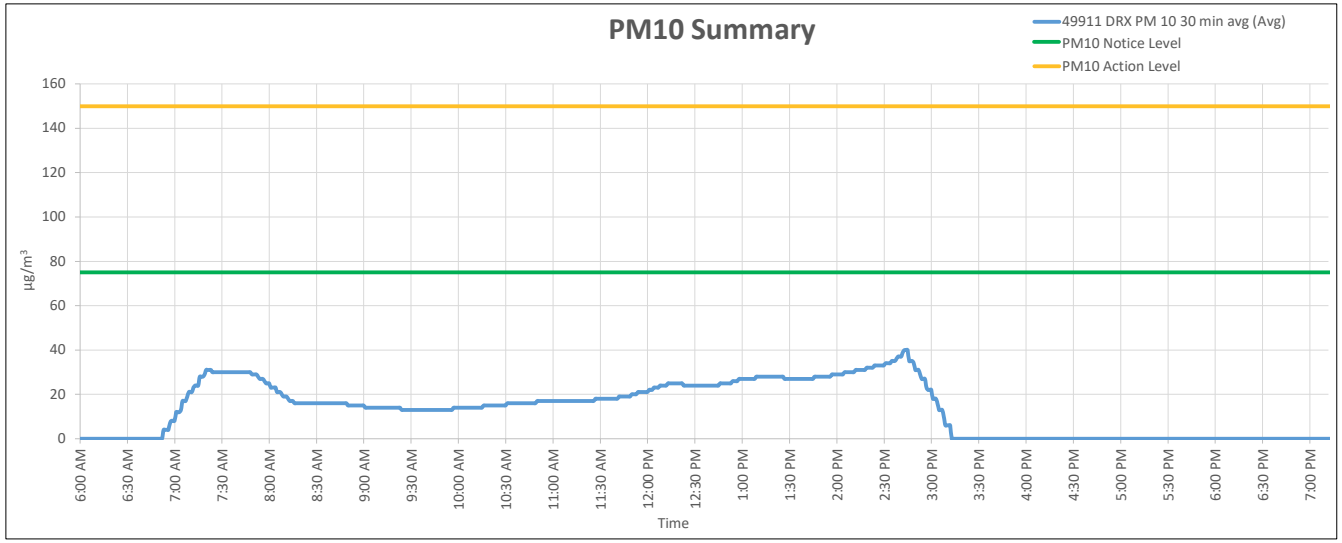
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:08 AM	3:23 PM	23.79	48.00	22.43	47.00

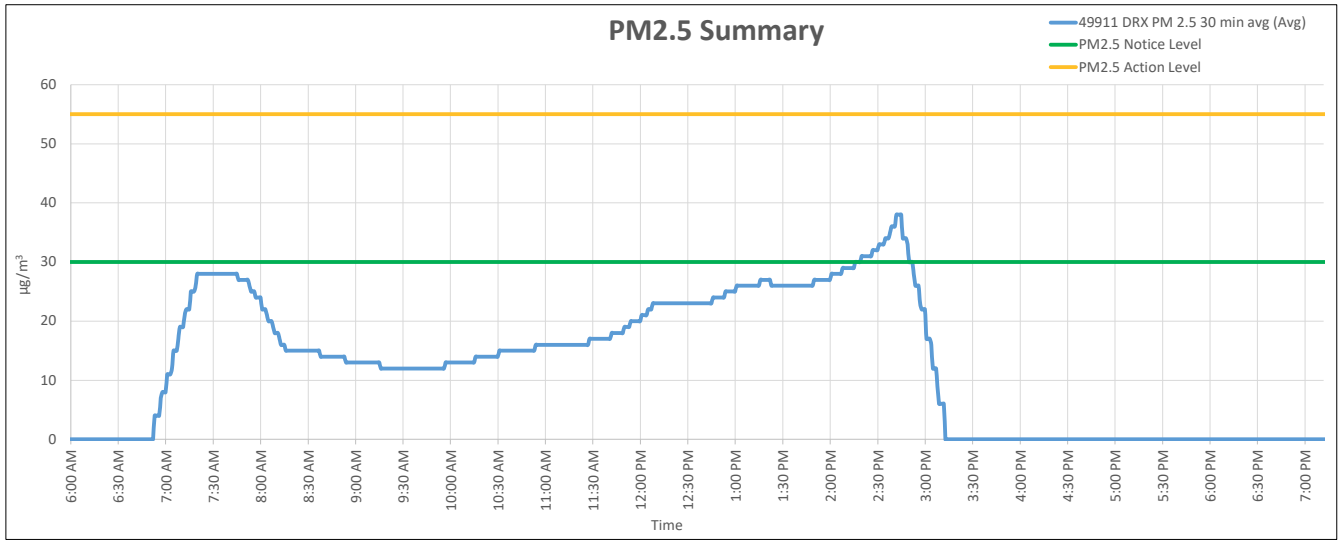




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 16, 2024

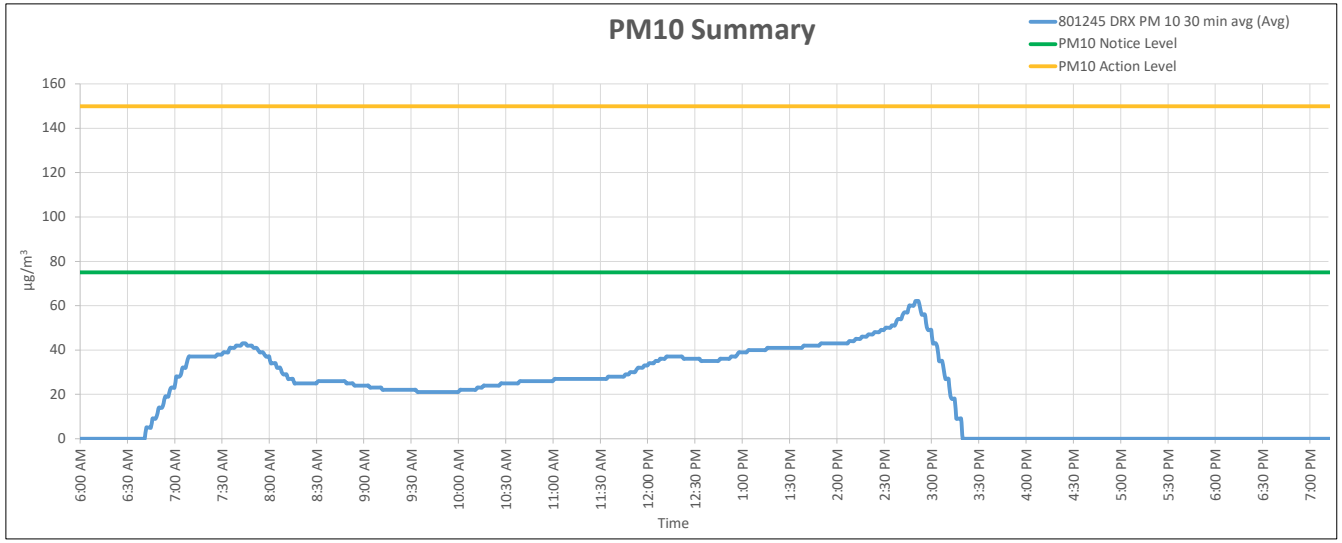
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:53 AM	3:12 PM	21.30	40.00	20.04	38.00

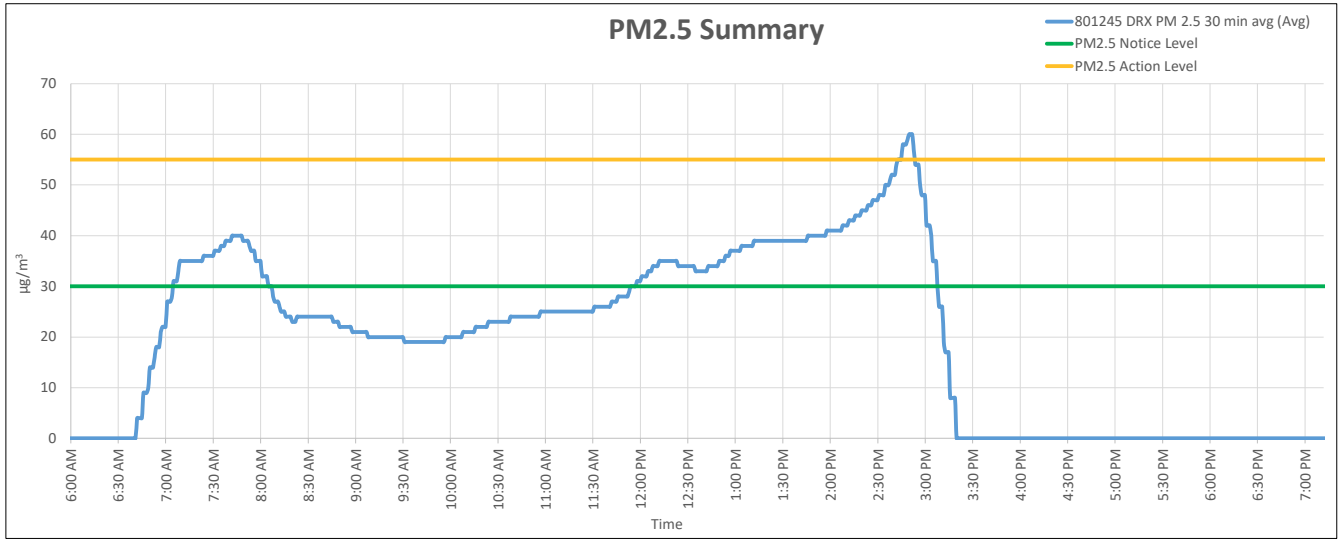




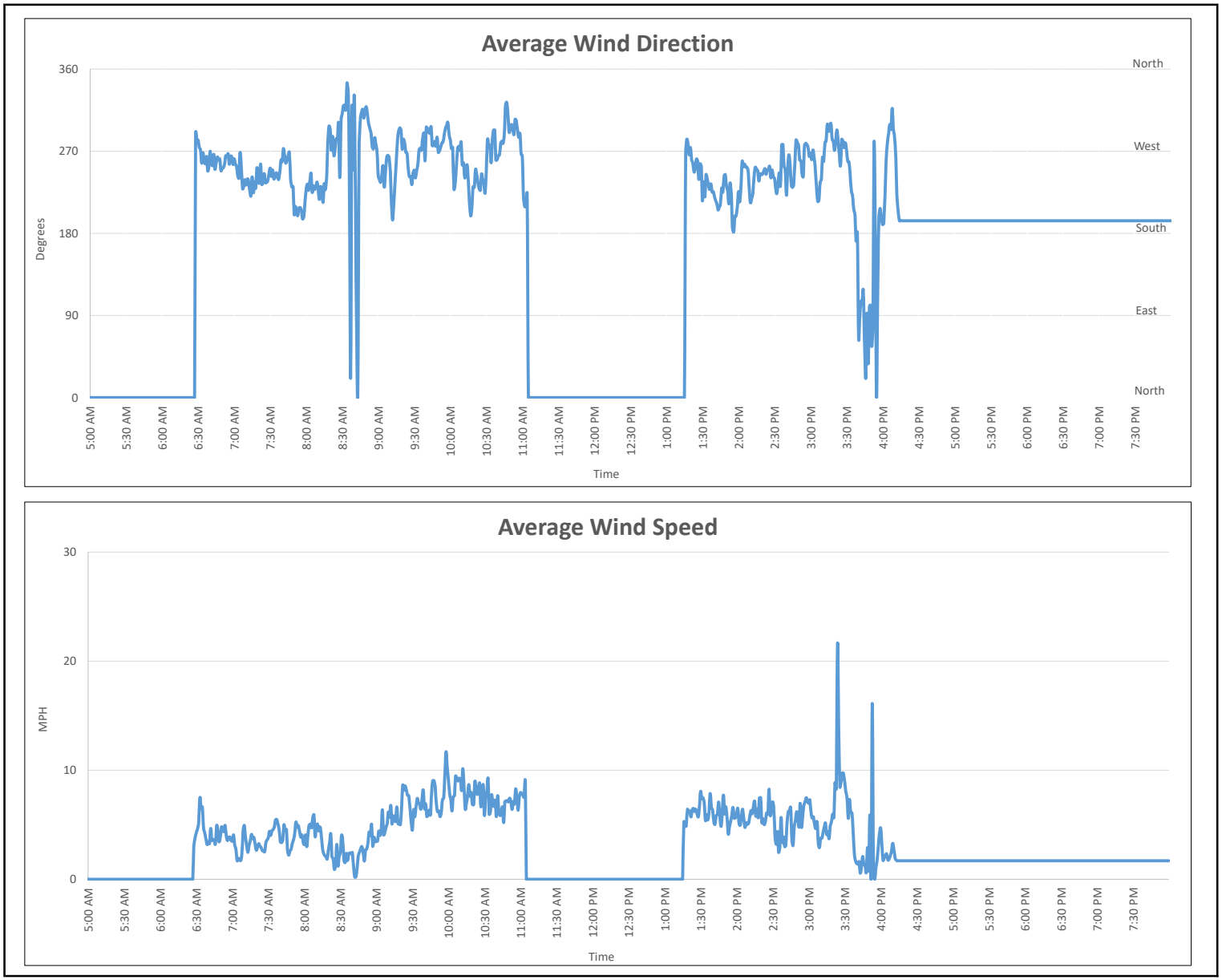
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 16, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:42 AM	3:19 PM	32.34	62.00	30.48	60.00

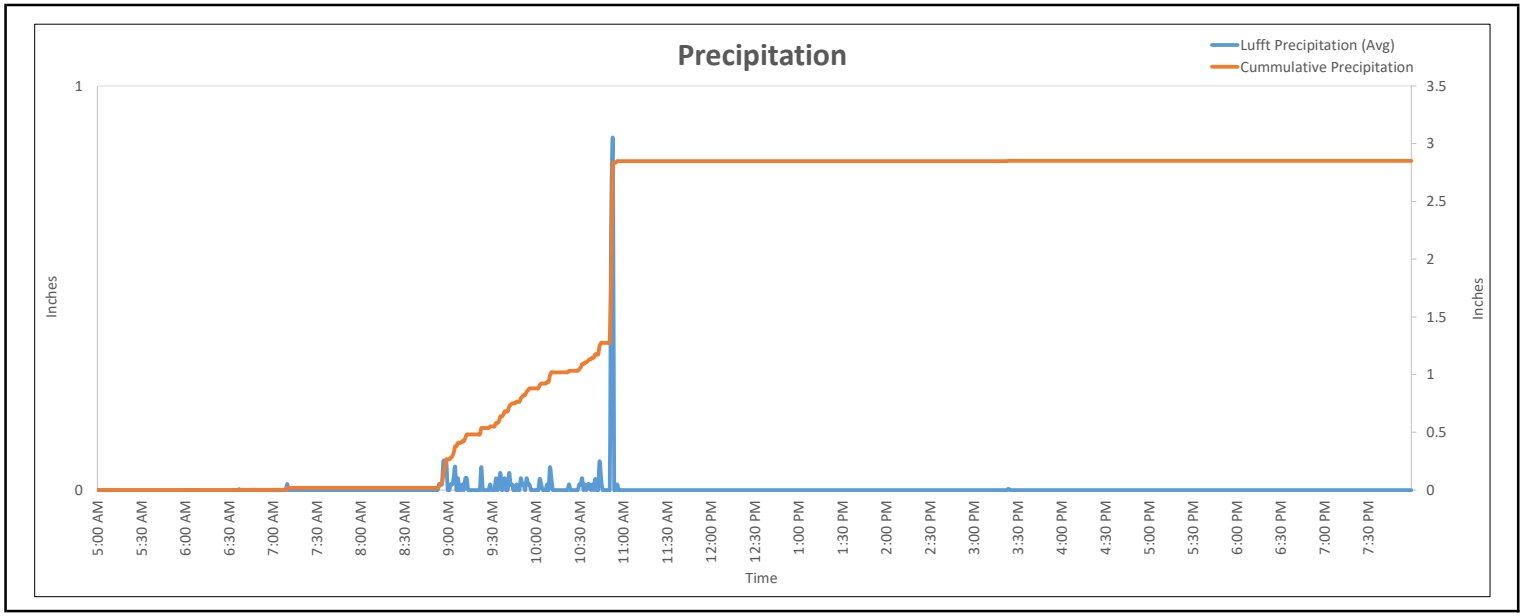




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Friday, May 17, 2024

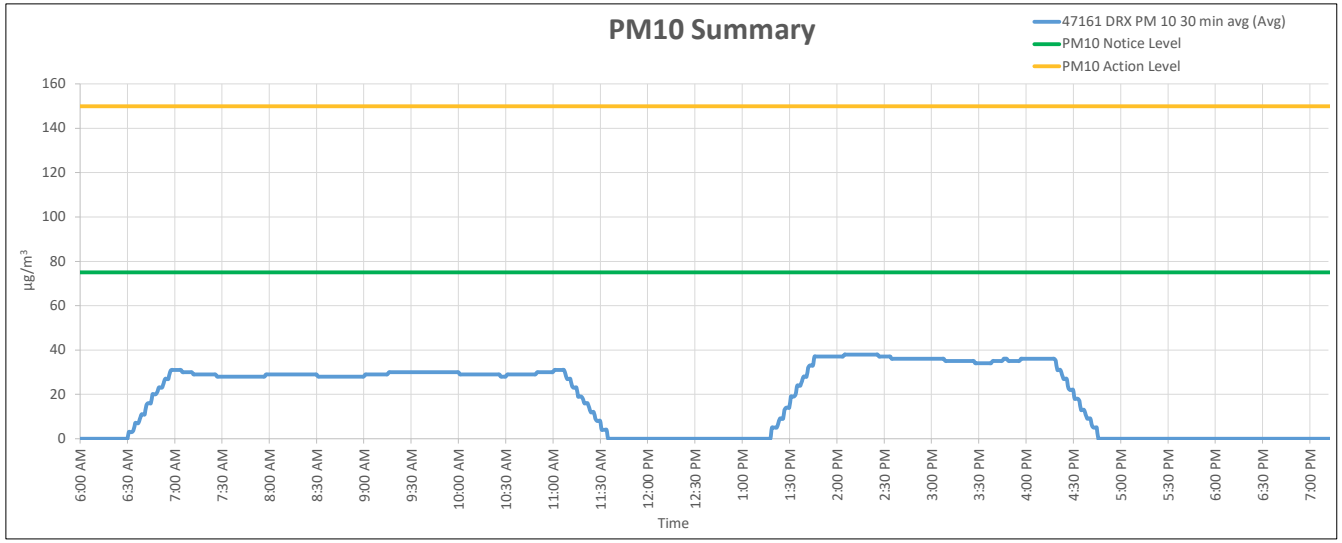


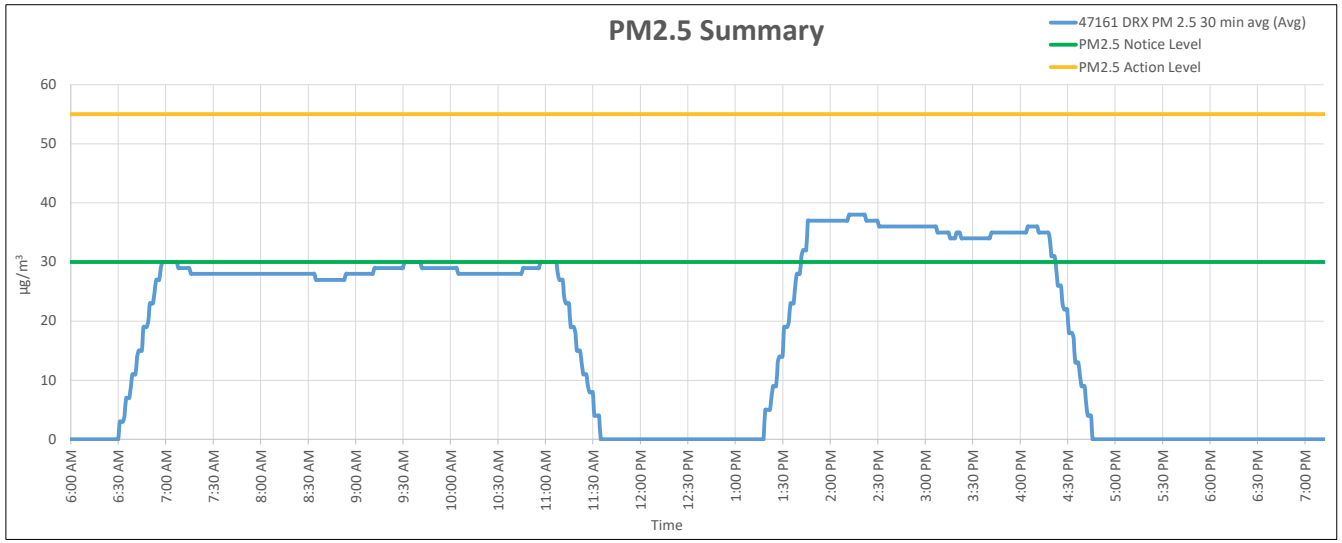
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Friday, May 17, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 17, 2024

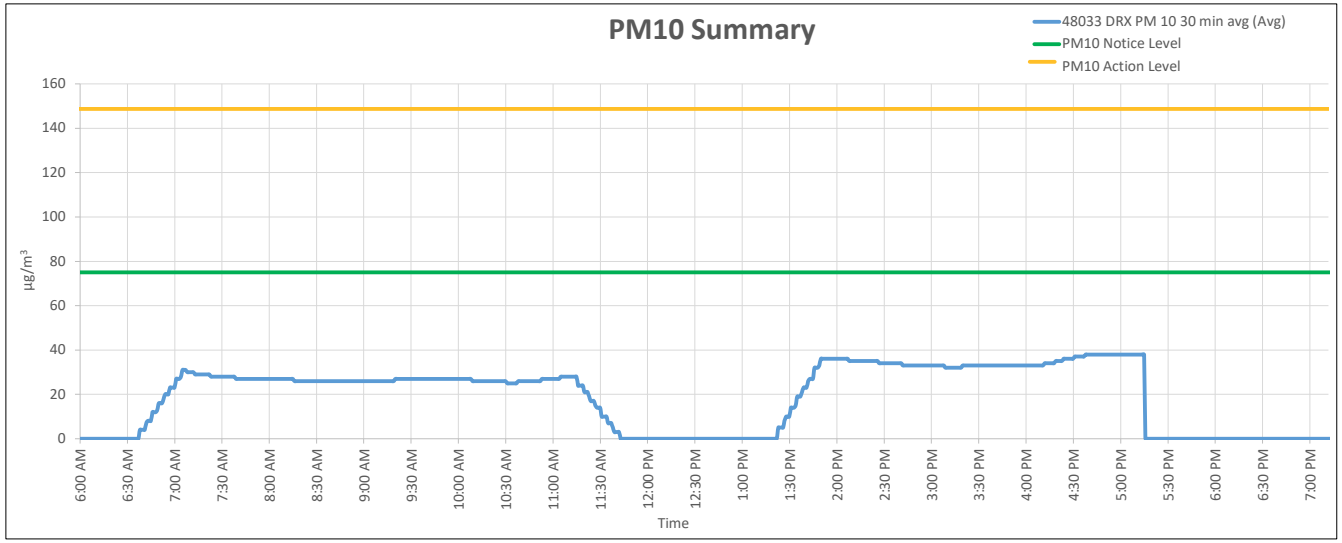
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:31 AM	4:45 PM	28.66	38.00	28.17	38.00

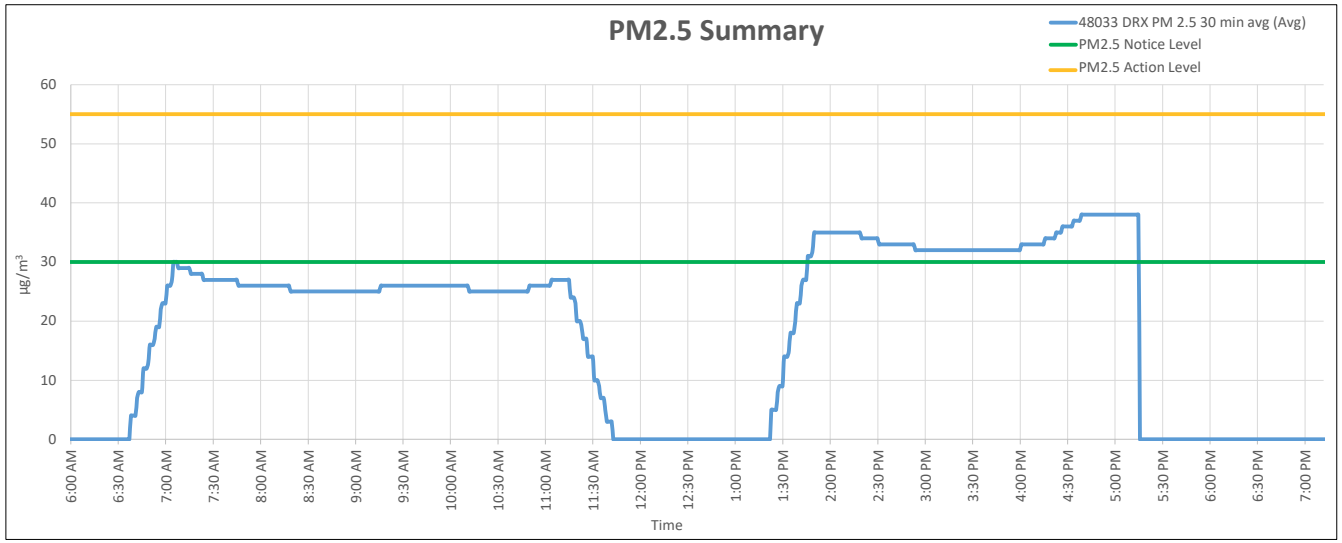




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 17, 2024

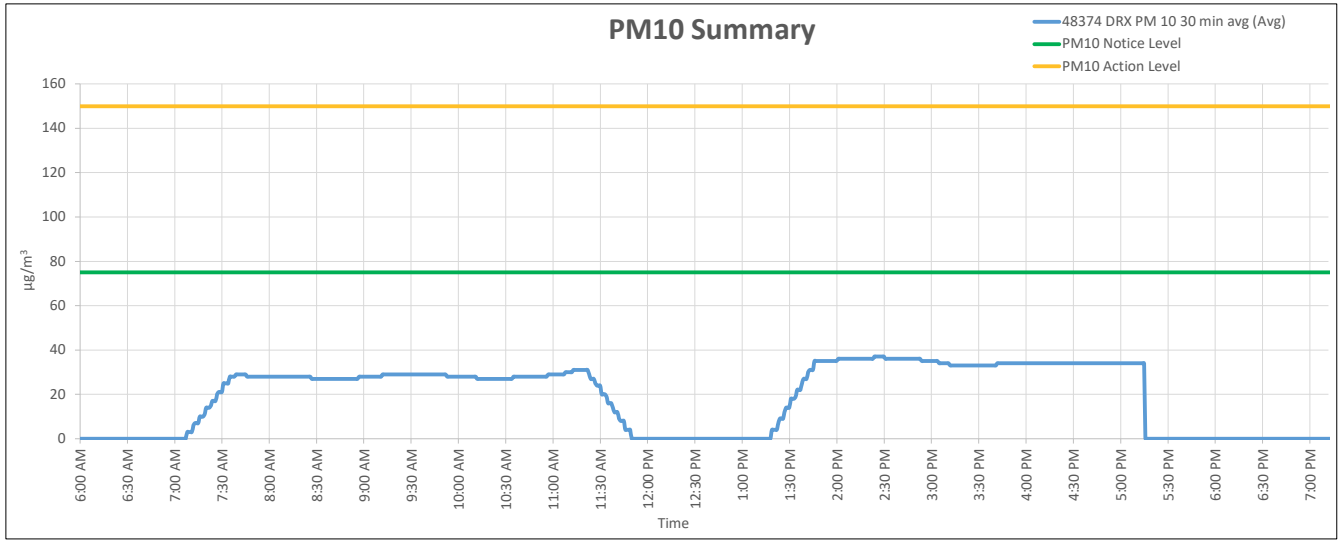
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:38 AM	5:15 PM	28.20	38.00	27.54	38.00

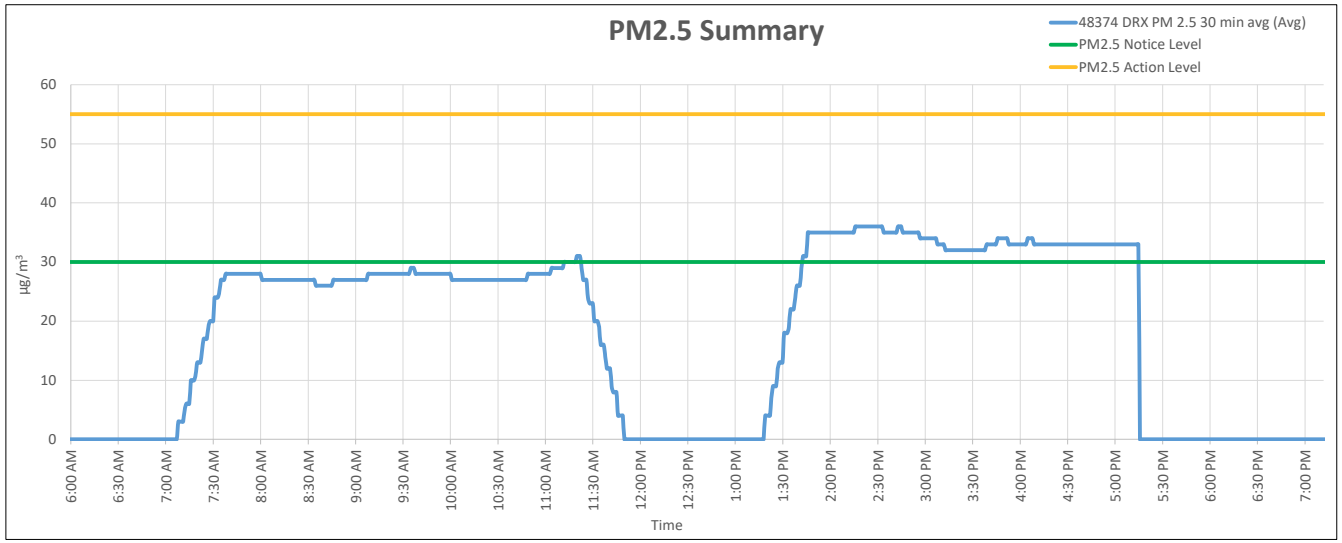




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 17, 2024

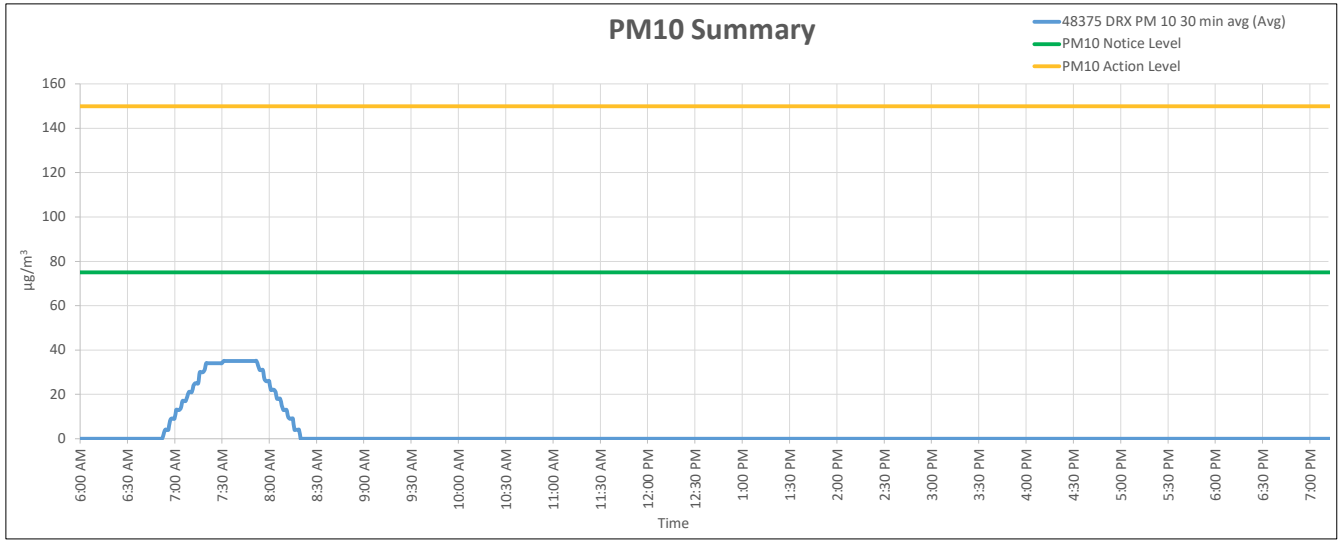
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	7:08 AM	5:15 PM	28.82	37.00	28.19	36.00

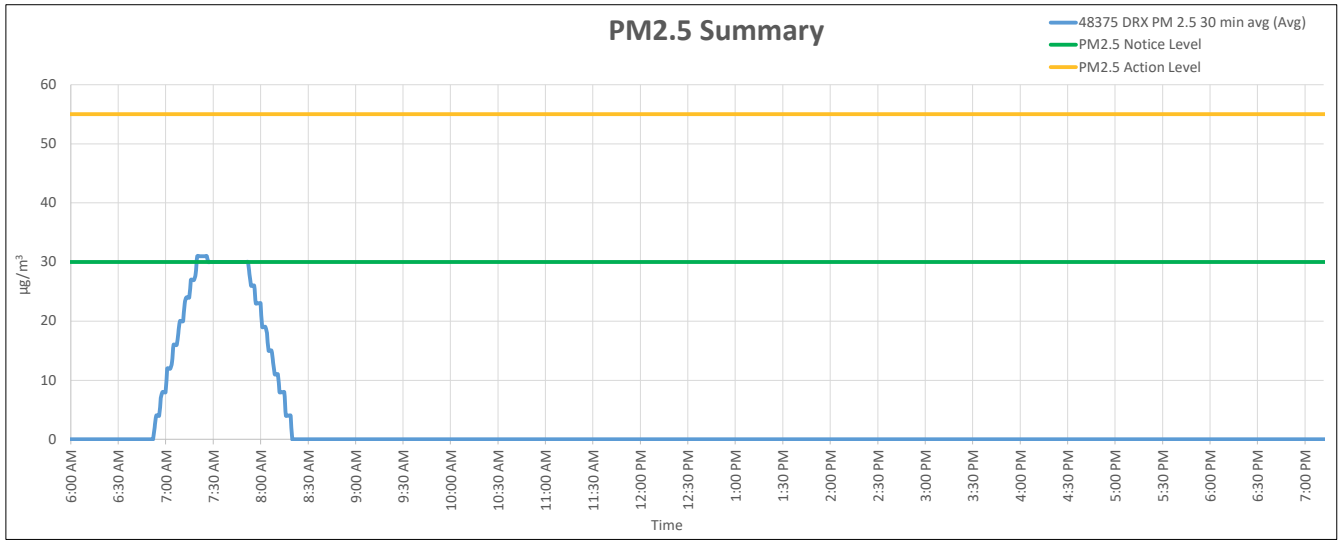




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 17, 2024

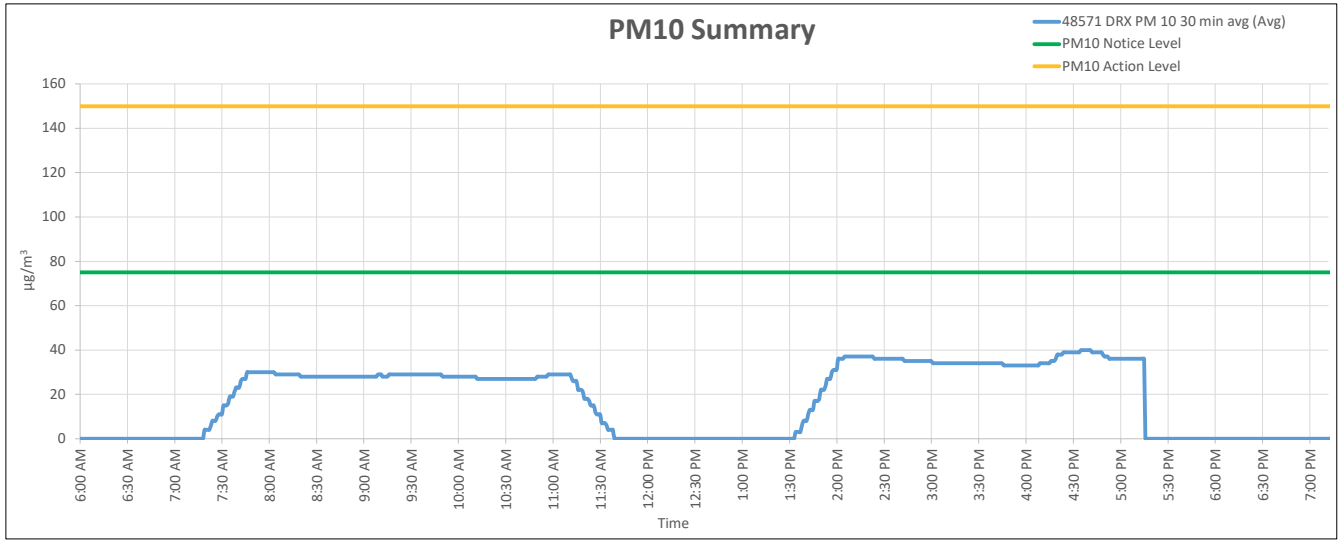
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:53 AM	8:19 AM	23.89	35.00	21.07	31.00

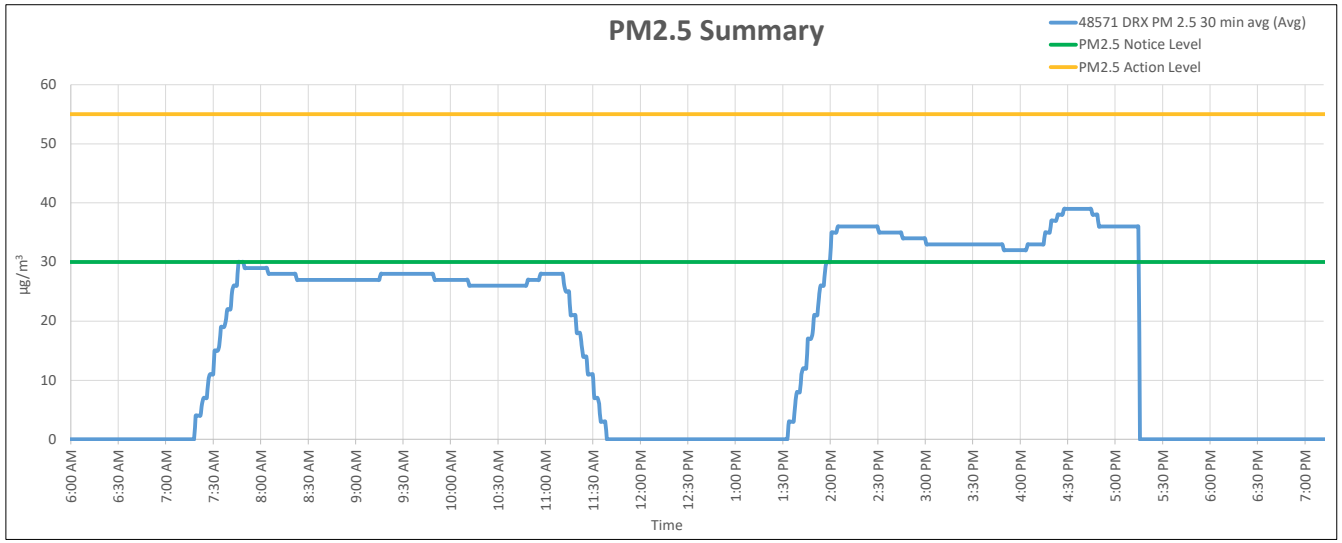




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 17, 2024

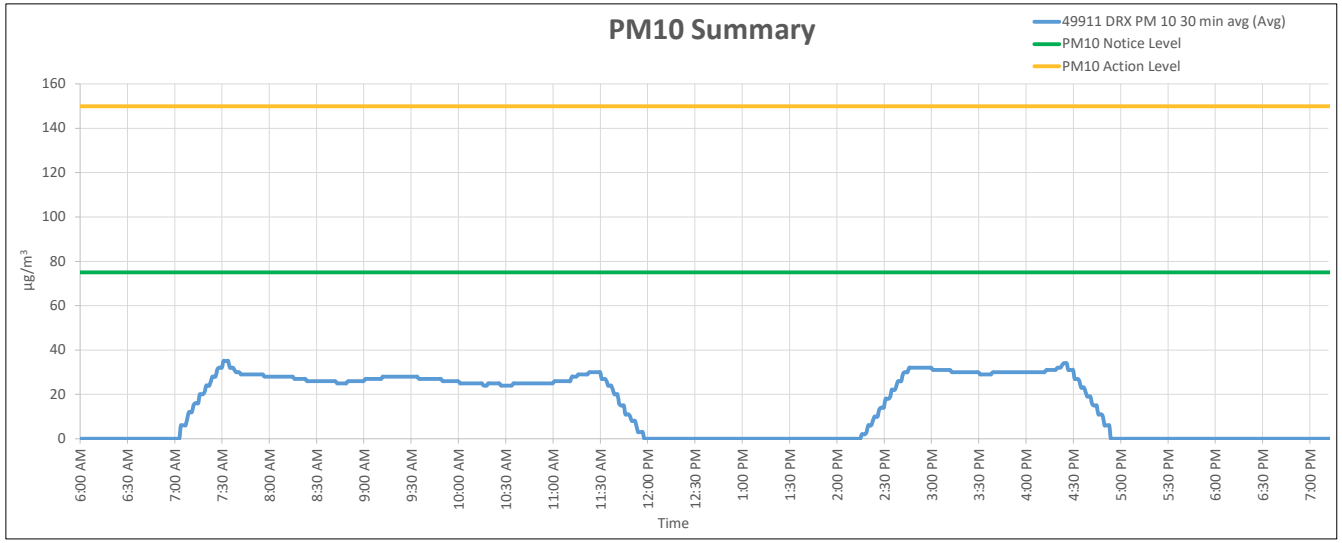
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:19 AM	5:15 PM	29.11	40.00	28.32	39.00

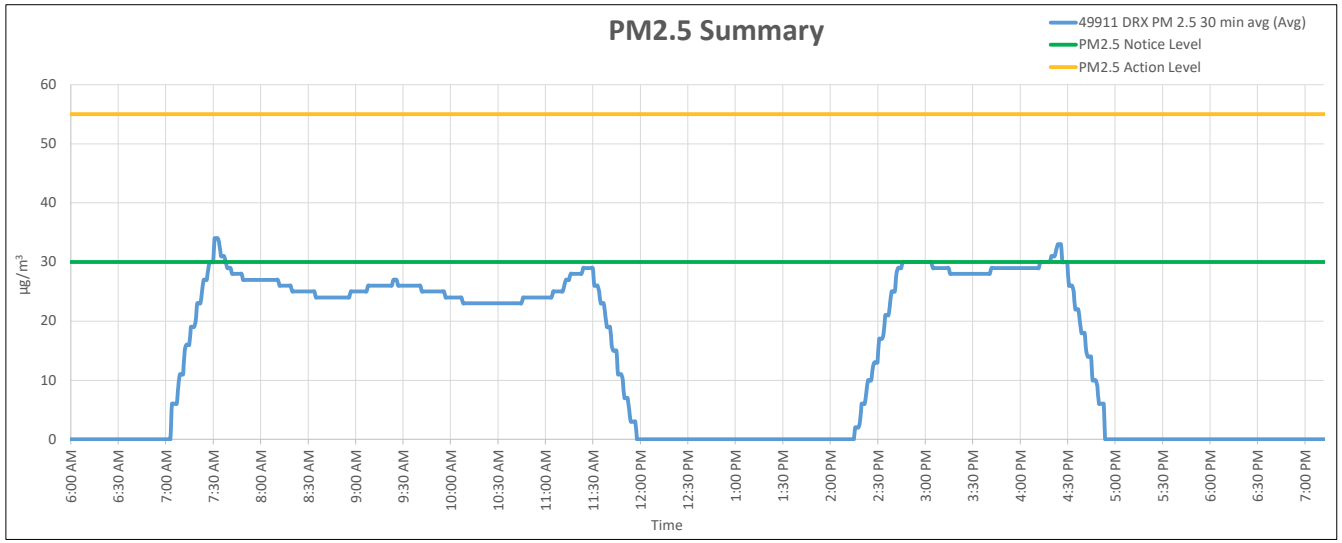




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 17, 2024

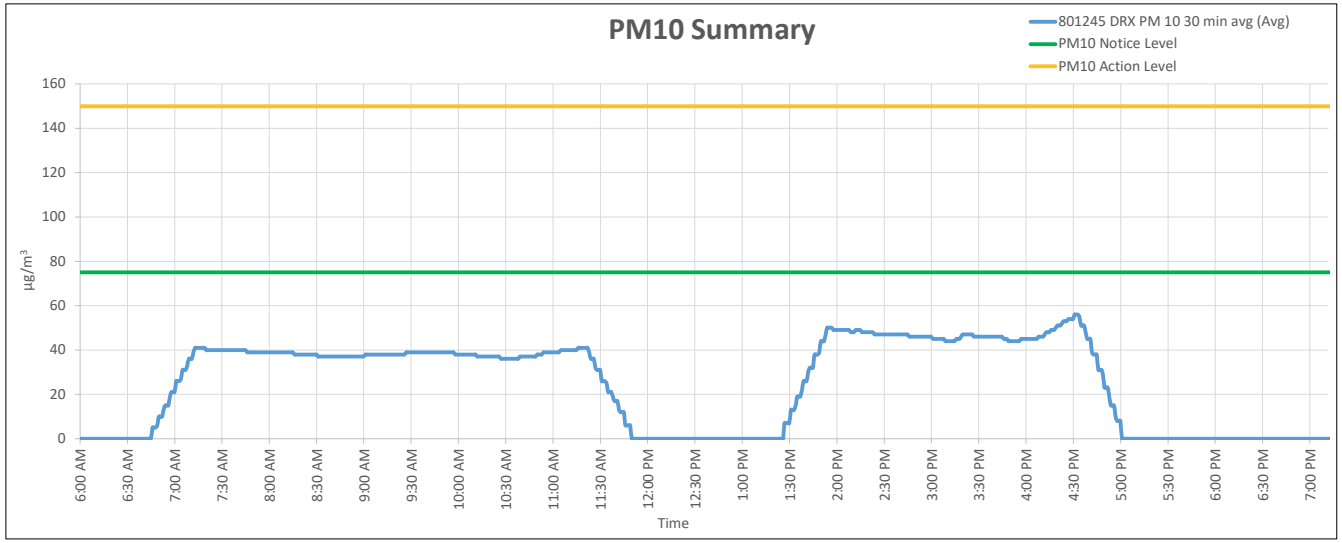
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	7:04 AM	4:53 PM	25.36	35.00	24.11	34.00





Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 17, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:46 AM	5:00 PM	38.28	56.00	37.28	55.00



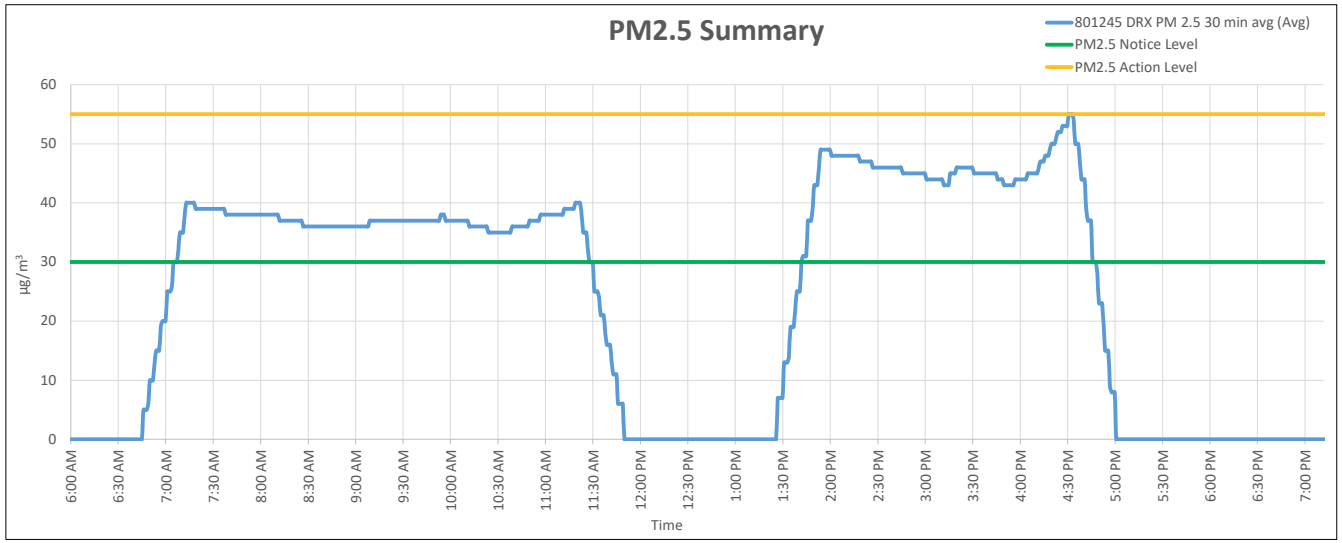
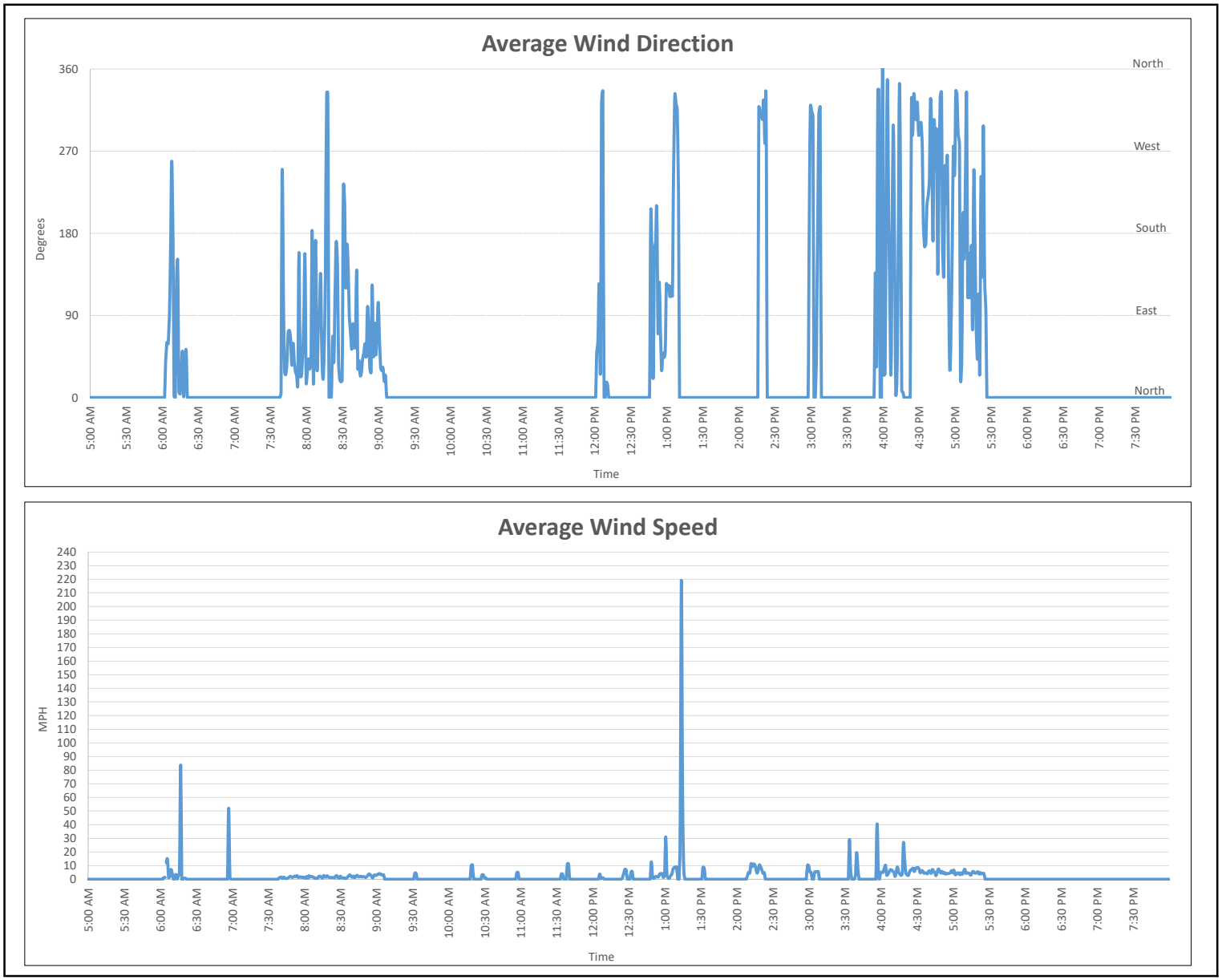


Table 5 – Direct Read Summary Union Pacific Houston Wood Preserving Works Houston, Texas							
Date	Modem #	PM_{10} Concentration ($\mu g/m^3$)			$PM_{2.5}$ Concentration ($\mu g/m^3$)		
		Min	Max	Average	Min	Max	Average
Week 4							
5/20/2024	48374	4.00	40.00	30.49	4.00	39.00	30.016
	47161	3.00	46.00	33.76	3.00	43.00	33.284
	48033	5.00	36.00	28.26	5.00	36.00	27.395
	48571	5.00	36.00	28.03	4.00	35.00	27.043
	48375	2.00	21.00	13.17	2.00	20.00	12.528
	801245	5.00	49.00	37.86	5.00	47.00	36.835
	49911	0.00	33.00	23.22	0.00	31.00	22.370
5/21/2024	48374	6.00	72.00	60.50	6.00	71.00	59.871
	47161	8.00	72.00	60.30	8.00	71.00	59.804
	48033	7.00	66.00	55.94	7.00	65.00	54.908
	48571	7.00	68.00	57.32	7.00	67.00	56.193
	48375	7.00	68.00	58.54	6.00	67.00	57.533
	801245	9.00	86.00	73.68	9.00	85.00	72.522
	49911	7.00	62.00	52.31	6.00	61.00	51.202
5/22/2024	48374	7.00	49.00	40.79	5.00	47.00	39.277
	47161	3.00	49.00	41.33	3.00	49.00	40.707
	48033	0.00	46.00	38.76	0.00	45.00	37.520
	48571	5.00	46.00	39.61	4.00	44.00	38.356
	48375	3.00	45.00	39.24	3.00	43.00	37.893
	801245	0.00	56.00	49.22	0.00	54.00	47.604
	49911	4.00	46.00	39.23	4.00	46.00	38.454
5/23/2024	48374	4.00	51.00	35.35	3.00	48.00	33.331
	47161	4.00	53.00	37.27	4.00	51.00	36.053
	48033	3.00	47.00	33.56	3.00	45.00	31.837
	48571	3.00	47.00	32.71	3.00	45.00	30.974
	48375	3.00	47.00	33.71	3.00	46.00	32.184
	801245	3.00	62.00	43.39	3.00	60.00	41.432
	49911	4.00	48.00	34.26	4.00	47.00	33.062
5/24/2024	48374	4.00	51.00	36.51	4.00	49.00	35.009
	47161	5.00	54.00	44.19	5.00	53.00	41.837
	48033	4.00	42.00	28.69	3.00	42.00	28.139
	48571	5.00	49.00	30.64	5.00	48.00	29.470
	48375	4.00	50.00	37.91	4.00	49.00	36.480
	801245	5.00	67.00	49.22	5.00	65.00	47.583
	49911	5.00	50.00	35.70	4.00	49.00	34.562

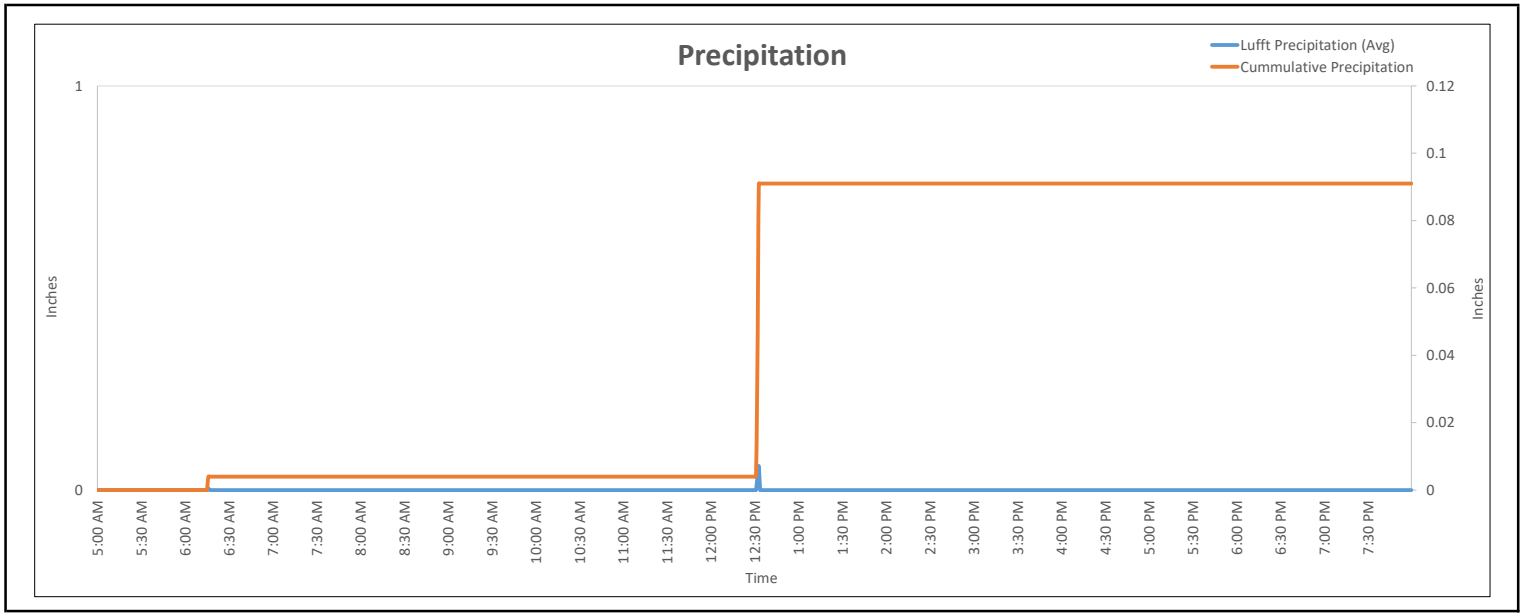
Note:

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
Houston Texas
Weather Daily Summary
Monday, May 20, 2024

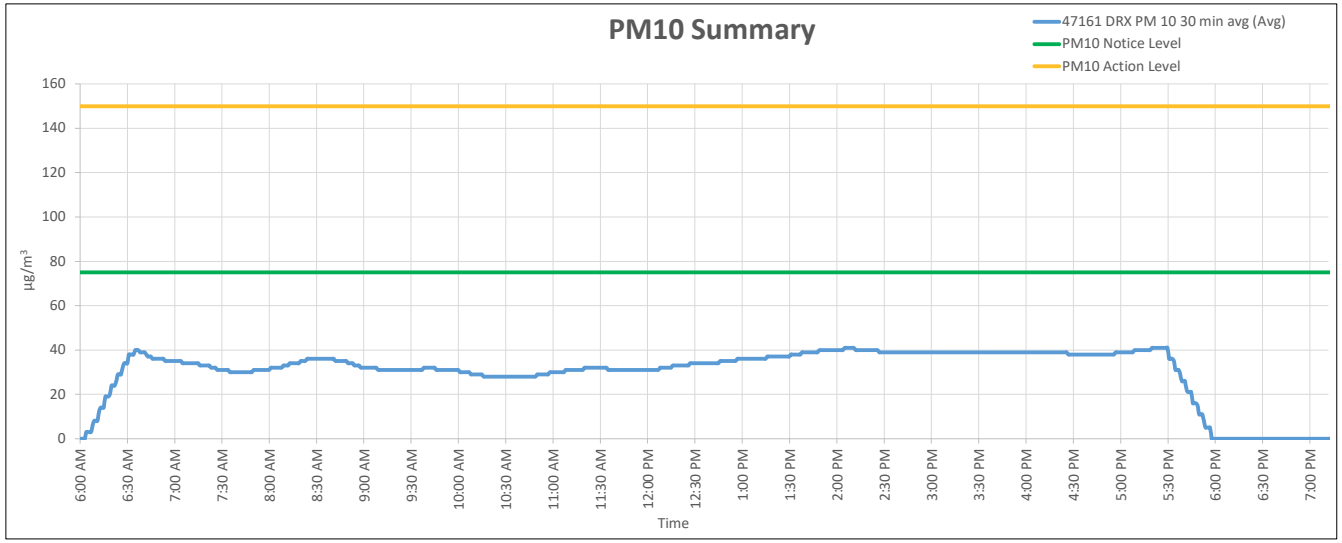


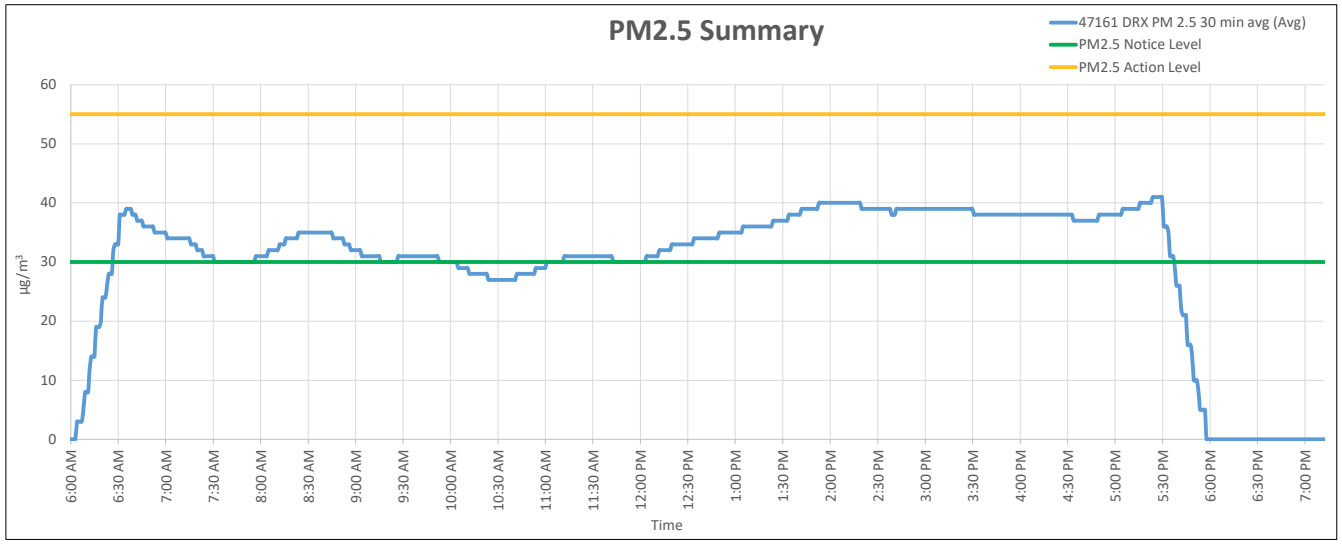
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Monday, May 20, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 20, 2024

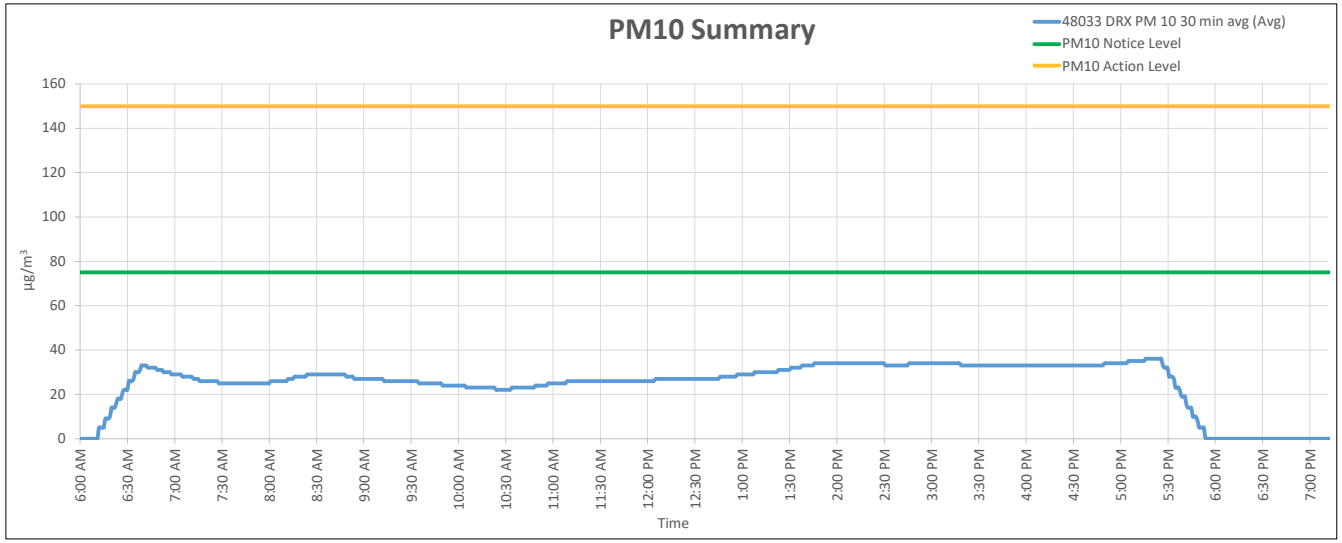
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:04 AM	5:57 PM	33.74	41.00	33.27	41.00

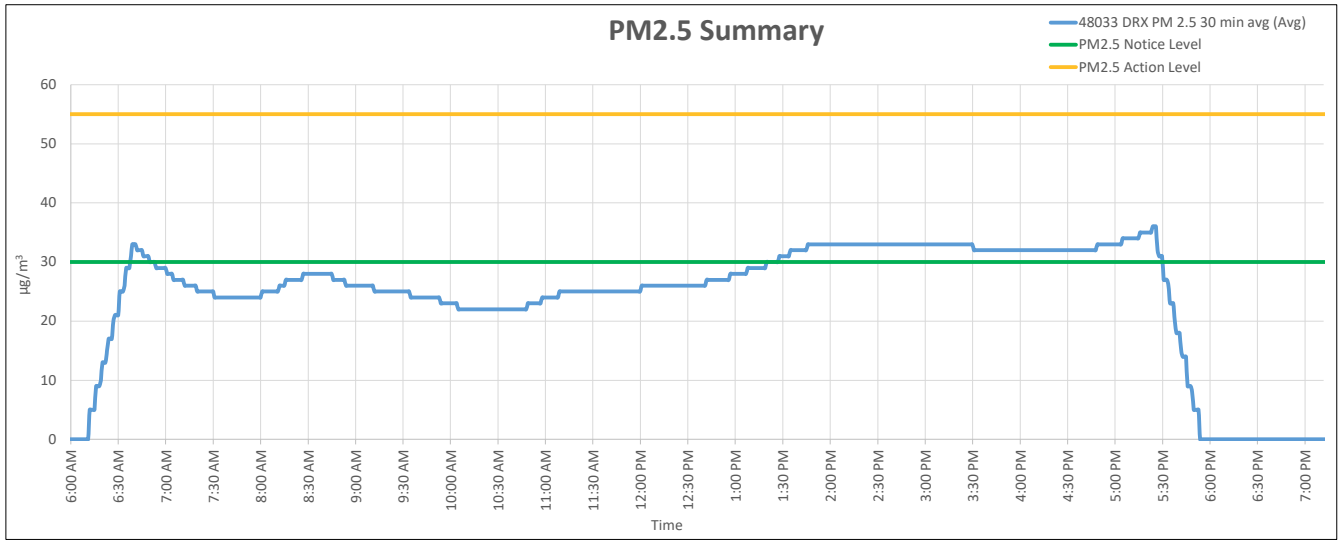




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 20, 2024

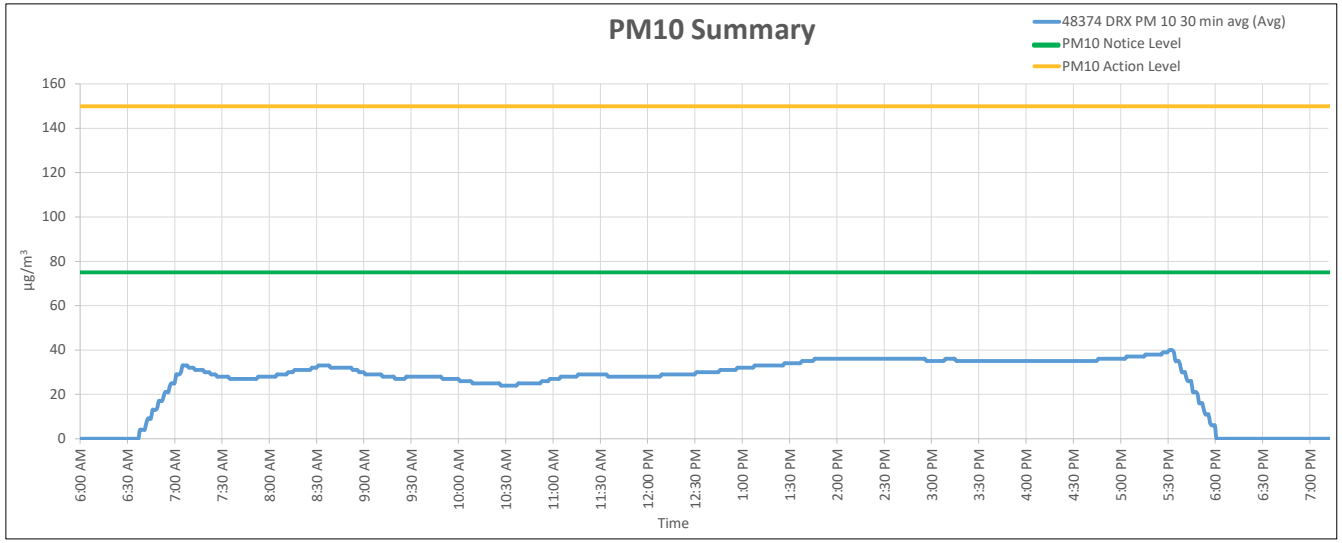
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:12 AM	5:53 PM	28.26	36.00	27.39	36.00

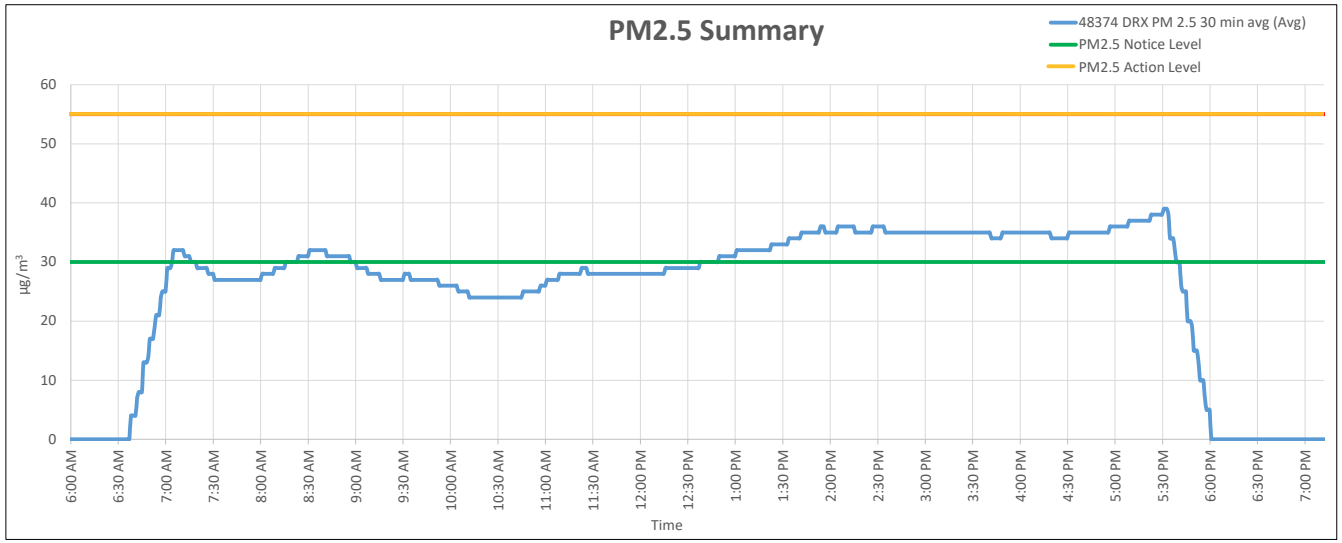




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 20, 2024

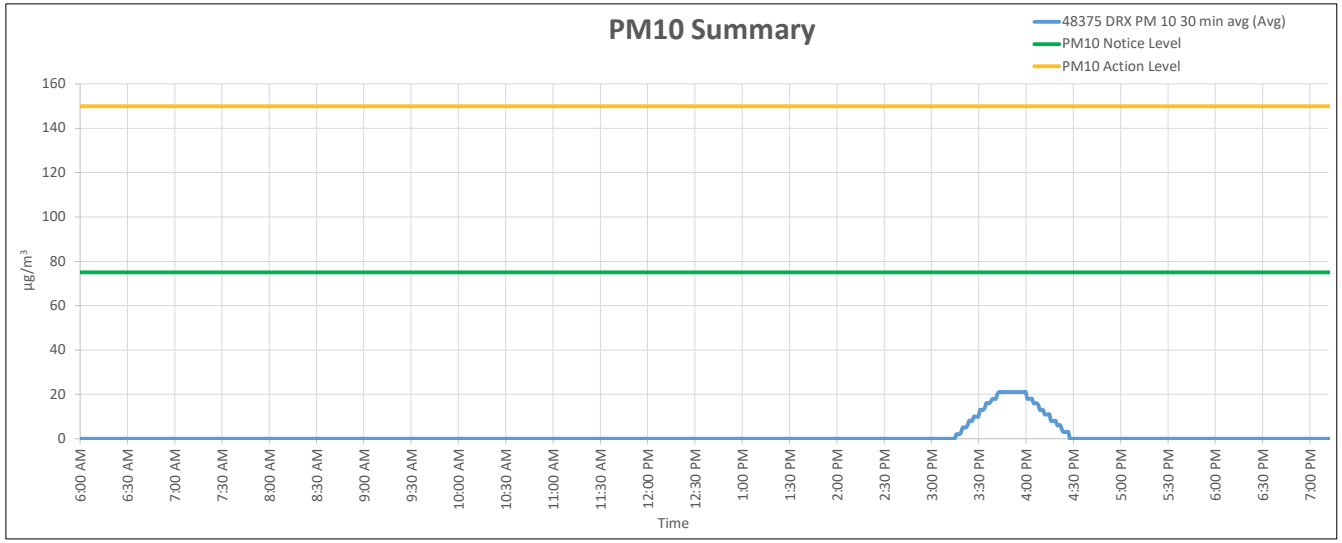
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:38 AM	6:00 PM	30.49	40.00	30.02	39.00

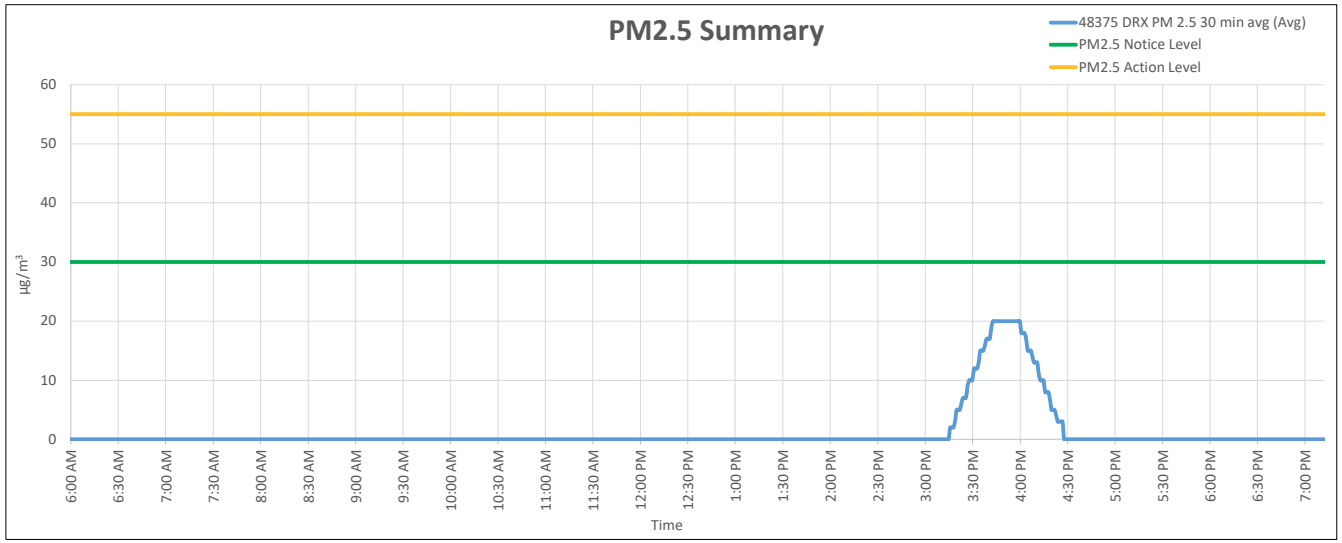




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 20, 2024

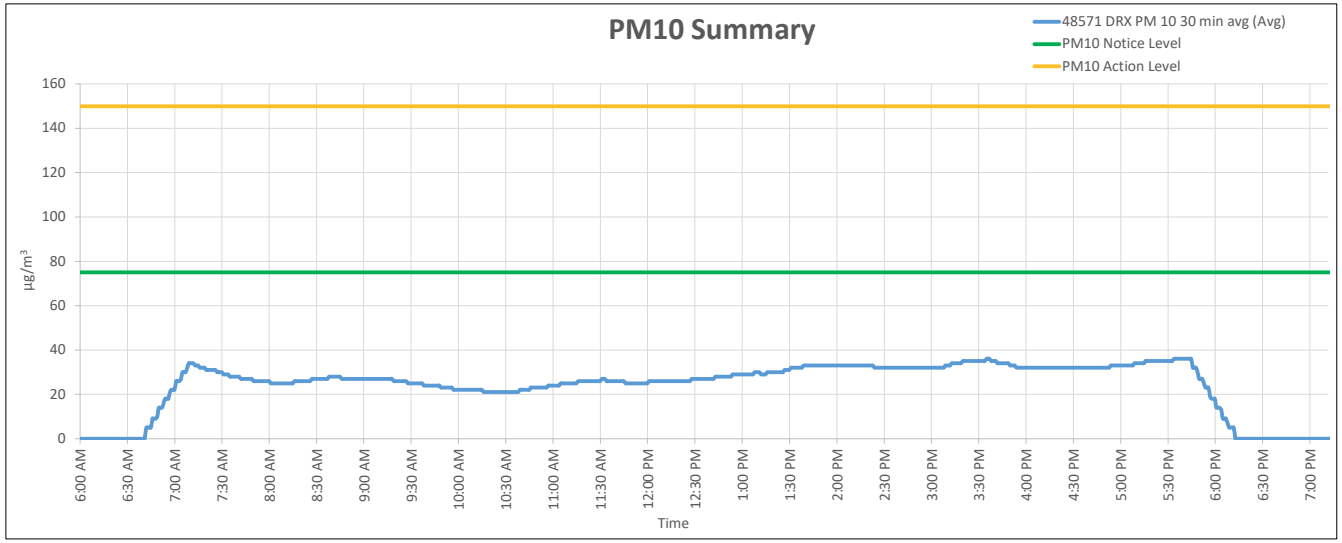
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	3:16 PM	4:27 PM	13.17	21.00	12.53	20.00

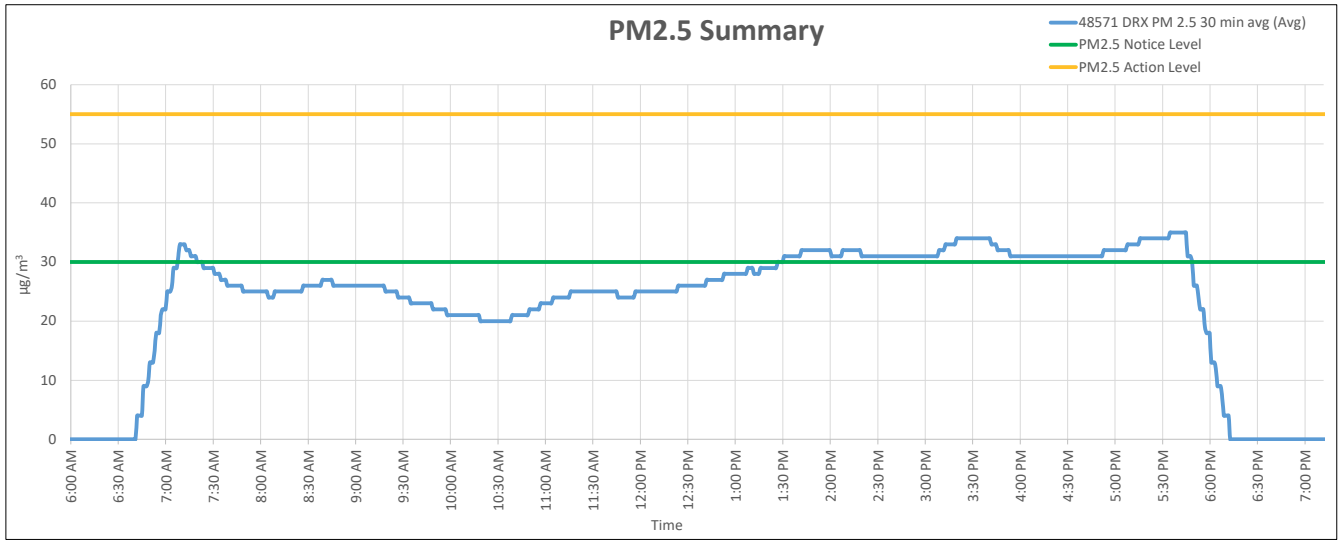




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 20, 2024

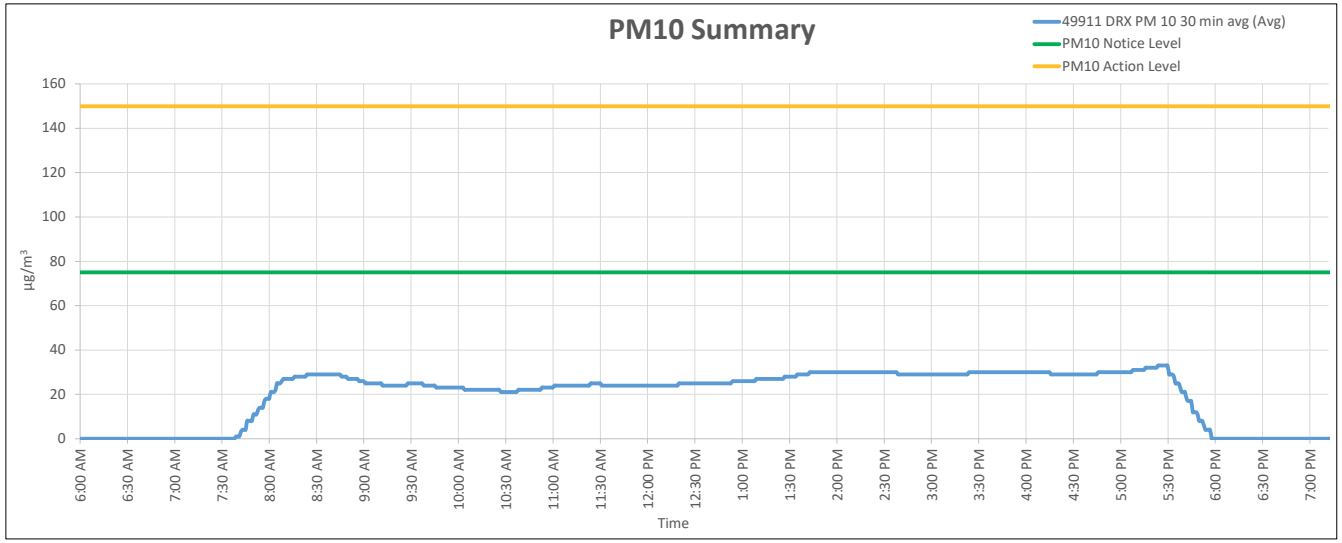
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	6:42 AM	6:12 PM	28.03	36.00	27.04	35.00

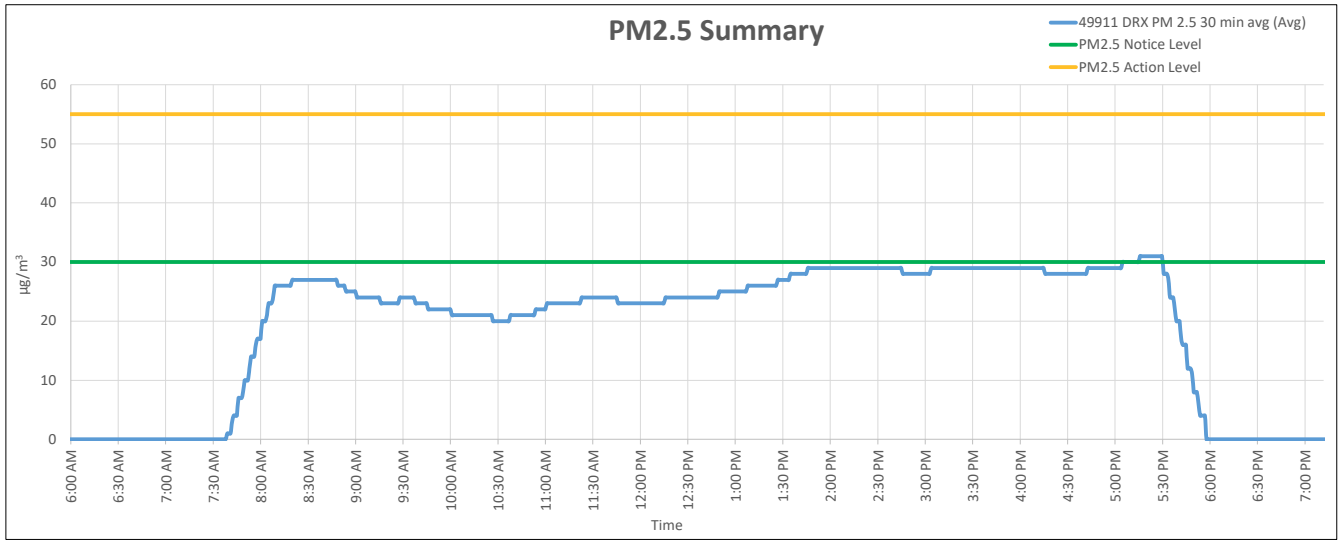




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 20, 2024

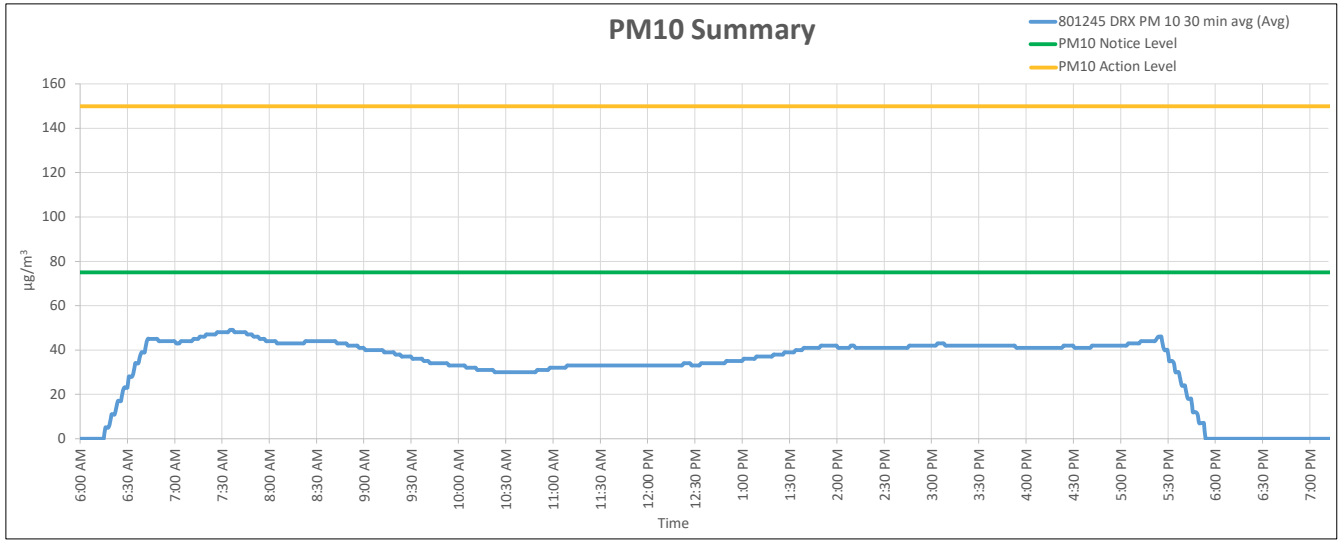
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	7:39 AM	5:57 PM	25.77	33.00	24.83	31.00

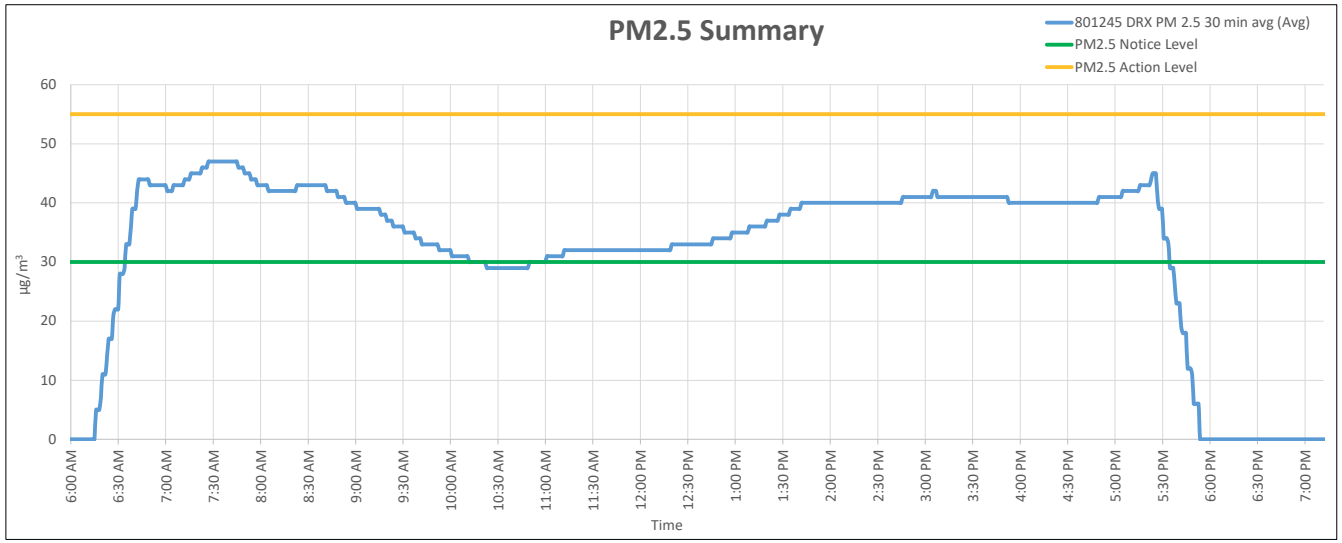




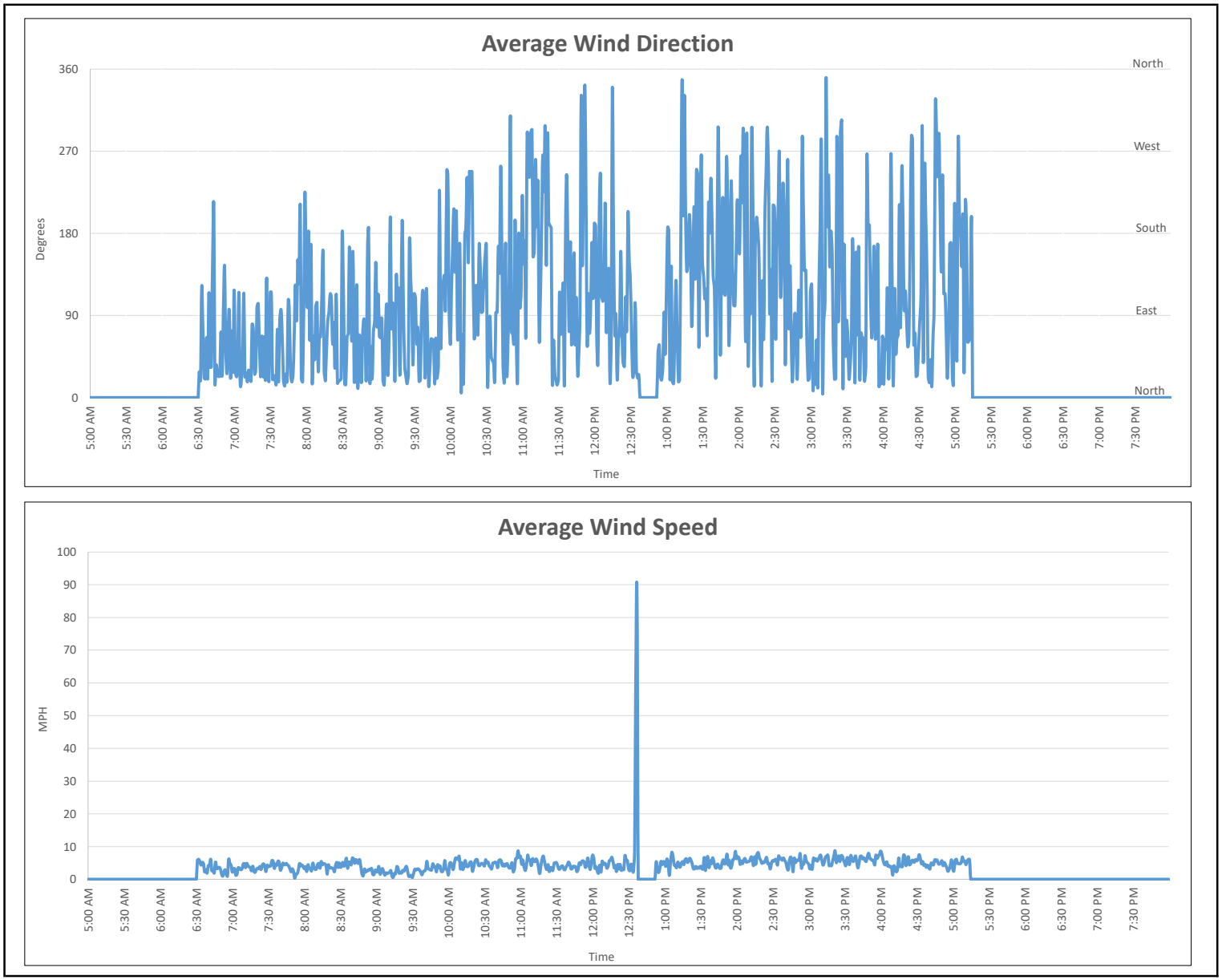
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Monday, May 20, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:16 AM	5:53 PM	37.86	49.00	36.84	47.00

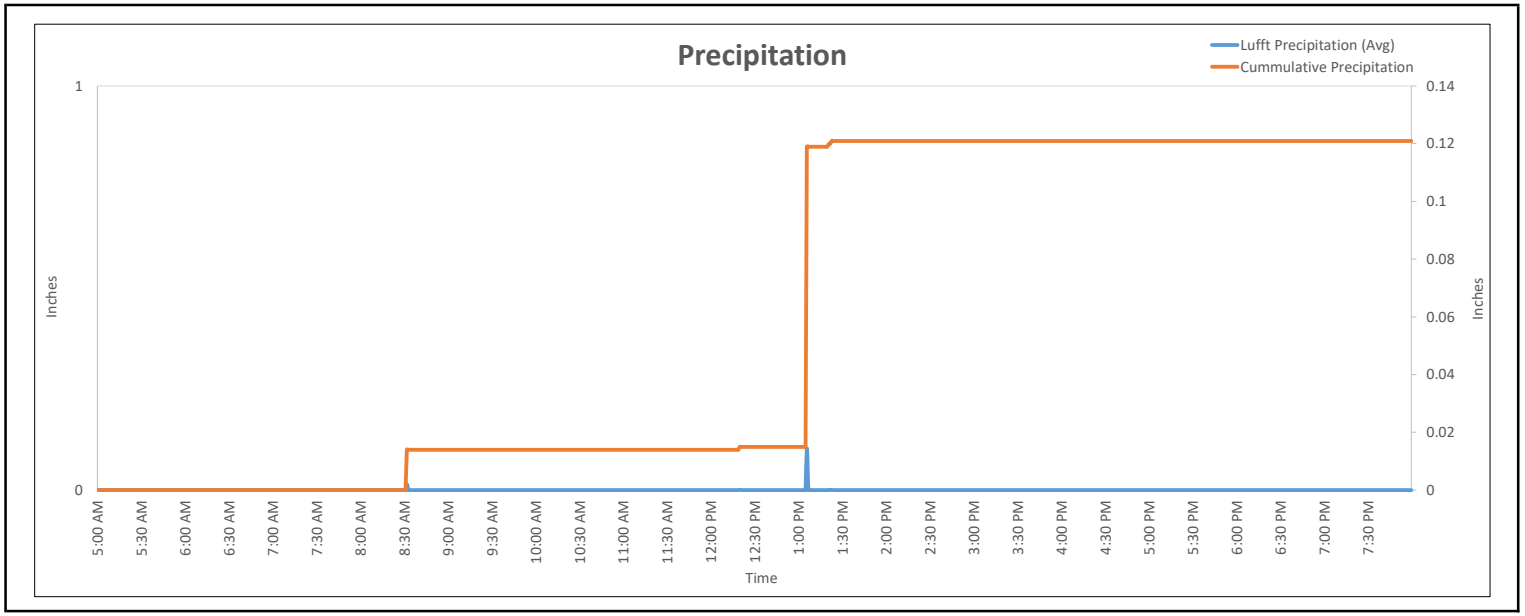




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Tuesday, May 21, 2024

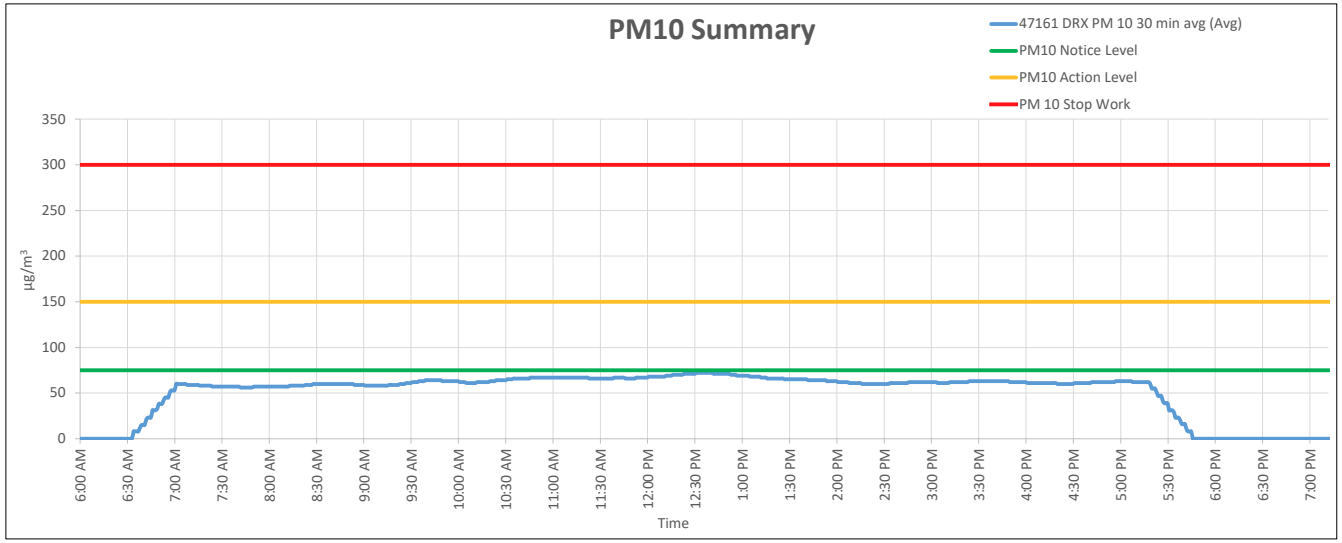


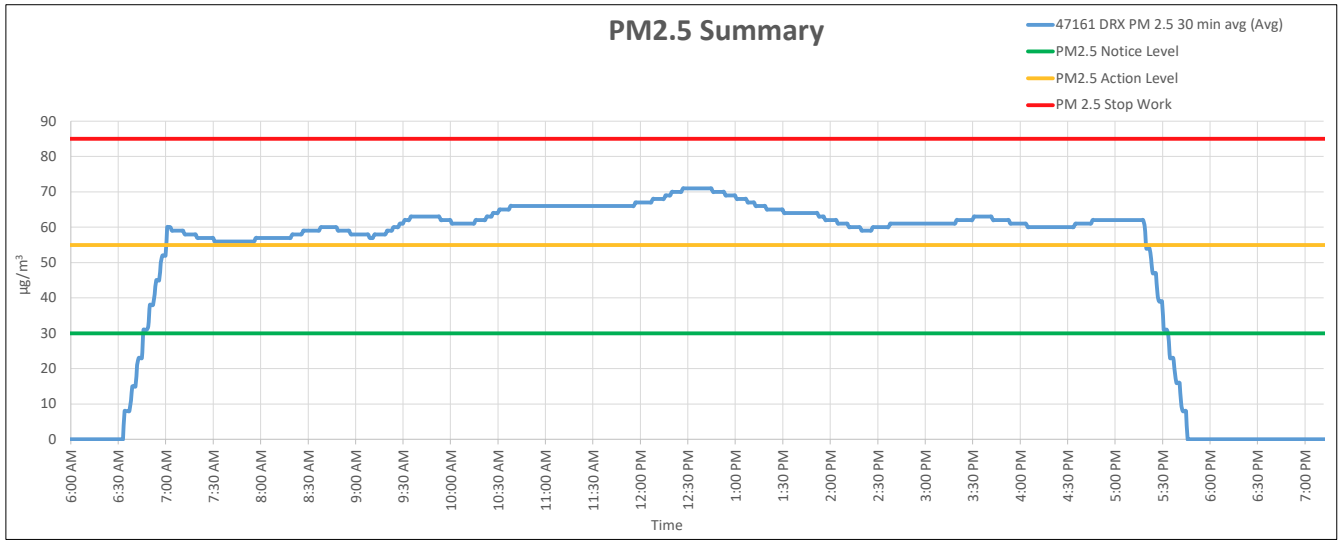
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Tuesday, May 21, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 21, 2024

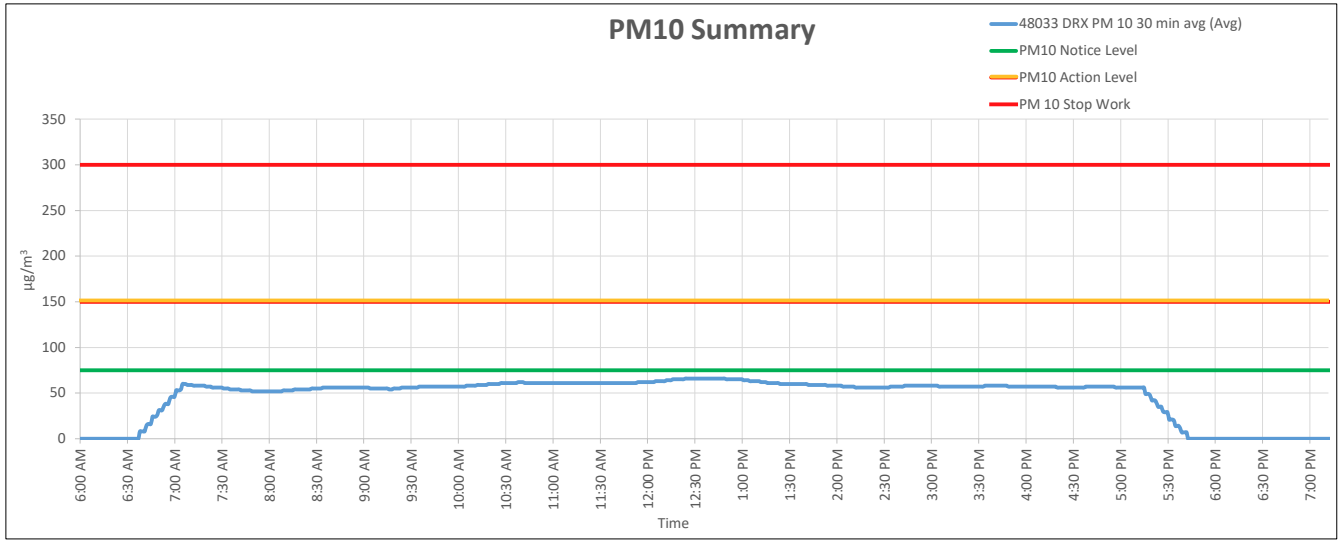
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:34 AM	5:45 PM	60.30	72.00	59.80	71.00

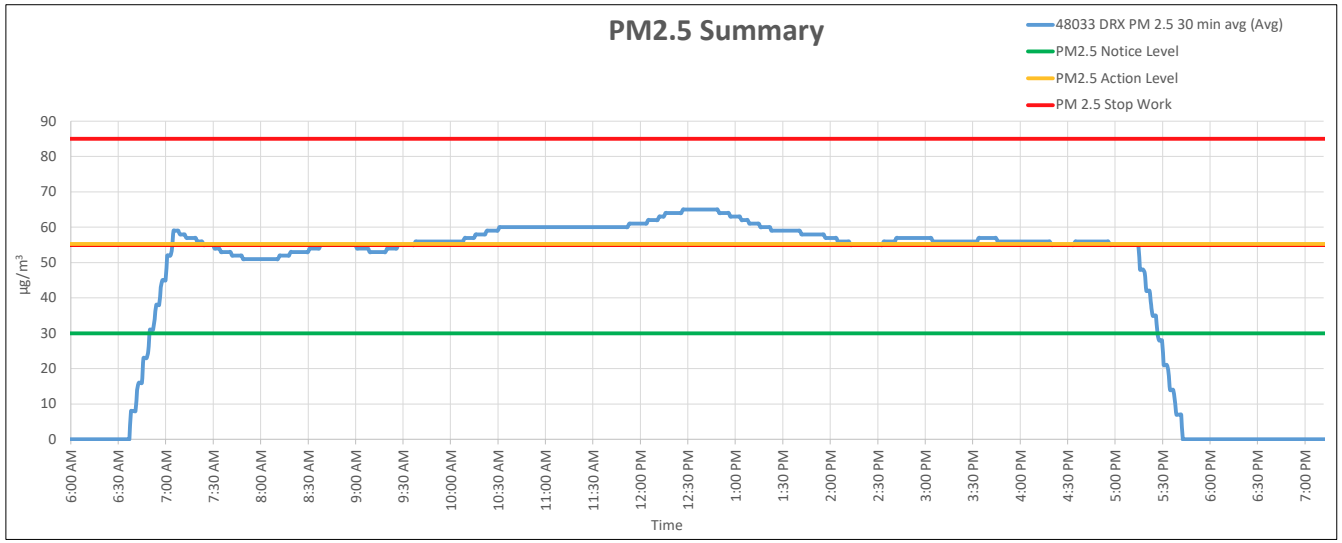




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 21, 2024

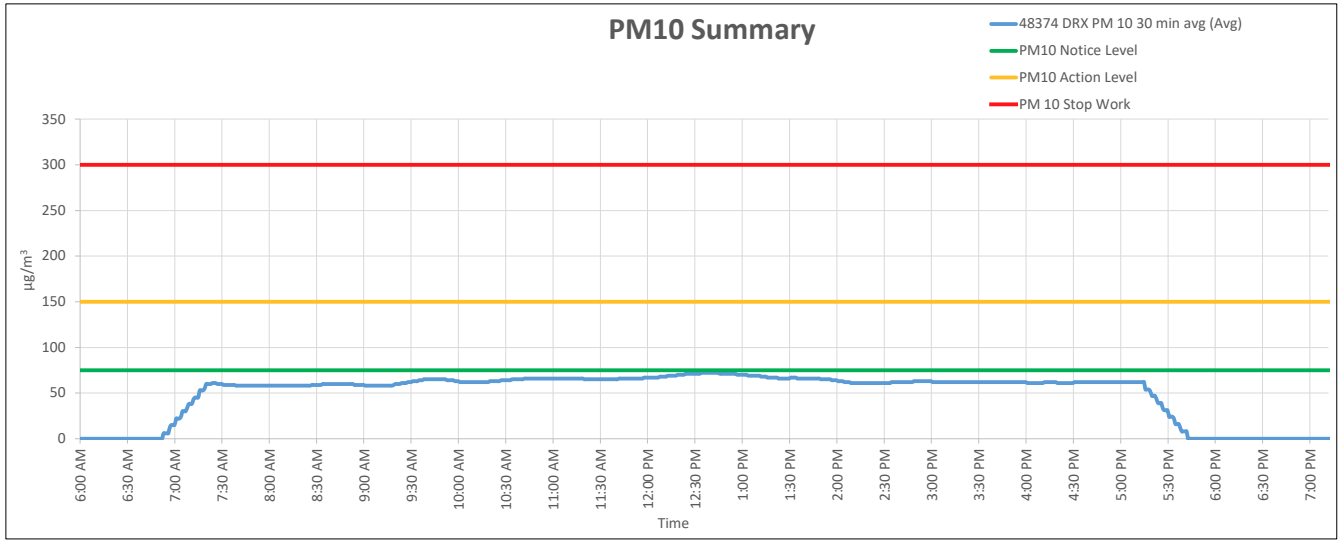
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:38 AM	5:42 PM	55.94	66.00	54.91	65.00

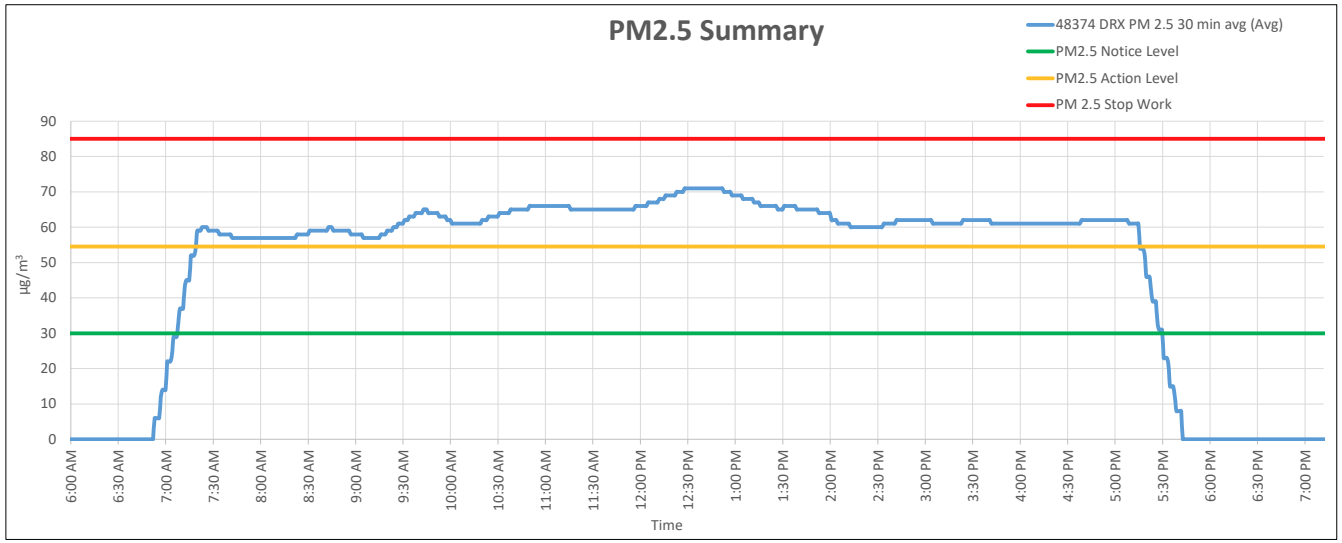




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 21, 2024

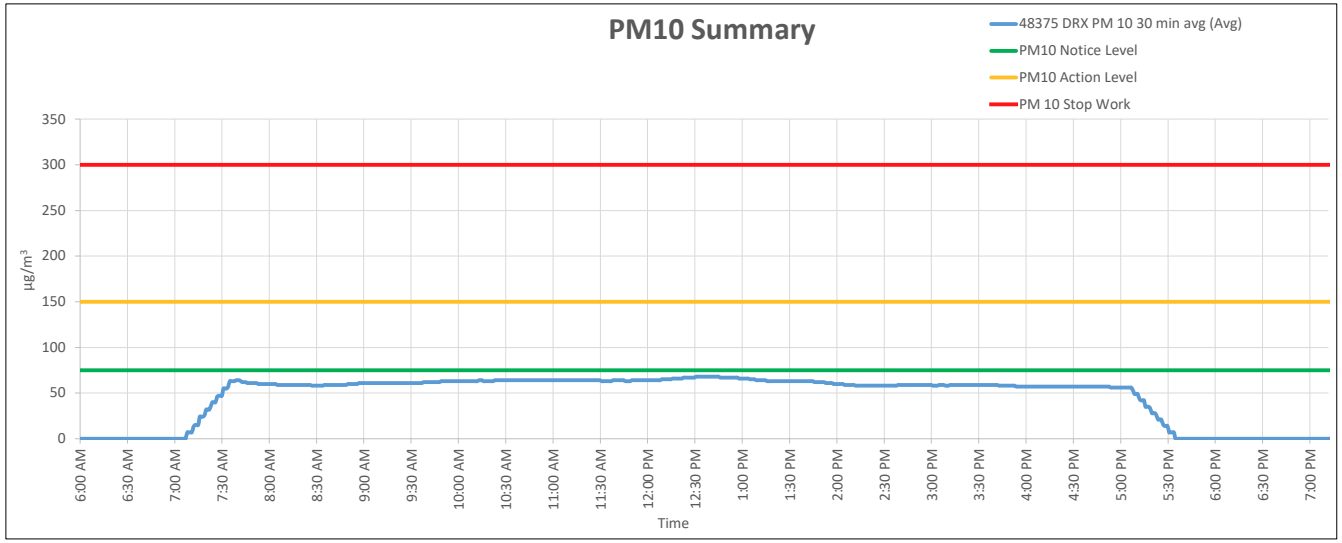
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:53 AM	5:42 PM	60.50	72.00	59.87	71.00

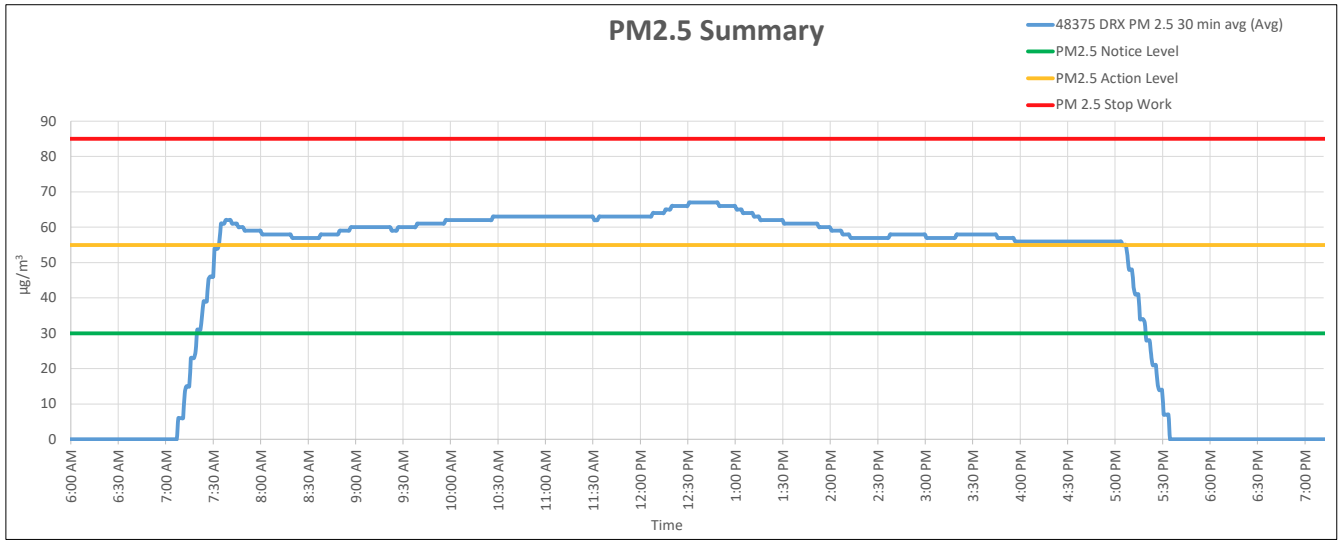




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 21, 2024

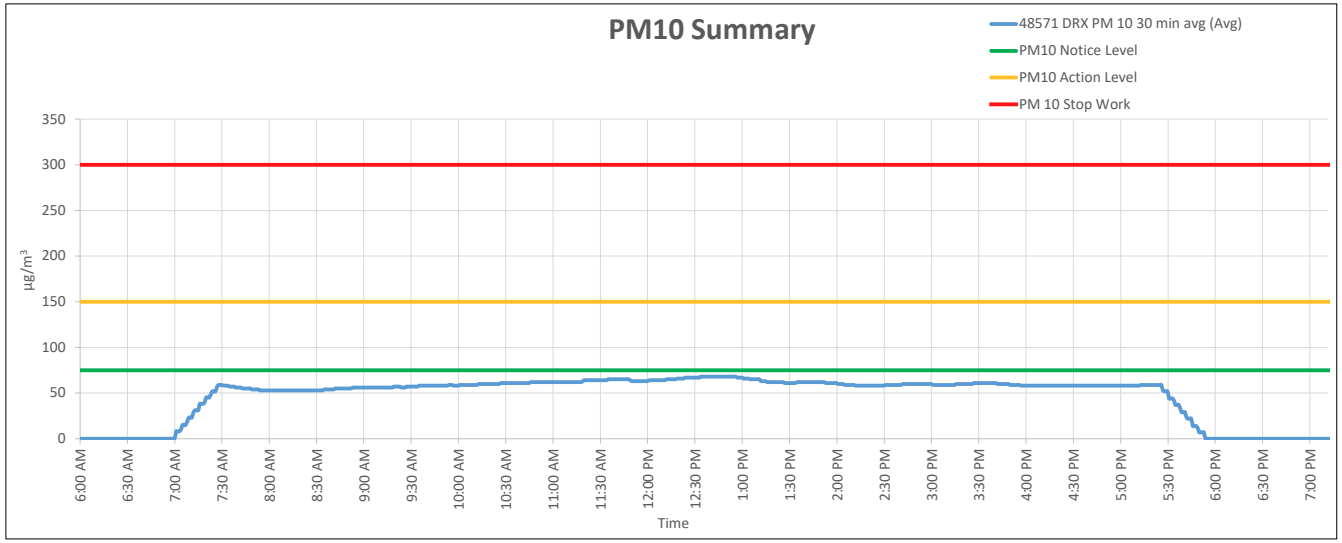
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	7:08 AM	5:34 PM	58.54	68.00	57.53	67.00

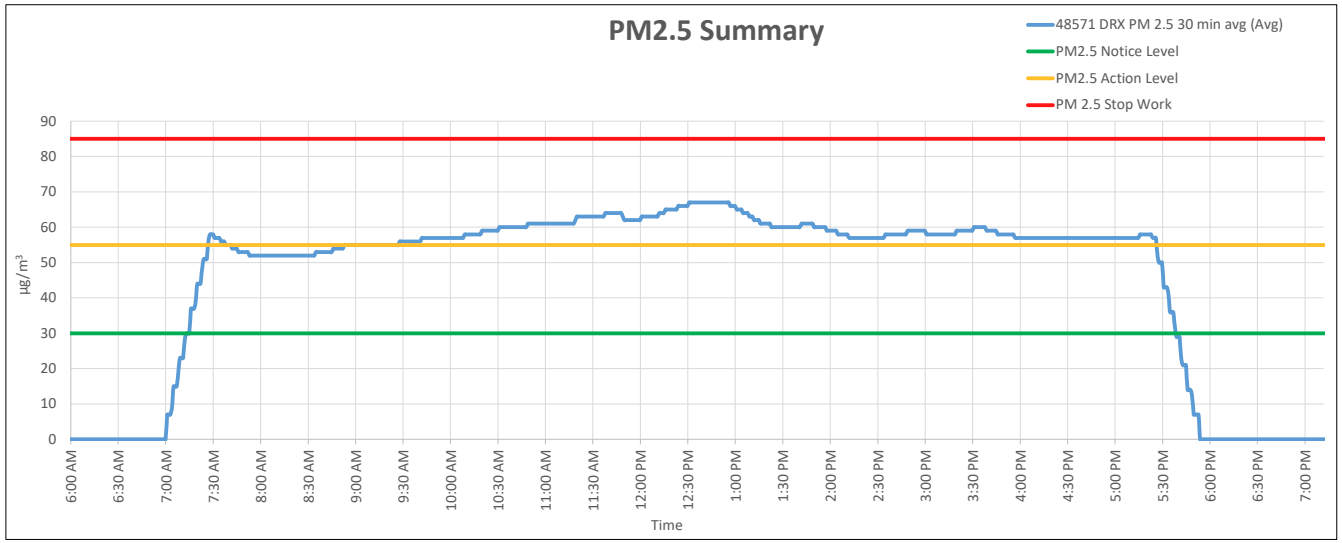




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 21, 2024

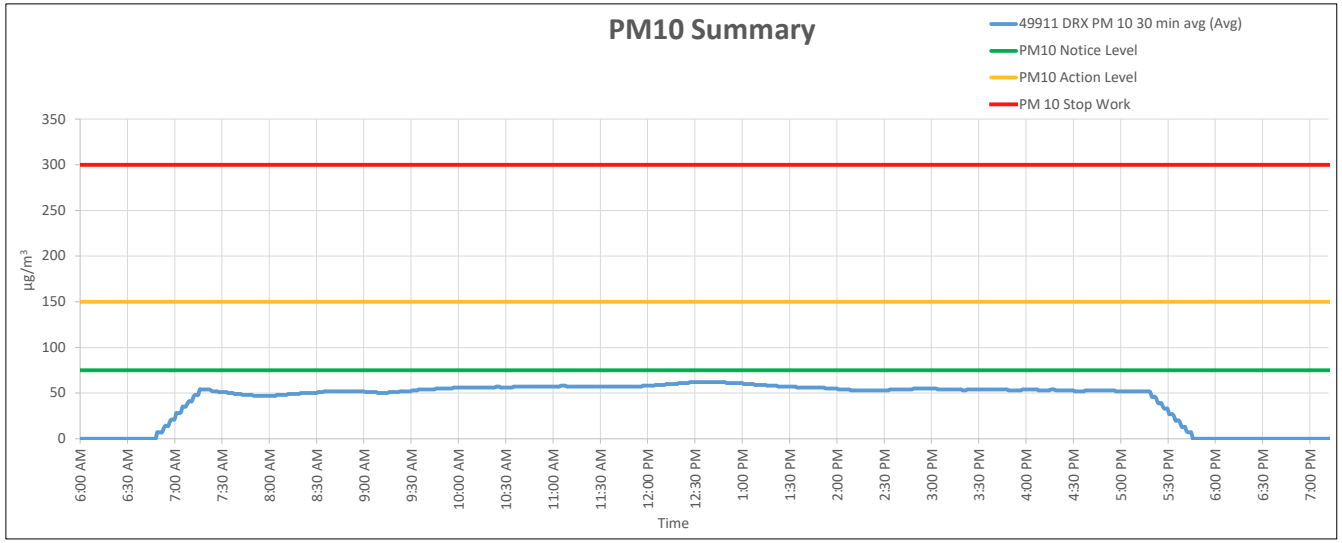
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:01 AM	5:53 PM	57.32	68.00	56.19	67.00

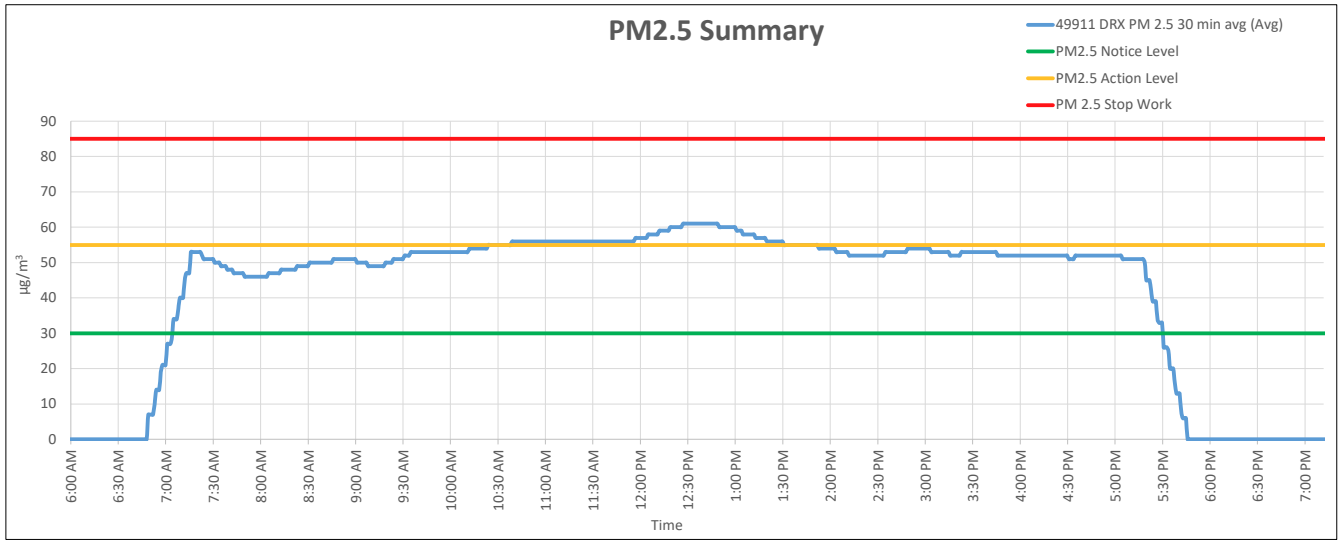




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 21, 2024

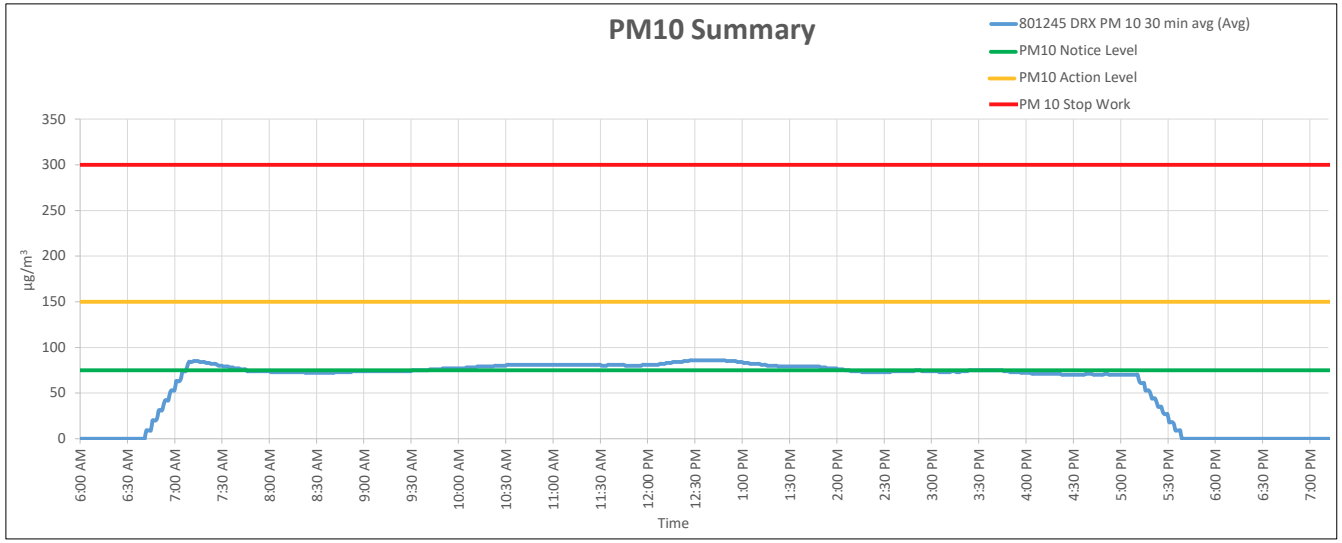
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:49 AM	5:45 PM	52.31	62.00	51.20	61.00

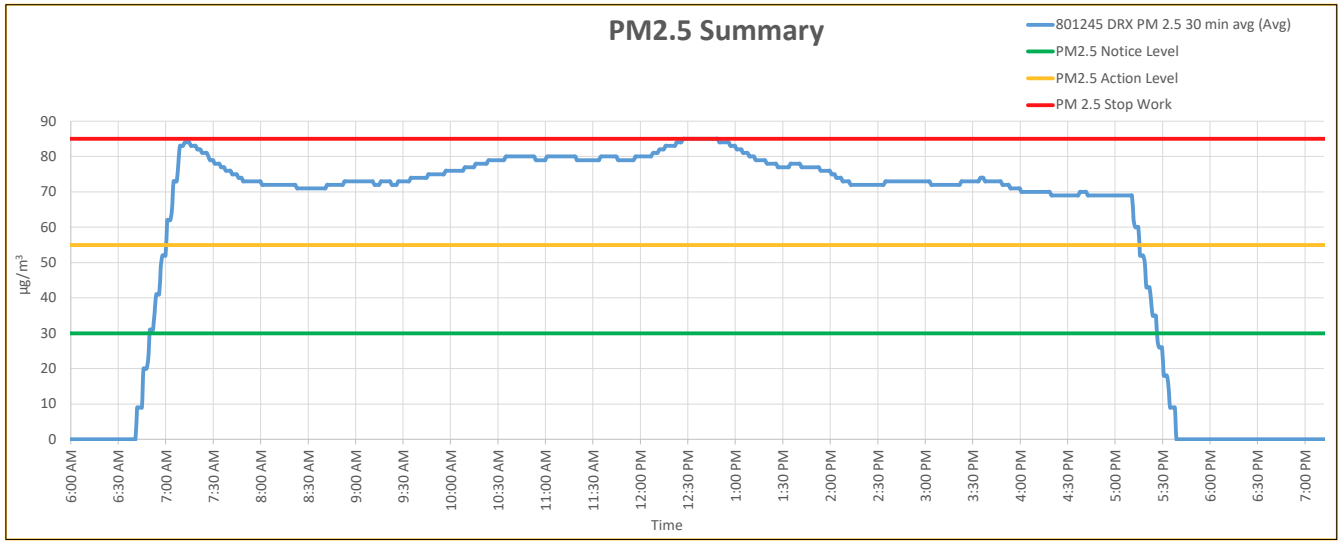




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 21, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:42 AM	5:38 PM	73.68	86.00	72.52	85.00



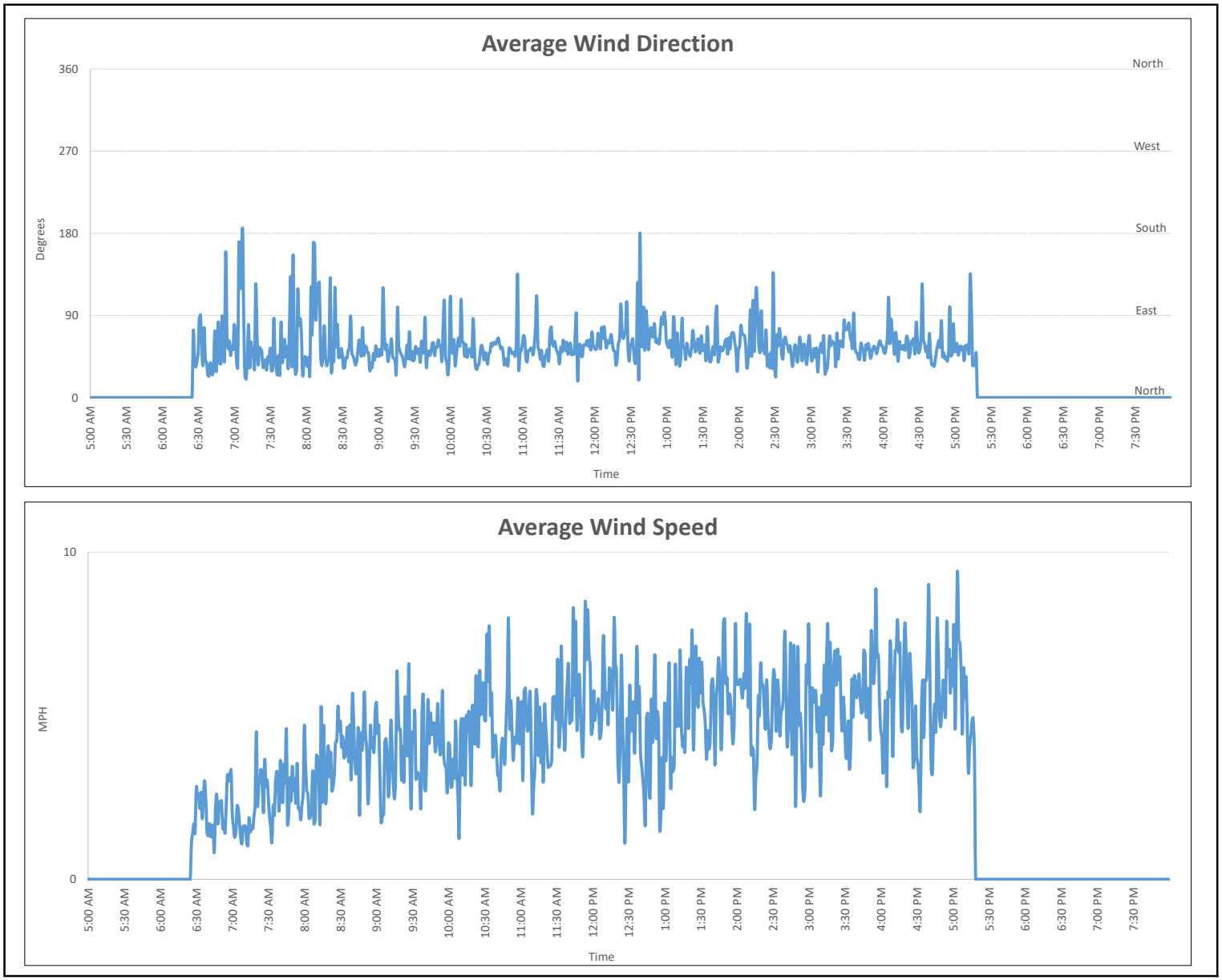


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston, Texas
TCEQ Air Monitor Values
Houston North Wayside C405/C1033
May 21, 2024

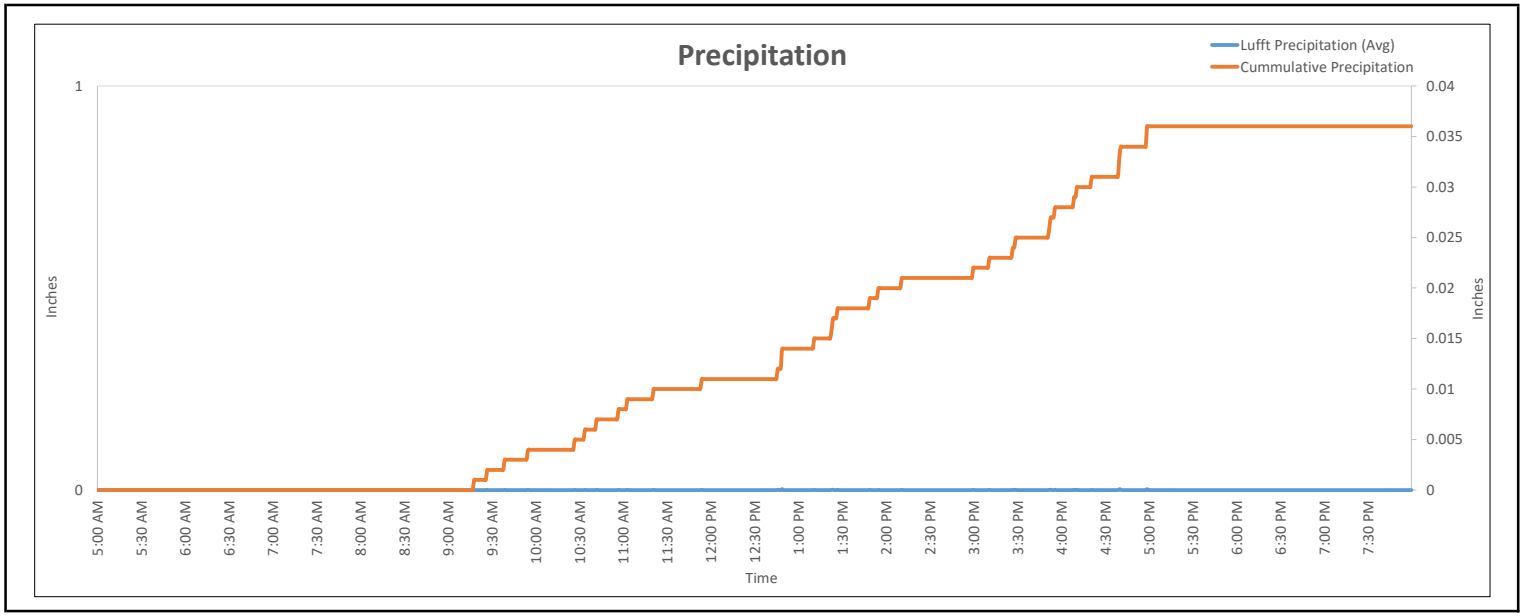
Parameter Measured	Morning												Afternoon												Parameter Measured	POC
	Mid	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	Noon	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00		
PM-10 (Standard Conditions)	***26.7***	27.2	31.2	33.1	36.4	37.6	42.3	45.6	51.9	52.2	50.1	51.3	50.2	54.8	**64.6**	58.3	62.1	57.9	42.7	35.3	33.9	32	30.7	28.2	PM-10 (Standard Conditions)	2 N MDL
PM-2.5 (Local Conditions)	***20***	22	20	25	24	25	22	24	35	32	**36**	35	30	30	32	33	32	21	20	22	21	21	23	23	PM-2.5 (Local Conditions)	1 R MDL
Parameter Measured	**Mid**	**1:00**	**2:00**	**3:00**	**4:00**	**5:00**	**6:00**	**7:00**	**8:00**	**9:00**	**10:00**	**11:00**	**Noon**	**1:00**	**2:00**	**3:00**	**4:00**	**5:00**	**6:00**	**7:00**	**8:00**	**9:00**	**10:00**	**11:00**	**Parameter Measured**	POC
	Morning												**Afternoon**													

Data from: https://www.tceq.texas.gov/cgi-bin/compliance/monops/daily_summary.pl

Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Wednesday, May 22, 2024

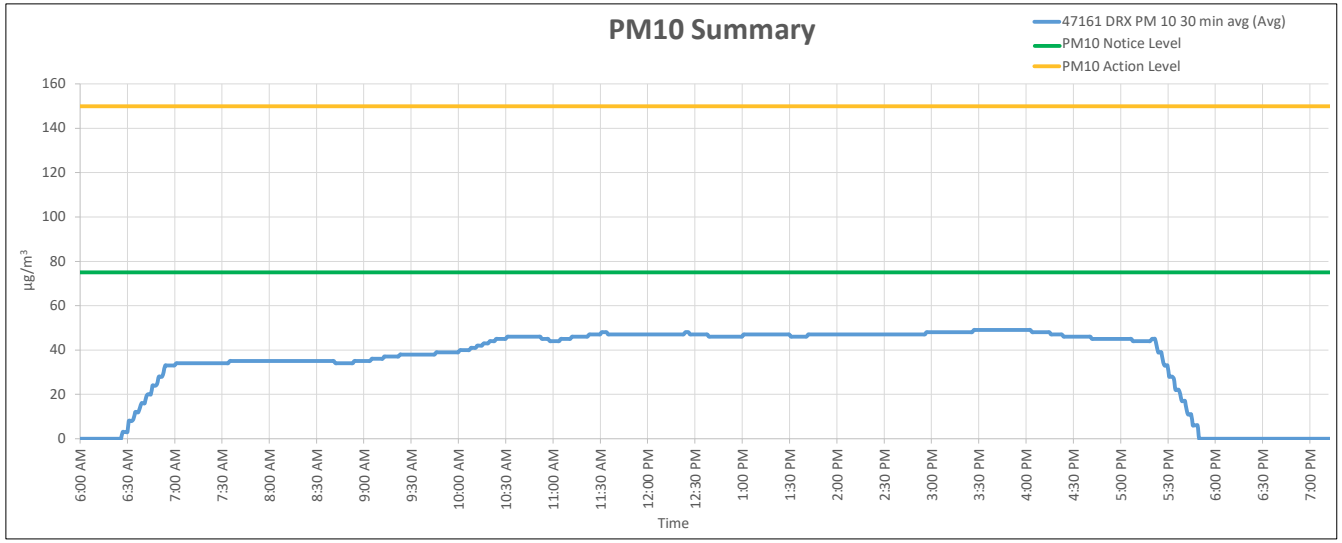


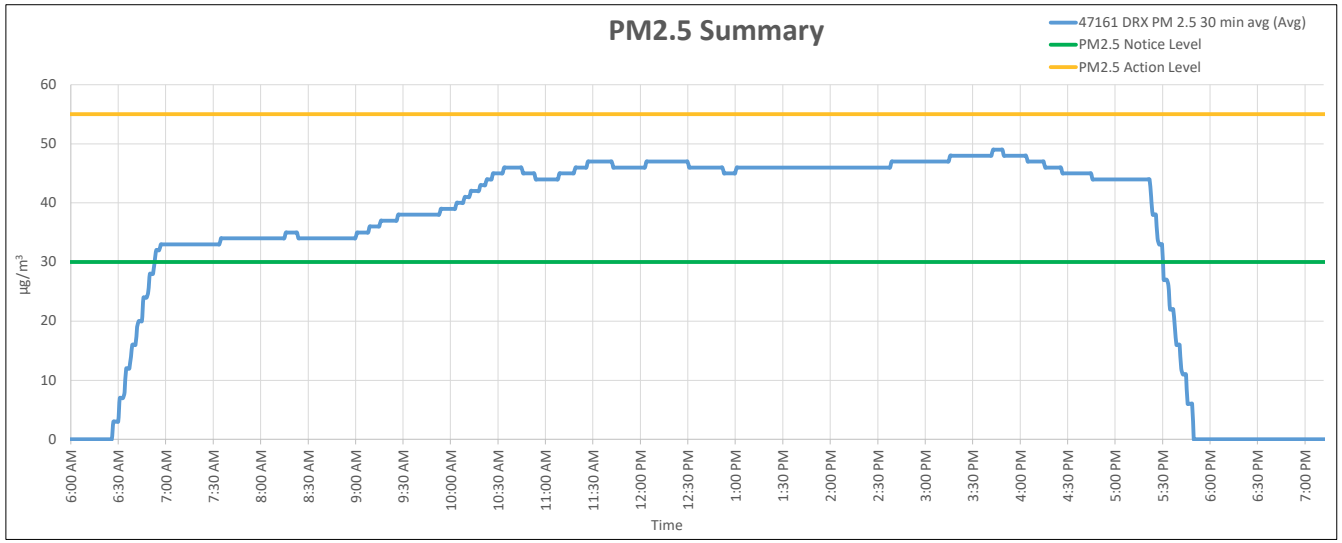
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Wednesday, May 22, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 22, 2024

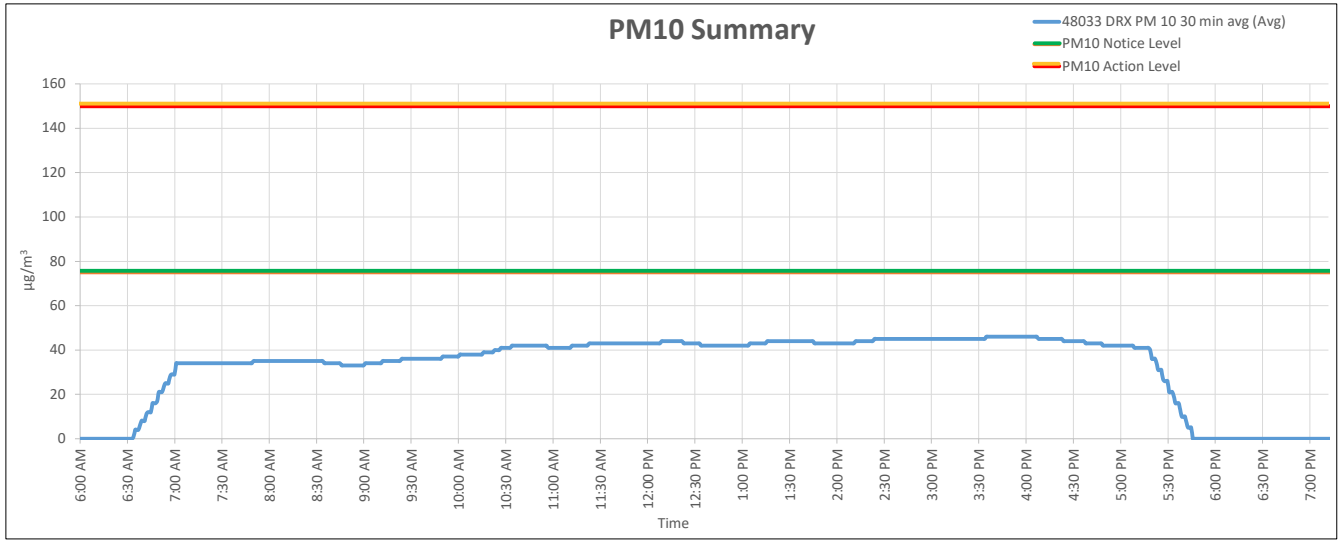
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:27 AM	5:49 PM	41.33	49.00	40.71	49.00

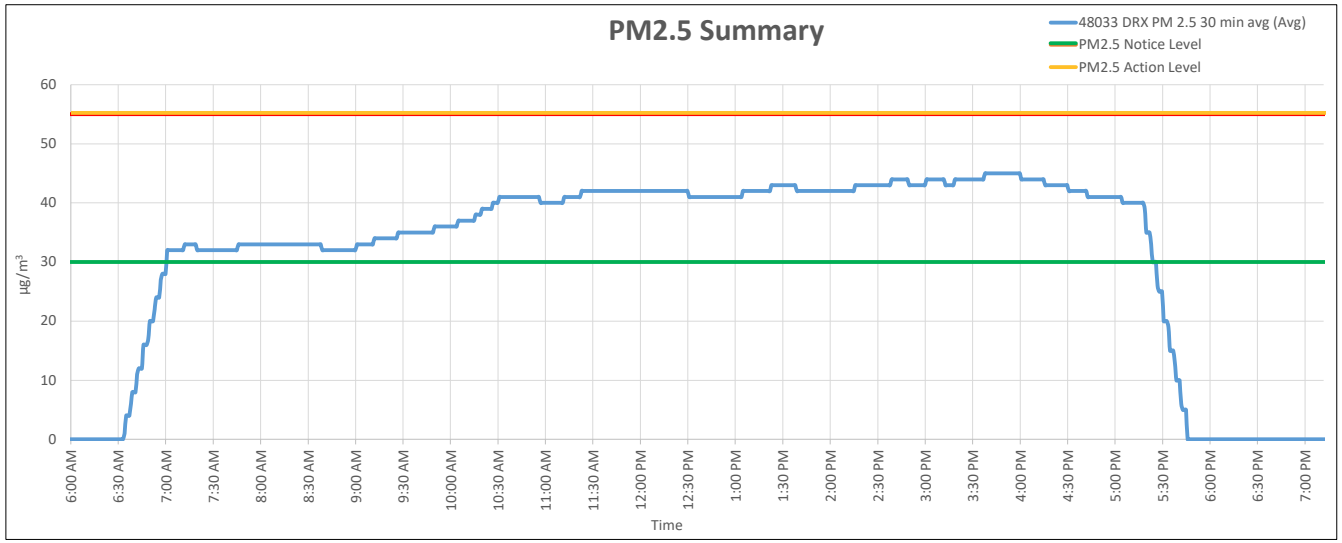




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 22, 2024

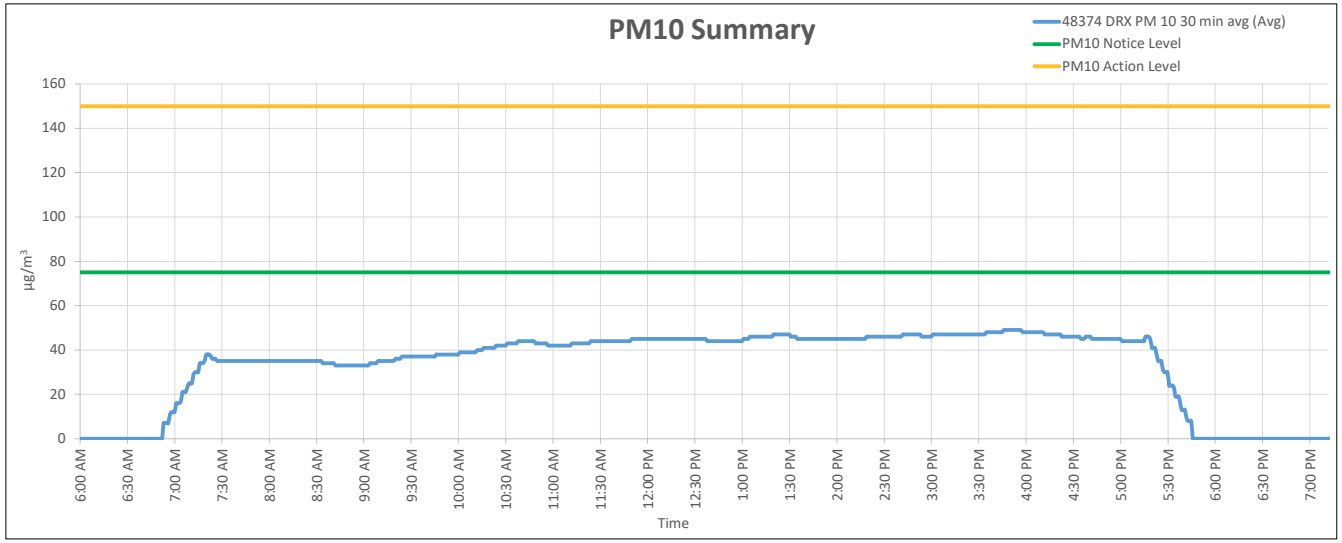
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:34 AM	5:45 PM	38.94	46.00	37.69	45.00

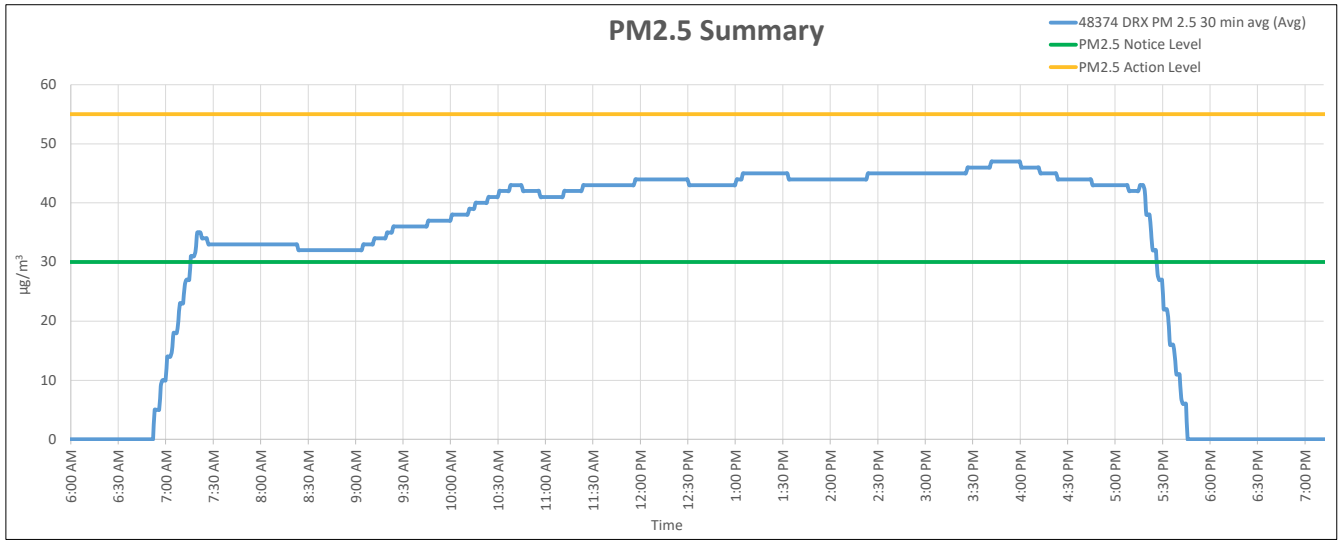




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 22, 2024

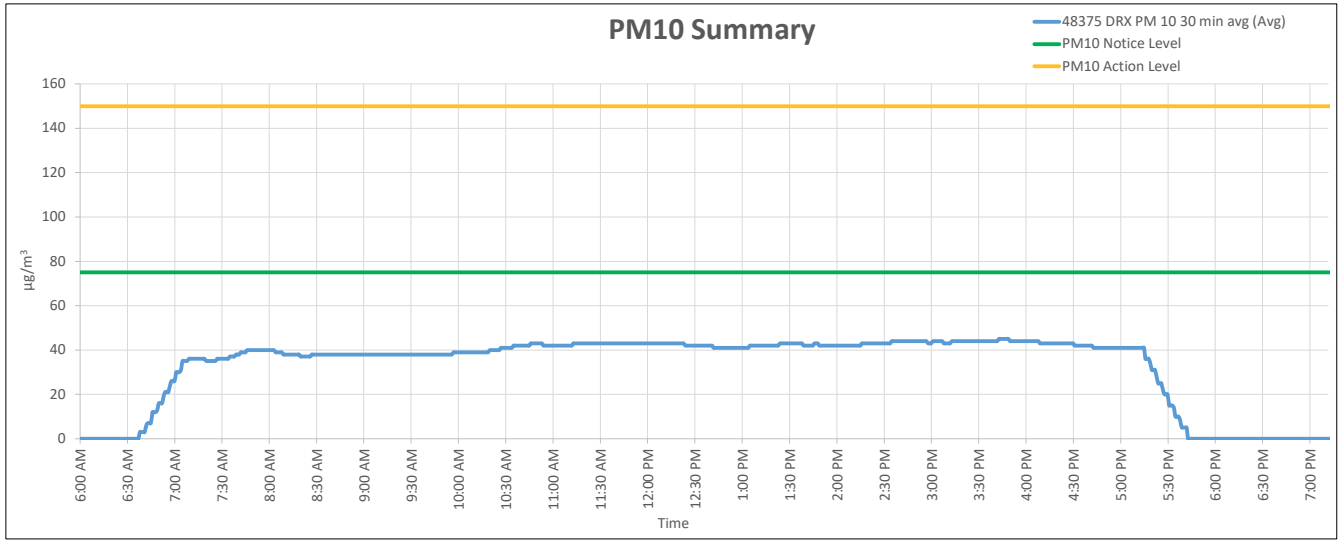
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:53 AM	5:45 PM	40.79	49.00	39.28	47.00

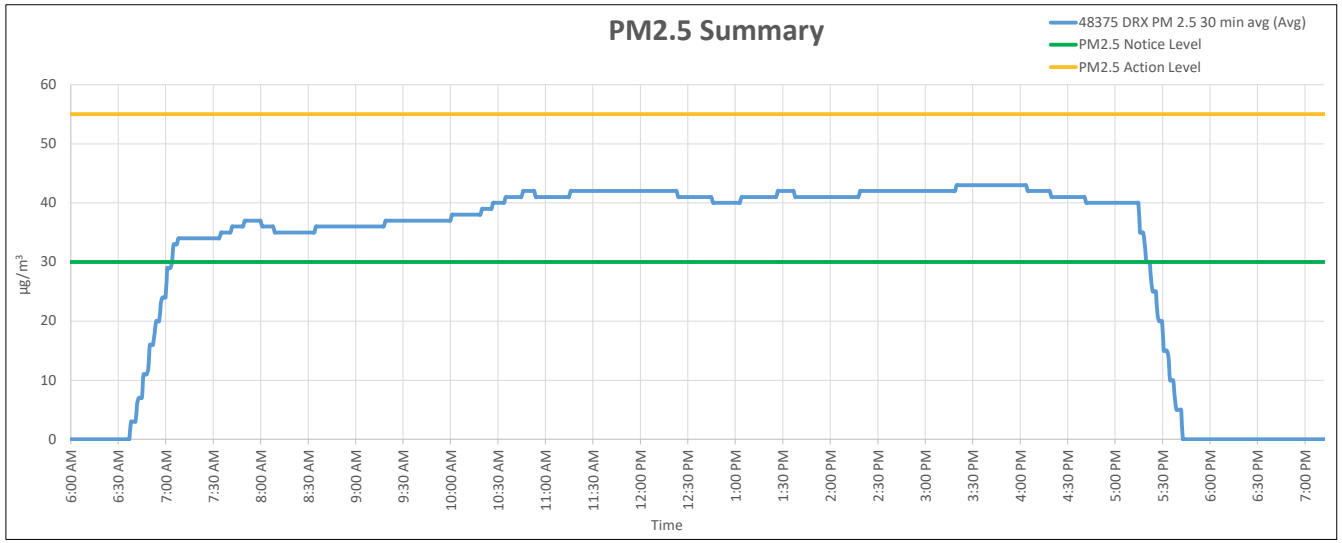




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 22, 2024

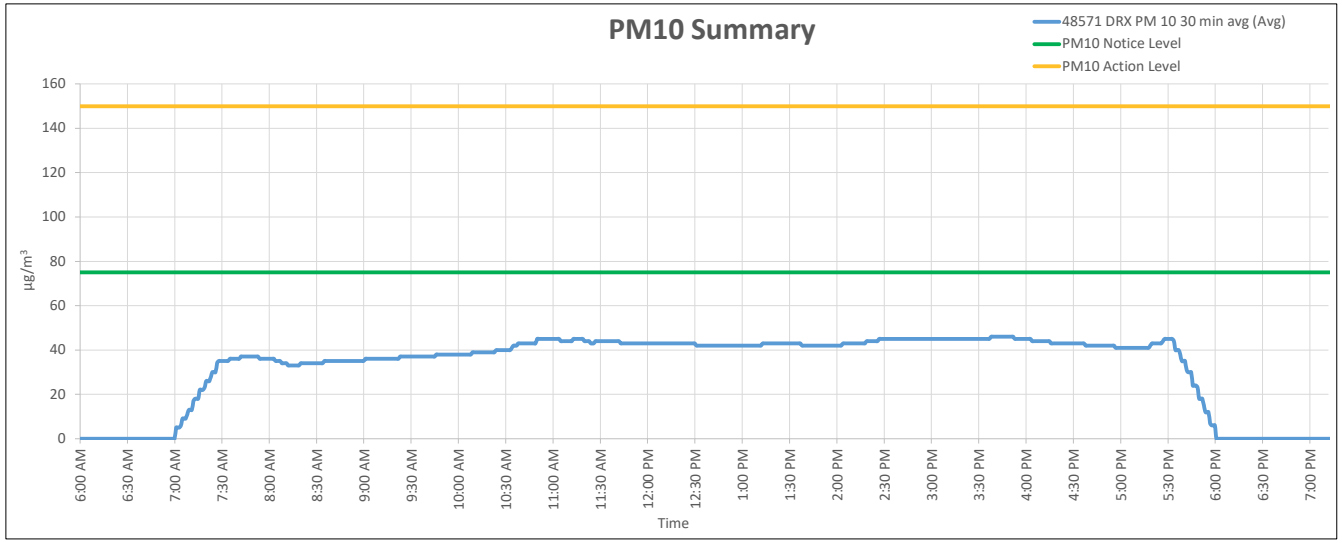
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:38 AM	5:42 PM	39.24	45.00	37.89	43.00

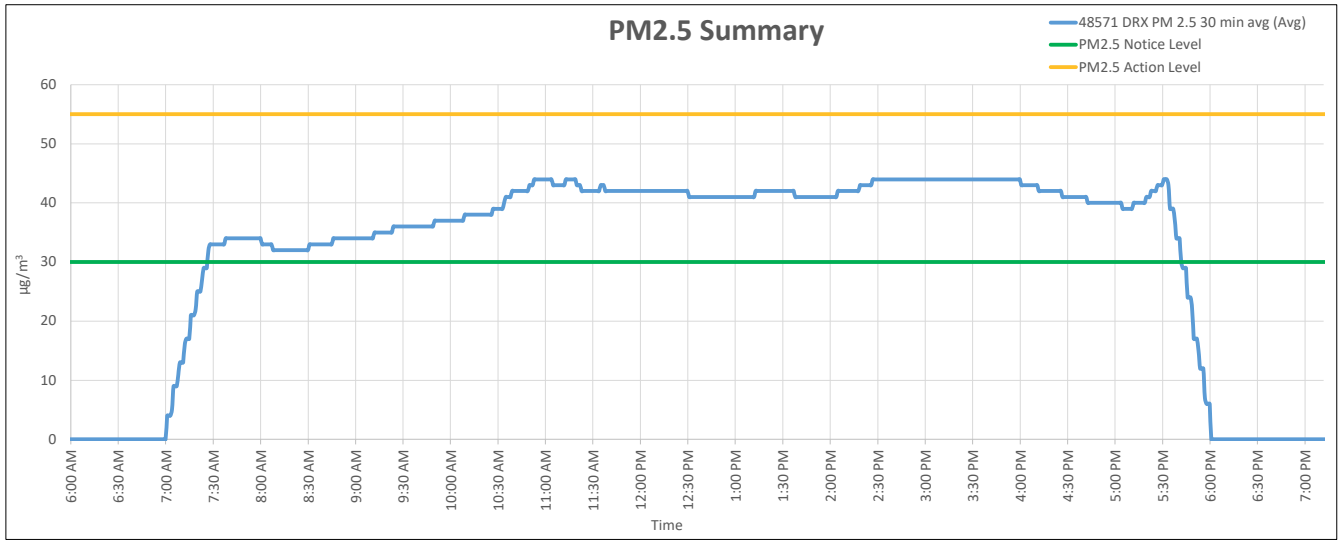




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 22, 2024

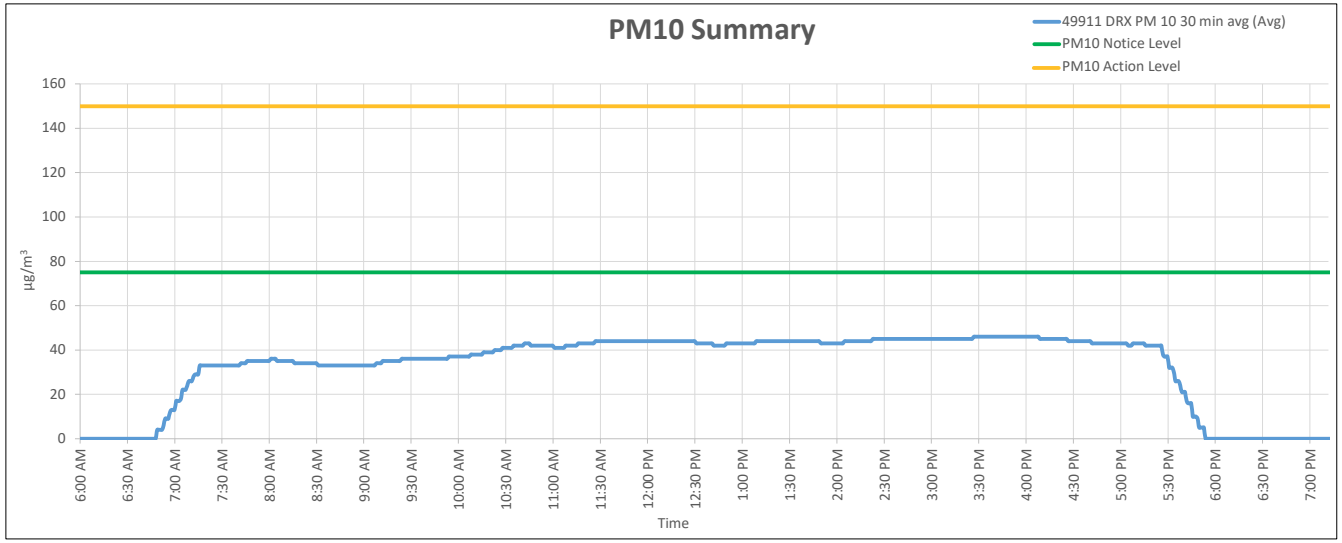
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:01 AM	6:00 PM	39.61	46.00	38.36	44.00

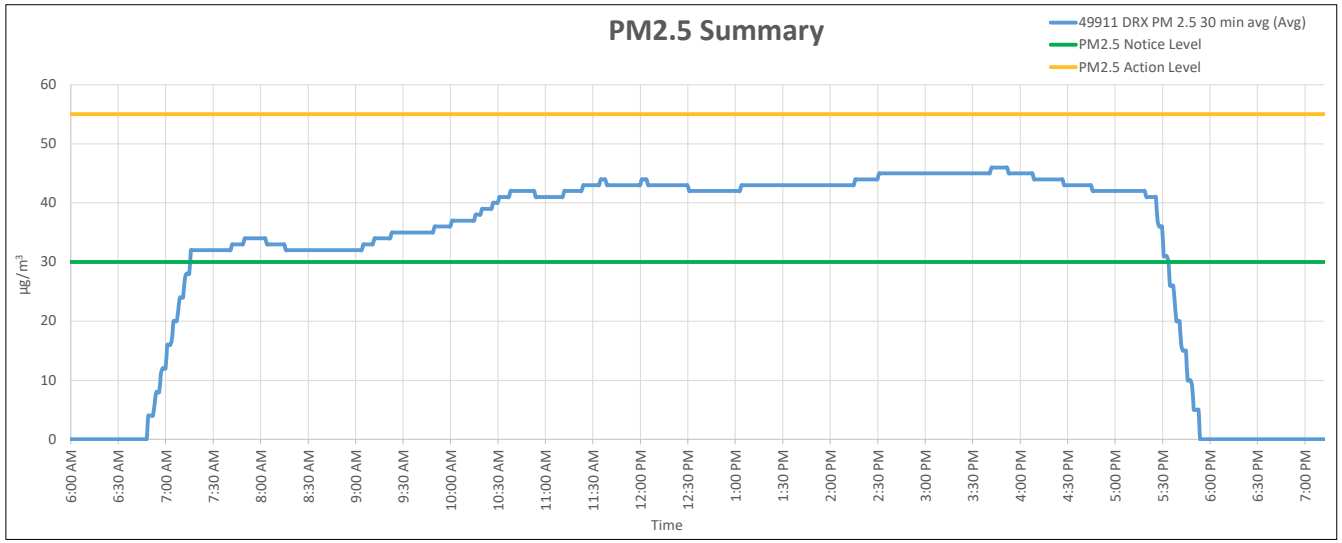




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 22, 2024

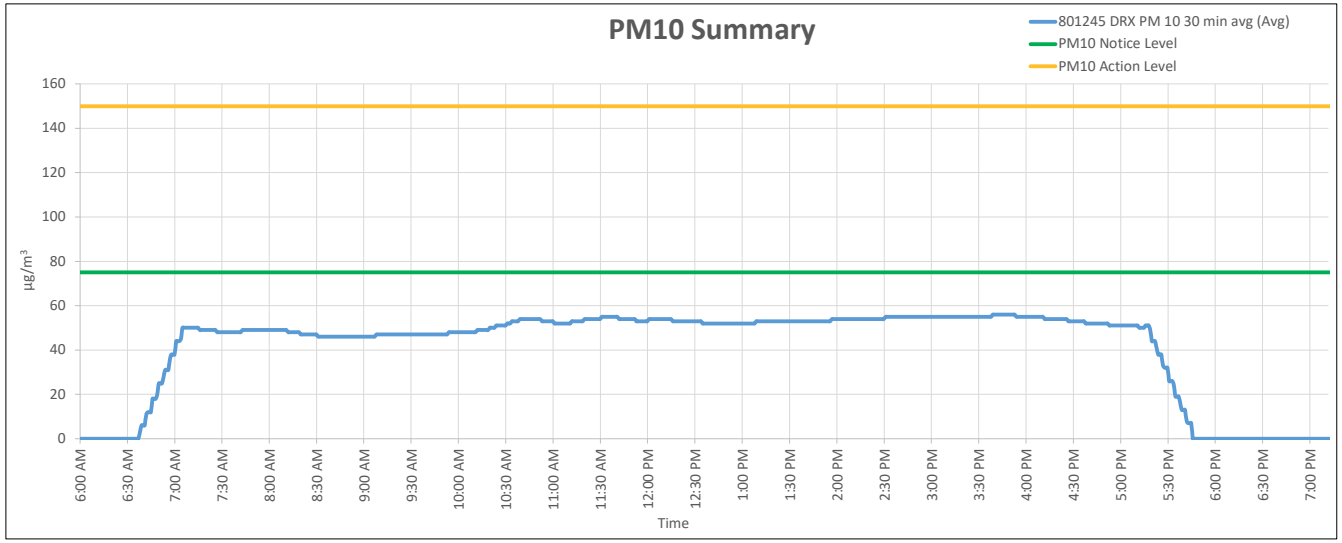
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:49 AM	5:53 PM	39.23	46.00	38.45	46.00

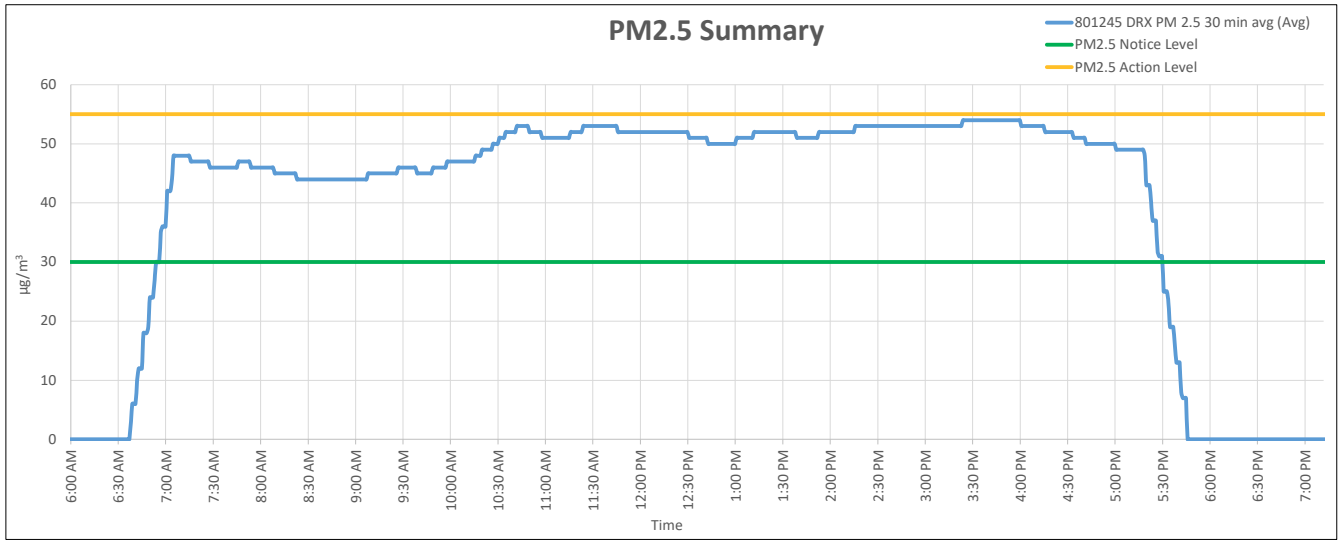




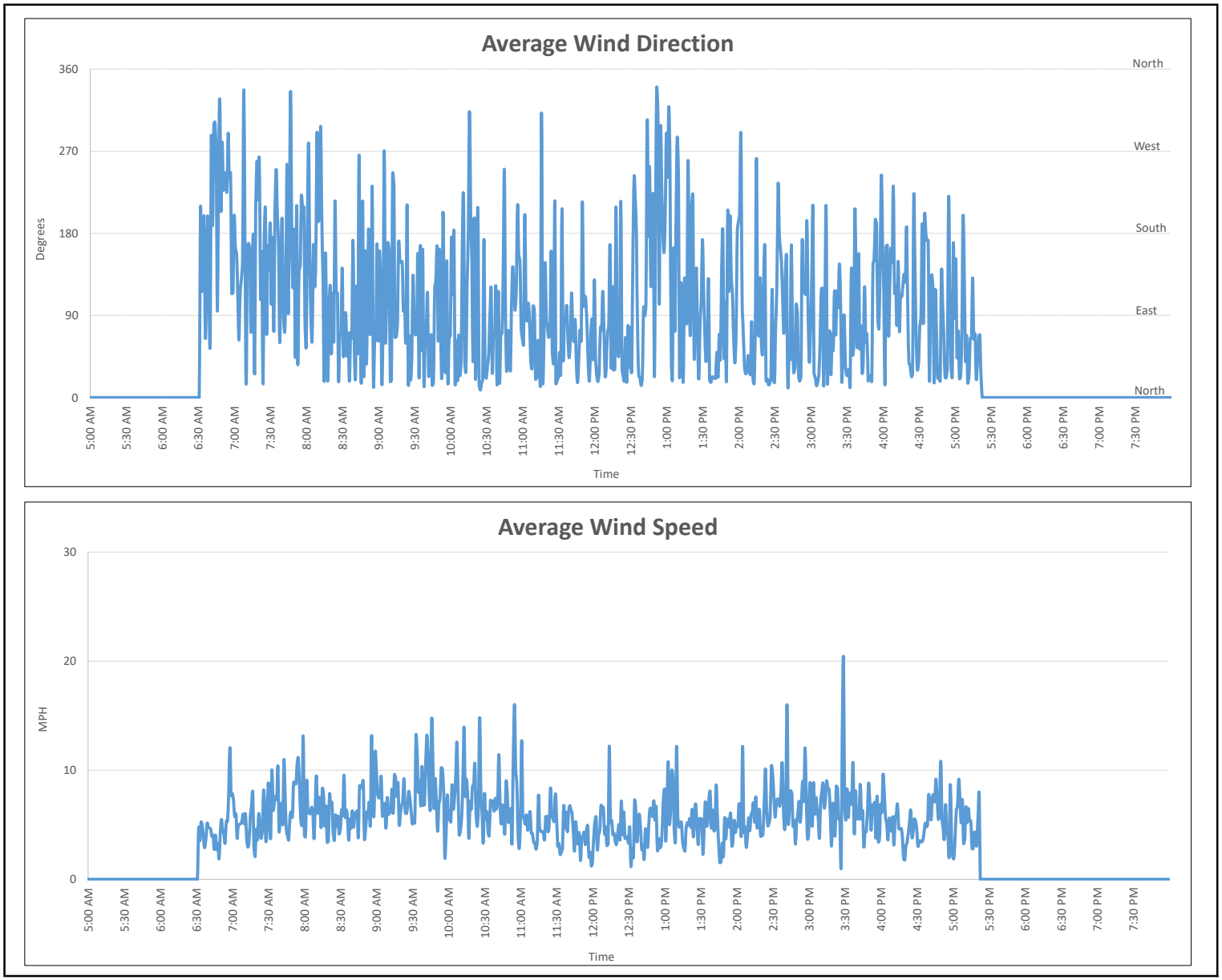
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 22, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:38 AM	5:45 PM	49.51	56.00	47.89	54.00

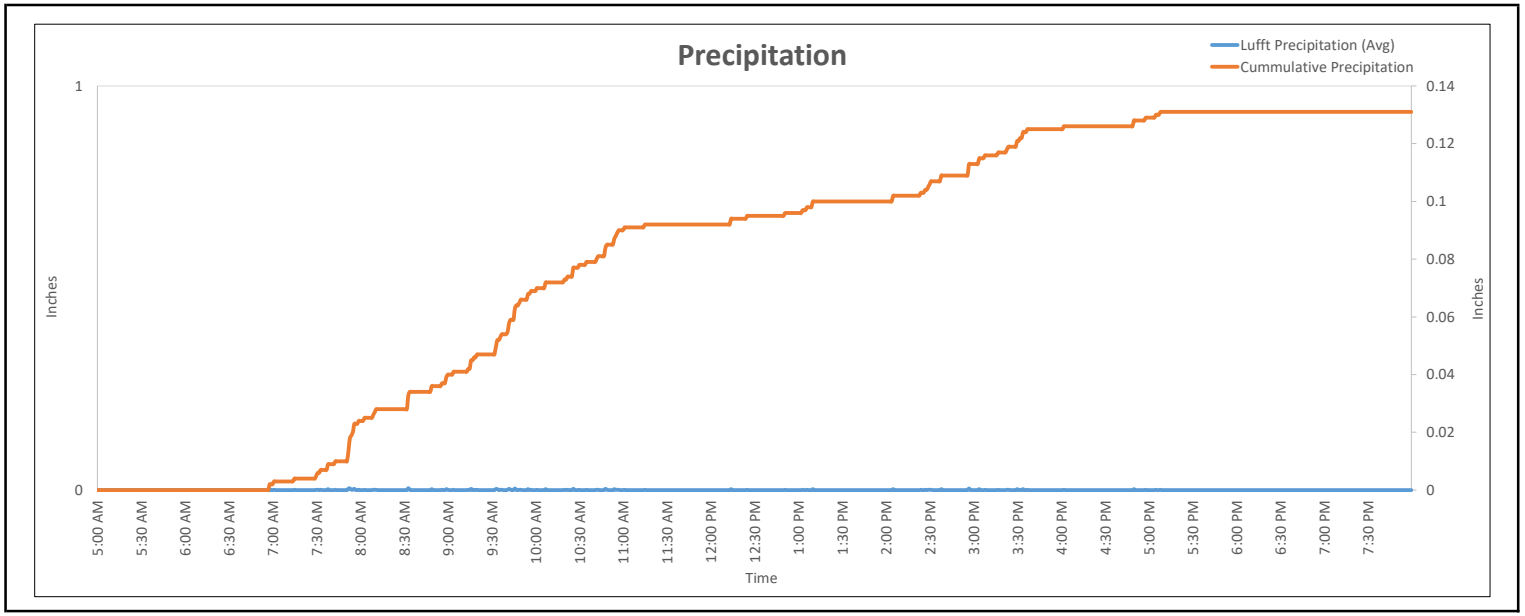




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Thursday, May 23, 2024

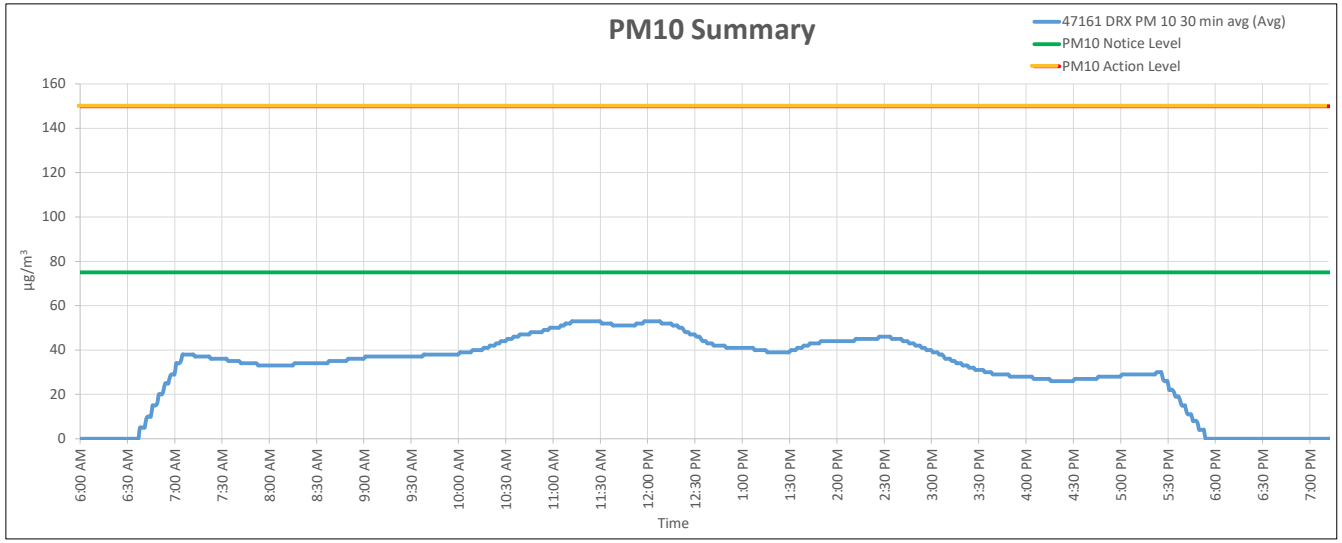


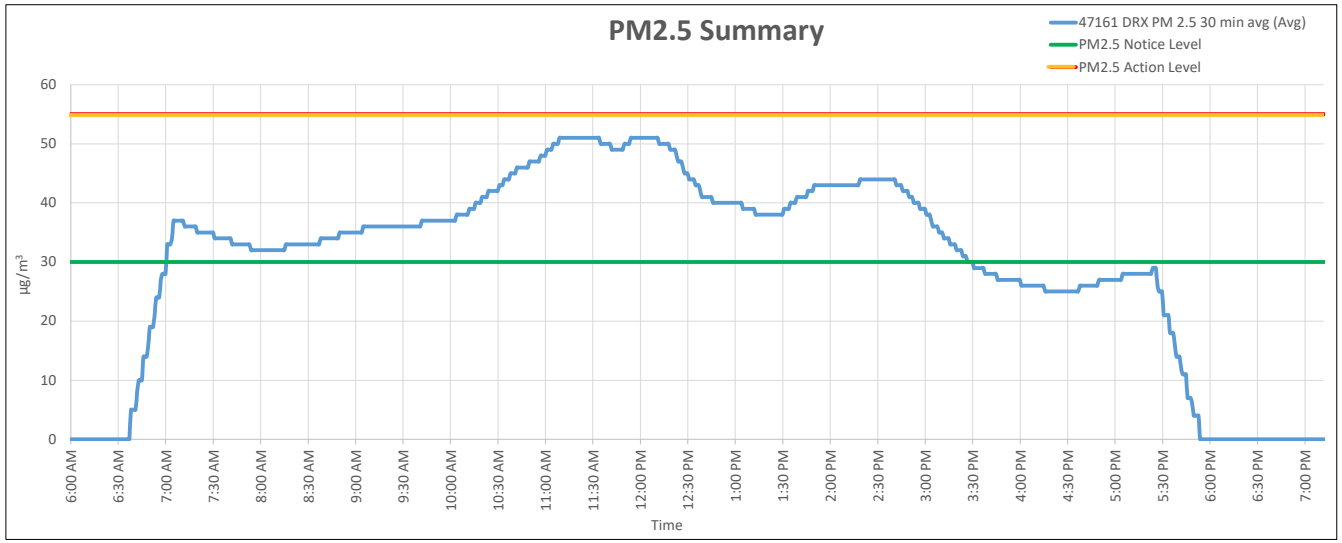
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Thursday, May 23, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 23, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:38 AM	5:53 PM	37.27	53.00	36.05	51.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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Air Monitoring Values
Thursday, May 23, 2024

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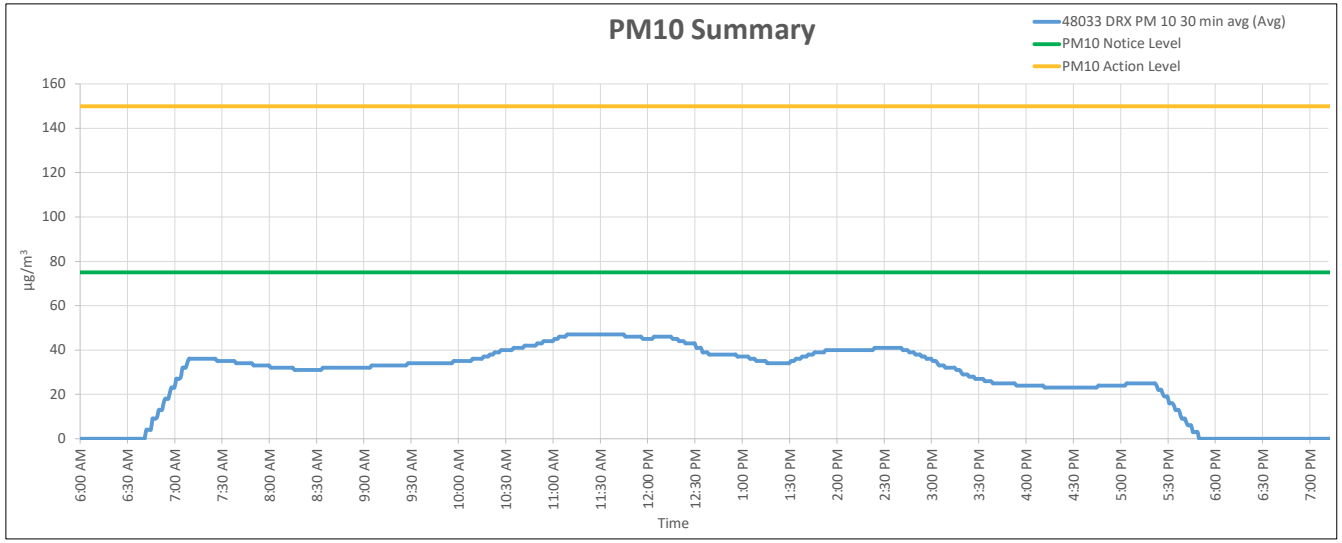
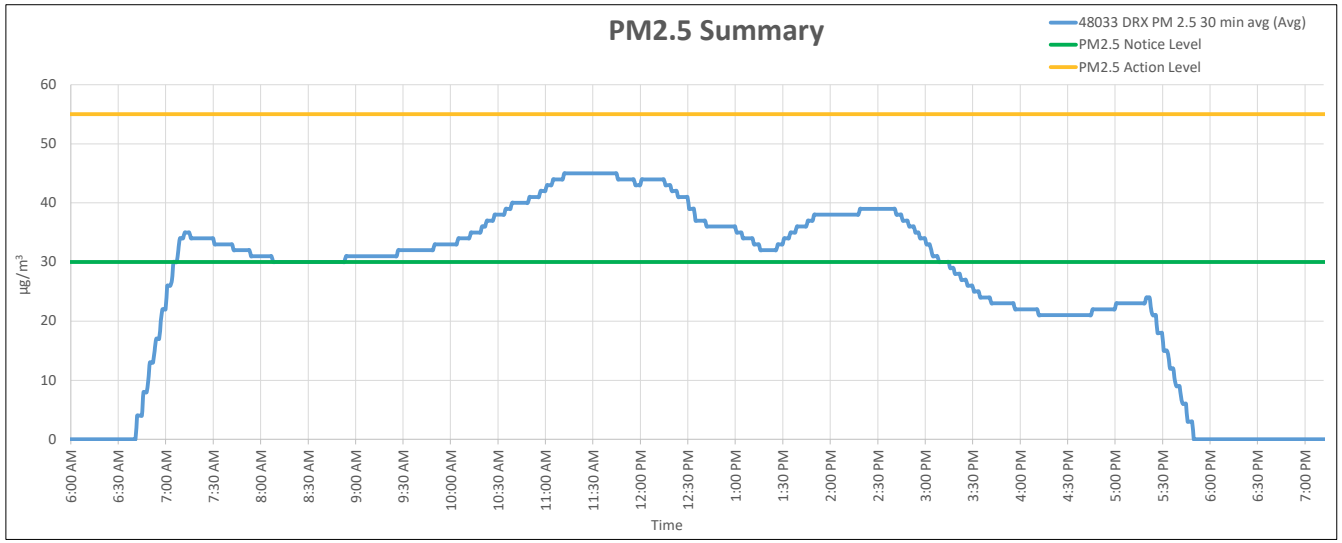
48033	6:42 AM	5:49 PM	33.56	47.00	31.84	45.00





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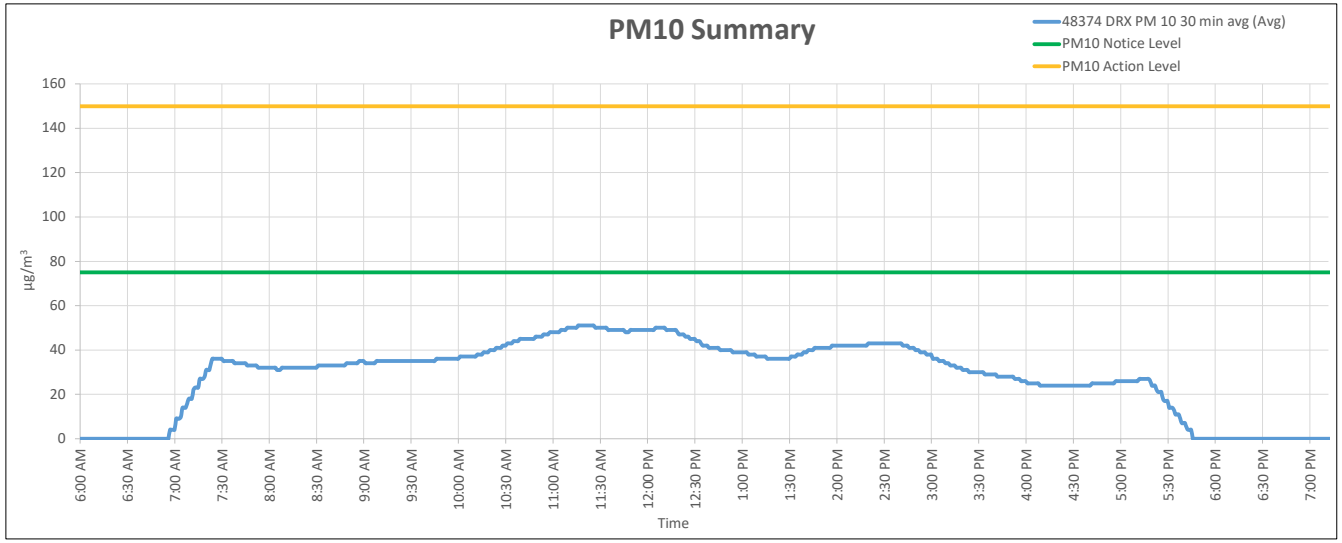
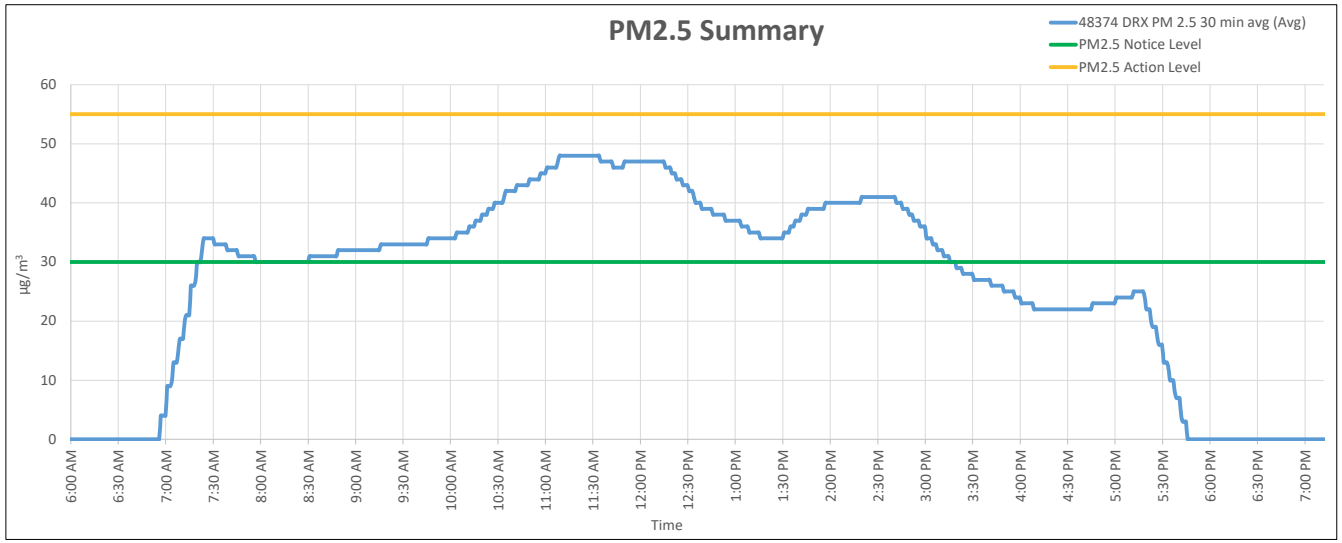
Air Monitoring Values
Thursday, May 23, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:57 AM	5:45 PM	35.35	51.00	33.33	48.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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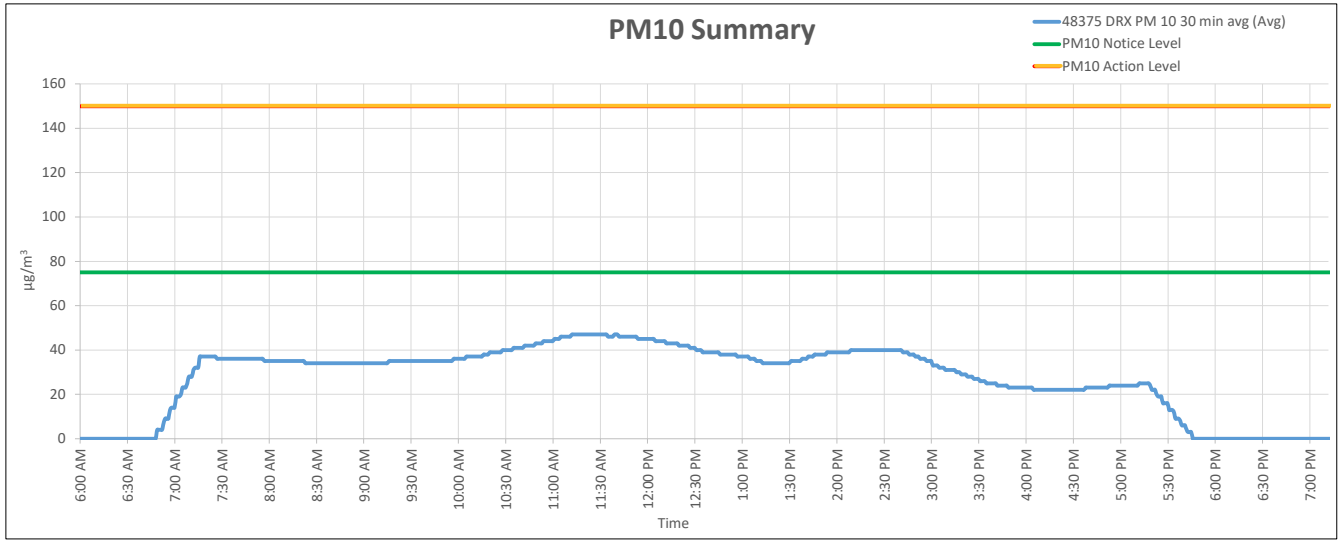
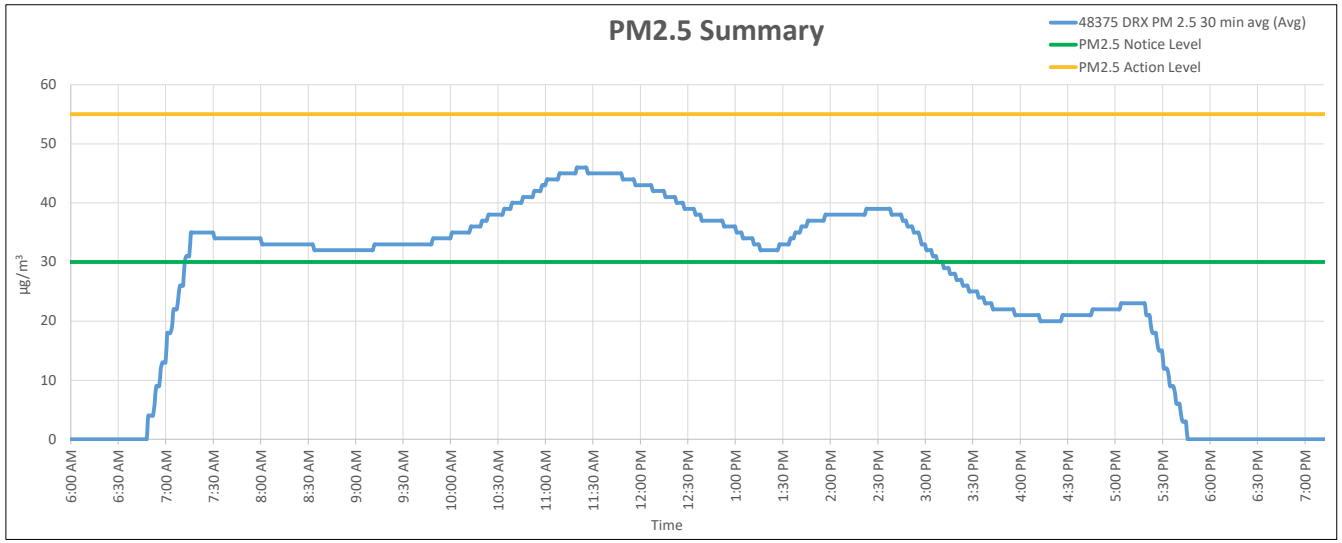
Air Monitoring Values
Thursday, May 23, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:49 AM	5:45 PM	33.71	47.00	32.18	46.00





Union Pacific Railroad
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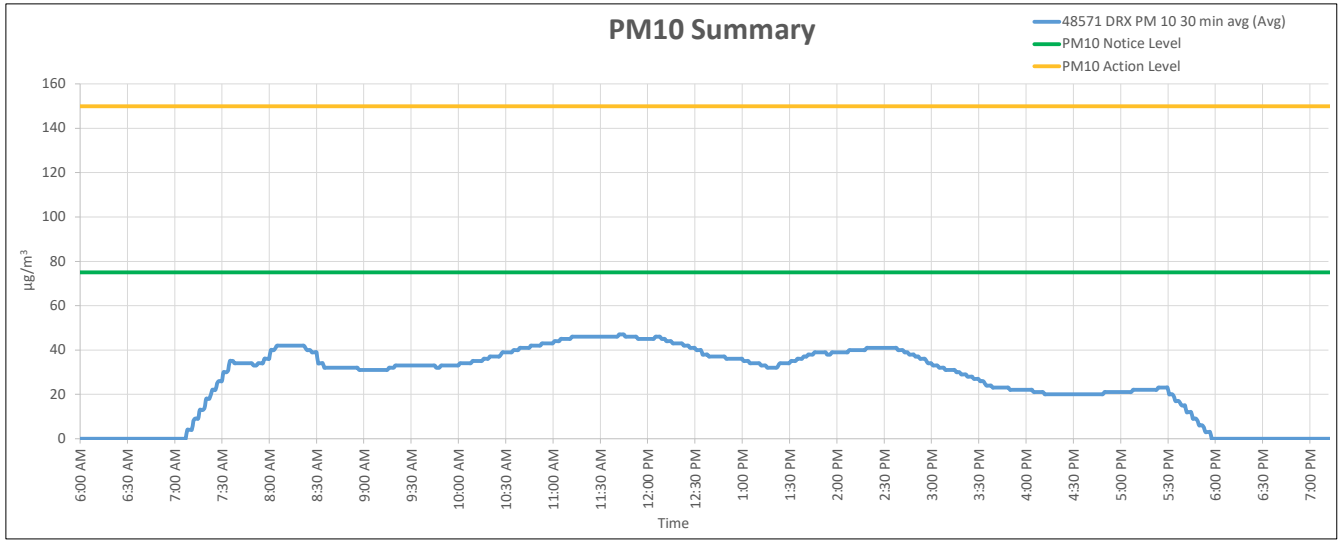
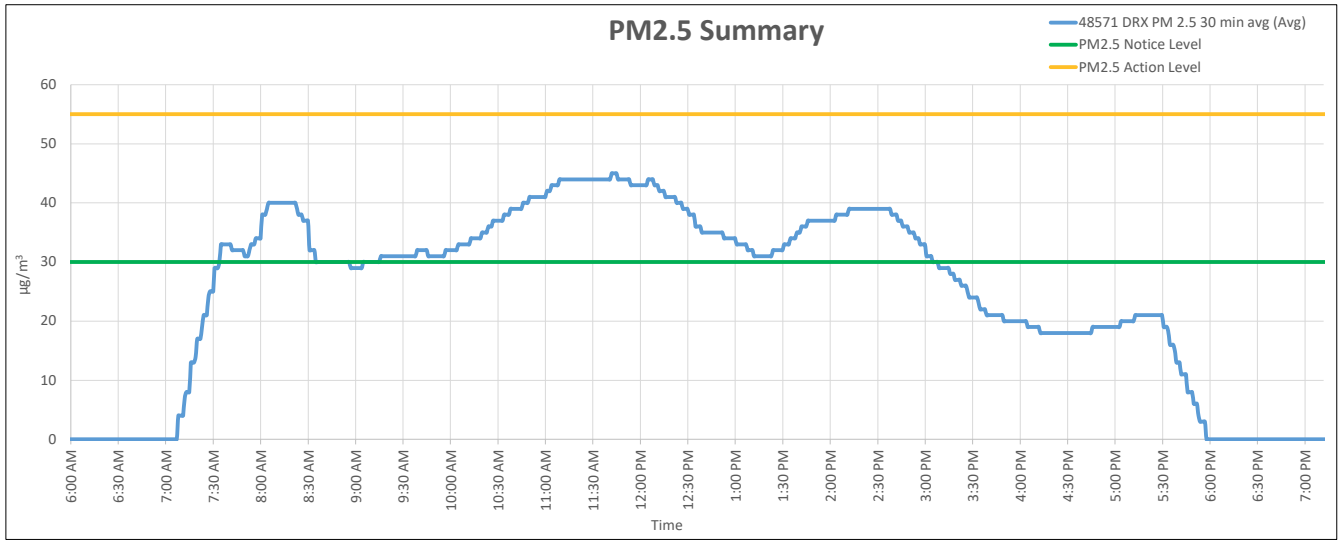
Air Monitoring Values
Thursday, May 23, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:08 AM	5:57 PM	32.71	47.00	30.97	45.00





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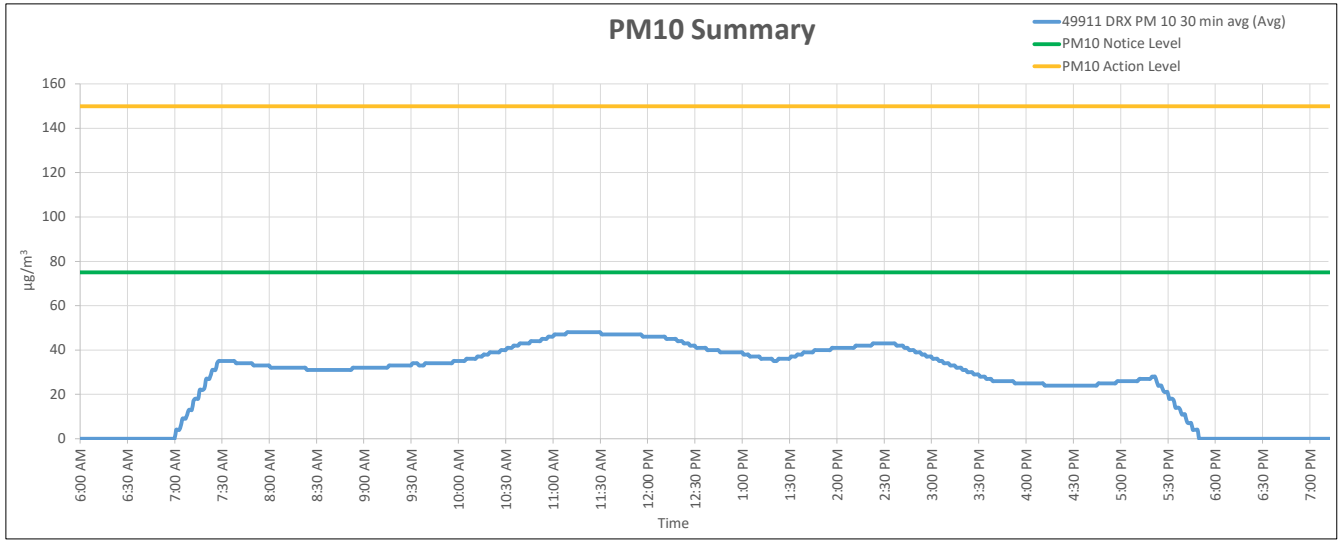
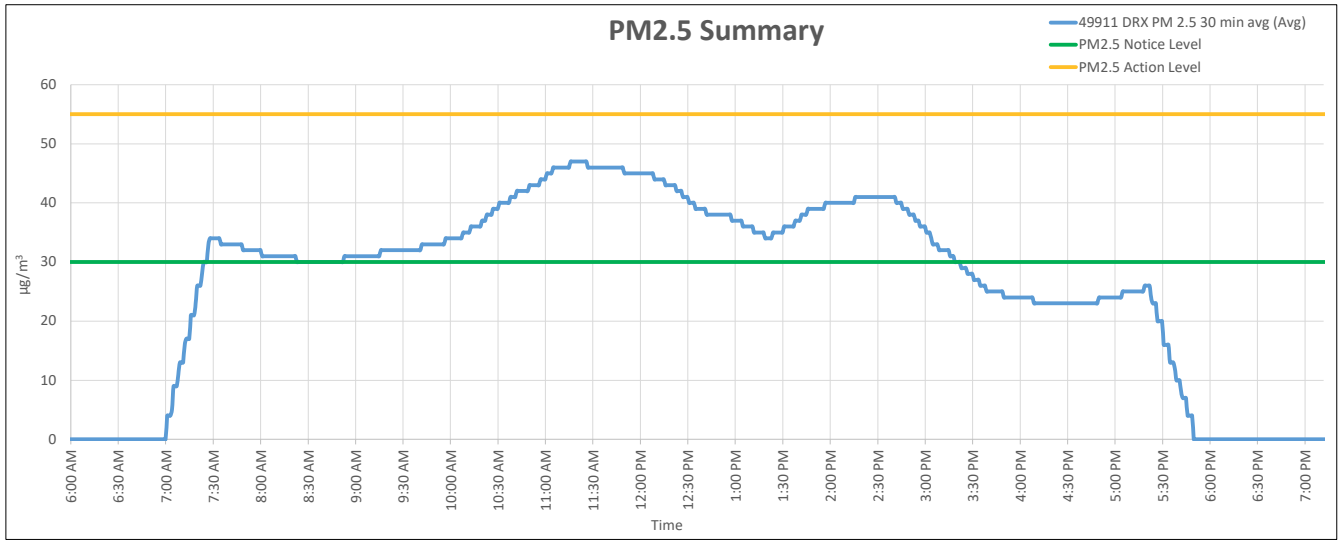
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	7:01 AM	5:49 PM	34.26	48.00	33.06	47.00





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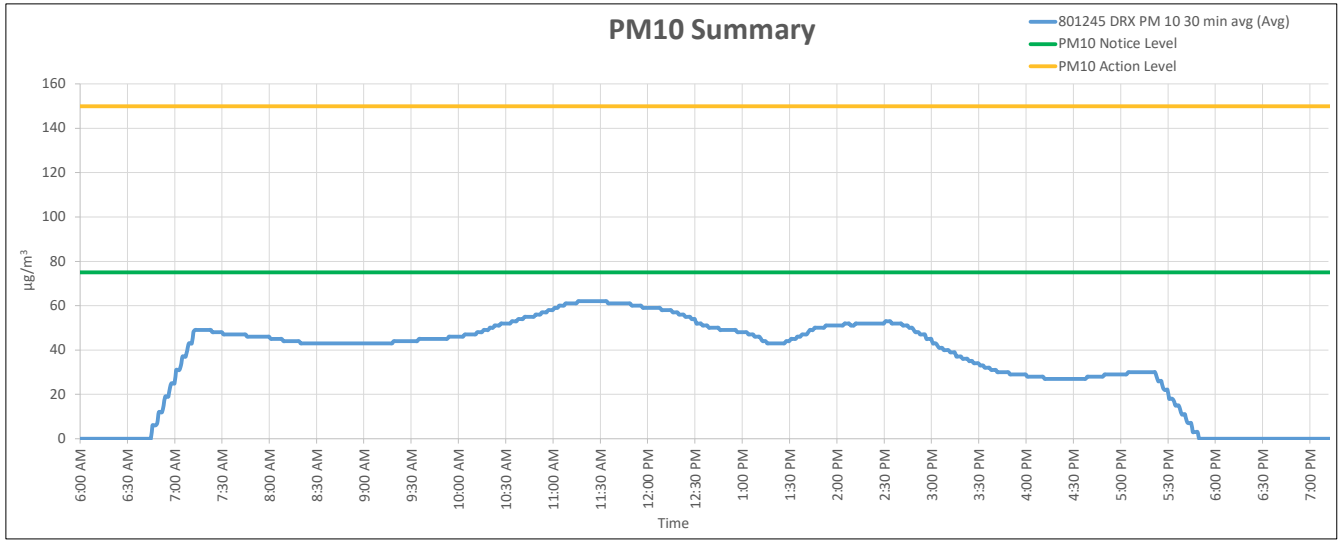
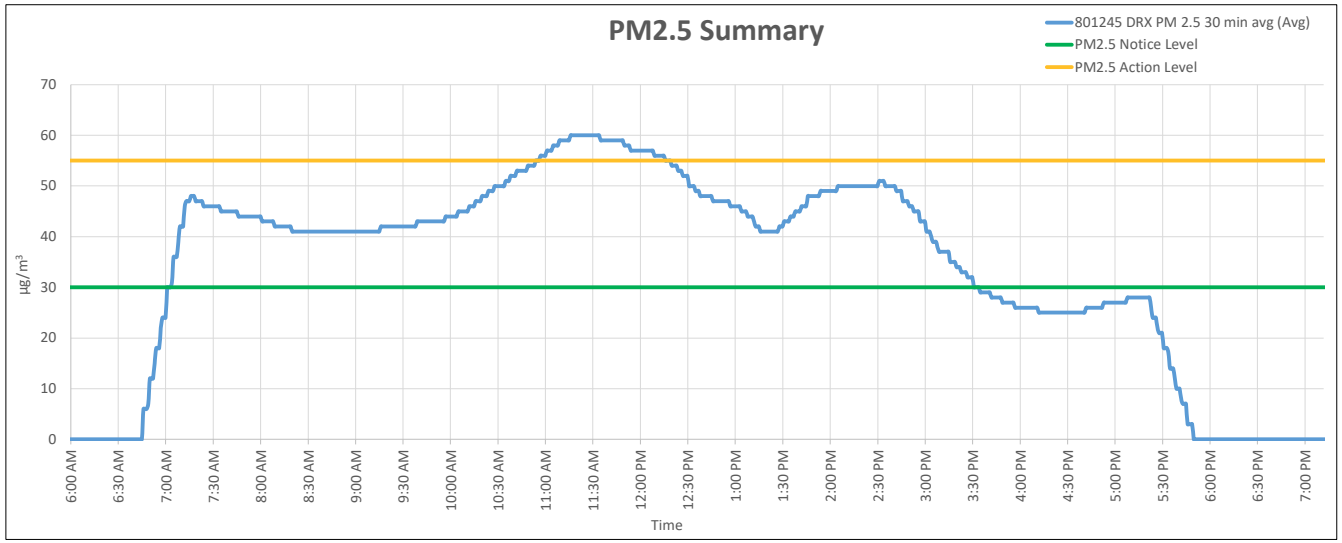
Thursday, May 23, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:46 AM	5:49 PM	43.39	62.00	41.43	60.00





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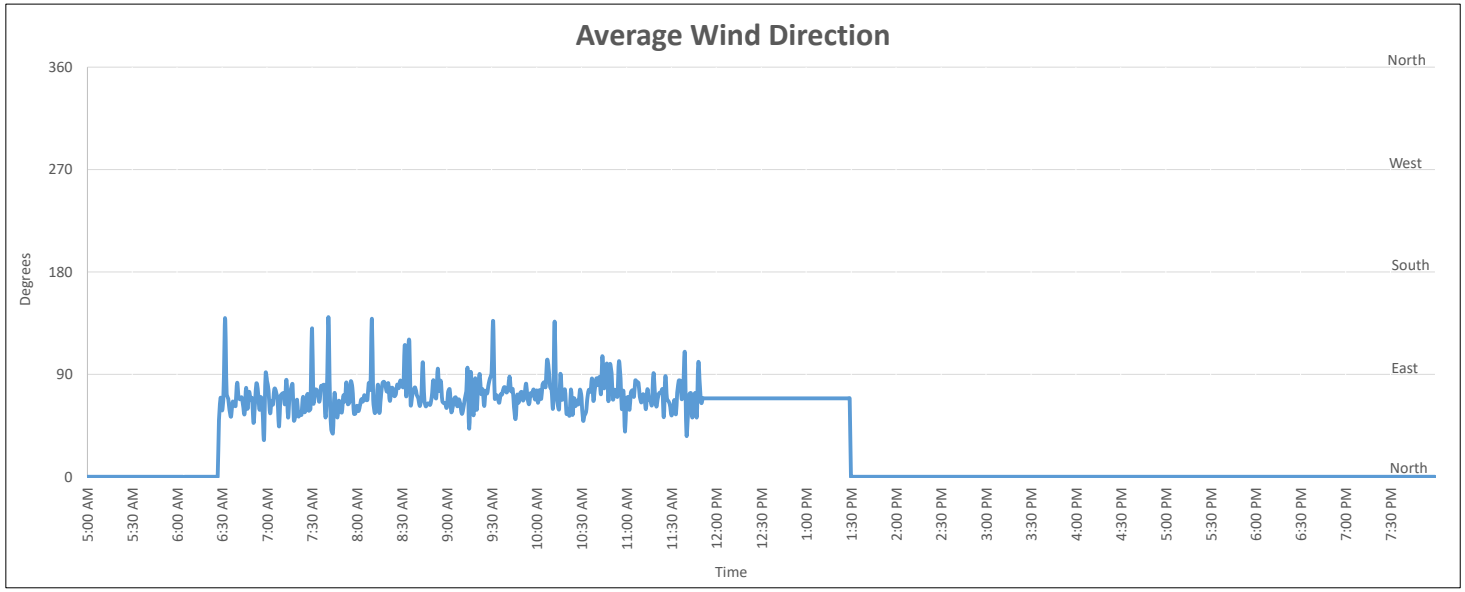

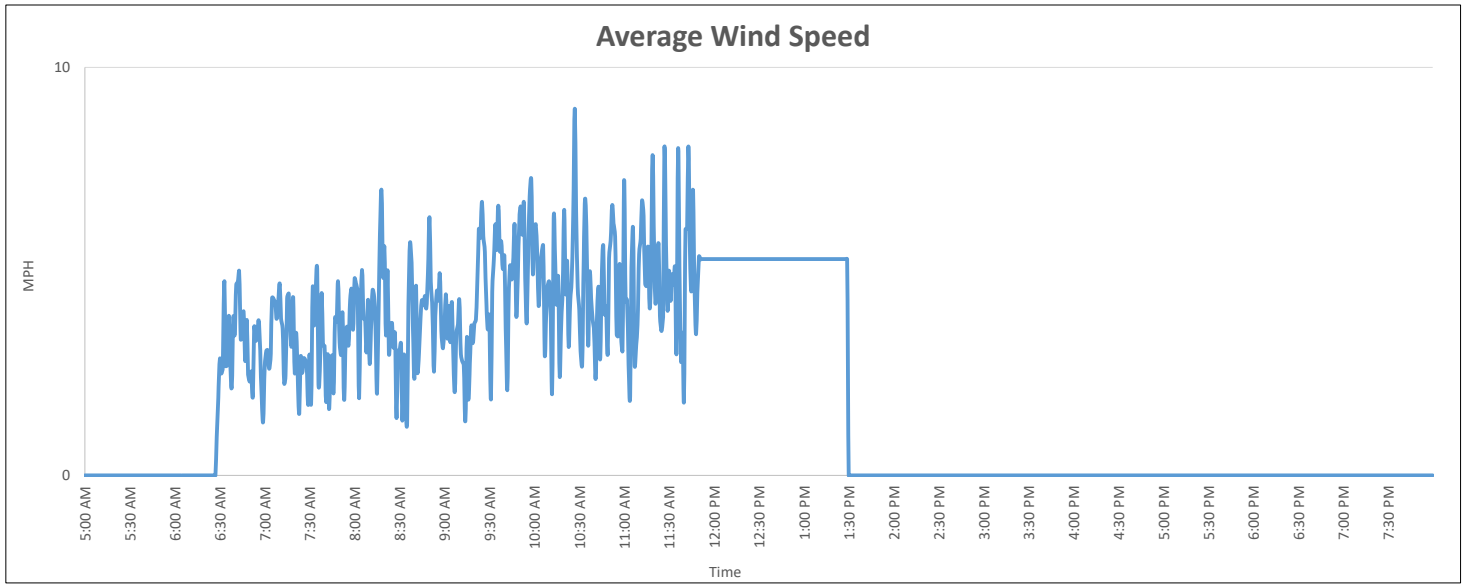

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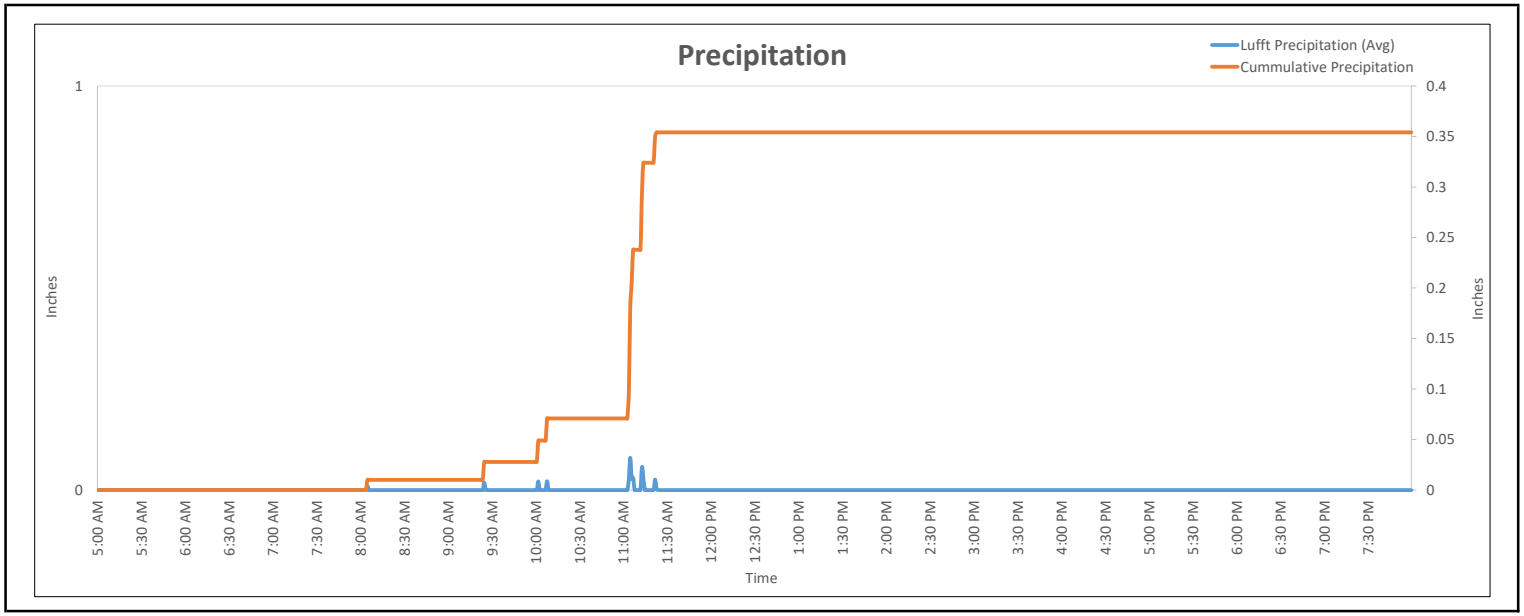

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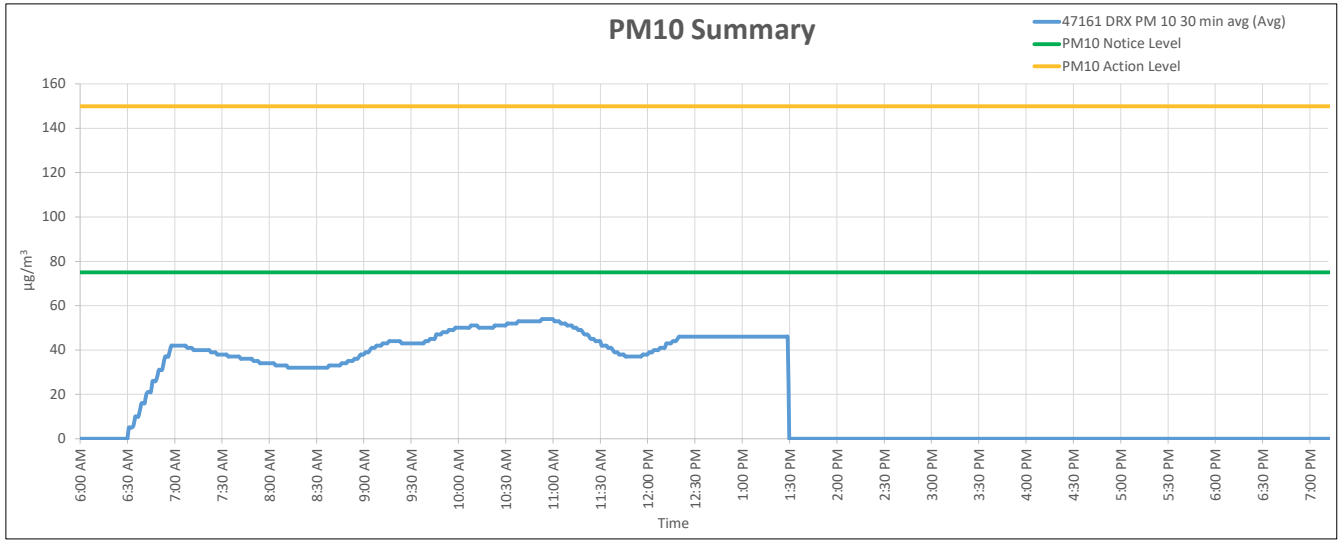
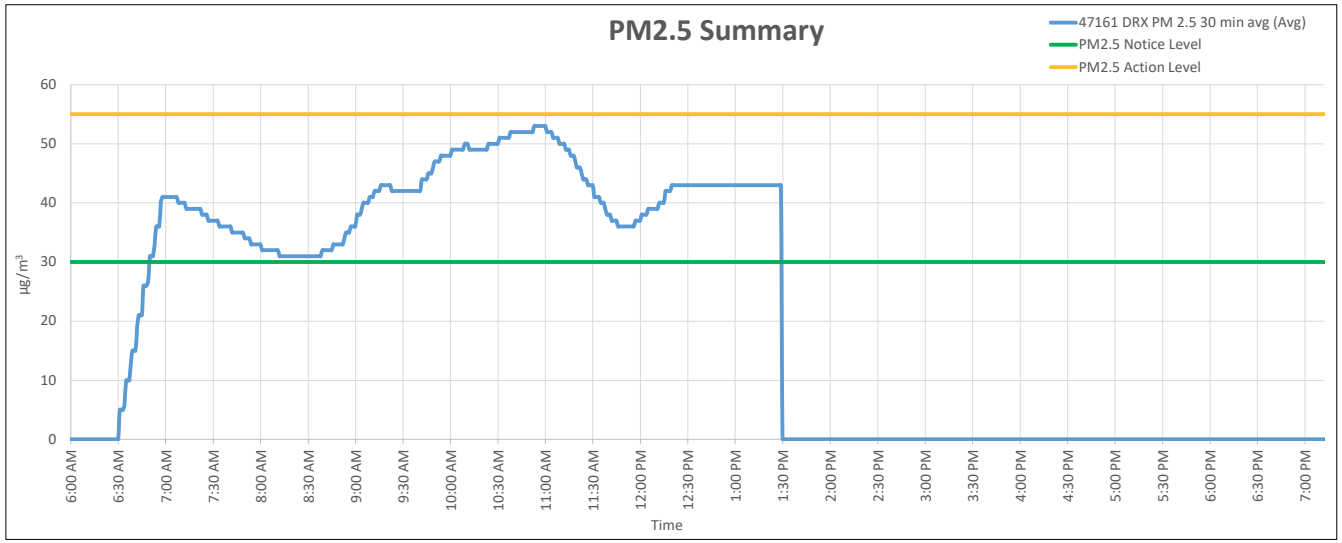
Air Monitoring Values
Friday, May 24, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:31 AM	1:29 PM	41.48	54.00	40.09	53.00





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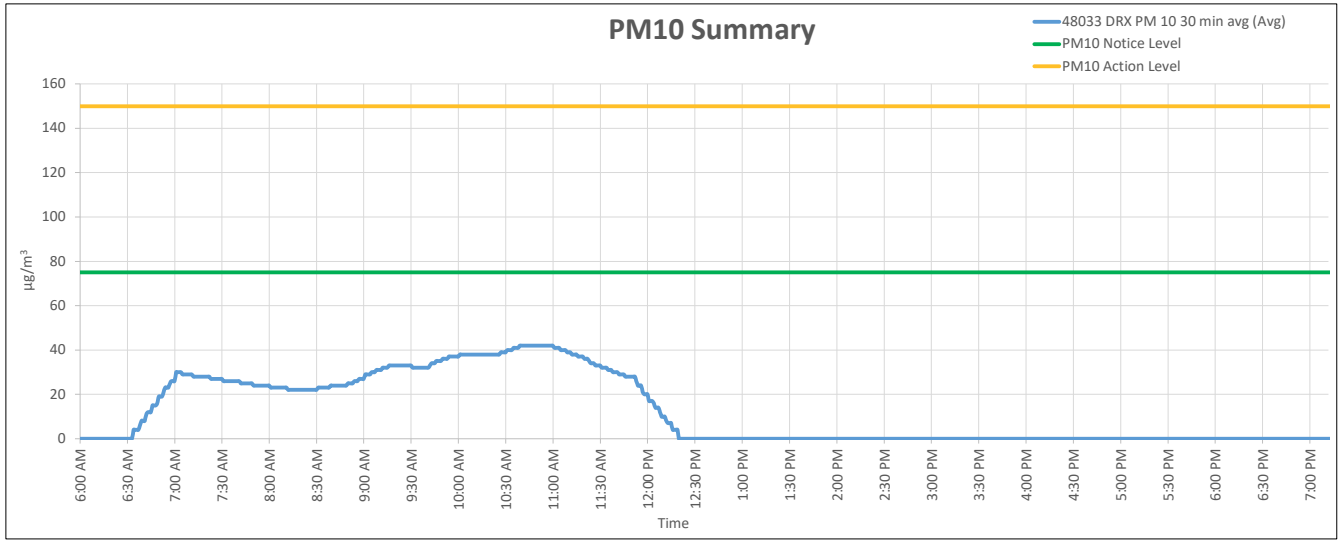
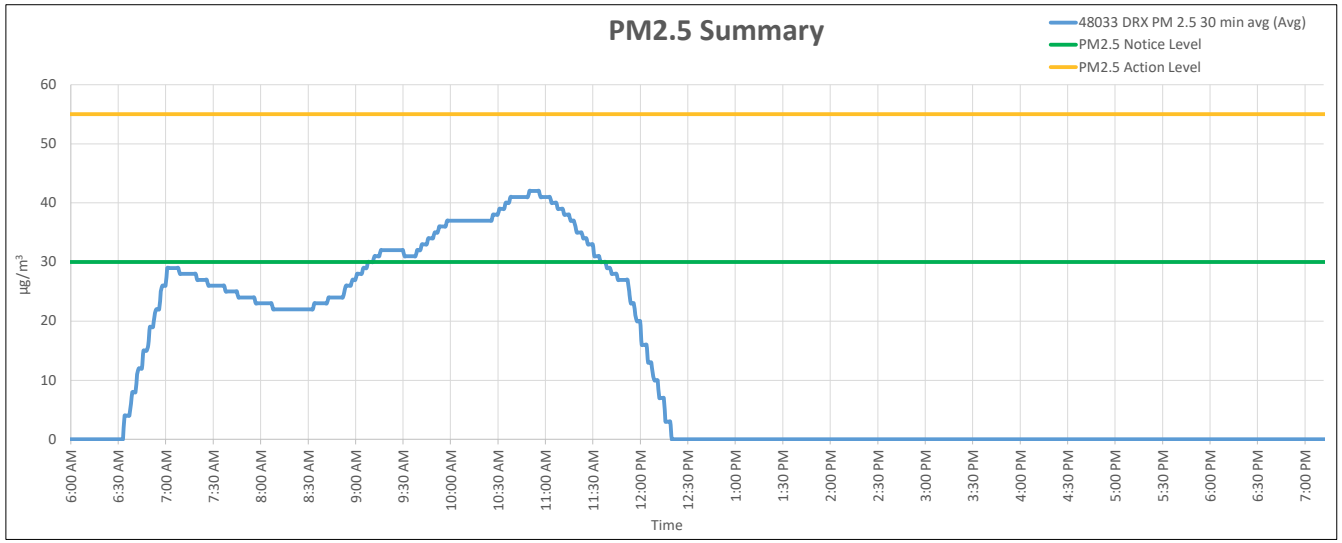
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:34 AM	12:19 PM	28.69	42.00	28.14	42.00





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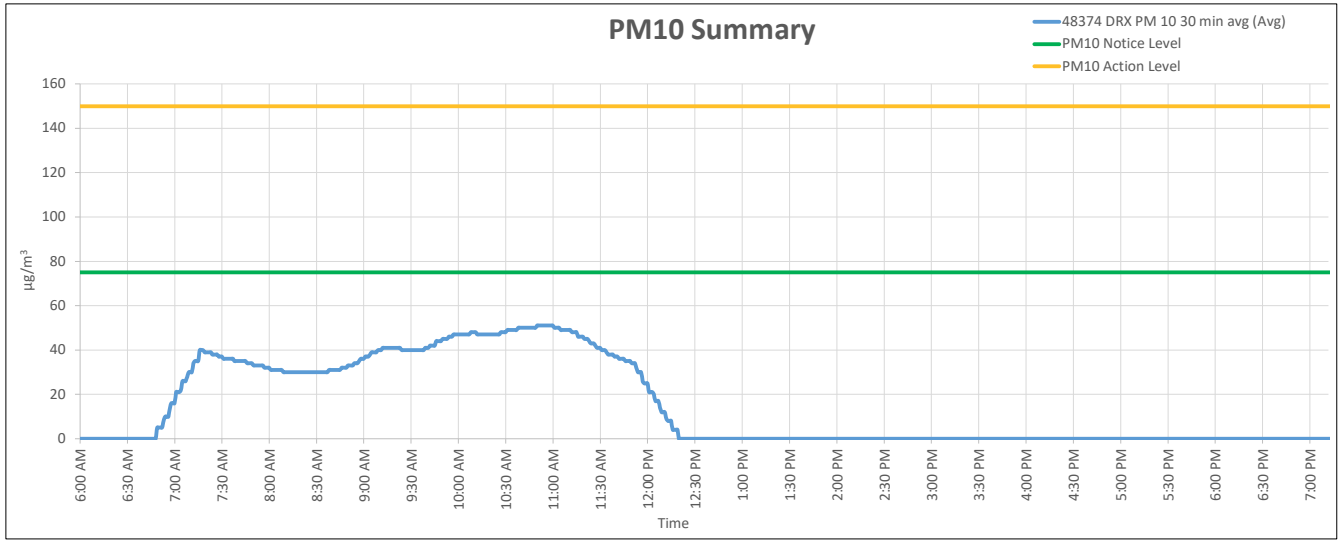
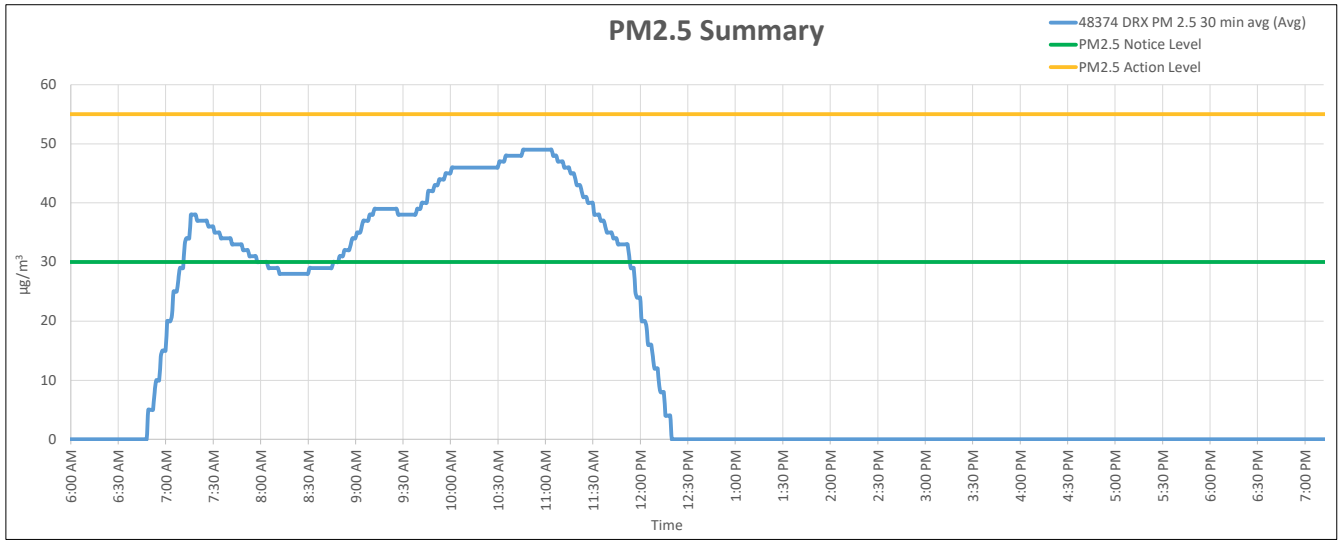
Friday, May 24, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:49 AM	12:19 PM	36.51	51.00	35.01	49.00





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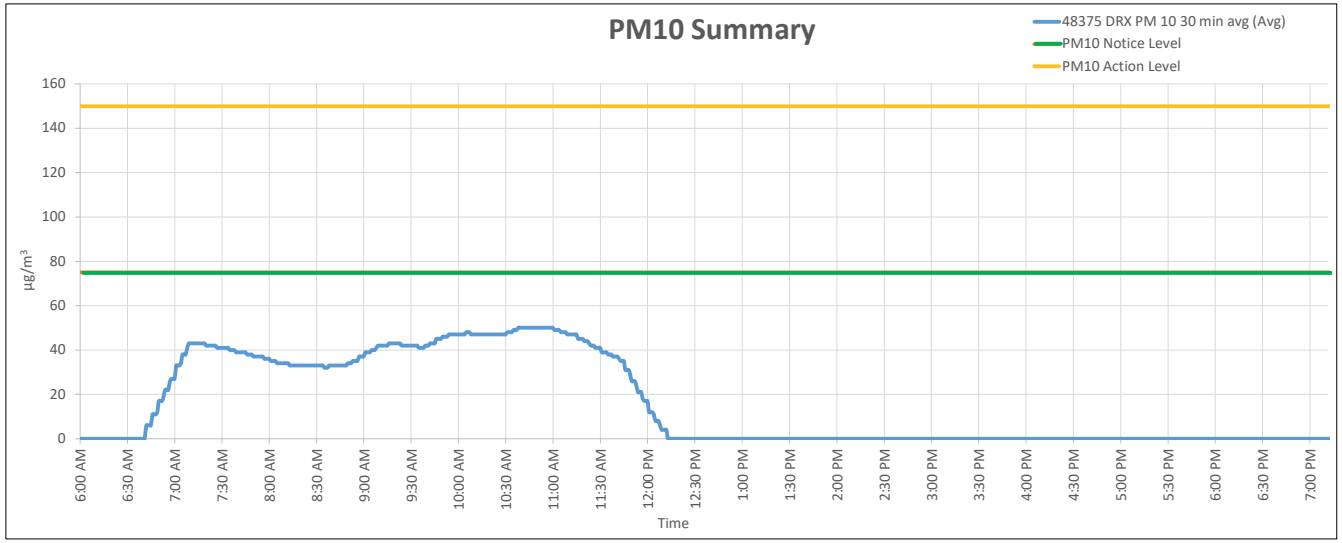
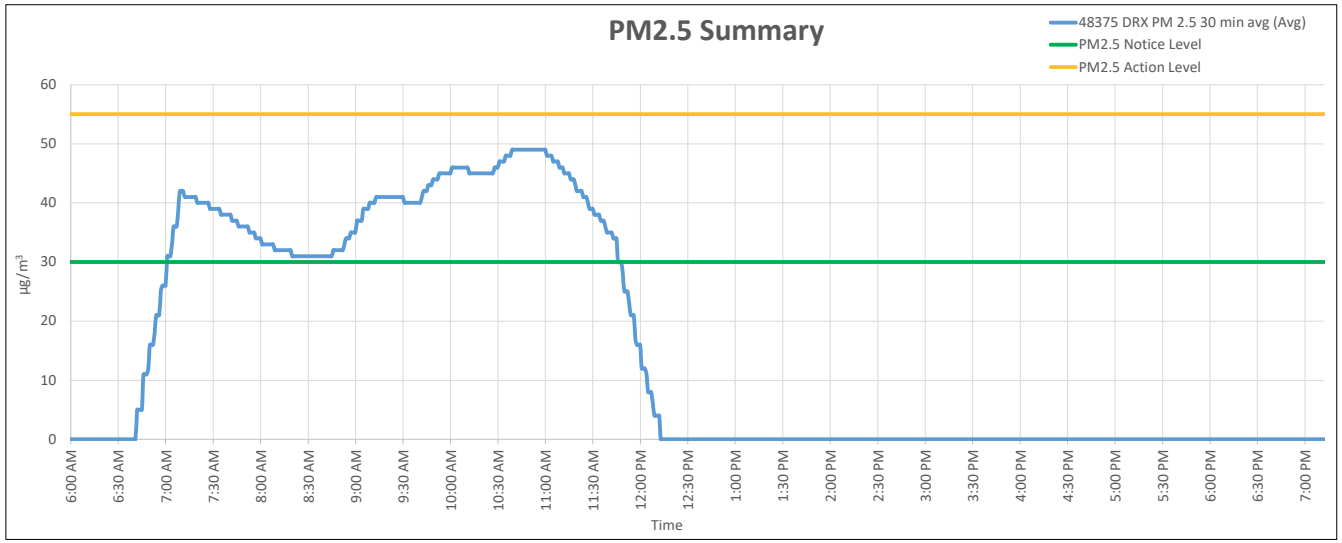
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:42 AM	12:12 PM	37.91	50.00	36.48	49.00





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Houston Wood Preserving Works Site
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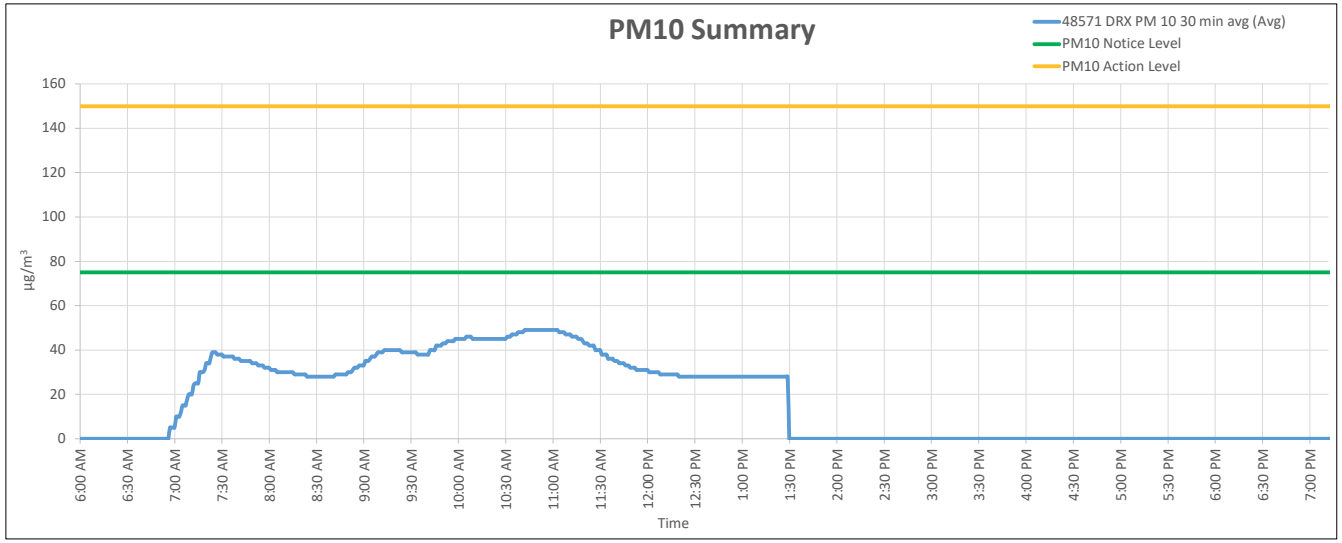
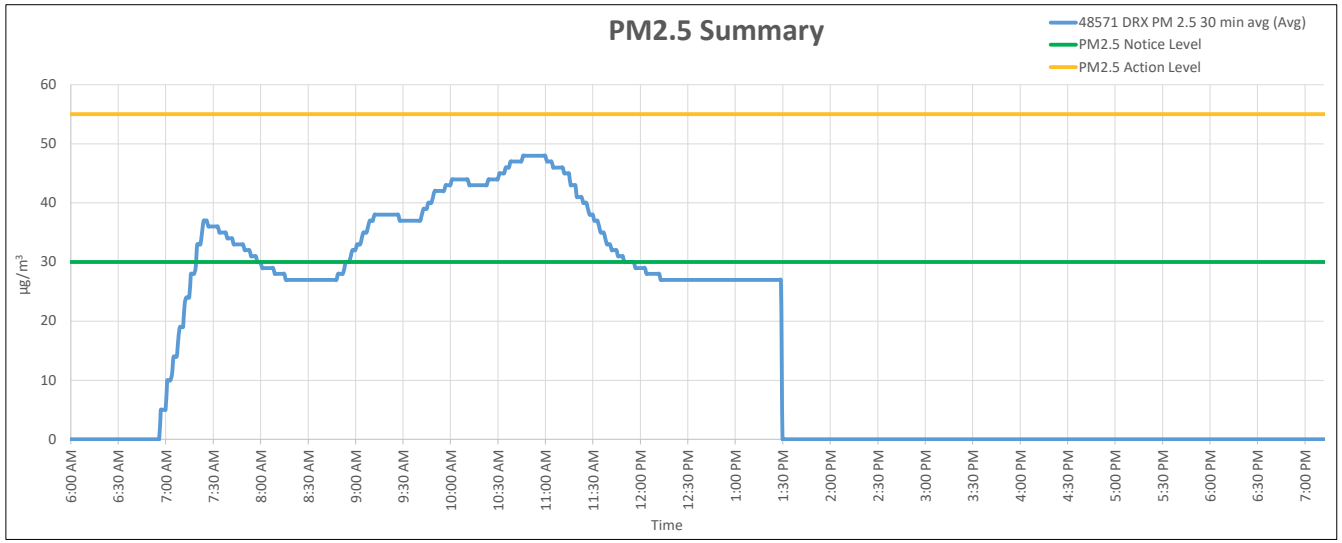
Air Monitoring Values
Friday, May 24, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	6:57 AM	1:29 PM	34.86	49.00	33.43	48.00





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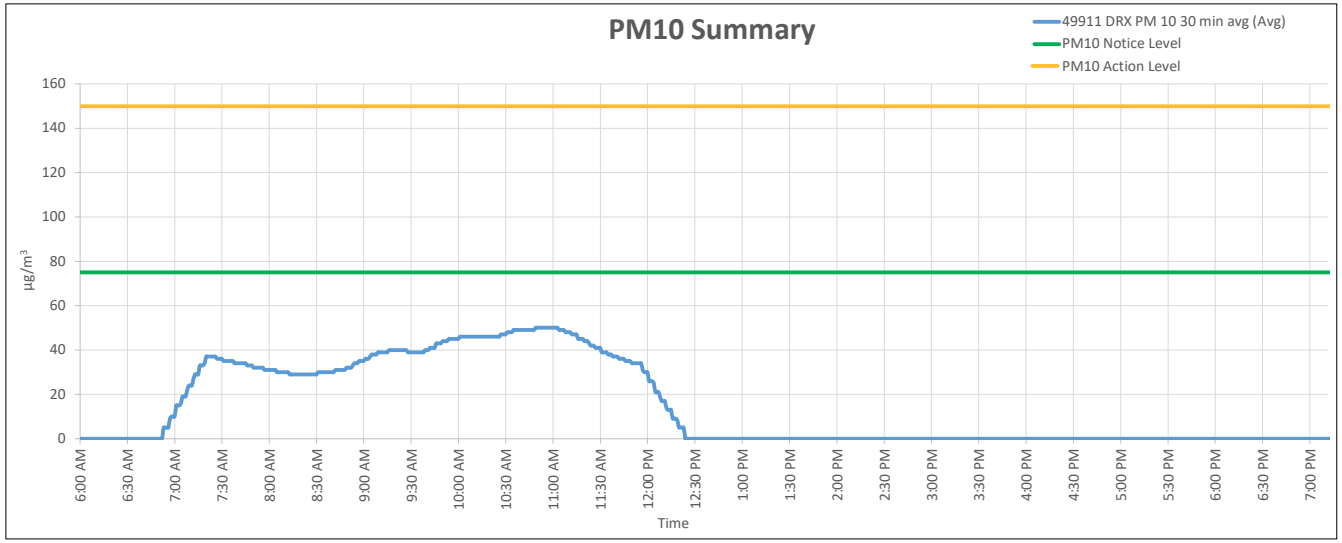
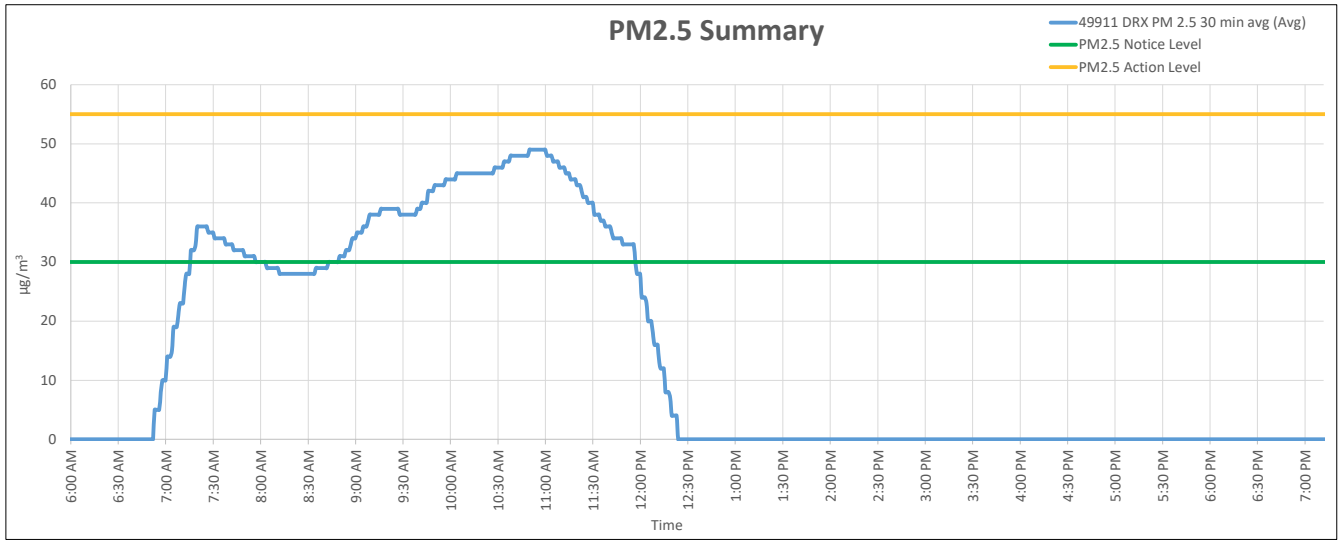
49911	6:53 AM	12:23 PM	35.70	50.00	34.56	49.00





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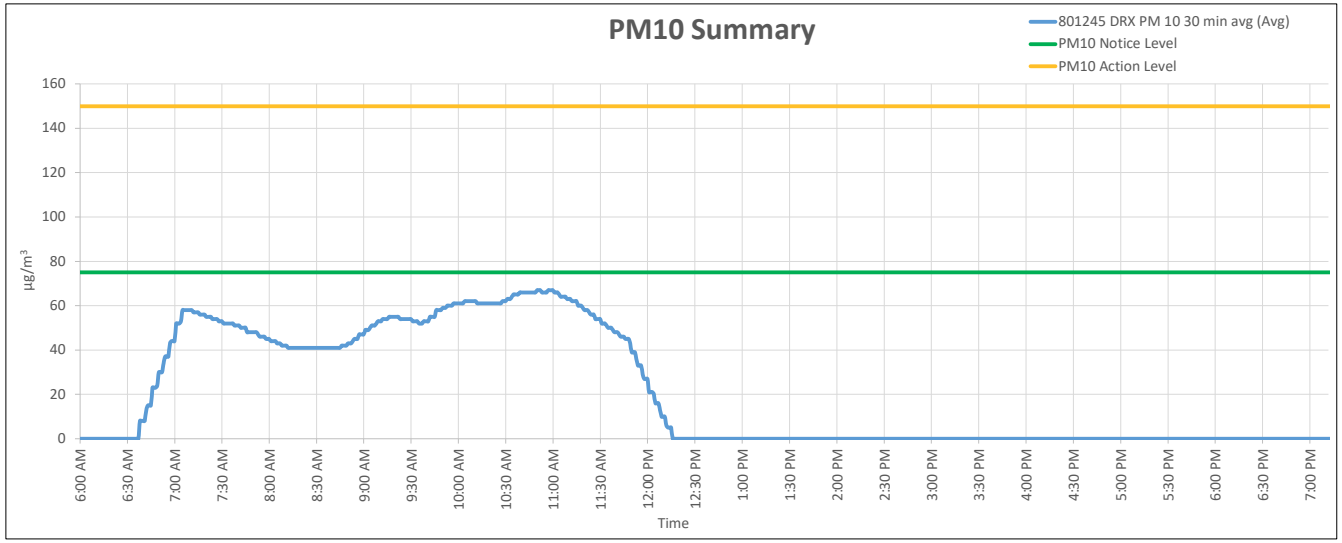
Friday, May 24, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:38 AM	12:15 PM	49.22	67.00	47.58	65.00



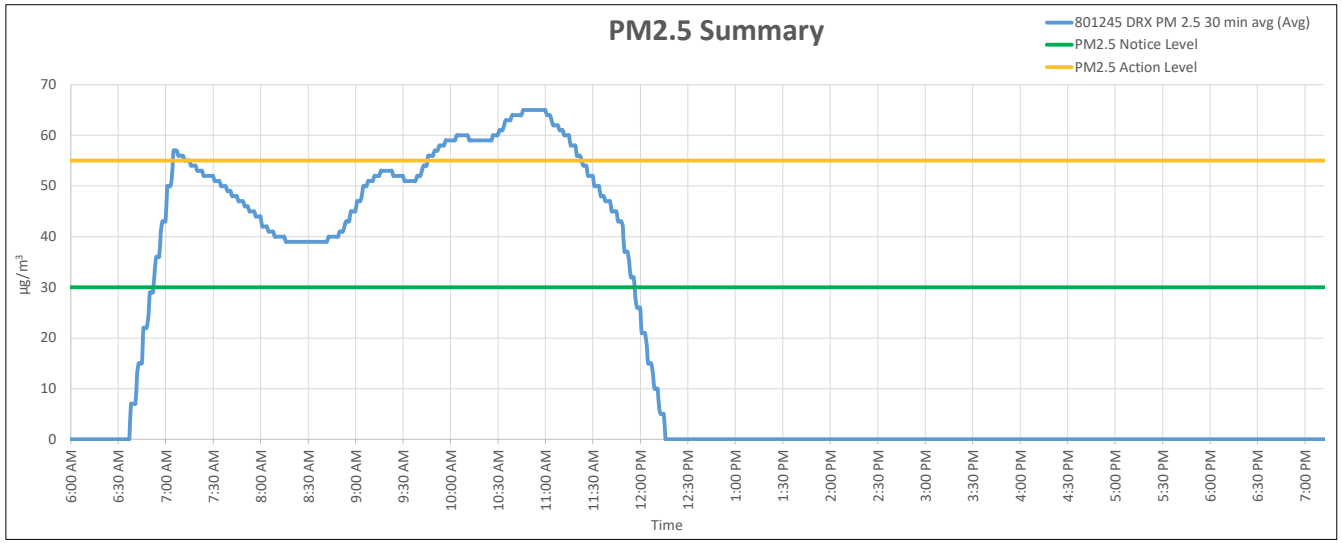


Table 5 – Direct Read Summary Union Pacific Houston Wood Preserving Works Houston, Texas							
Date	Modem #	PM_{10} Concentration ($\mu g/m^3$)			$PM_{2.5}$ Concentration ($\mu g/m^3$)		
		Min	Max	Average	Min	Max	Average
Week 5							
5/28/2024	48374	8.00	200.00	63.79	8.00	199.00	62.56
	47161	4.00	99.00	51.53	4.00	98.00	50.96
	48033	7.00	220.00	62.96	7.00	219.00	62.54
	48571	8.00	100.00	57.11	8.00	97.00	55.75
	48375	9.00	504.00	103.66	9.00	502.00	102.15
	801245	10.00	333.00	91.89	10.00	332.00	90.83
	49911	8.00	128.00	59.67	8.00	126.00	58.64
5/29/2024	48374	3.00	34.00	26.31	3.00	33.00	25.20
	47161	4.00	46.00	30.95	4.00	44.00	30.24
	48033	3.00	32.00	25.01	3.00	31.00	24.48
	48571	3.00	41.00	26.18	3.00	40.00	25.12
	48375	0.00	38.00	28.36	0.00	37.00	27.26
	801245	3.00	50.00	37.80	3.00	48.00	36.31
	49911	3.00	34.00	27.59	3.00	33.00	26.79
5/30/2024	48374	2.00	18.00	13.43	2.00	16.00	12.71
	47161	2.00	19.00	16.66	2.00	19.00	16.27
	48033	2.00	16.00	12.53	2.00	15.00	12.09
	48571	1.00	21.00	10.66	1.00	20.00	9.80
	48375	1.00	24.00	13.32	1.00	22.00	12.57
	801245	1.00	29.00	20.08	1.00	28.00	19.10
	49911	2.00	19.00	14.78	2.00	18.00	14.36
5/31/2024	48374	1.00	8.00	4.74	1.00	8.00	4.26
	47161	1.00	14.00	8.75	1.00	14.00	8.58
	48033	1.00	9.00	7.80	1.00	9.00	7.72
	48571	1.00	9.00	7.07	1.00	9.00	7.00
	48375	1.00	10.00	7.56	1.00	10.00	7.41
	801245	1.00	12.00	7.39	1.00	12.00	7.07
	49911	1.00	11.00	6.77	1.00	11.00	6.33

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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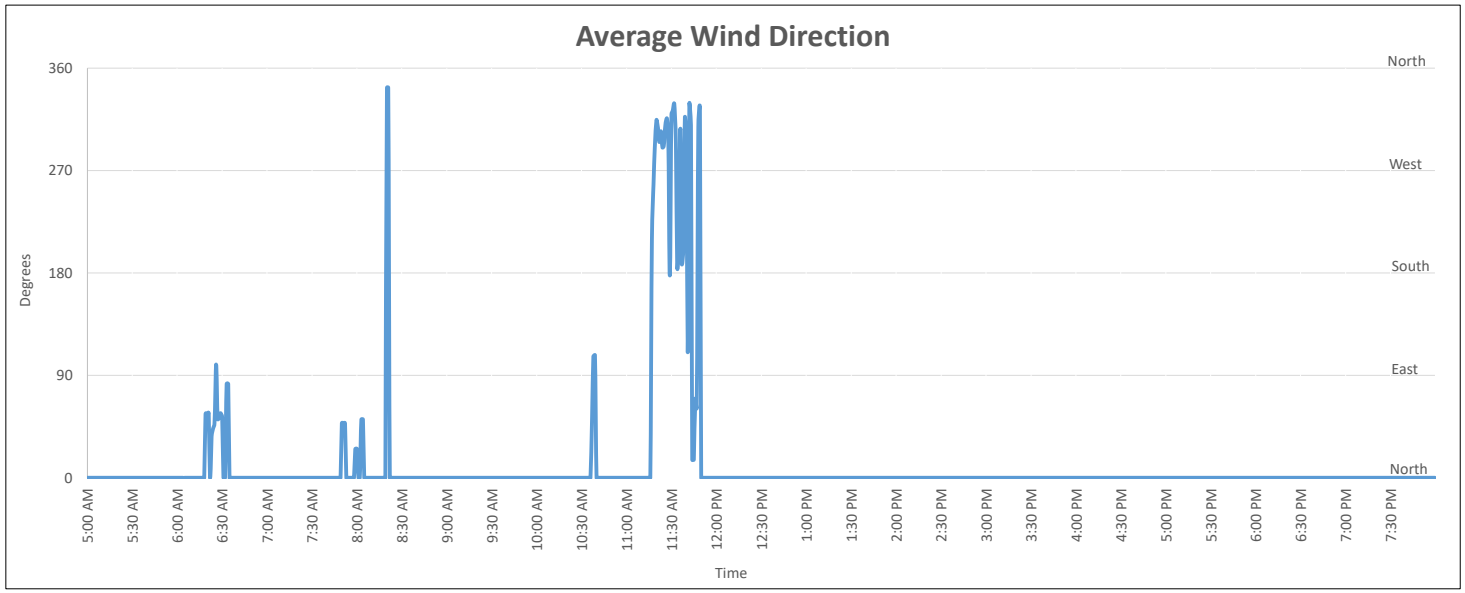

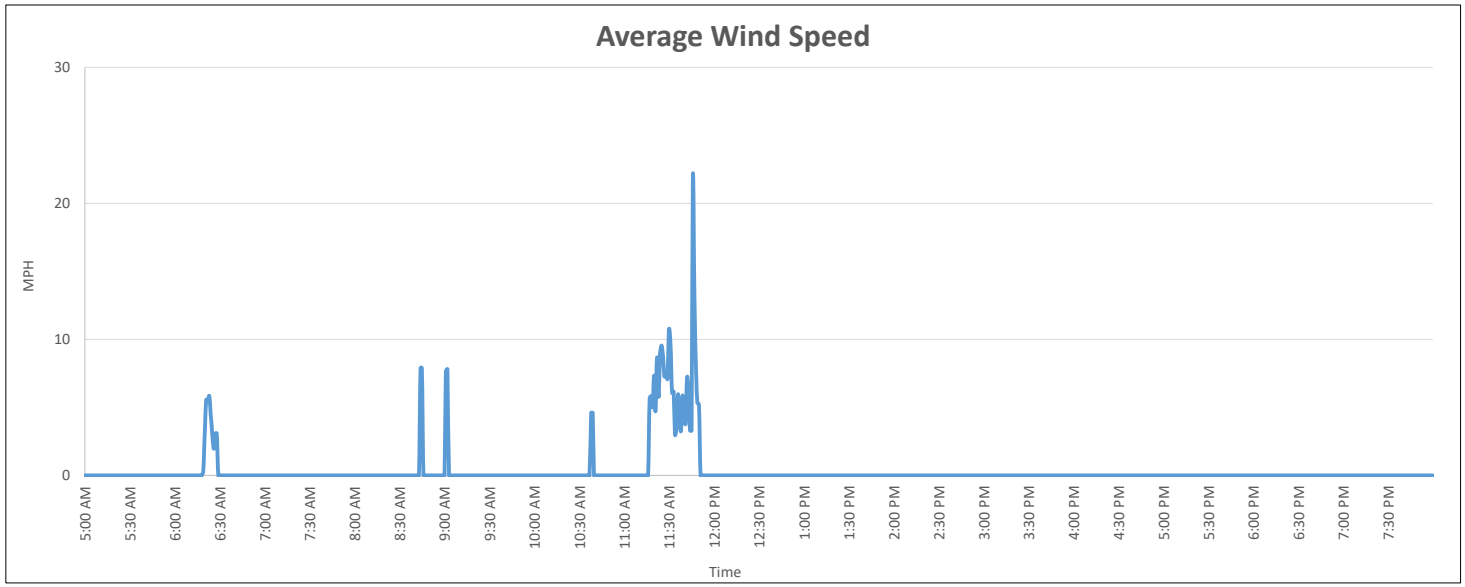

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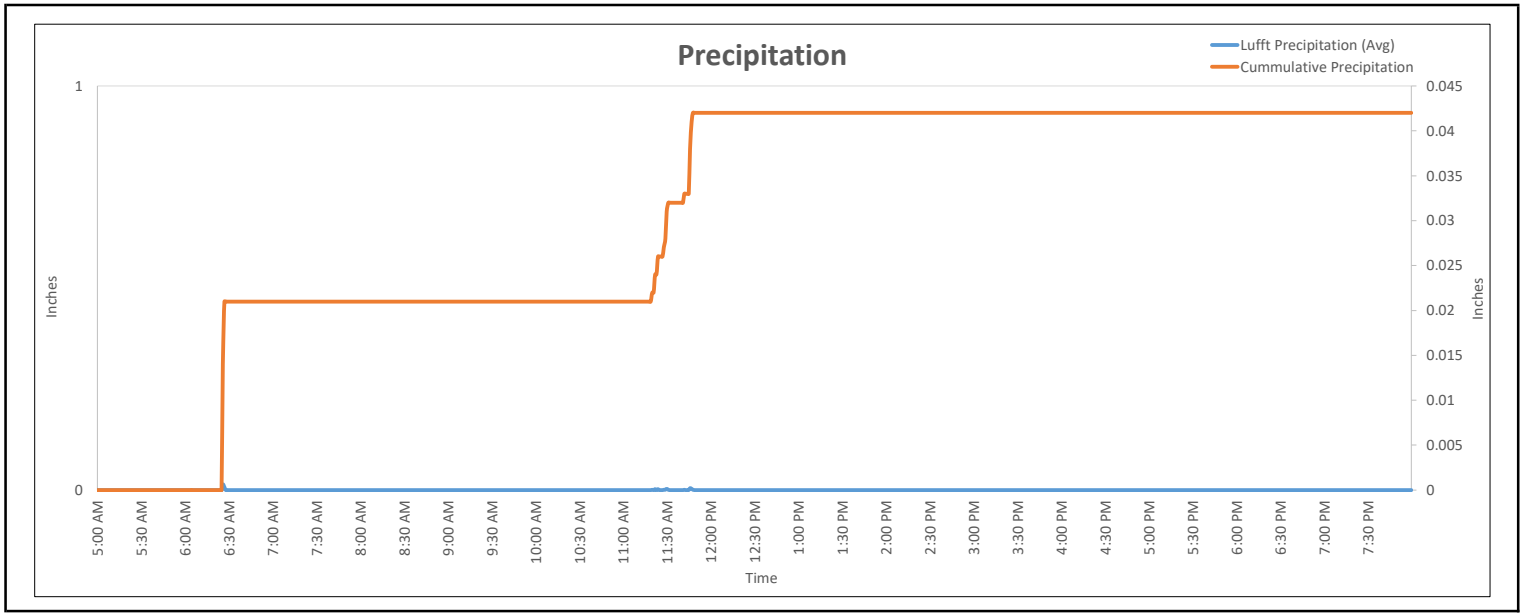

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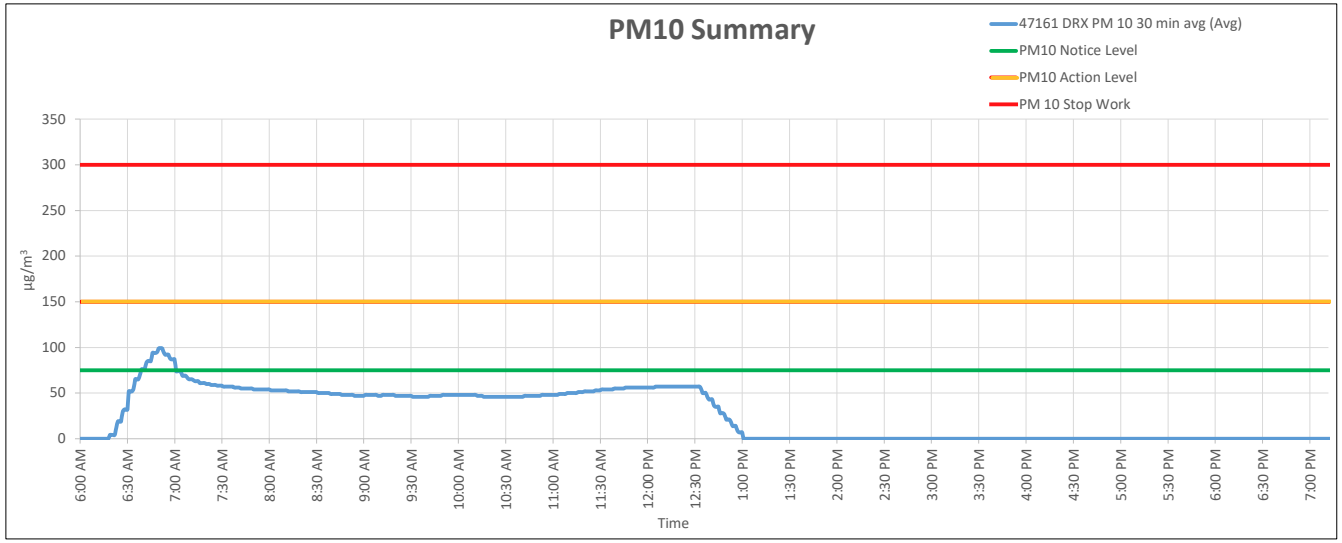
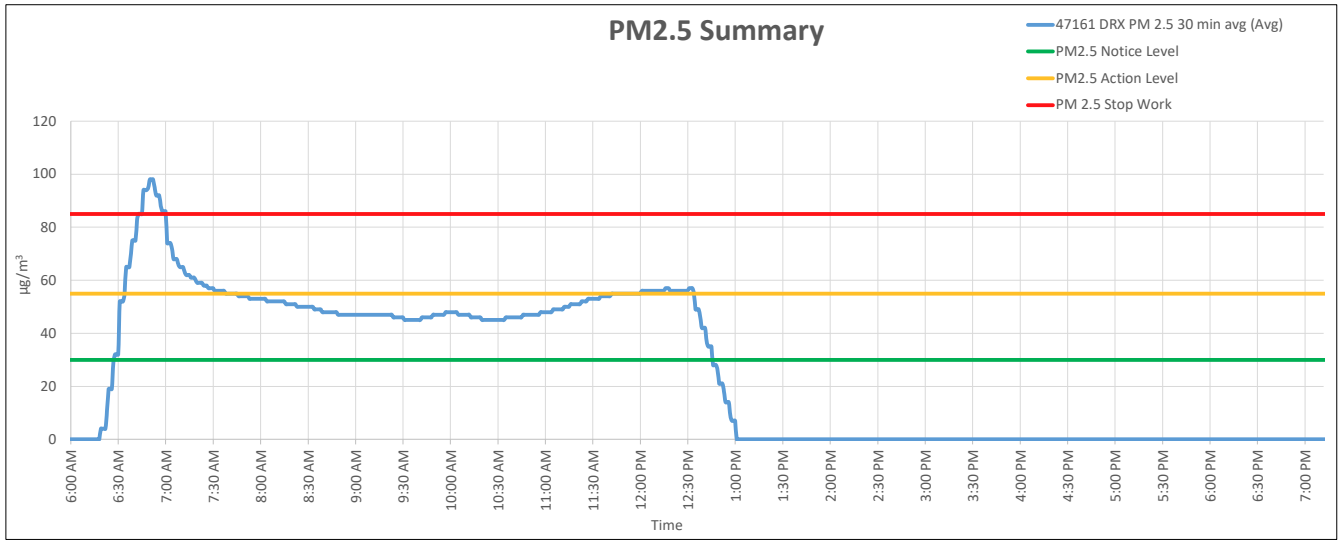
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:19 AM	1:00 PM	51.53	99.00	50.96	98.00





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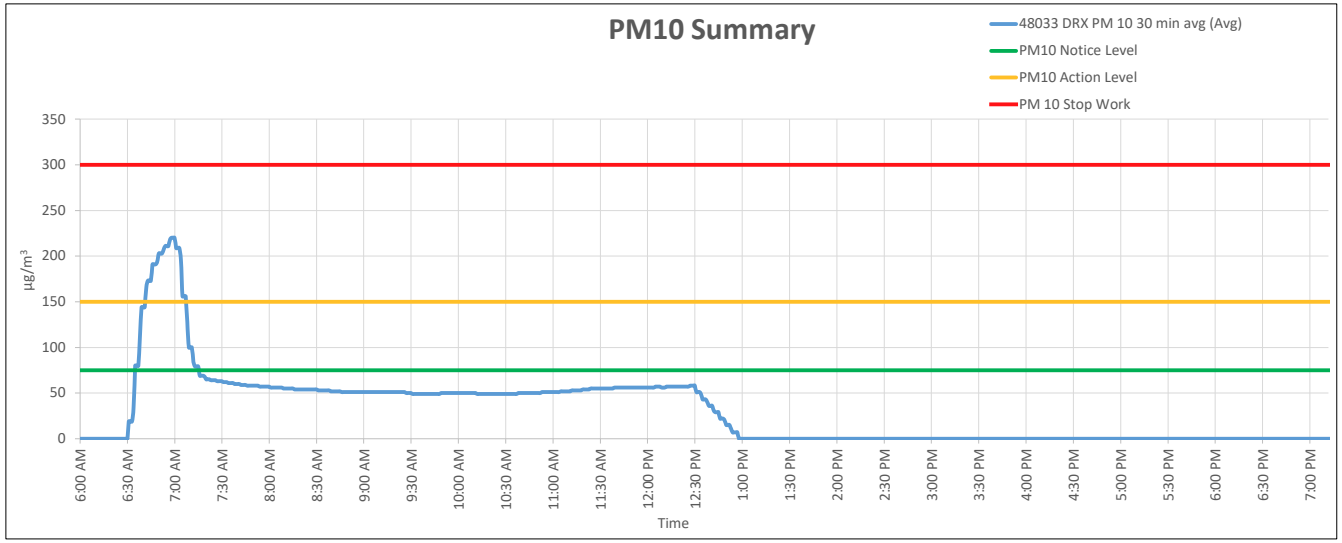
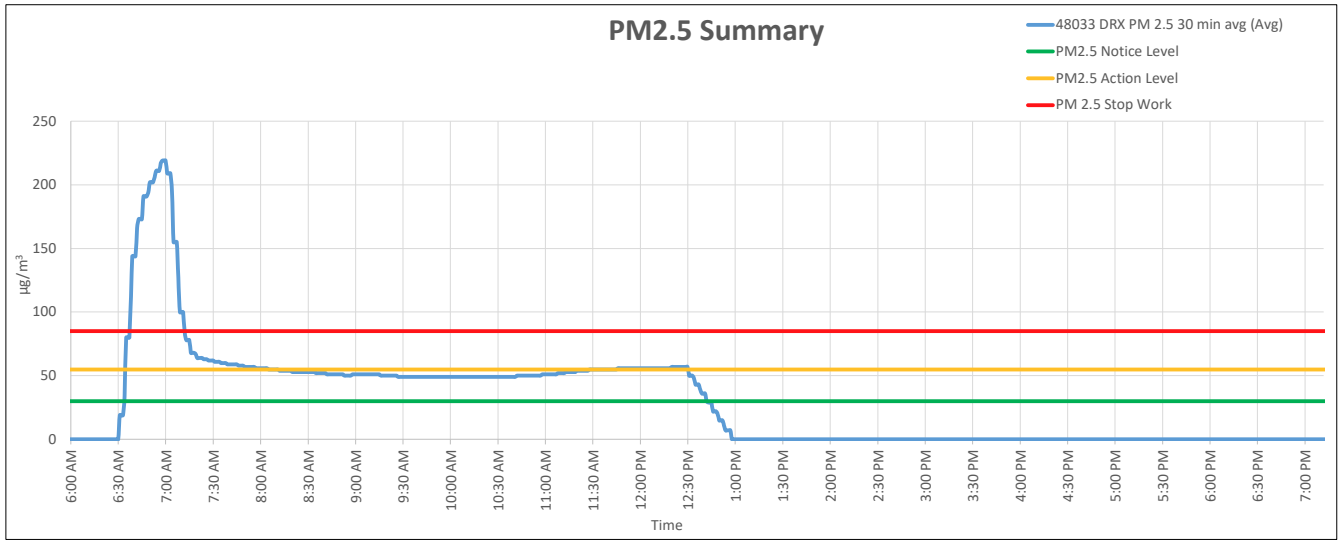
48033	6:31 AM	12:57 PM	62.96	220.00	62.54	219.00





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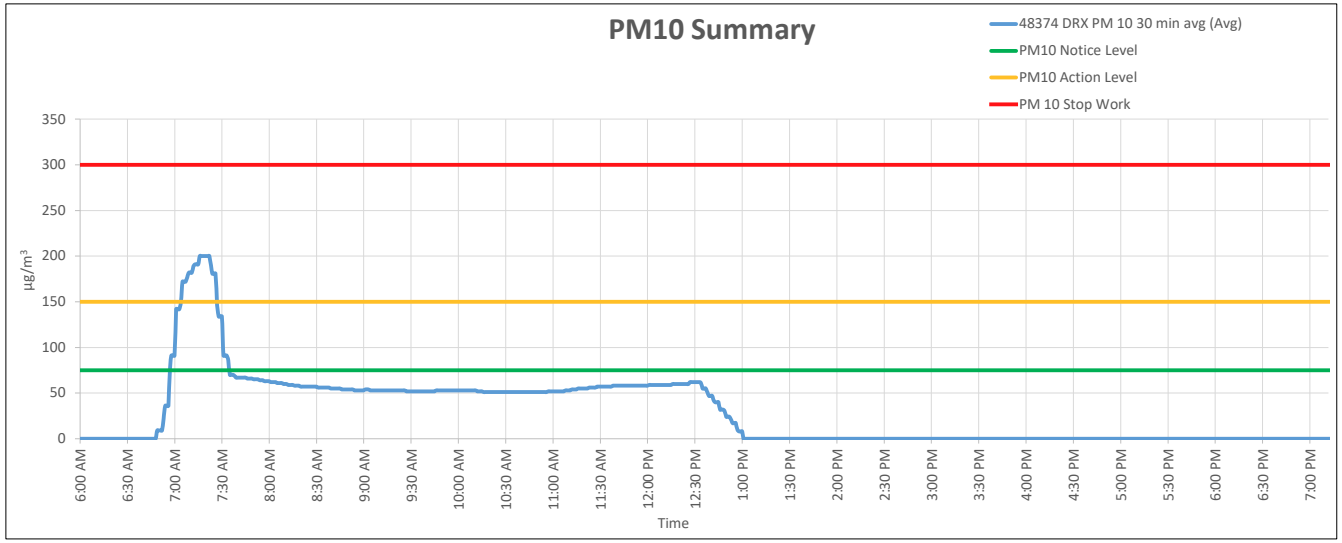
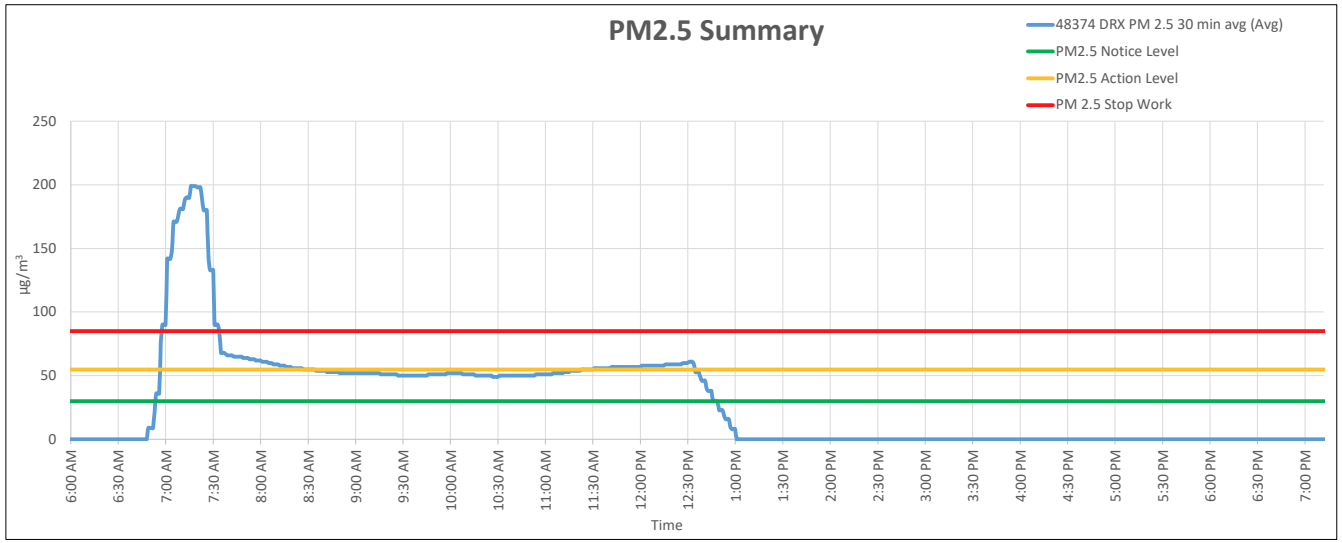
Air Monitoring Values
Tuesday, May 28, 2024

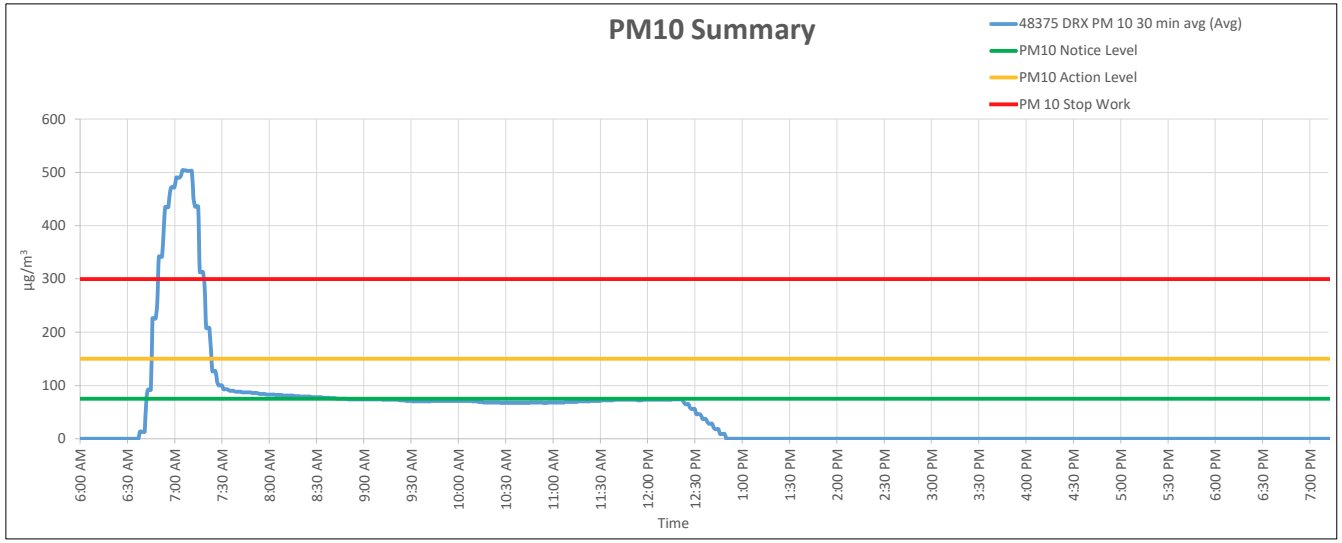
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:49 AM	1:00 PM	63.79	200.00	62.56	199.00

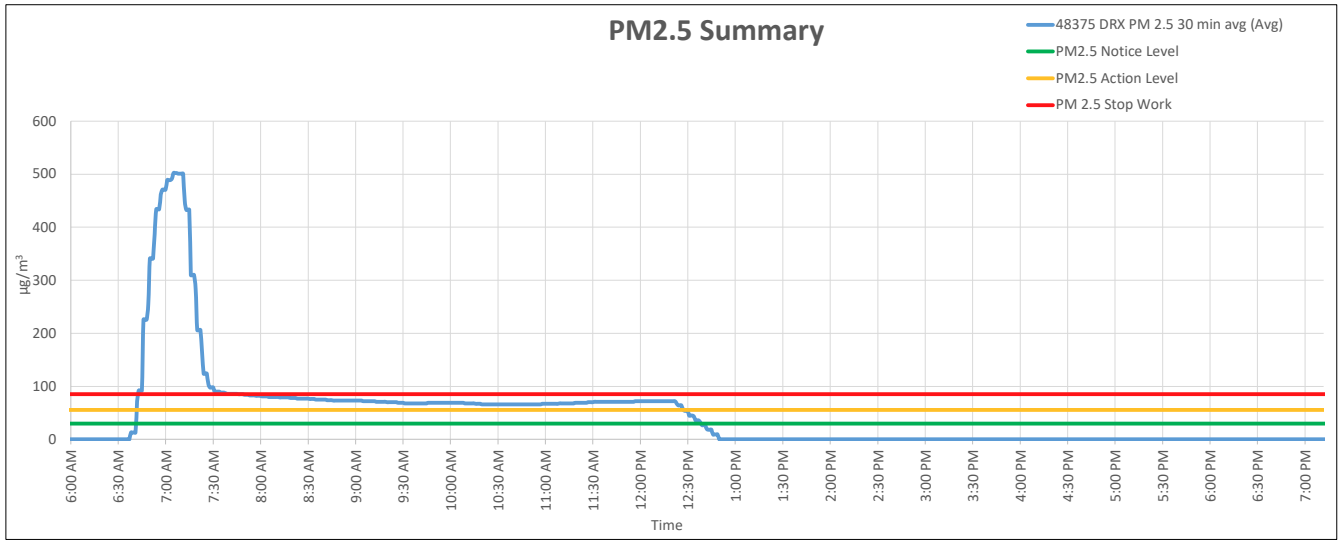




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 28, 2024

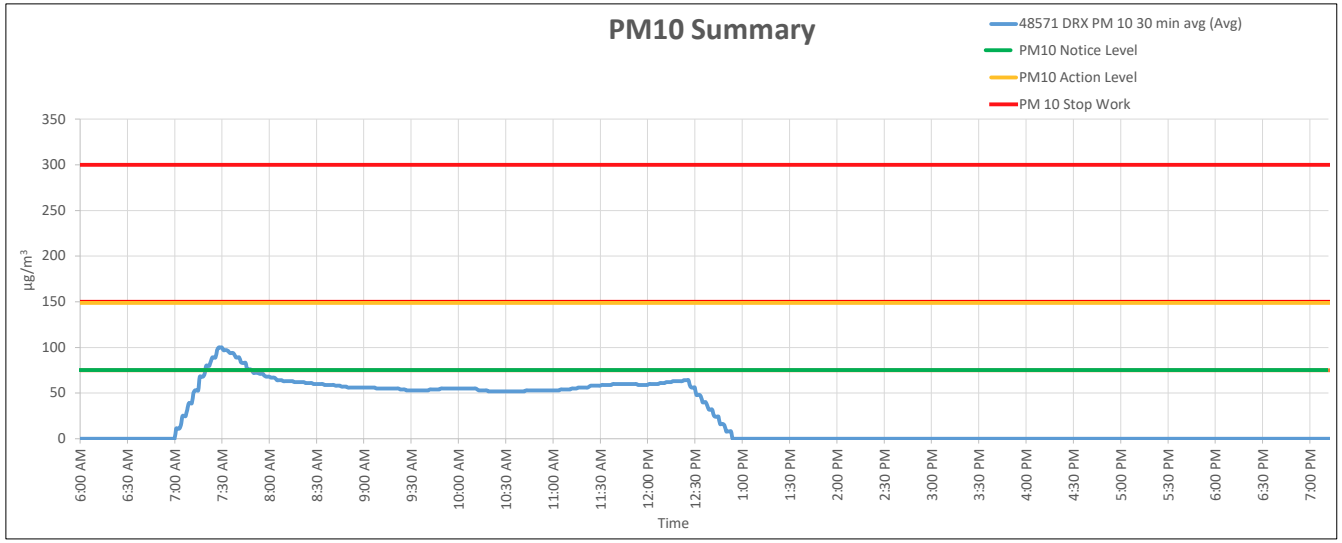
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:38 AM	12:49 PM	103.66	504.00	102.15	502.00

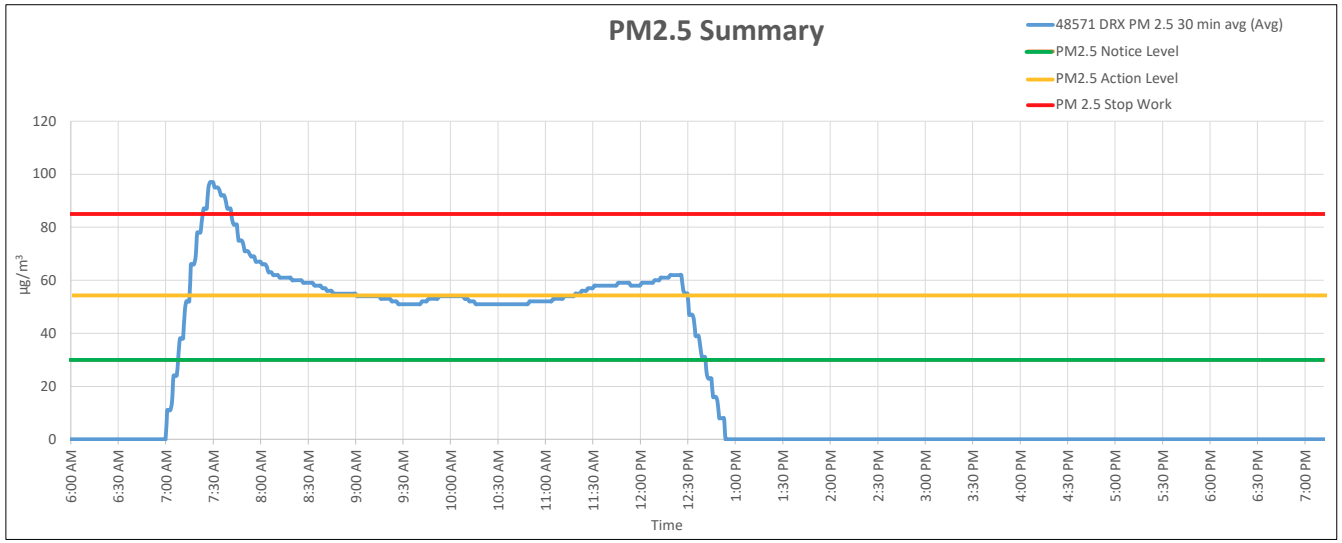




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 28, 2024

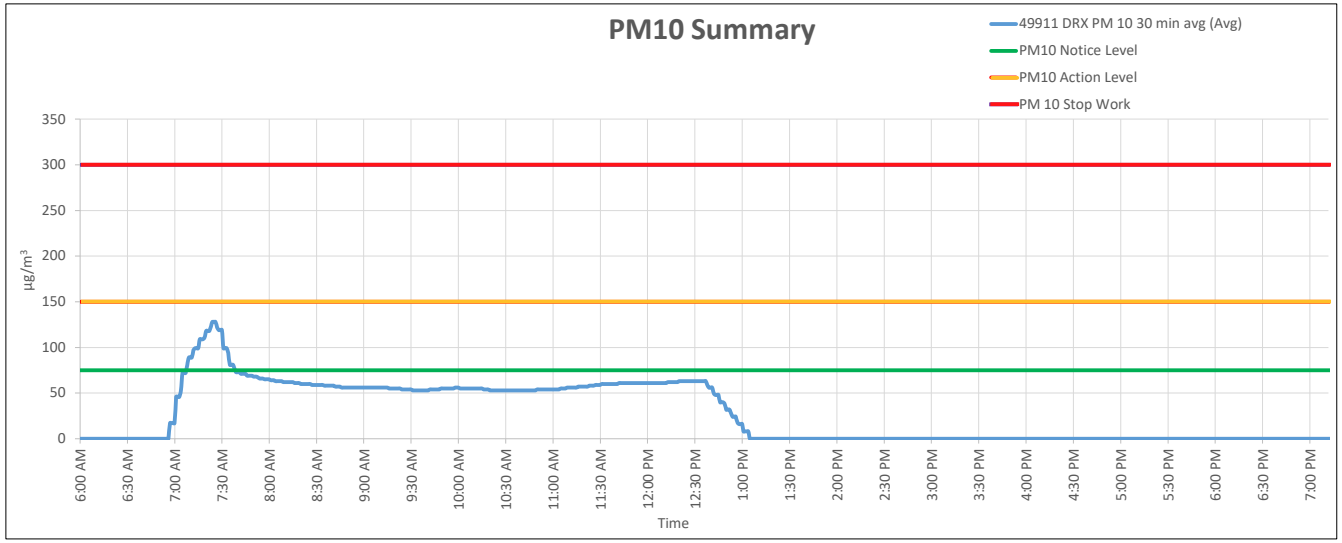
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	7:01 AM	12:53 PM	57.11	100.00	55.75	97.00

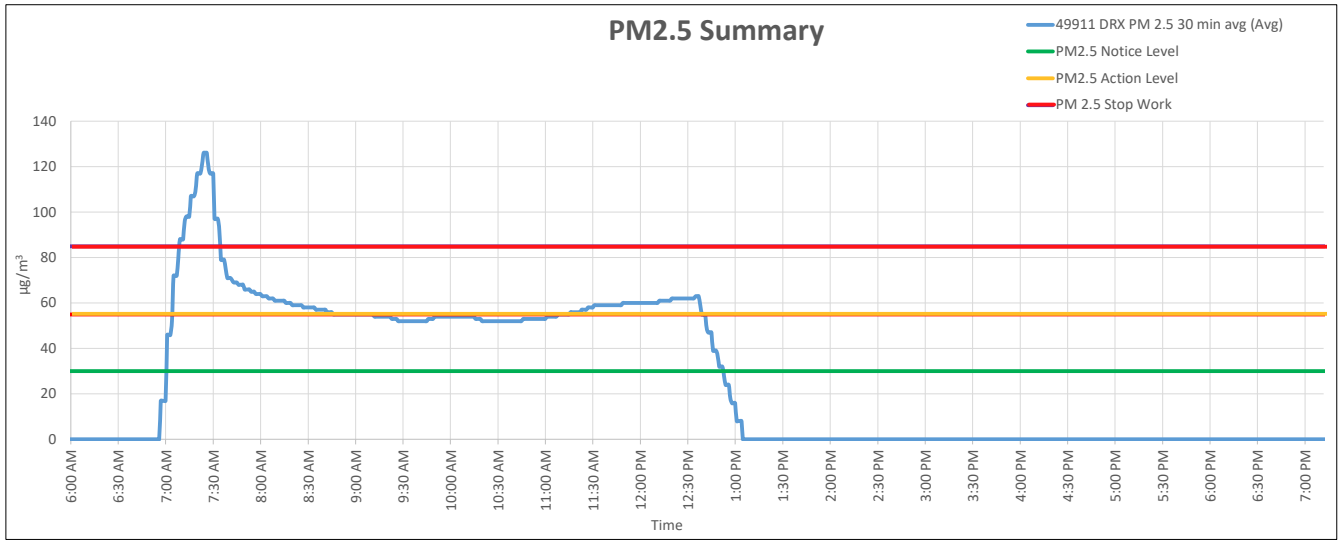




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 28, 2024

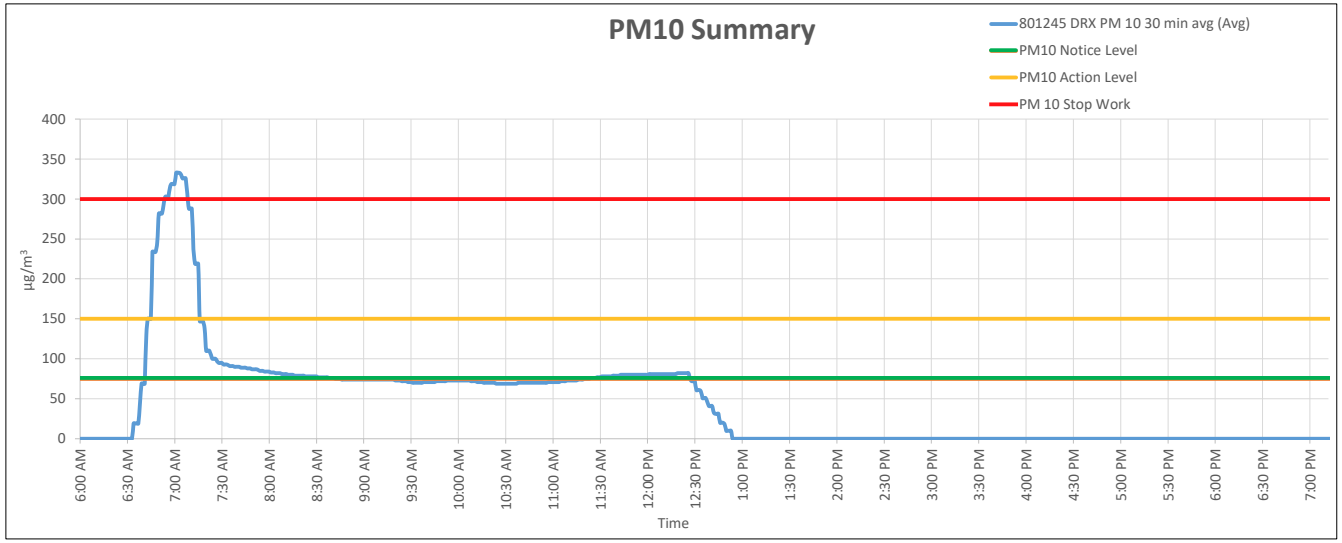
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:57 AM	1:04 PM	59.67	128.00	58.64	126.00

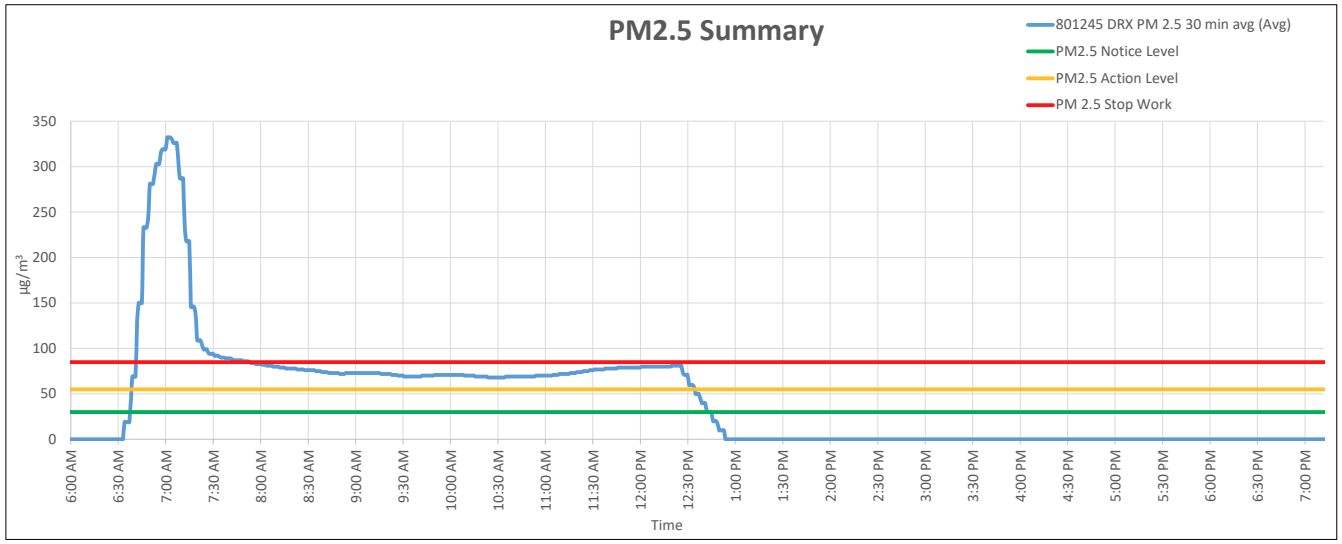




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Tuesday, May 28, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:34 AM	12:53 PM	91.89	333.00	90.83	332.00



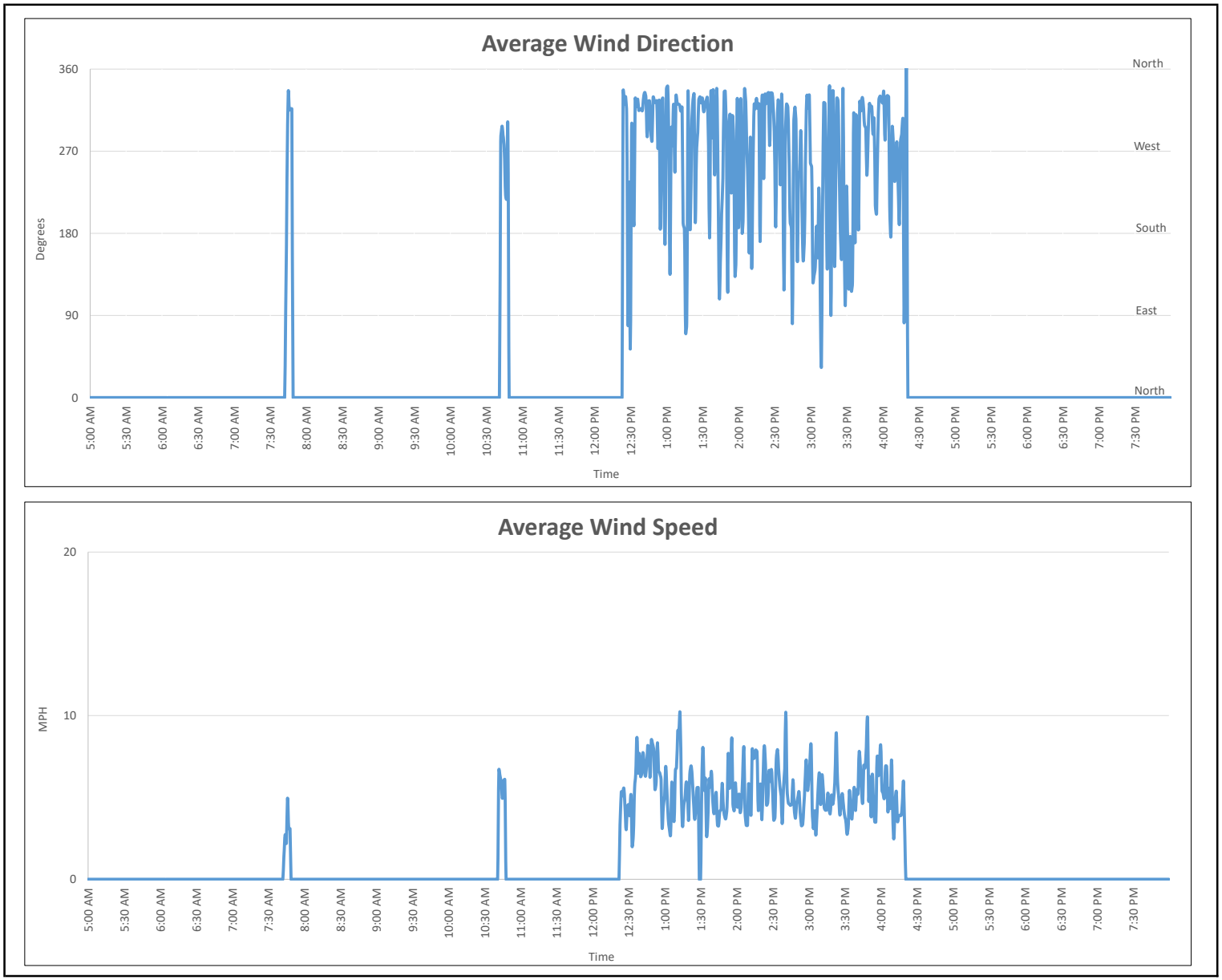


Union Pacific Railroad
Houston Wood Preserving Works Site
Houston, Texas
TCEQ Air Monitor Values
Houston North Wayside C405/C1033
May 28, 2024

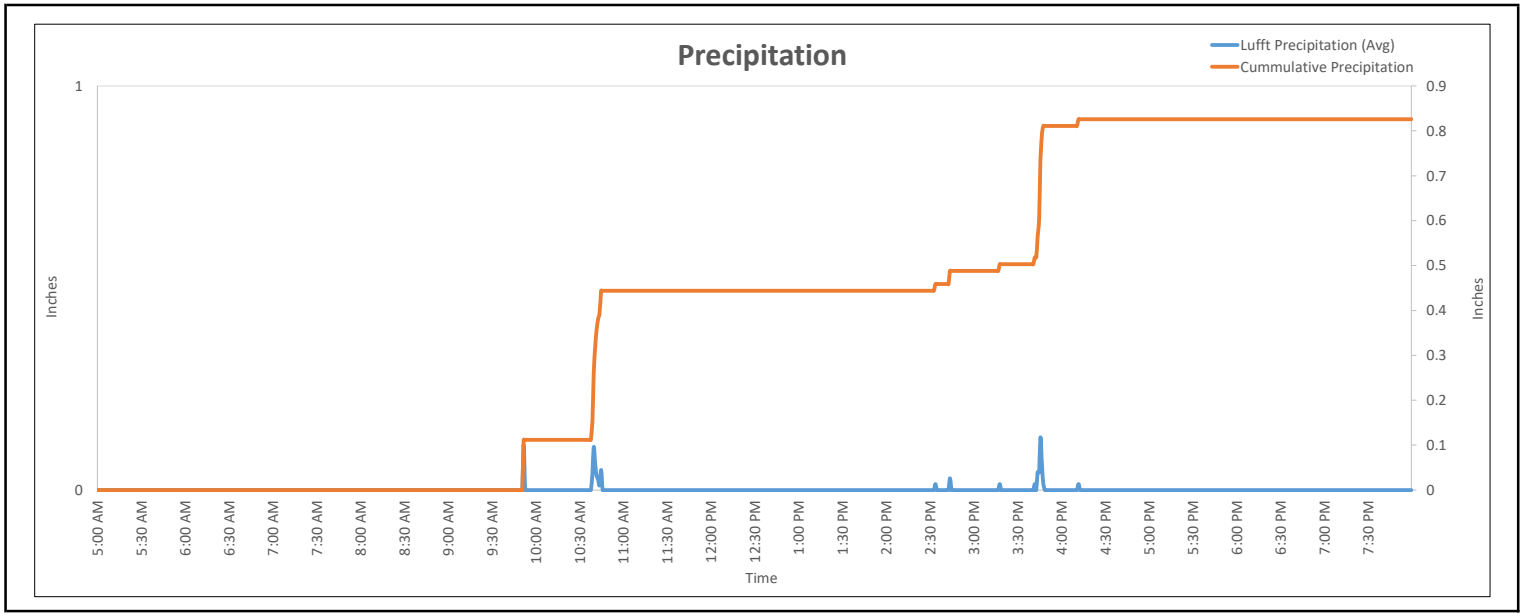
Parameter Measured	Morning												Afternoon												Parameter Measured	POC
	Mid	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	Noon	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00		
PM-10 (Standard Conditions)	30.2	28	28.8	33.1	**133.9**	64.5	84.3	94.5	116.6	75.3	89.7	67.6	94.9	NEG	***1.3***	10.9	10	11.3	11.1	26.9	24.5	13.7	14.4	17.9	PM-10 (Standard Conditions)	2 N MDL
PM-2.5 (Local Conditions)	LIM	LIM	LIM	LIM	LIM	LIM	LIM	PMA	PMA	PMA	26	LIM	**28**	NEG	8	13	***7***	15	11	15	14	11	15	13	PM-2.5 (Local Conditions)	1 R MDL
Parameter Measured	**Mid**	**1:00**	**2:00**	**3:00**	**4:00**	**5:00**	**6:00**	**7:00**	**8:00**	**9:00**	**10:00**	**11:00**	**Noon**	**1:00**	**2:00**	**3:00**	**4:00**	**5:00**	**6:00**	**7:00**	**8:00**	**9:00**	**10:00**	**11:00**	**Parameter Measured**	POC
	Morning												**Afternoon**													

Data from: https://www.tceq.texas.gov/cgi-bin/compliance/monops/daily_summary.pl

Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Wednesday, May 29, 2024

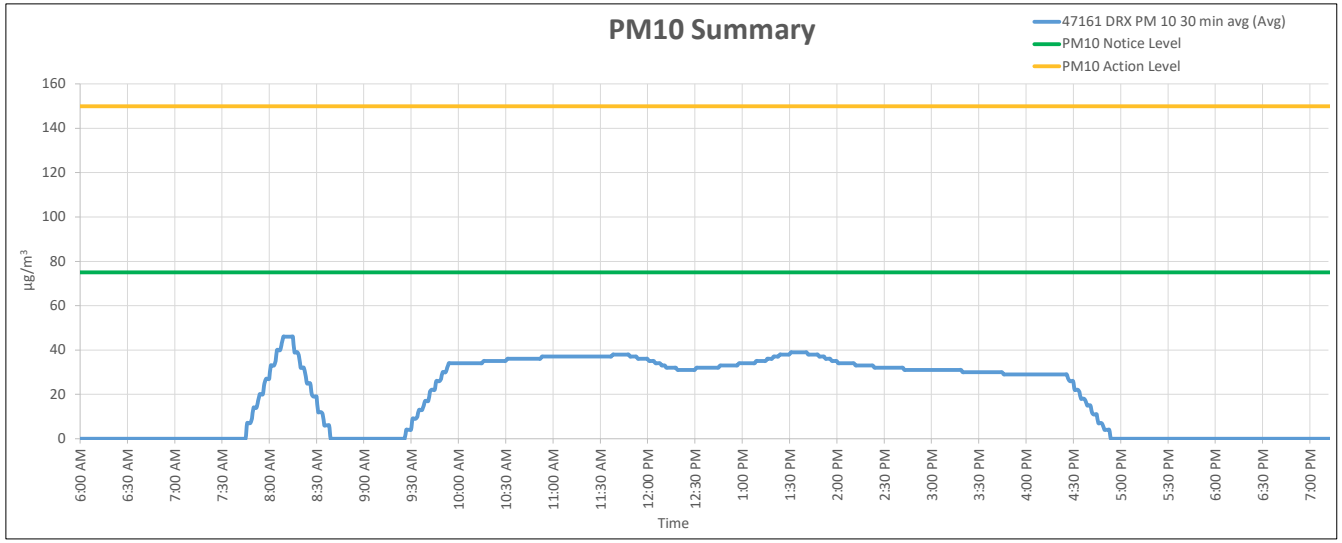


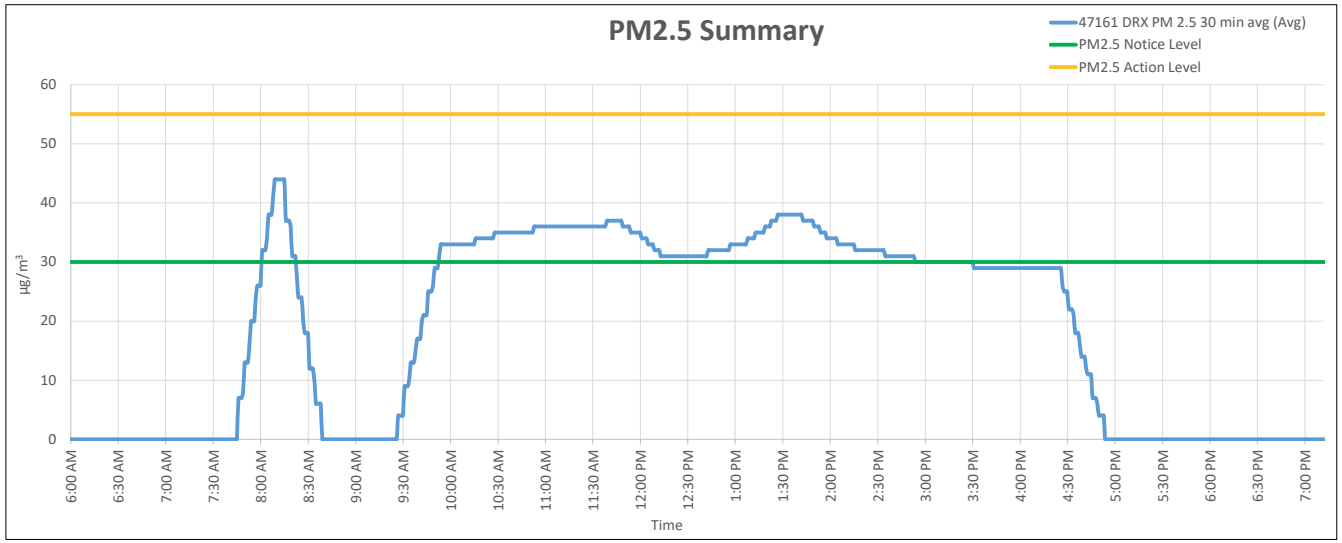
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Wednesday, May 29, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 29, 2024

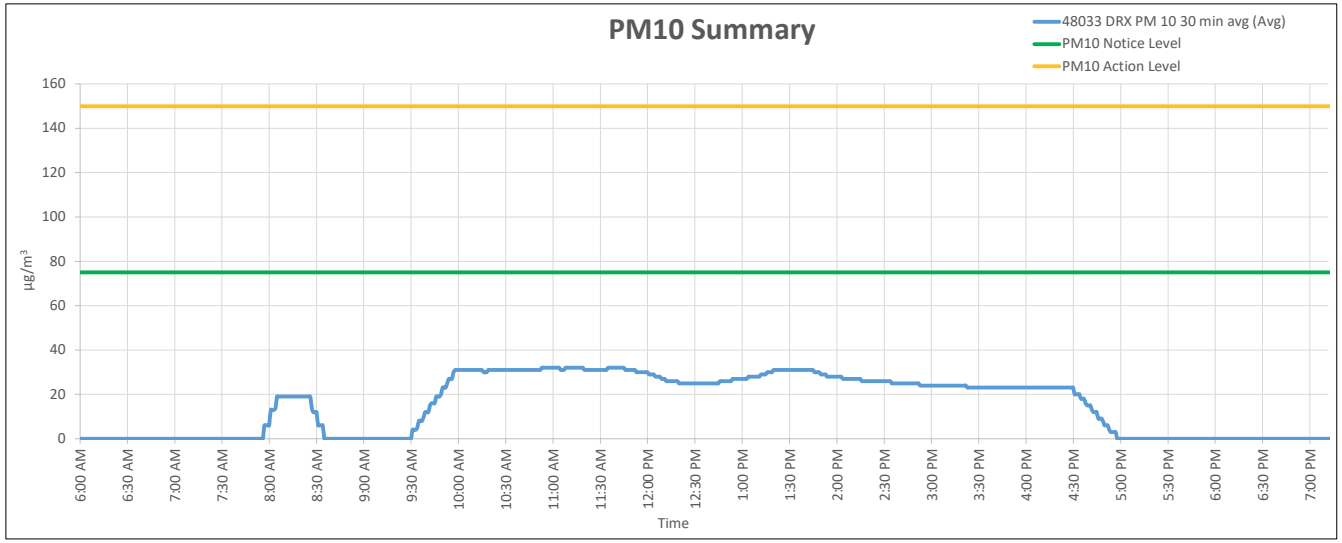
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	7:46 AM	4:53 PM	30.95	46.00	30.24	44.00

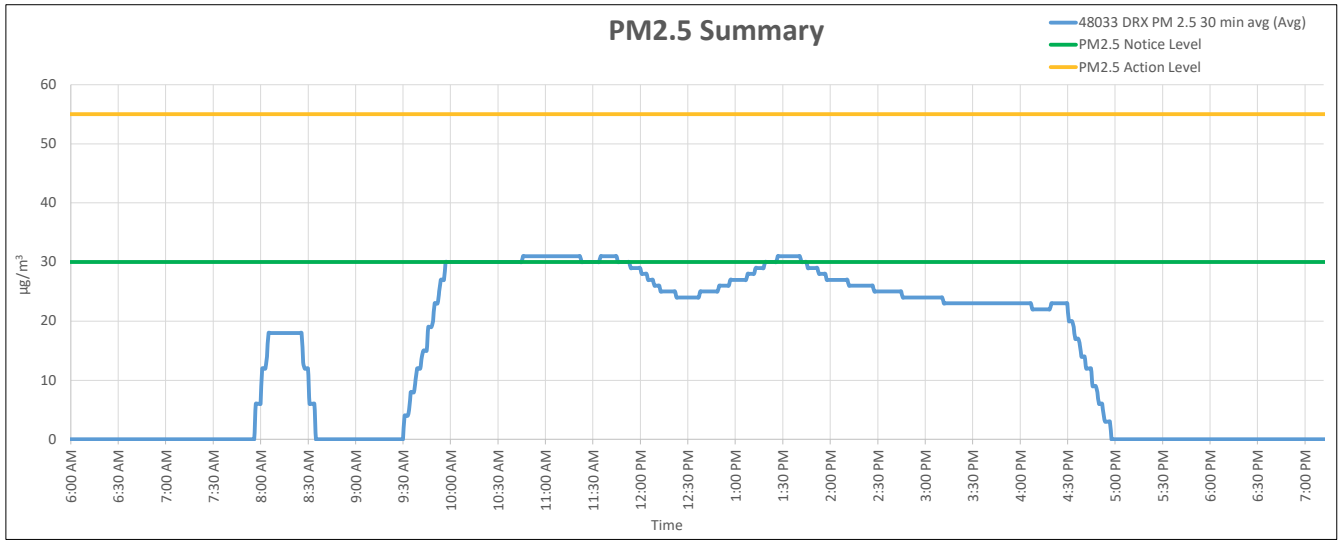




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 29, 2024

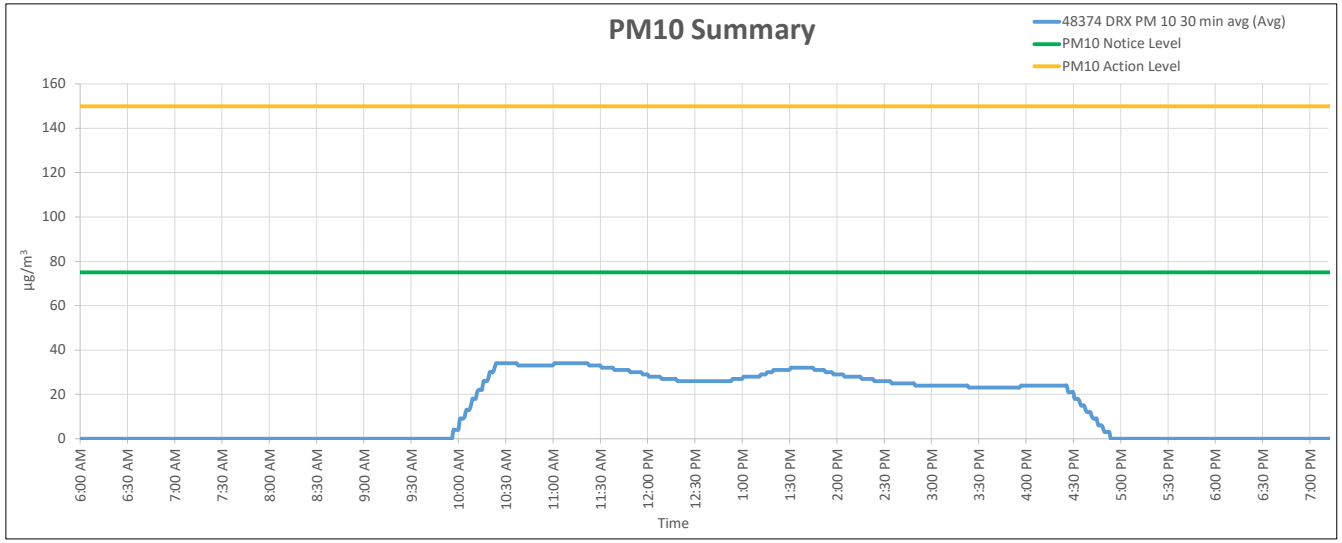
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	7:57 AM	4:57 PM	25.01	32.00	24.48	31.00

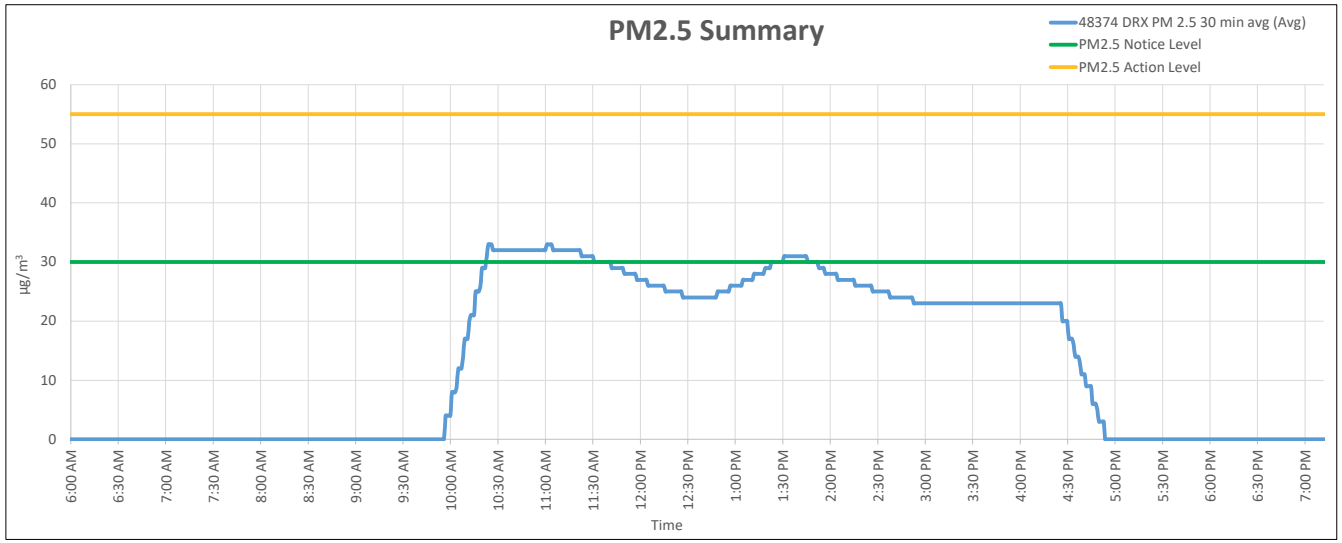




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 29, 2024

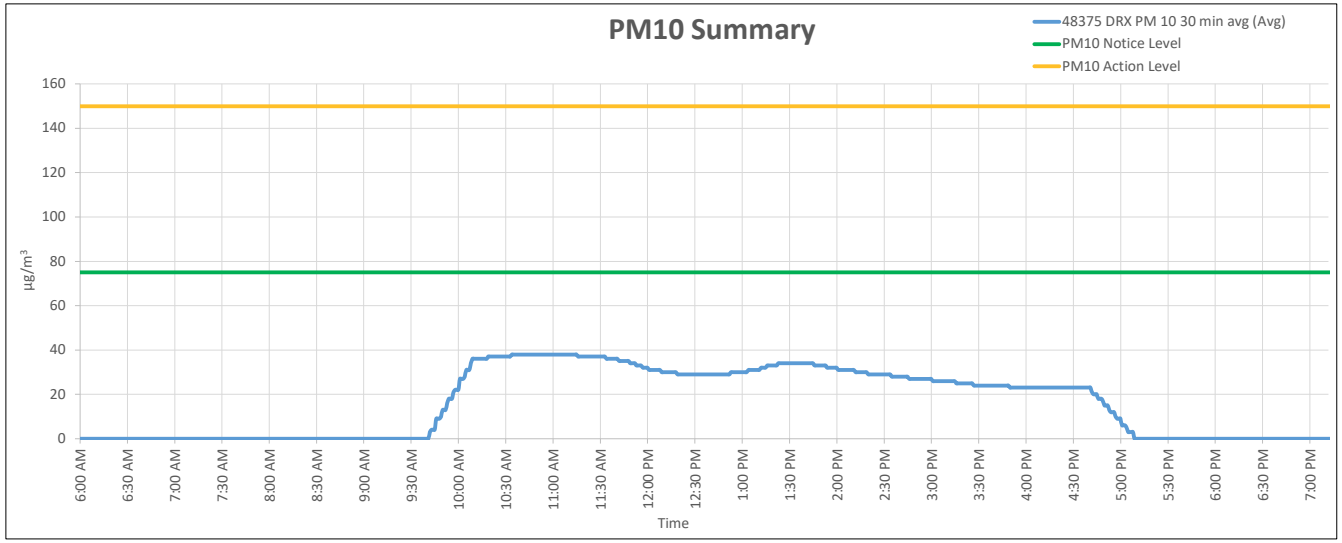
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	9:57 AM	4:53 PM	26.31	34.00	25.20	33.00

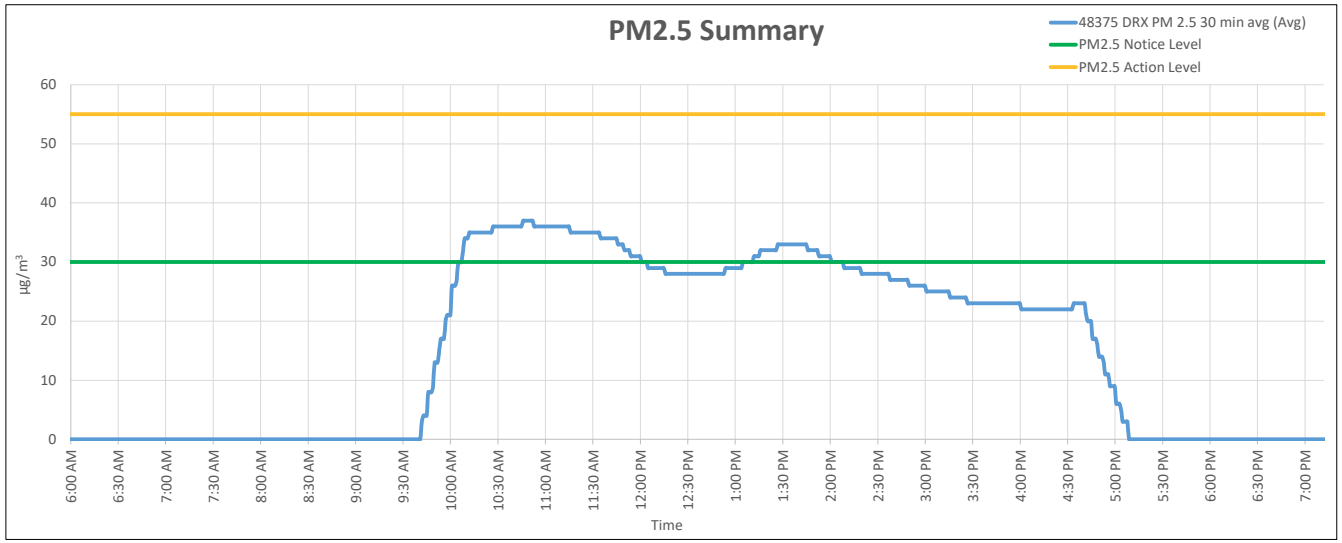




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 29, 2024

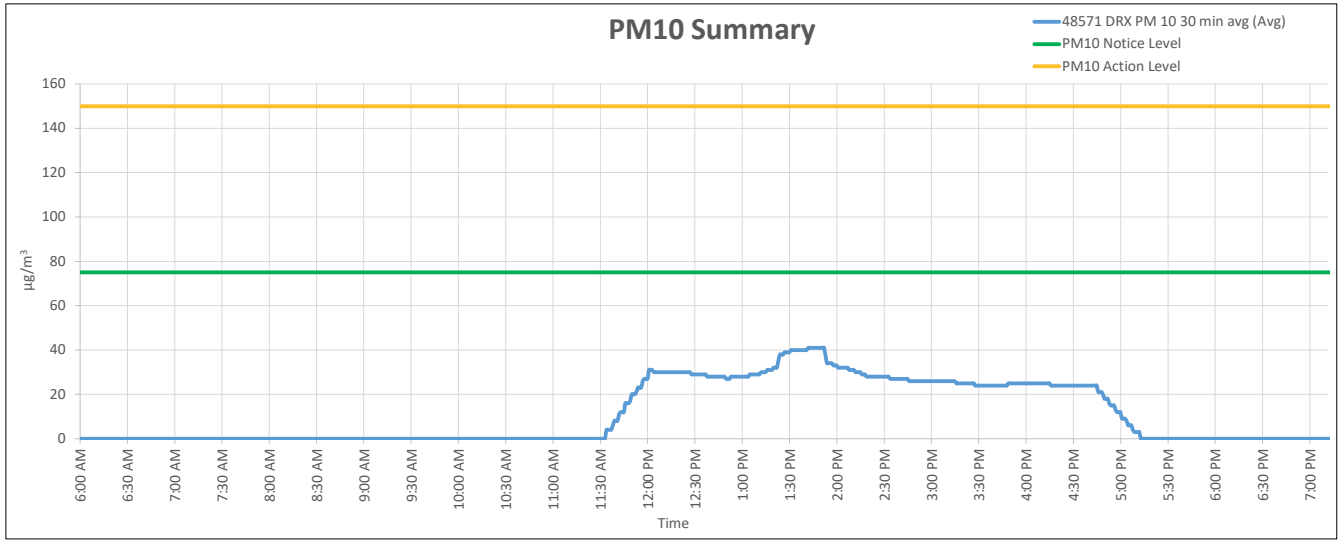
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	9:42 AM	5:08 PM	28.62	38.00	27.51	37.00

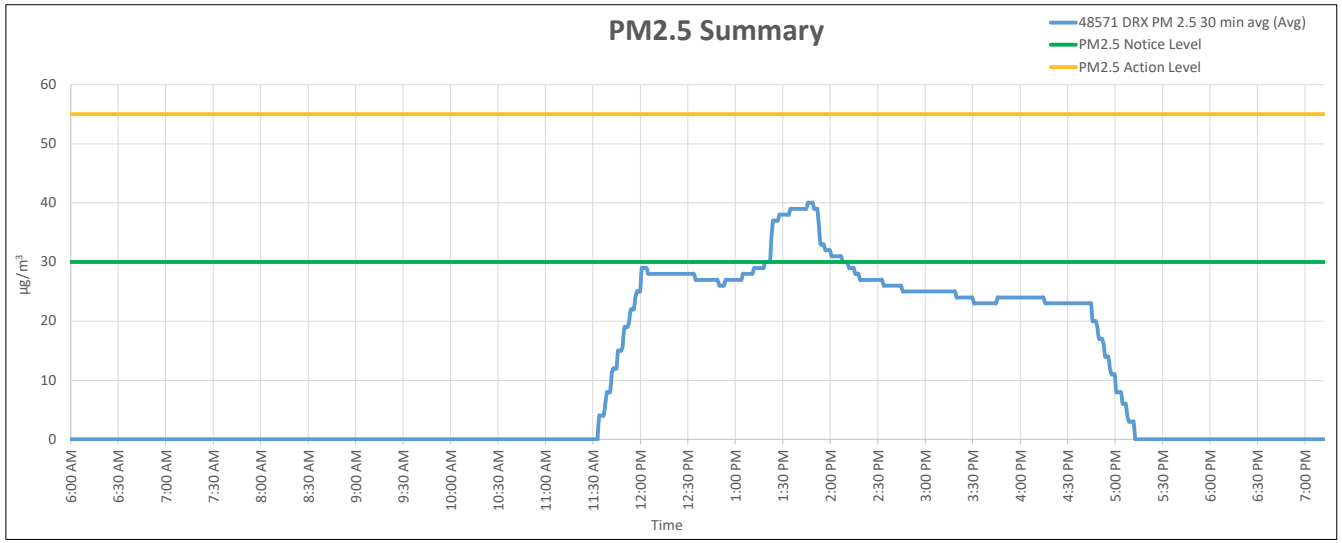




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 29, 2024

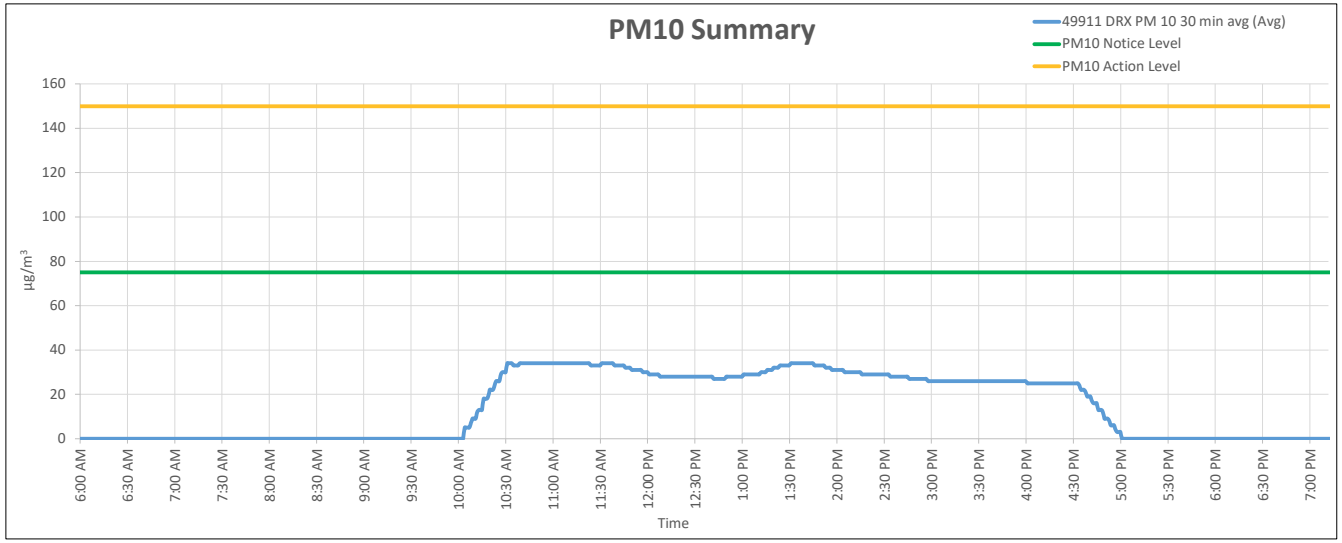
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	11:34 AM	5:12 PM	26.18	41.00	25.12	40.00

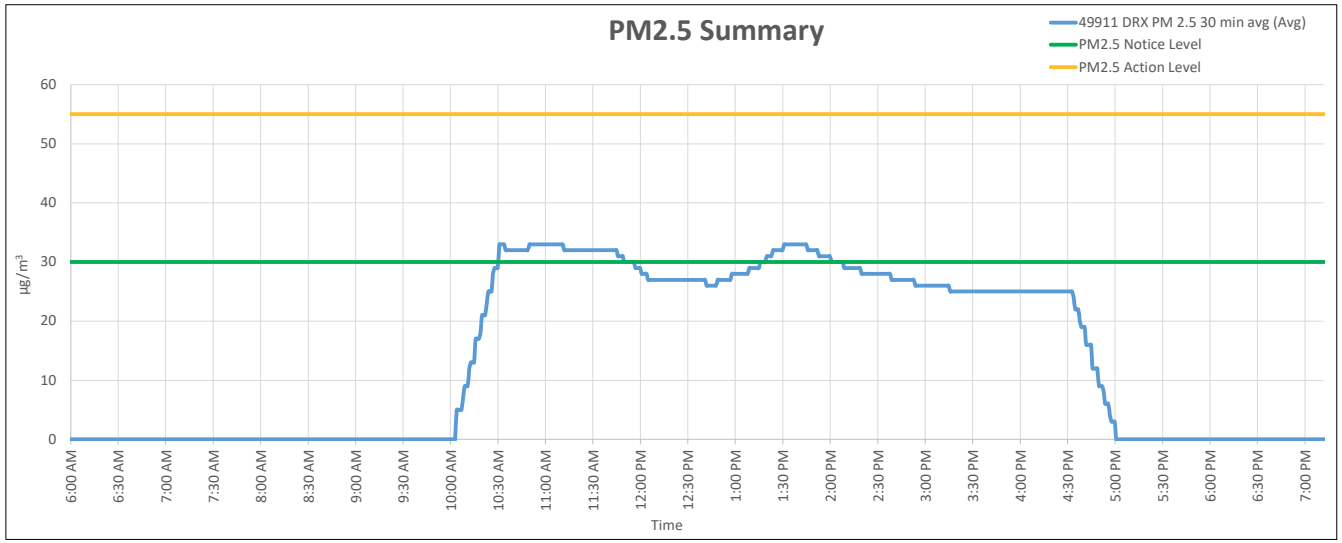




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 29, 2024

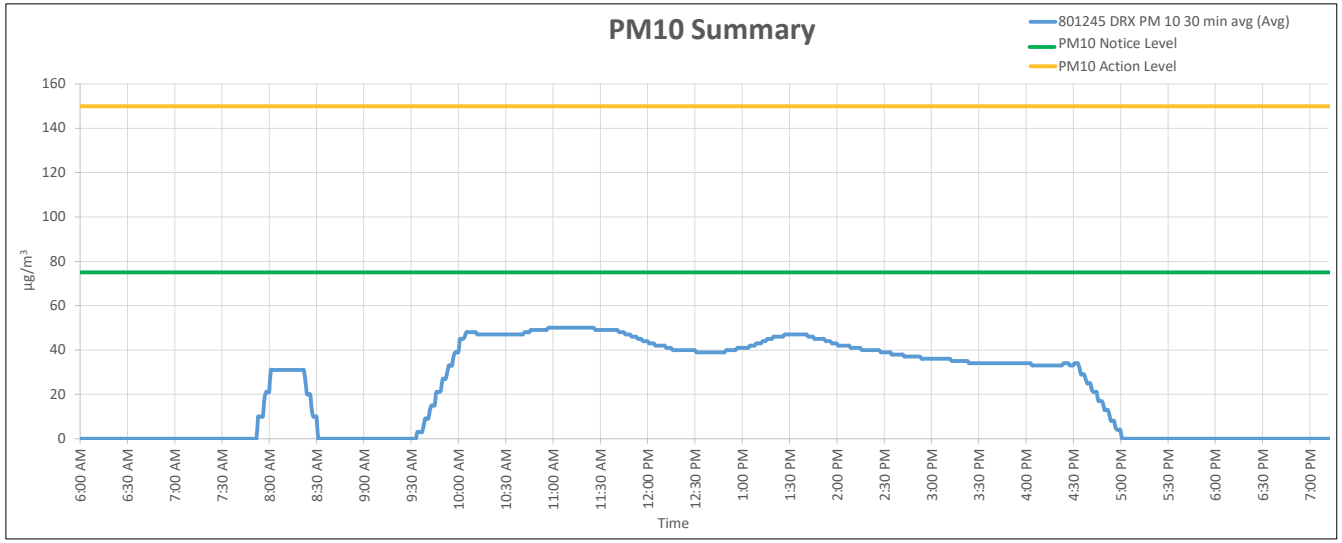
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	10:04 AM	5:00 PM	27.59	34.00	26.79	33.00

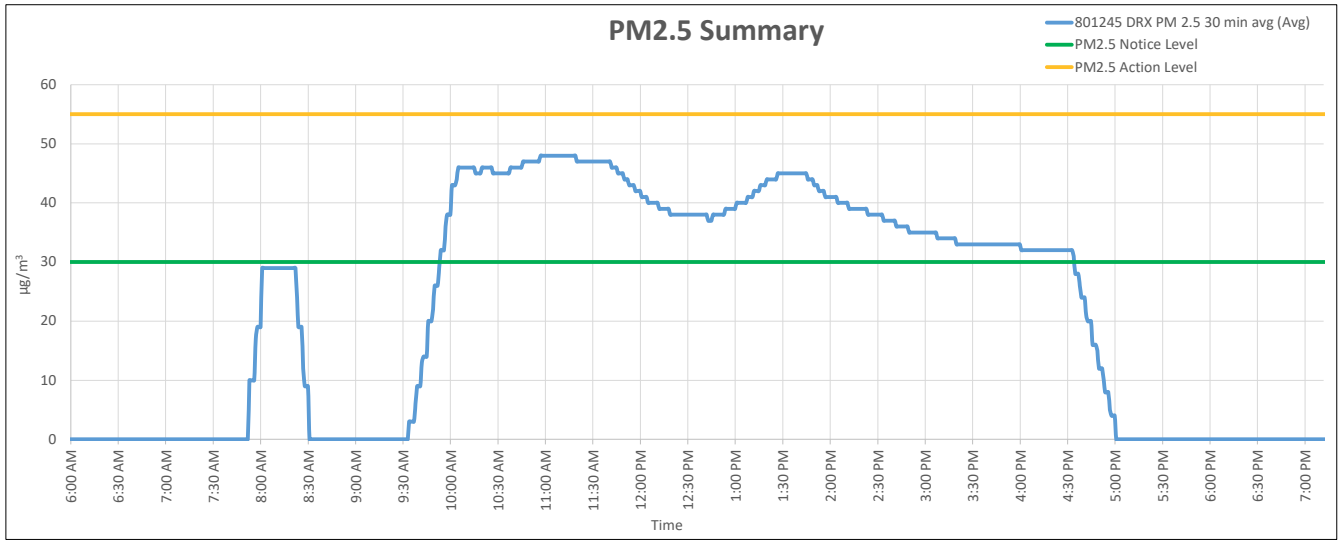




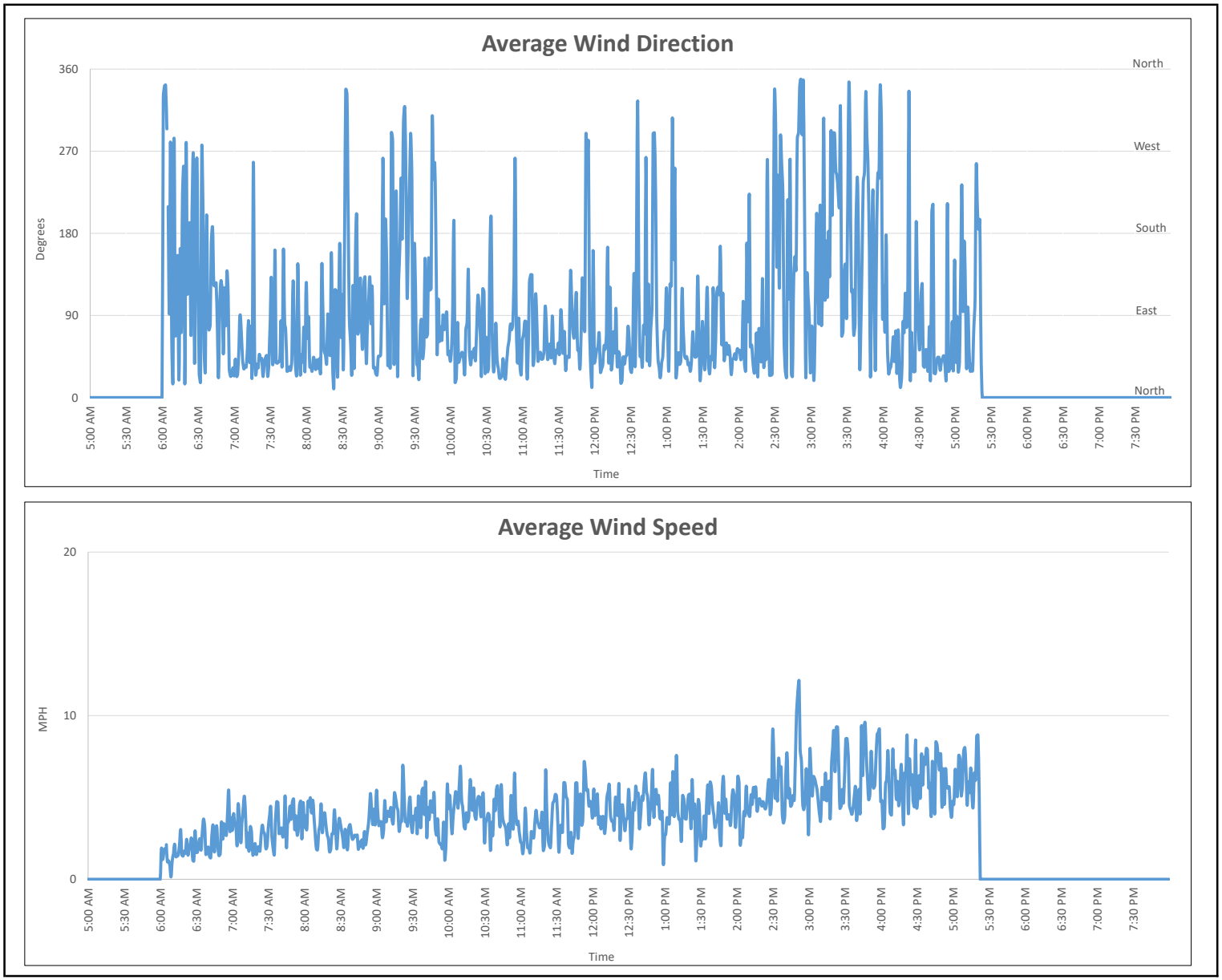
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Wednesday, May 29, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	7:53 AM	5:00 PM	37.80	50.00	36.31	48.00

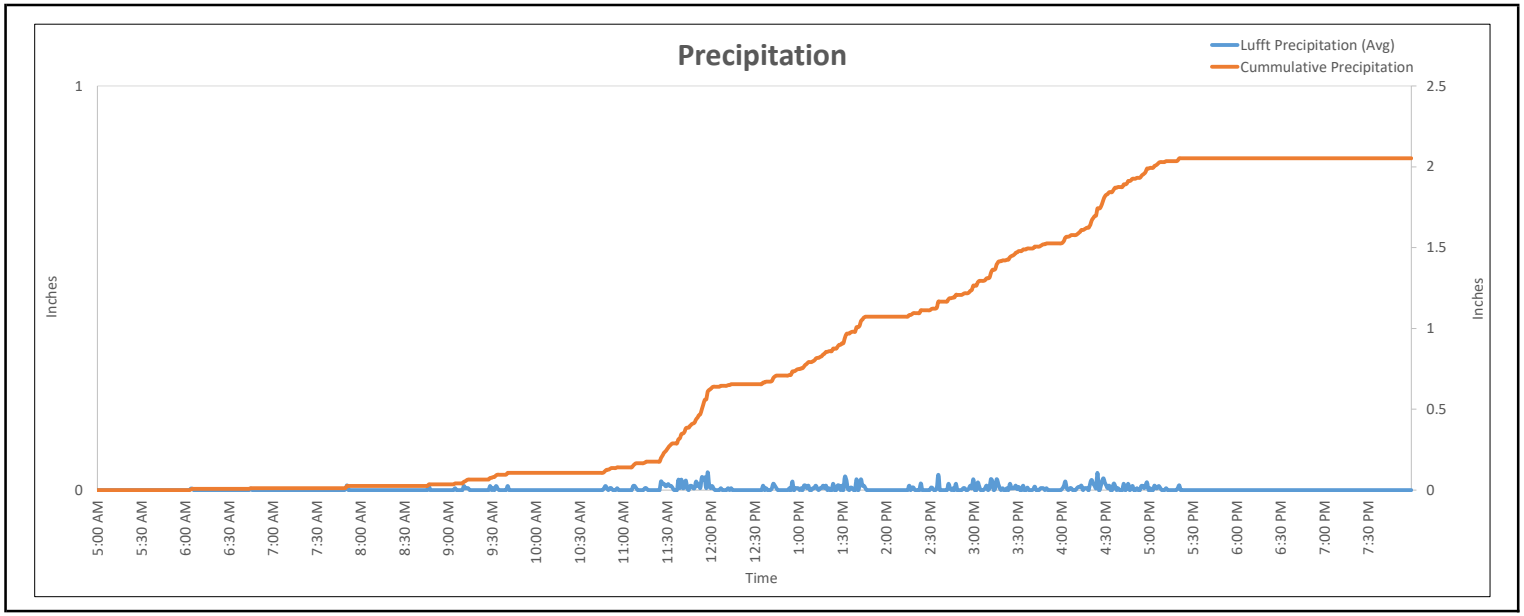




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Thursday, May 30, 2024

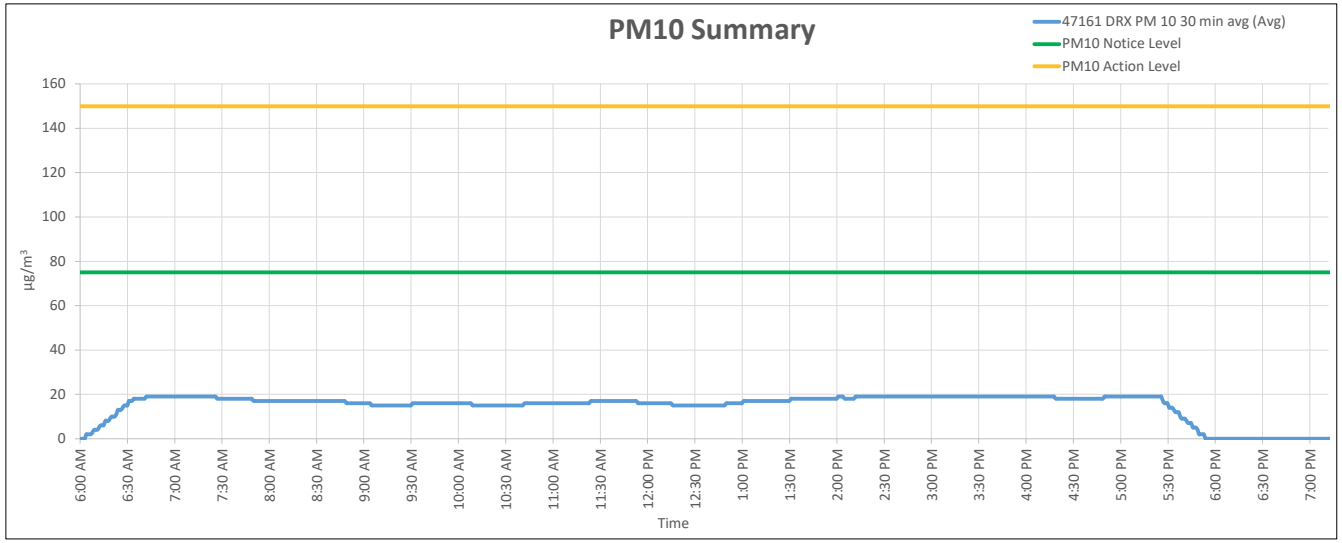


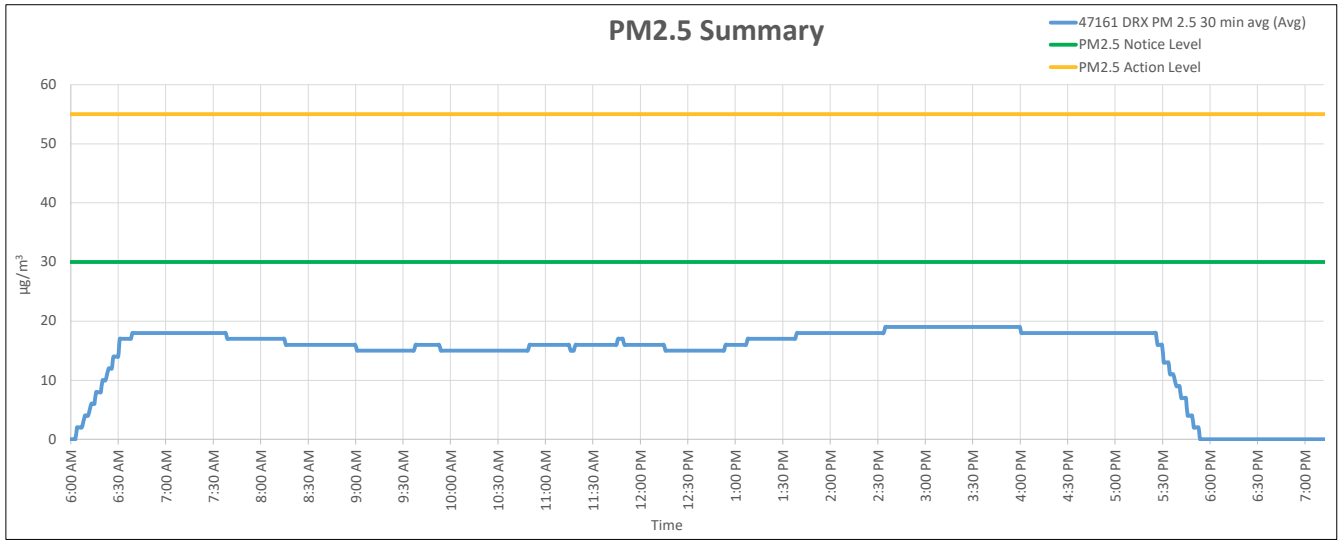
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Thursday, May 30, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 30, 2024

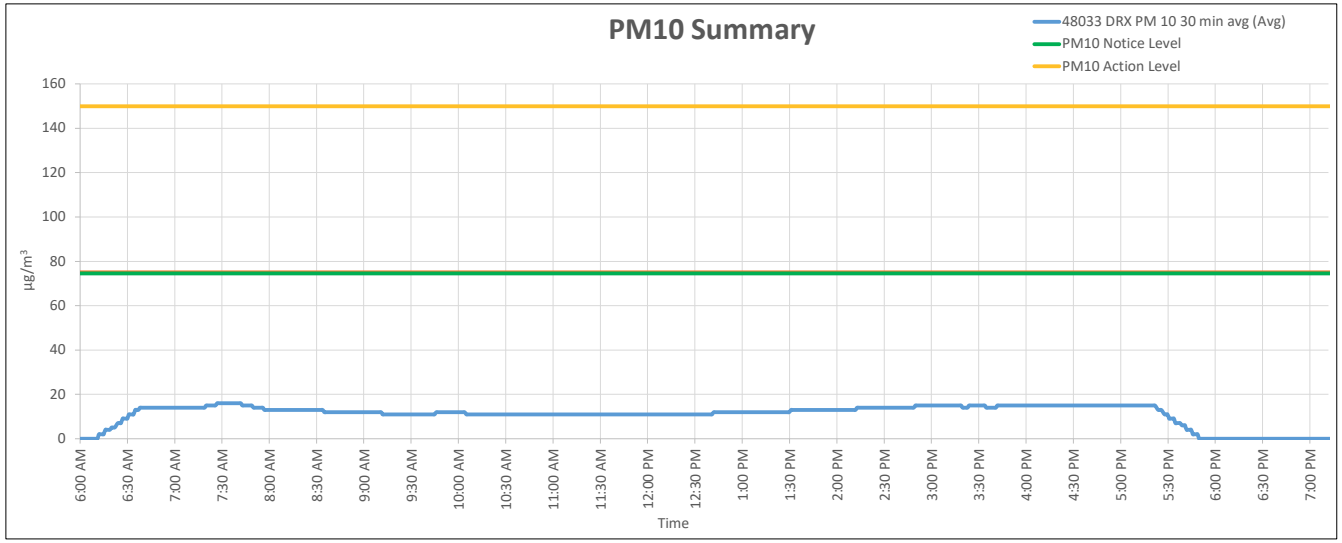
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	6:04 AM	5:53 PM	16.66	19.00	16.27	19.00

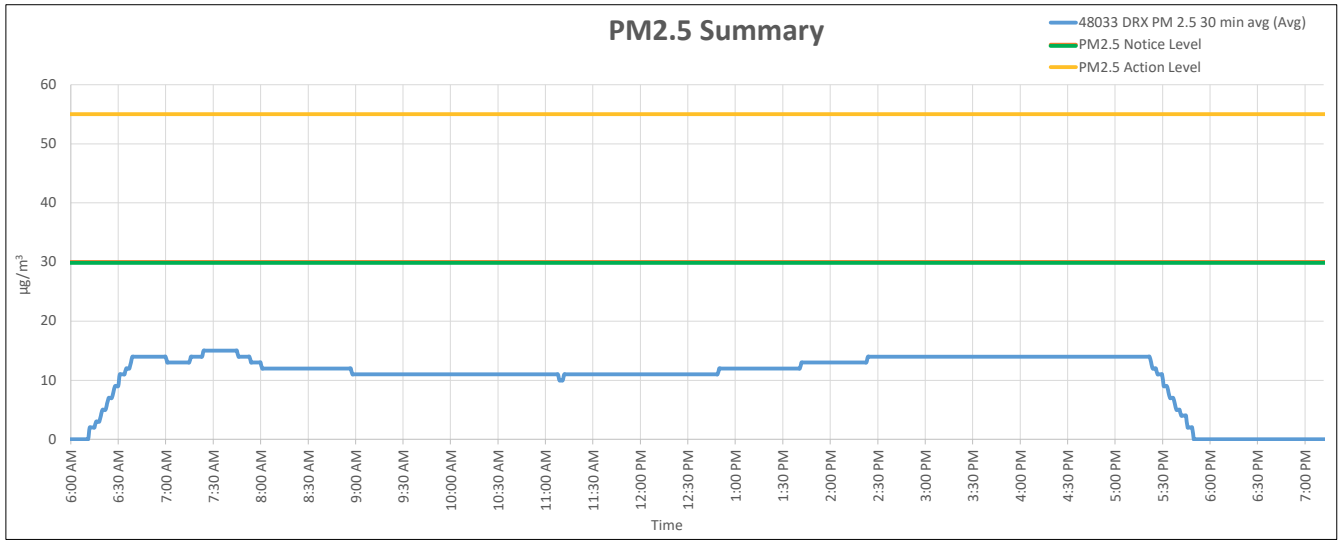




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 30, 2024

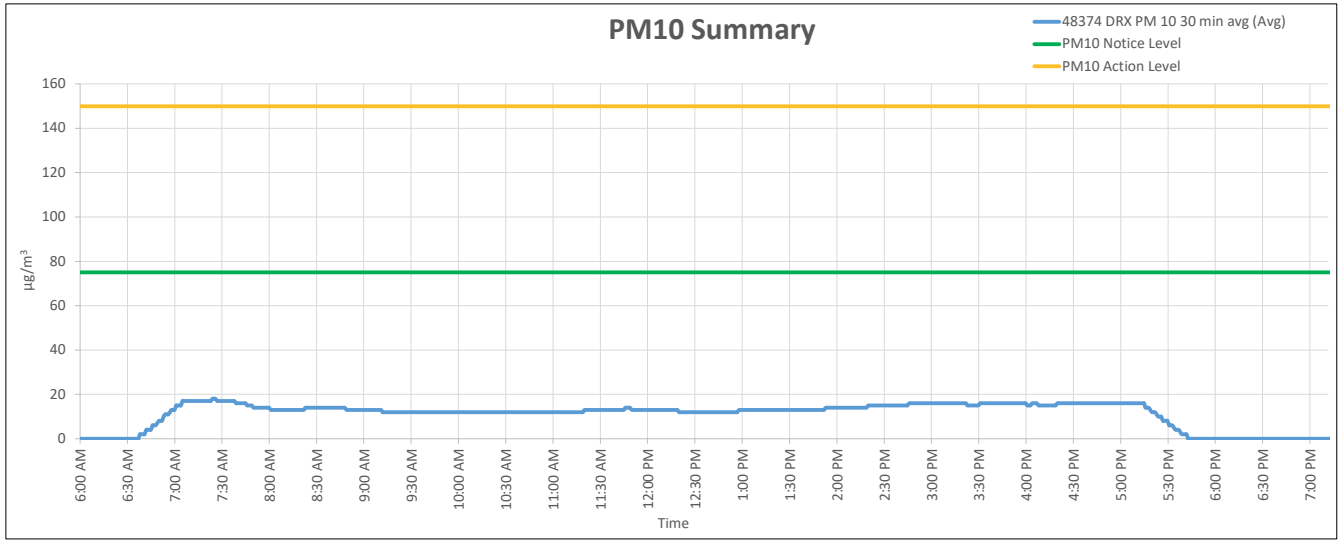
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	6:12 AM	5:49 PM	12.53	16.00	12.09	15.00

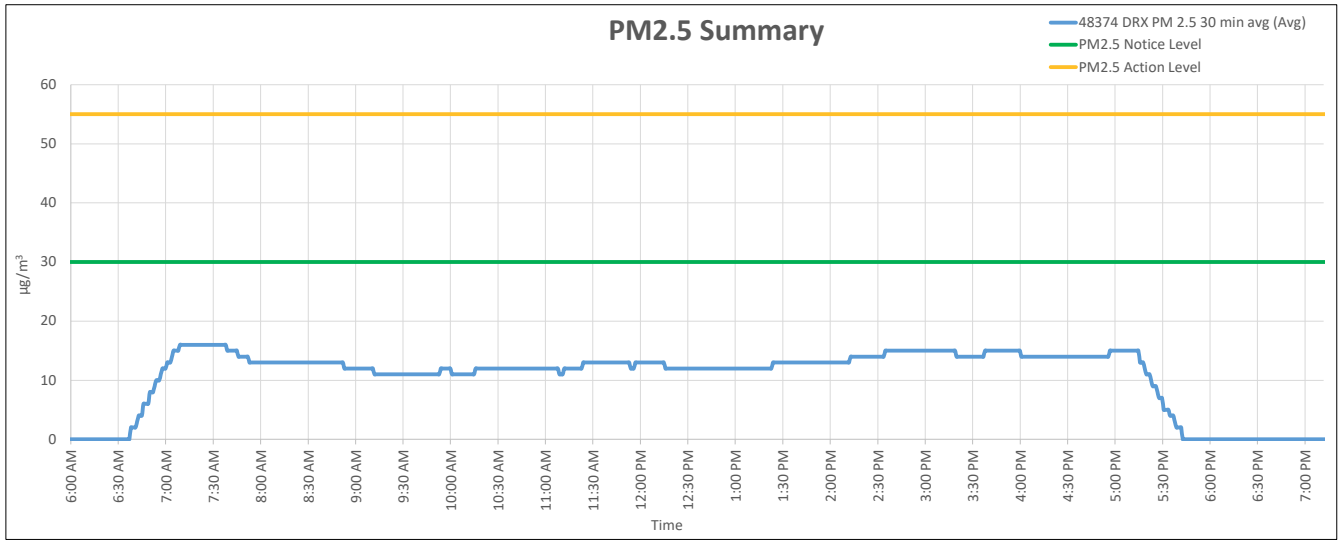




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 30, 2024

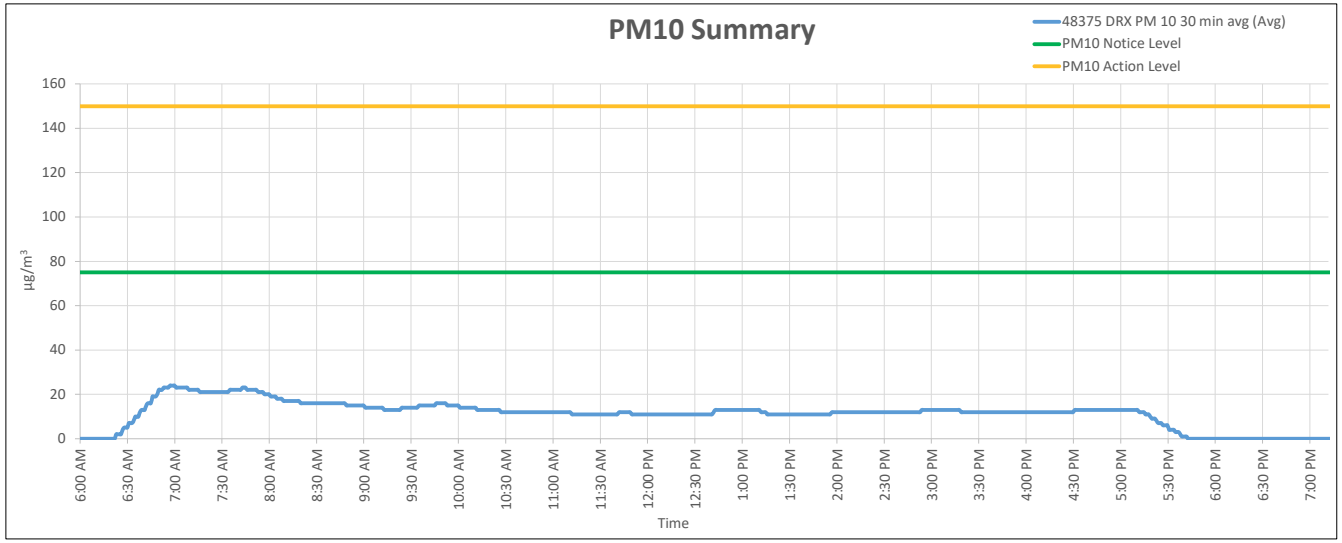
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	6:38 AM	5:42 PM	13.43	18.00	12.71	16.00

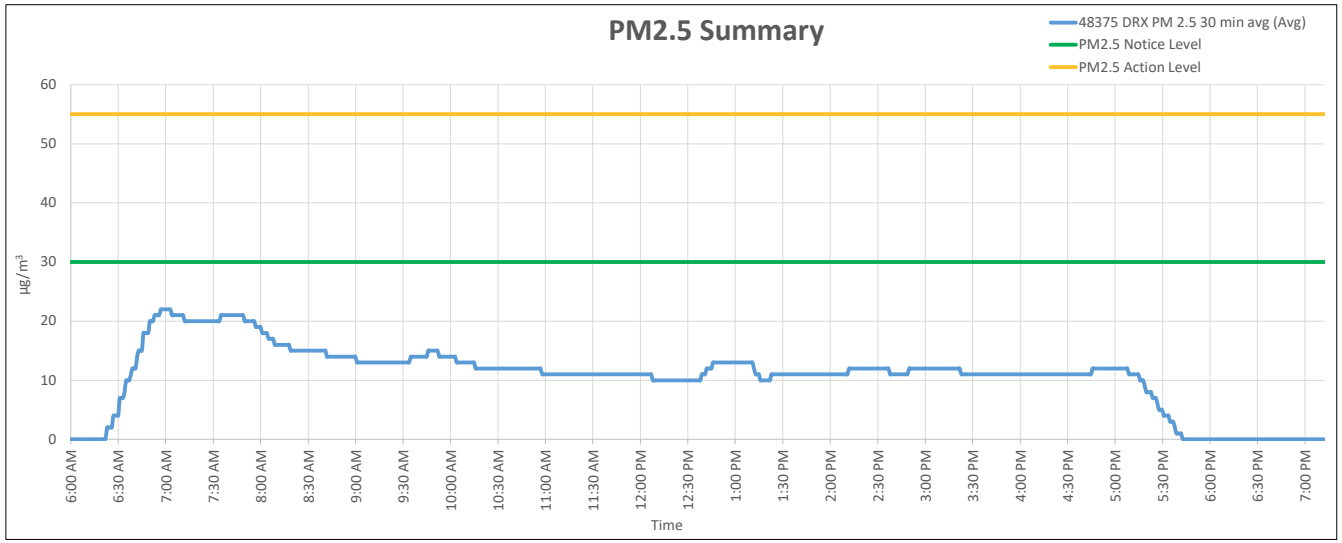




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 30, 2024

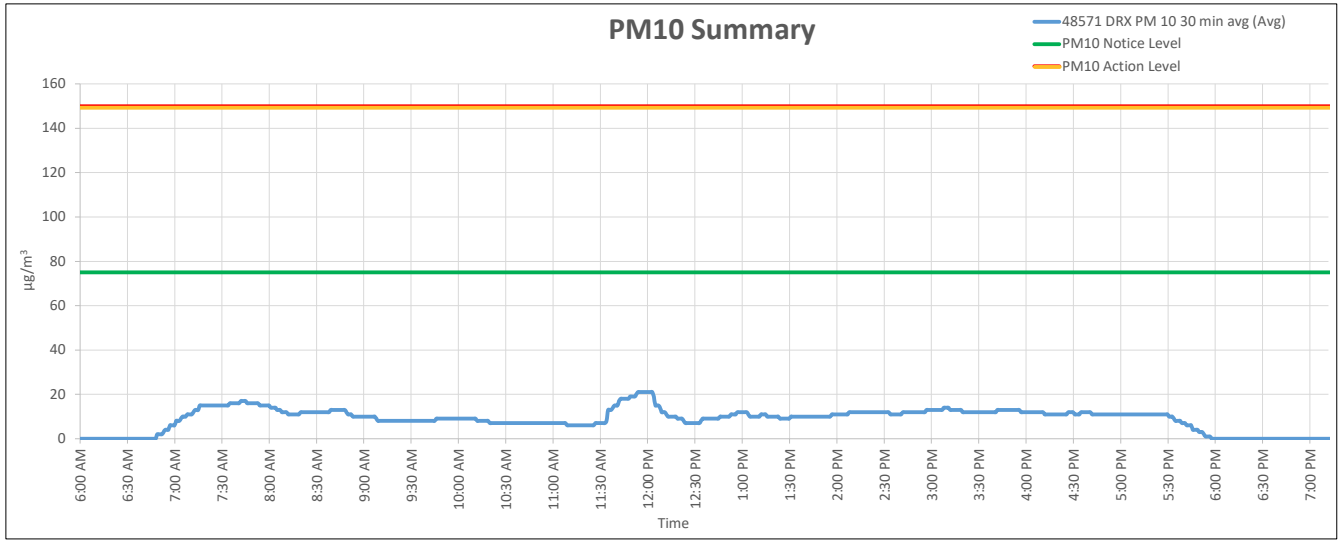
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	6:23 AM	5:38 PM	13.32	24.00	12.57	22.00

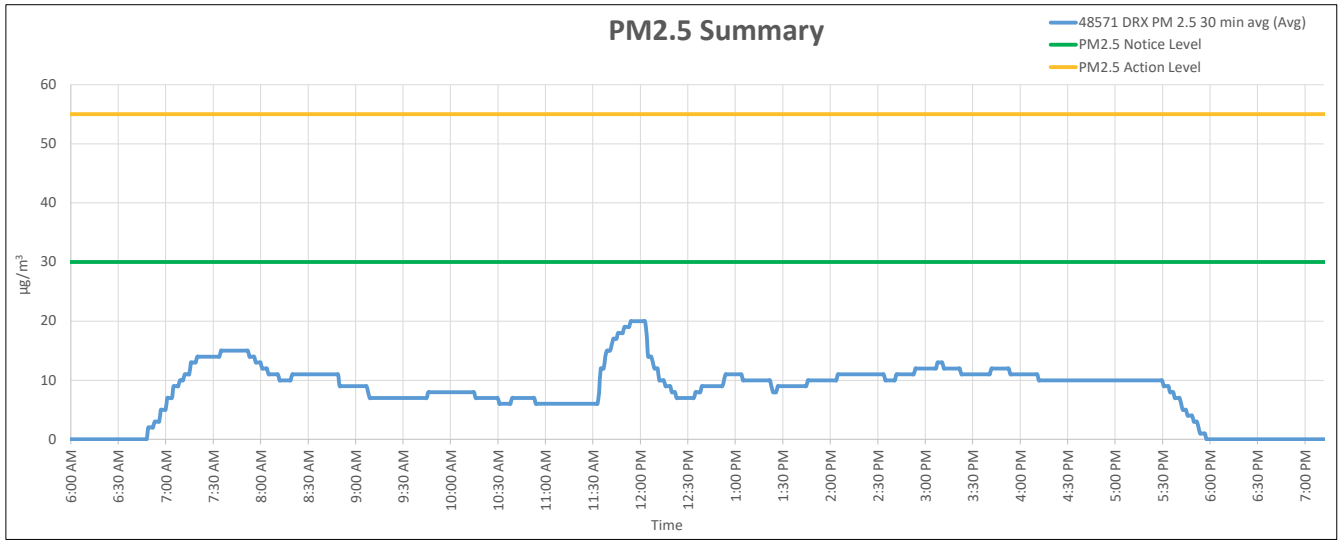




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 30, 2024

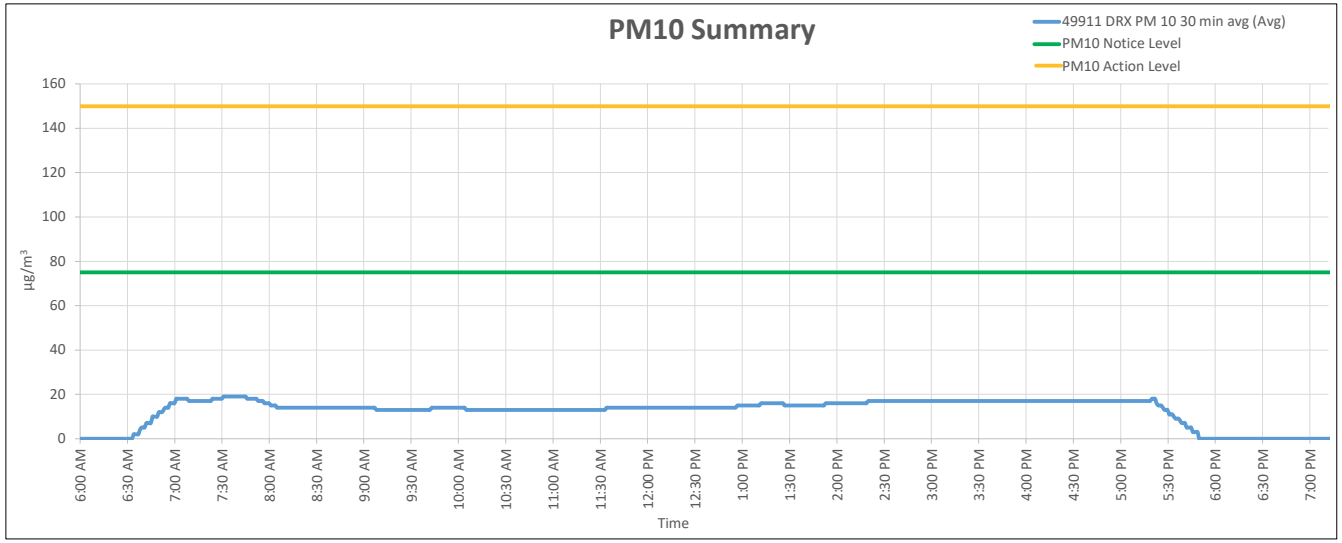
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	6:49 AM	5:53 PM	10.66	21.00	9.80	20.00

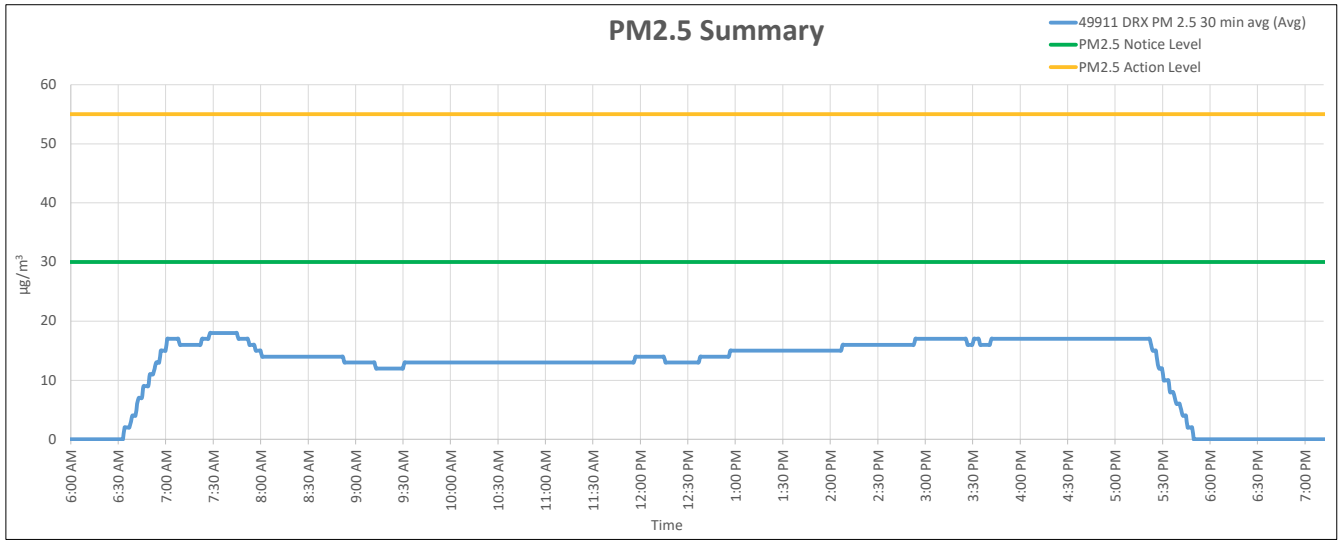




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Thursday, May 30, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	6:34 AM	5:49 PM	14.78	19.00	14.36	18.00





Union Pacific Railroad
Houston Wood Preserving Works Site
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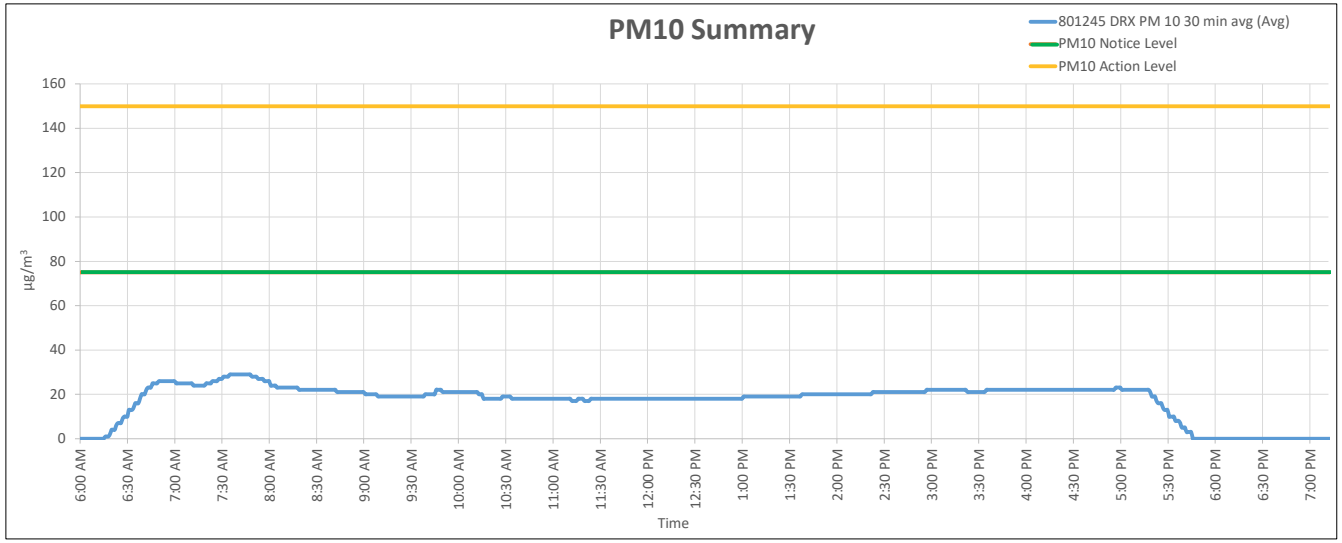
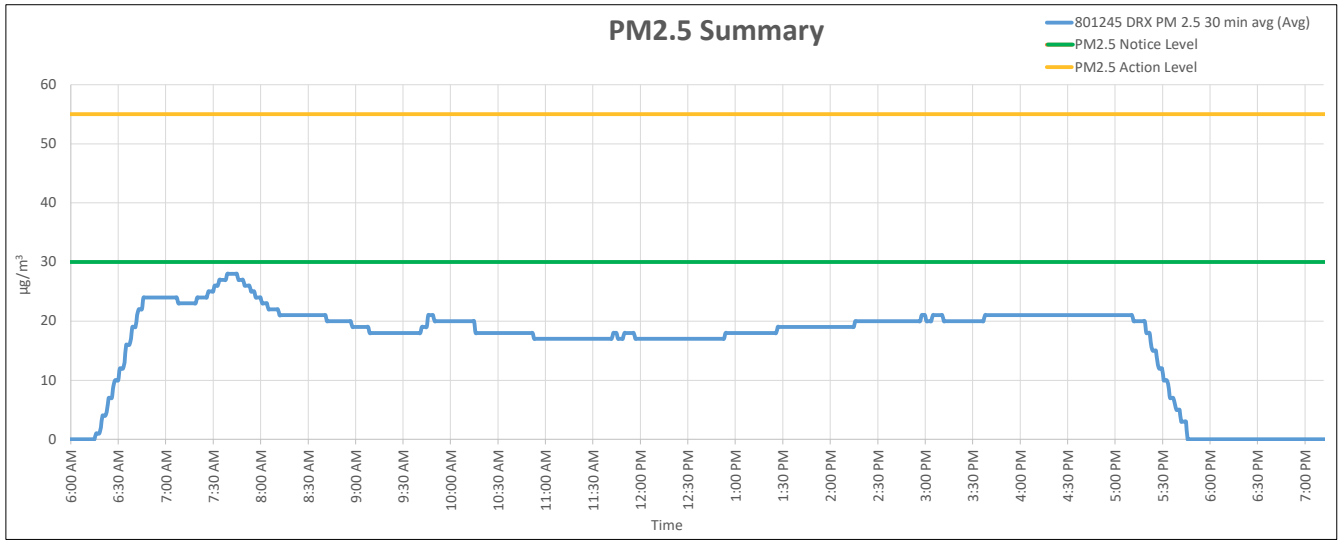
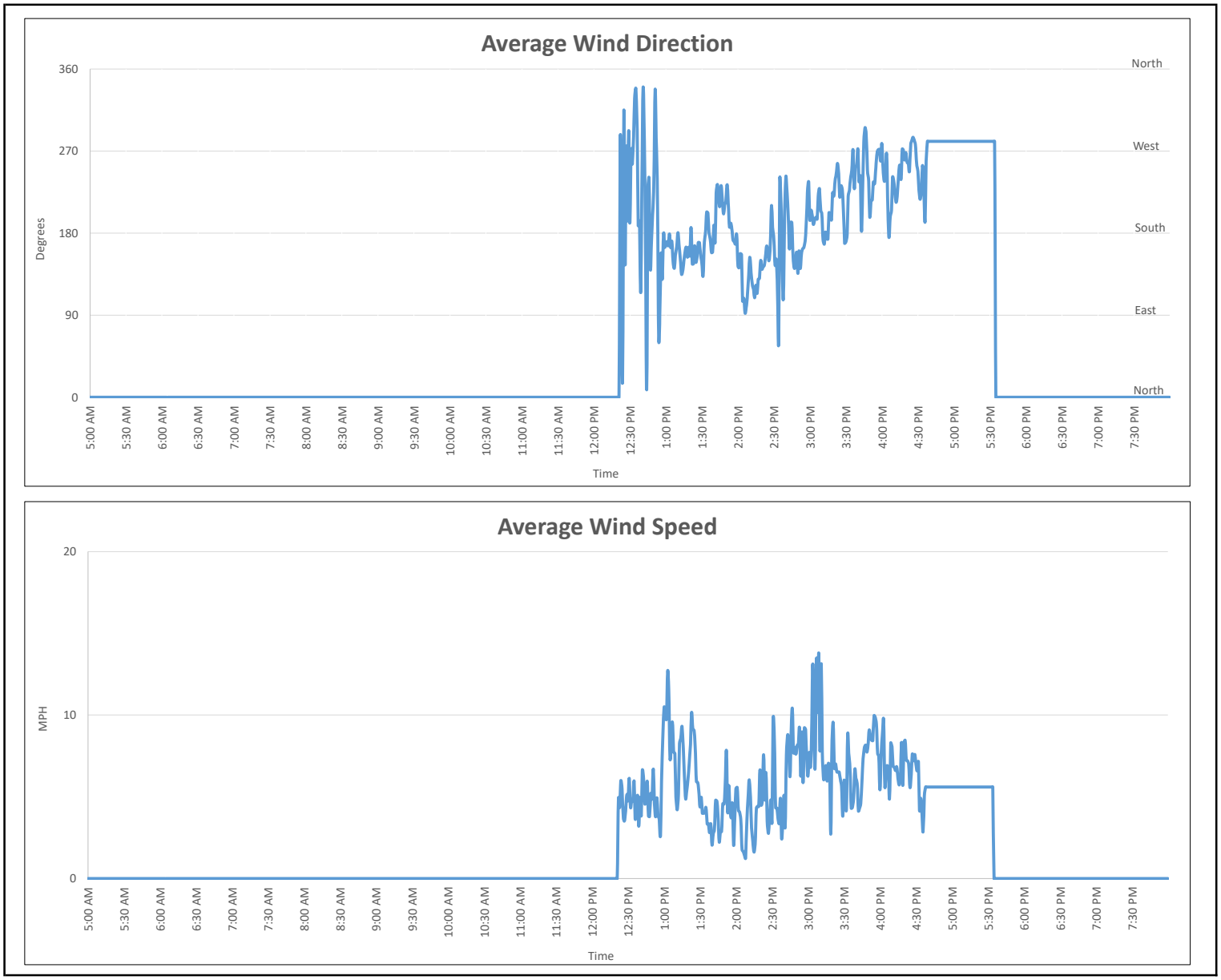
Air Monitoring Values
Thursday, May 30, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	6:16 AM	5:45 PM	20.08	29.00	19.10	28.00

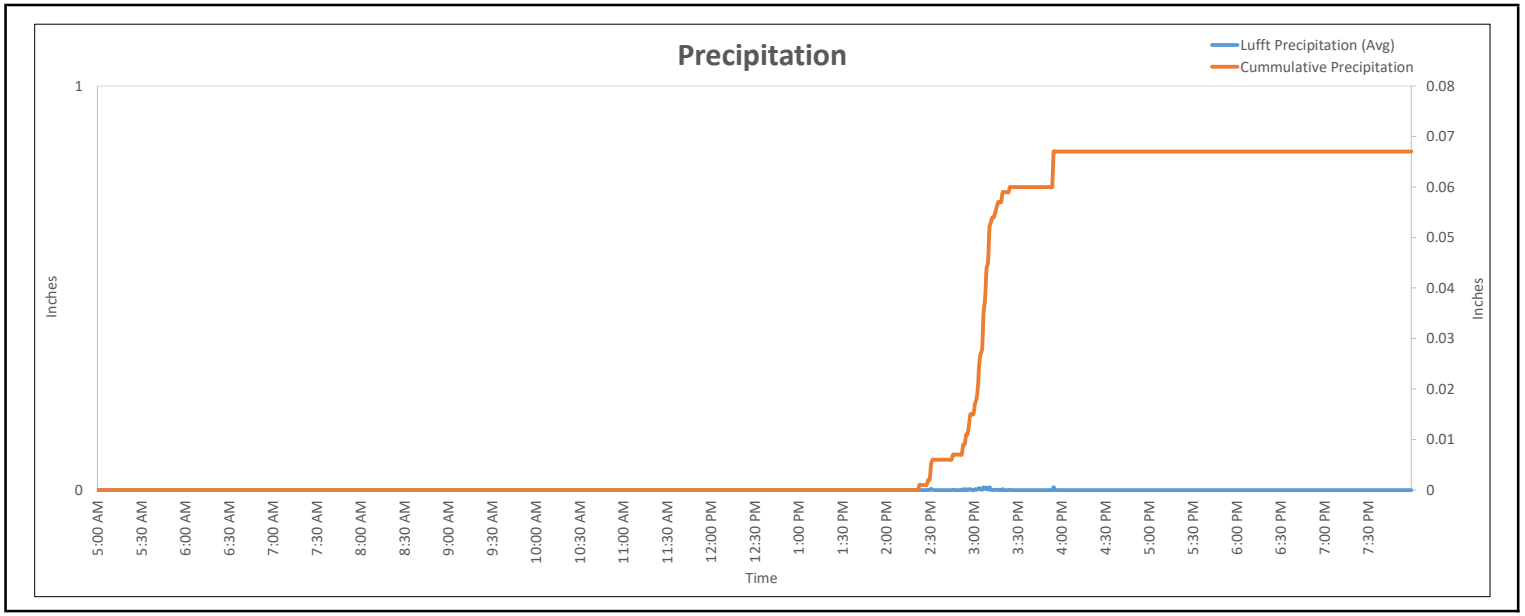




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Friday, May 31, 2024

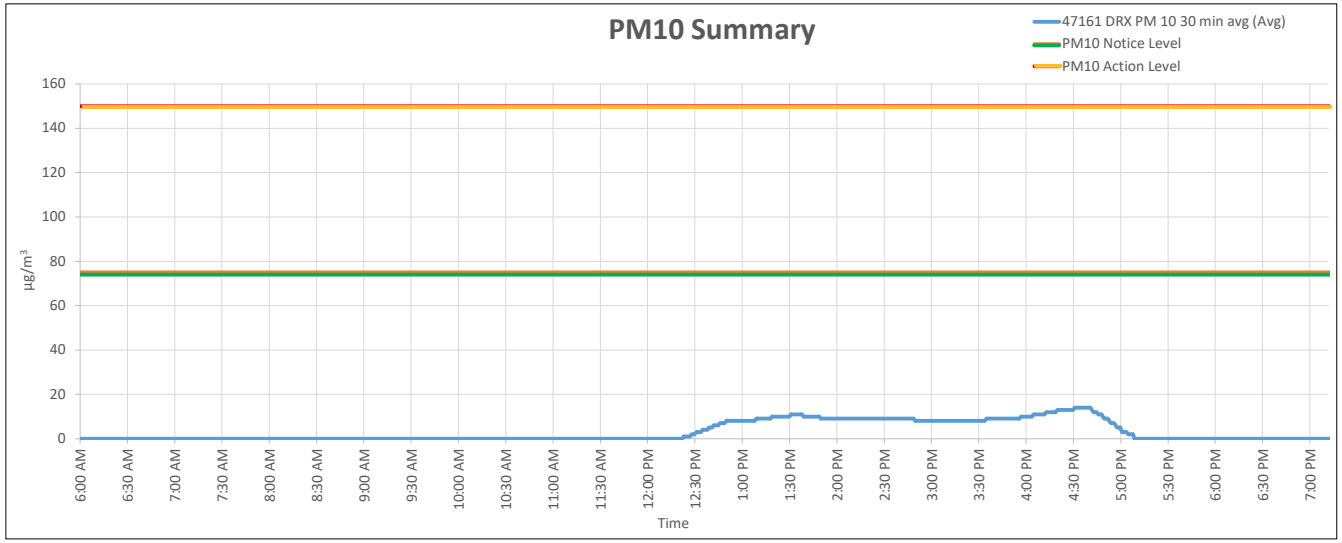


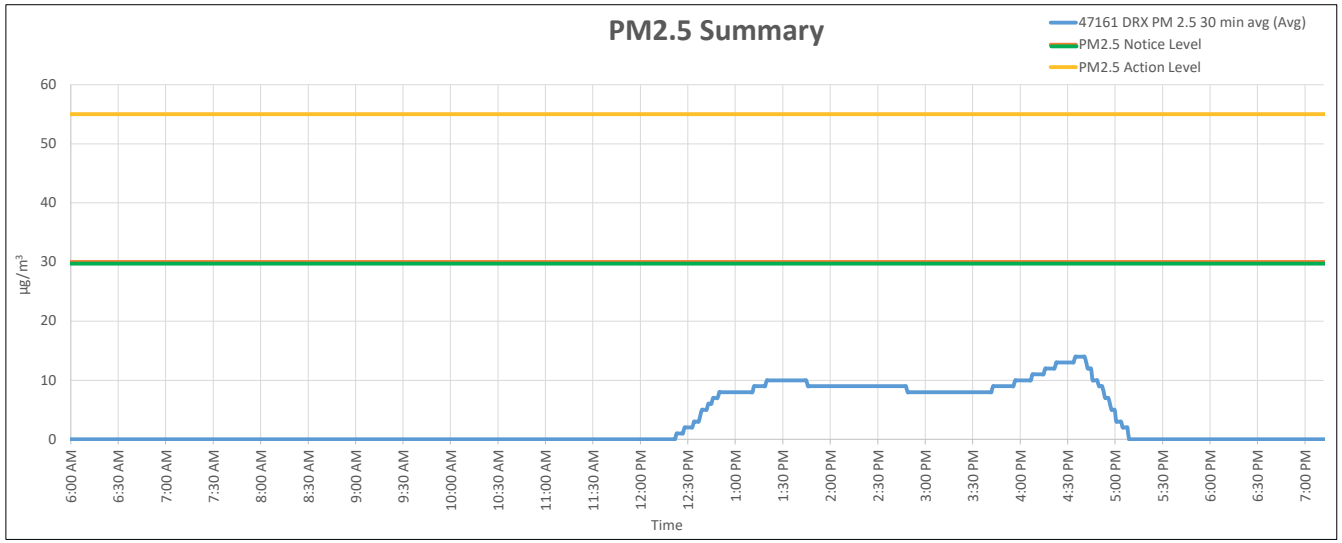
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Weather Daily Summary
Friday, May 31, 2024



Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 31, 2024

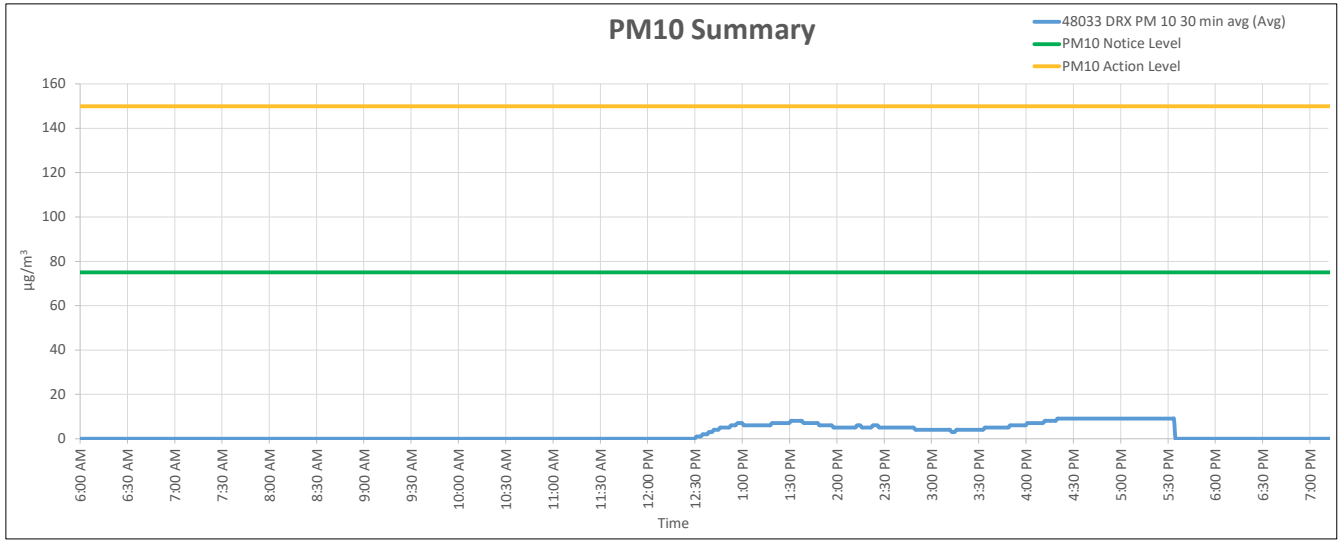
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
47161	12:23 PM	5:08 PM	8.75	14.00	8.58	14.00

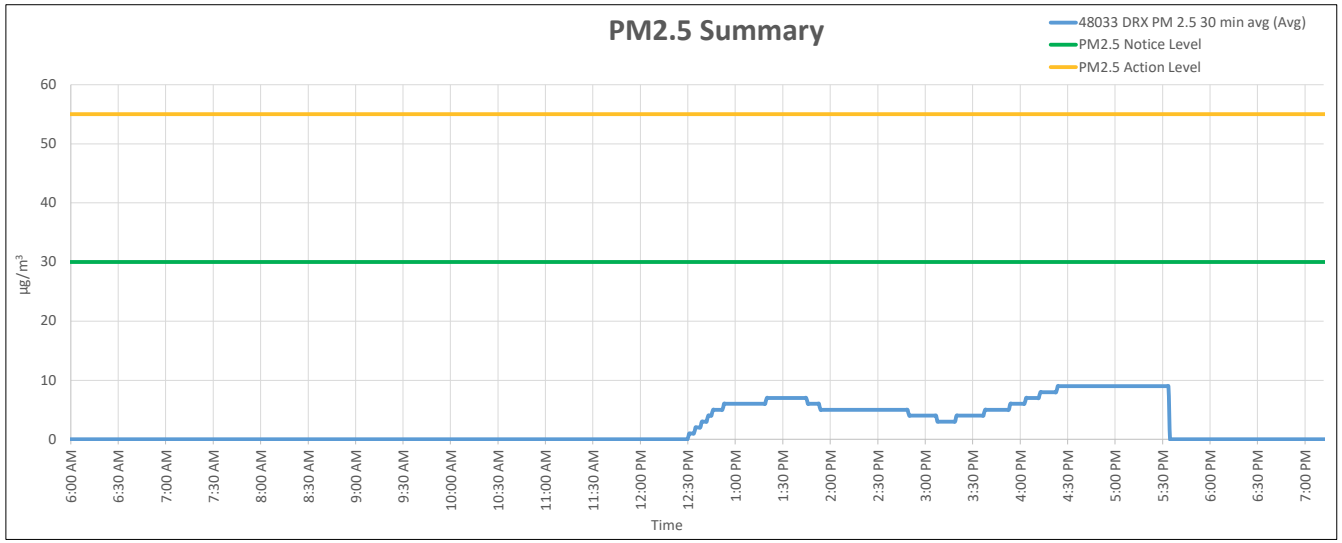




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 31, 2024

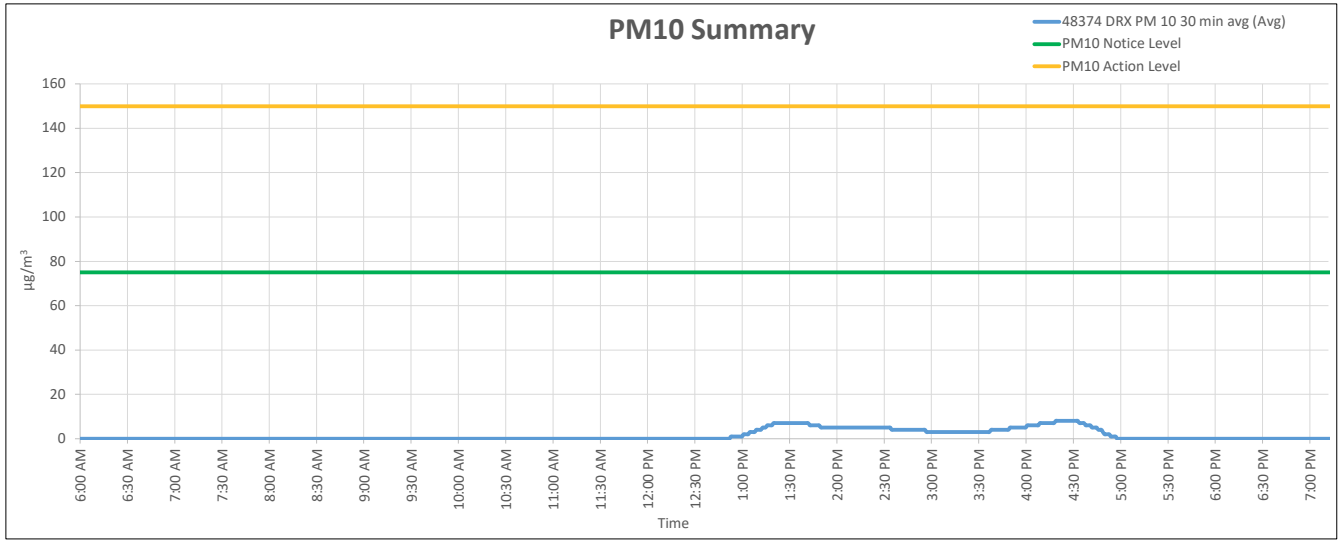
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48033	12:31 PM	5:34 PM	6.27	9.00	6.10	9.00

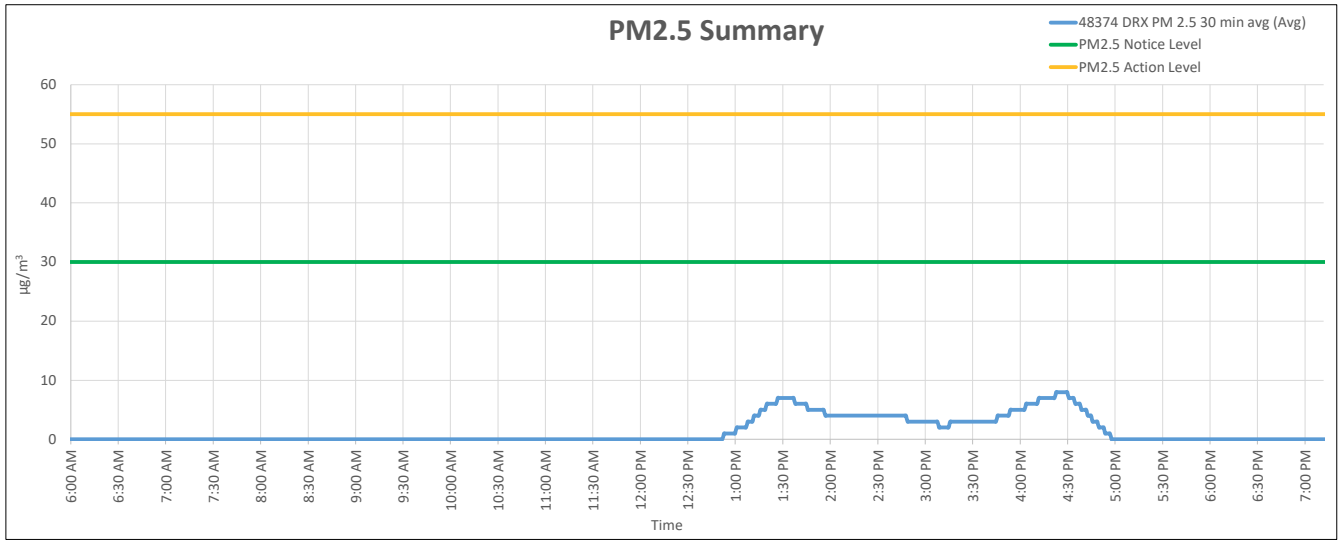




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 31, 2024

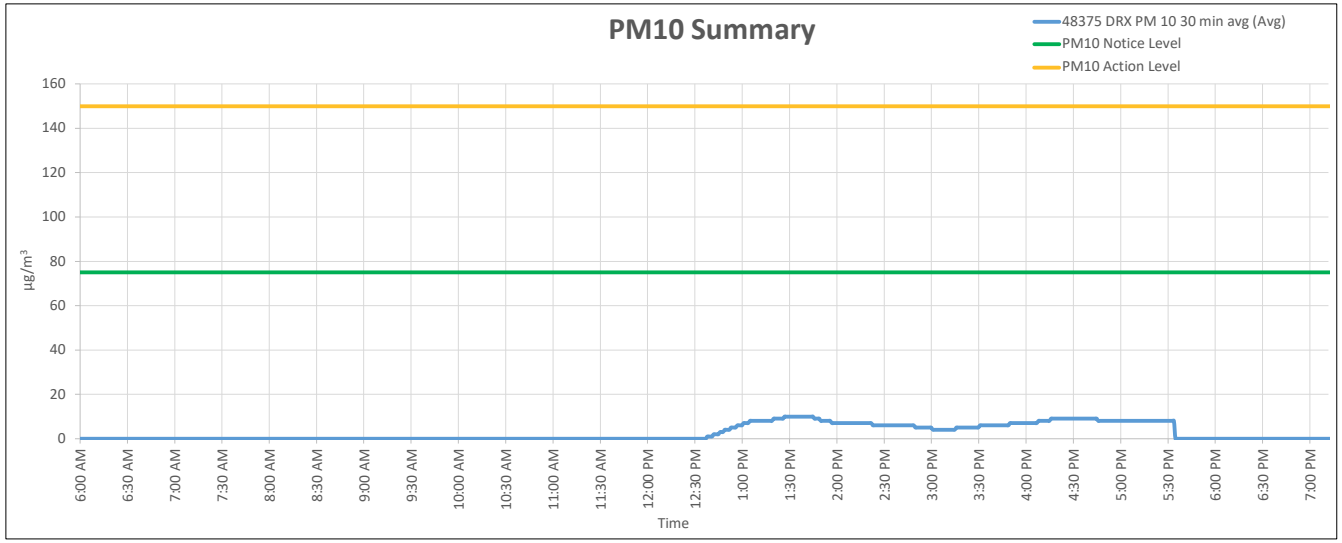
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48374	12:53 PM	4:53 PM	4.74	8.00	4.26	8.00

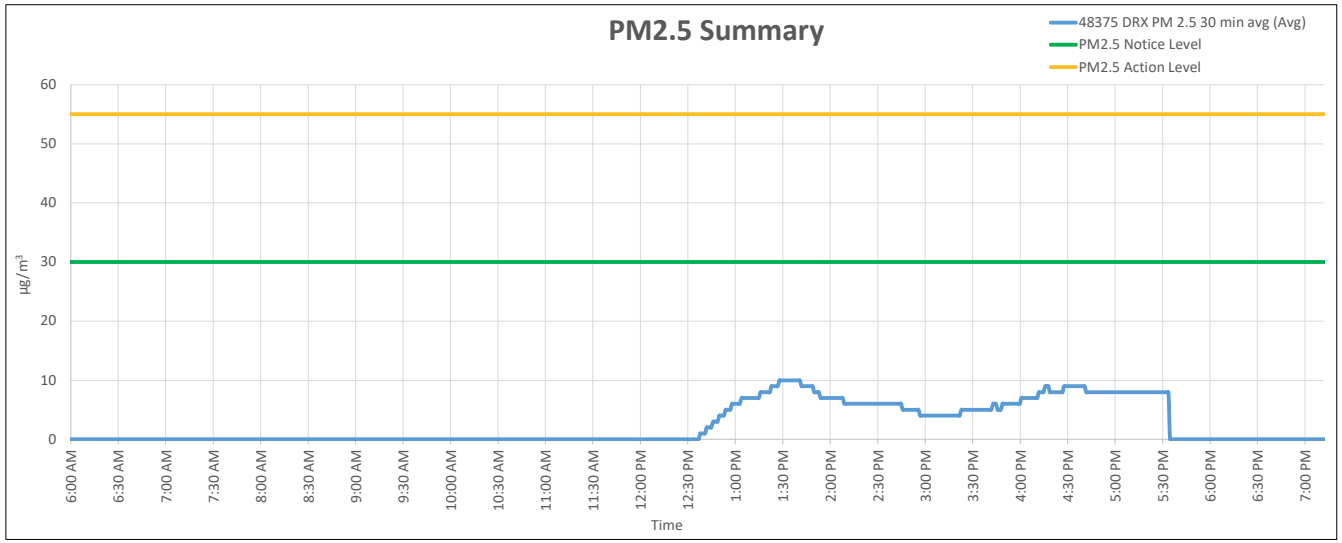




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 31, 2024

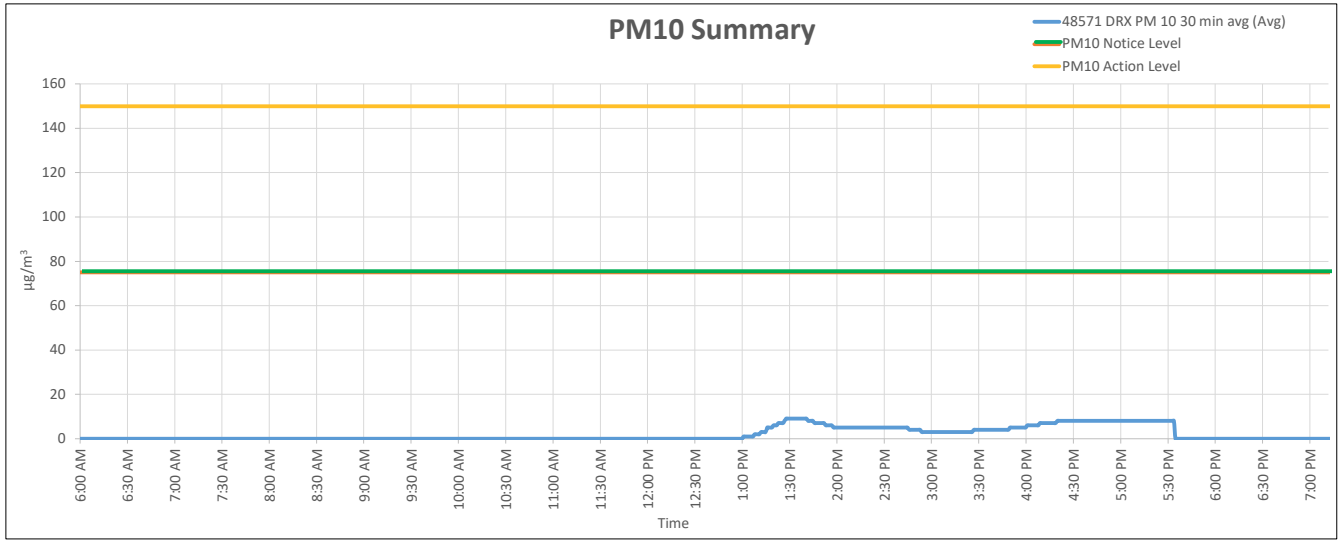
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48375	12:38 PM	5:34 PM	6.98	10.00	6.65	10.00

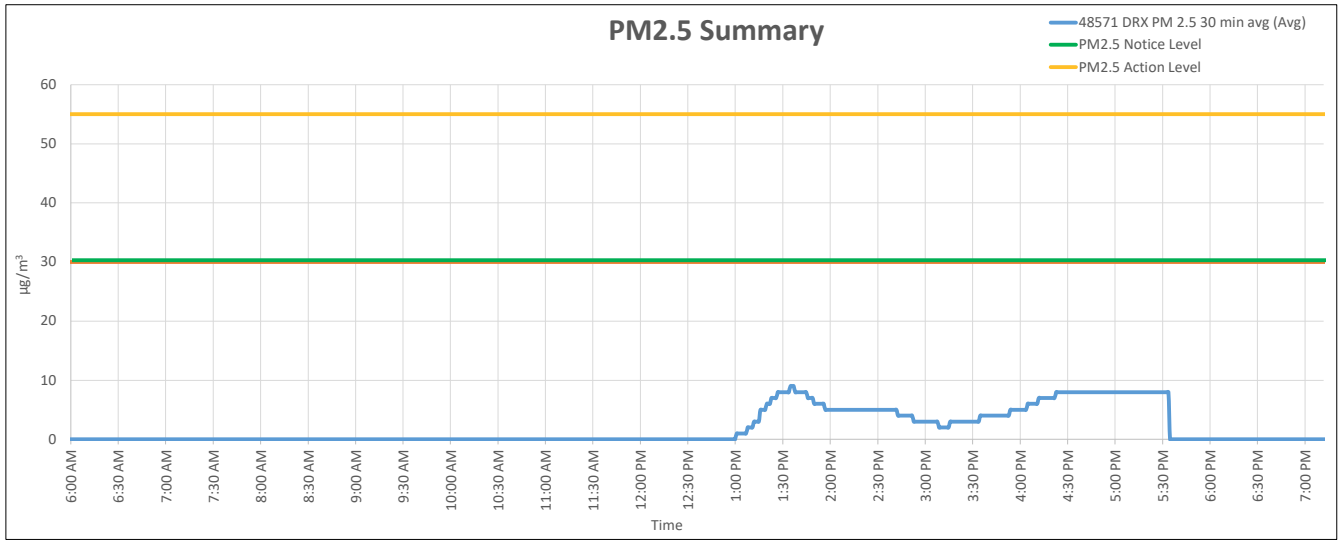




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 31, 2024

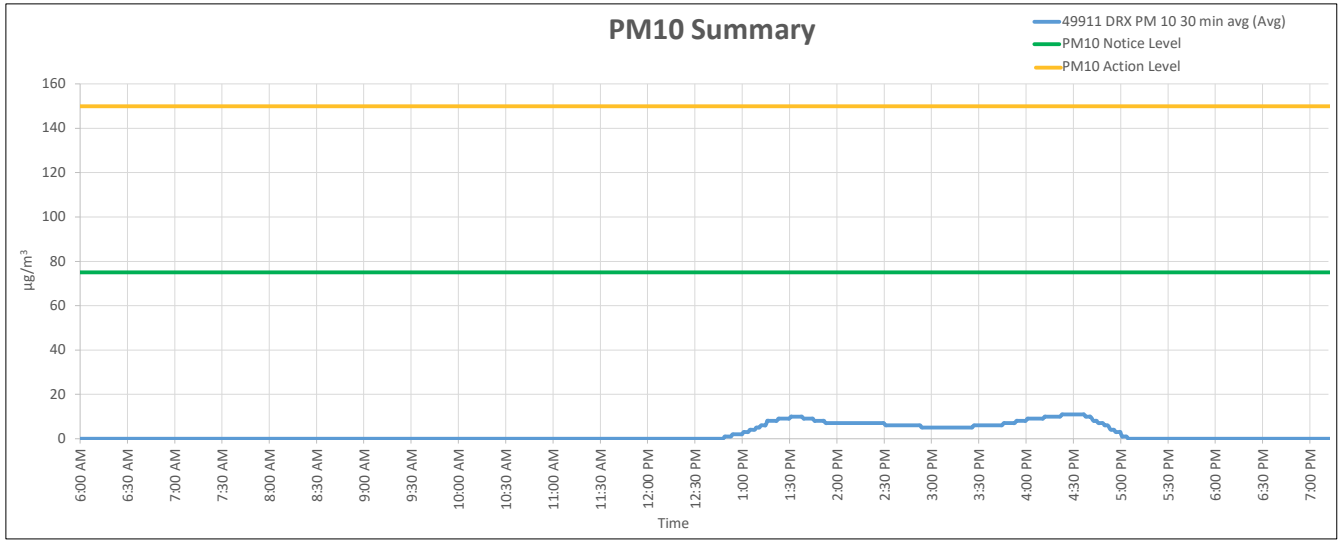
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
48571	1:01 PM	5:34 PM	5.77	9.00	5.59	9.00

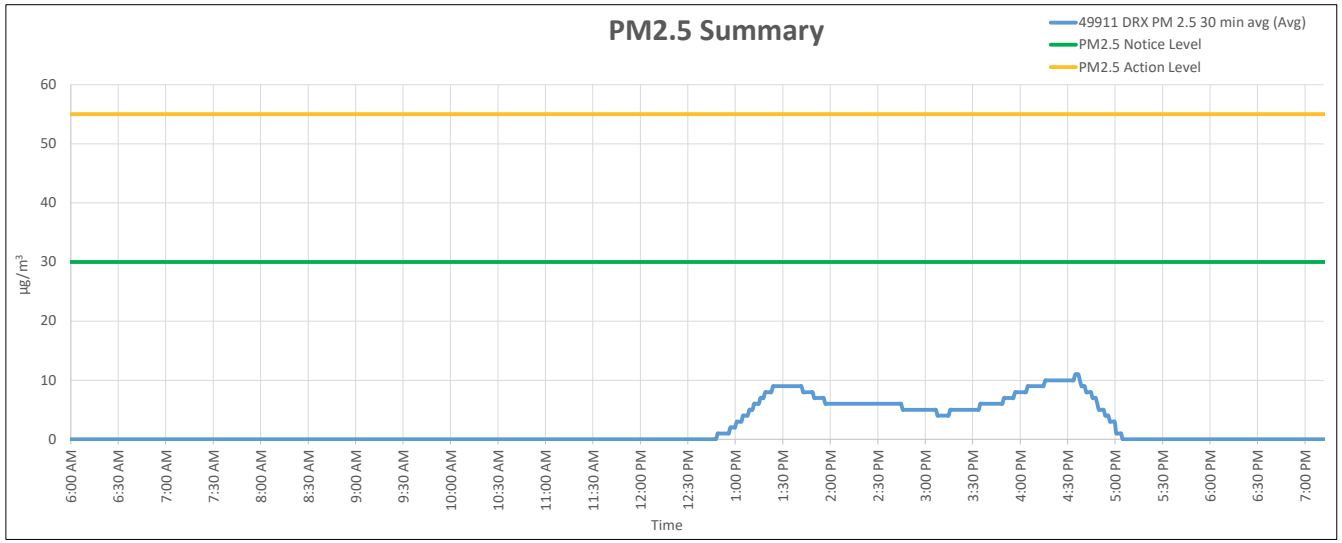




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 31, 2024

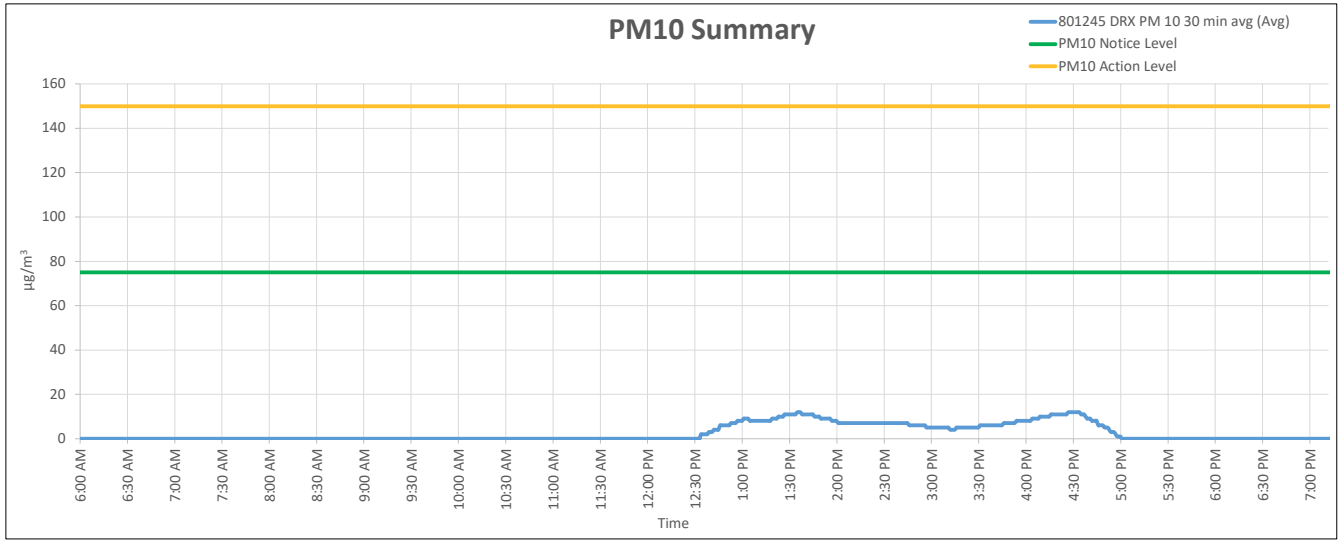
Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
49911	12:49 PM	5:00 PM	6.77	11.00	6.33	11.00

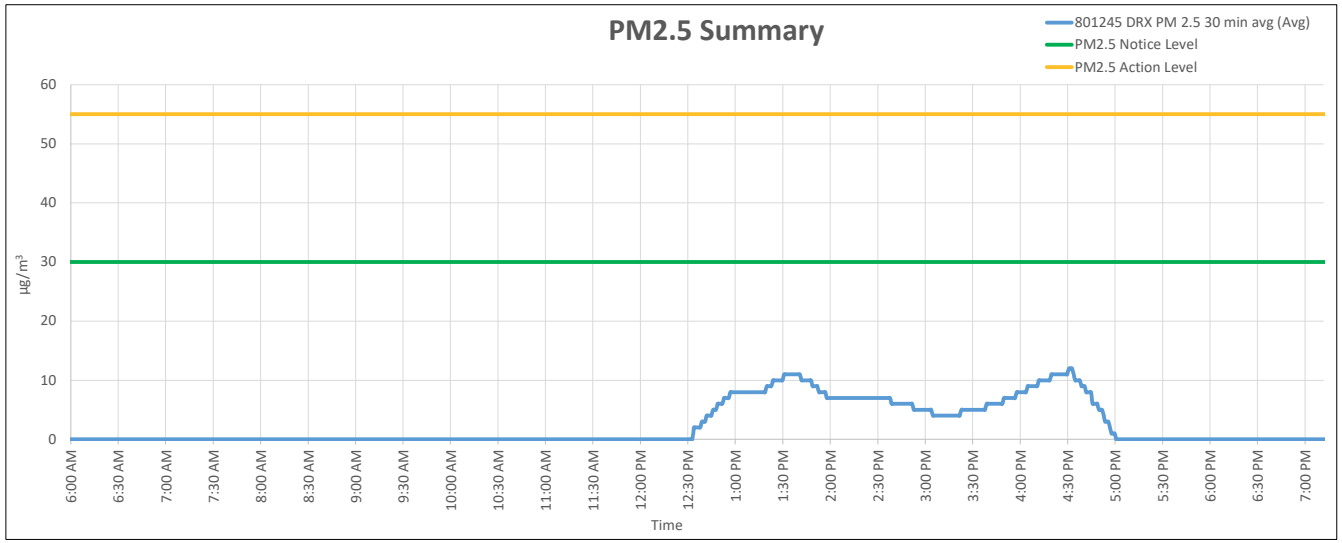




Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
Friday, May 31, 2024

Monitor Number	Start	Stop	Daily PM_{10} Average ($\mu g/m^3$)	Daily PM_{10} Maximum ($\mu g/m^3$)	Daily $PM_{2.5}$ Average ($\mu g/m^3$)	Daily $PM_{2.5}$ Maximum ($\mu g/m^3$)
801245	12:34 PM	4:57 PM	7.39	12.00	7.07	12.00





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 5 – TCEQ AMCV for Arsenic and PAH
Union Pacific Houston Wood Preserving Works

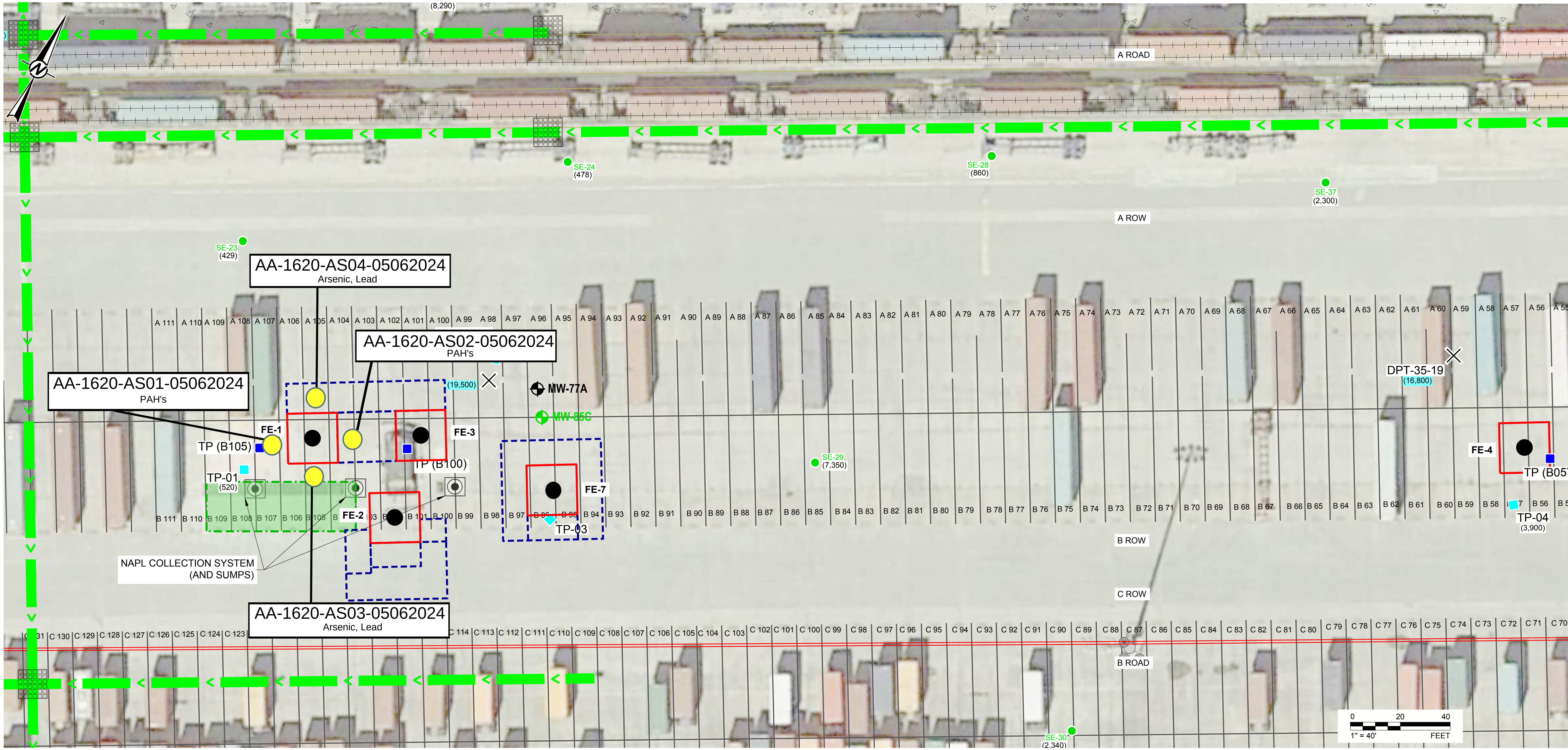
Houston, Texas

Analyte	Short-Term AMCV (µg/m³)	Long-Term AMCV (µg/m³)
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

Table 5 – TCEQ AMCV for Arsenic and PAH Union Pacific Houston Wood Preserving Works Houston, Texas		
Analyte	**Short-Term AMCV ($\mu g/m^3$)**	**Long-Term AMCV ($\mu g/m^3$)**
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 µg/m3 as a 3-month average concentration.

Integrated air samples were not taken during the week ofApril 29th. The only excavation activities onsite during week 1 were concrete cutting. No soil disturbance took place, therefore sampling ws not necessary. Integrated air samples were not taken during the week of May 27th due to the holiday and weather onsite. Additional samples will be taken the week of June 3rd.



LEGEND

EXISTING CONCRETE	EXISTING NAPL COLLECTION SUMP
EXISTING ASPHALT	A-TZ MONITORING WELL LOCATION
EXISTING RAIL SPURS	C-TZ MONITORING WELL LOCATION
EXISTING PARKING STALL STRIPE	EXISTING NAPL COLLECTION SYSTEM (CONSTRUCTED FEB. 2019)
B100 EXISTING PARKING STALL LABELS	NAPL SEEP LOCATION
EXISTING 2 in ELECTRICAL CONDUIT (PVC SCH 80 OR HDPE OF EQUVALENT THICKNESS)	TEST PIT LOCATION (2019)
EXISTING LIGHT POLE	TEST PIT LOCATION (JULY 2020)
EXISTING BOLLARD	2013 SOIL BORING LOCATION
STORMWATER DRAIN LINE	TPH (TX1005) SOIL SAMPLE LOCATION (2019-2020)
ORIGINAL FOCUSED EXCAVATION AREA	PHASE 3 SOIL EVALUATION SOIL BORING LOCATION (2023)
EXTENDED FOCUSED EXCAVATION AREA	(308) TOTAL TPH (TX1005) CONCENTRATION (mg/kg)
PLANNED FOCUSED EXCAVATION EXTENSION AREA	Air Sampling Location

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, DATED 02-23-2019

NOTE(S)

1. UNDERGROUND UTILITIES SHOW HEREON ARE APPROXIMATE BASED ON A RIGHT-OF-WAY AND TRACK MAP PROVIDED FOR INFORMATION. ALWAYS CALL 811 BEFORE YOU DIG.
2. TOTAL TPH CONCENTRATIONS GREATER THAN 10,000 mg/kg (TIER 1 SOIL$_{Res}$ PCL) ARE HIGHLIGHTED BLUE.

May 6, 2024 Sampling Locations

CLIENT
UNION PACIFIC RAILROAD CO

PROJECT
HOUSTON WOOD PRESERVING WORKS
ENGLEWOOD INTERMODAL YARD

TITLE
ON-GOING FOCUSED EXCAVATION

CONSULTANT
wsp

YYYY-MM-DD	2024-05-10
DESIGNED	AJD
PREPARED	AJD
REVIEWED	ECM/KG
APPROVED	RLB

PROJECT NO. 31406585.016 REV. 0 FIGURE 1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

Path: \\golder.gds\gal\Texarkana\Projects - Round Rock_2019\19119232 - HWPW\2024-01\ | File Name: 1 - On-Going Focused Excavations.dwg | Last Edited By: adiamond Date: 2024-05-23 Time:2:47:10 PM | Printed By: adiamond Date: 2024-05-23 Time:2:48:13 PM

Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
May 6, 2024 to May 10, 2024

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E1038-01	May 6, 2024	9:01 AM	4:11 PM	See Map

Field Sample	Analyte	Results	Reporting Level	Short Term AMCV	Long-Term AMCV
AA.1620-A501-20240506	Acenaphthene	ND	0.12 µg/m3	100 µg/m^3	10 µg/m^3
	Acenaphthylene	ND	0.12 µg/m3	100 µg/m^3	10 µg/m^3
	Anthracene	ND	0.12 µg/m3	1 µg/m^3	0.067 µg/m^3
	Benzo(a)anthracene	ND	0.12 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(a)pyrene	ND	0.12 µg/m3	NE	0.017 µg/m^3
	Benzo(b)fluoranthene	ND	0.12 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(e)pyrene	ND	0.12 µg/m3	NE	NE
	Benzo(g,h,i)perylene	ND	0.12 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(k)fluoranthene	ND	0.12 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Chrysene	ND	0.12 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Dibenz(a,h)anthracene	ND	0.12 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluoranthene	ND	0.12 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluorene	ND	0.12 µg/m3	10 µg/m^3	1 µg/m^3
	Indeno(1,2,3-cd)pyrene	ND	0.12 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	1-Methylnaphthalene	ND	0.12 µg/m3	NE	NE
	2-Methylnaphthalene	ND	0.12 µg/m3	NE	NE
	Naphthalene	ND	0.29 µg/m3	500 µg/m^3	50 µg/m^3
	Perylene	ND	0.12 µg/m3	NE	NE
	Phenanthrene	ND	0.12 µg/m3	8 µg/m^3	0.8 µg/m^3
	Pyrene	ND	0.12 µg/m3	0.5 µg/m^3	0.05 µg/m^3

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E1038-02	May 6, 2024	9:05 AM	4:40 PM	See Map

Field Sample	Analyte	Results	Reporting Level	Short Term AMCV	Long-Term AMCV
AA.1620-A502-20240506	Acenaphthene	0.12 µg/m3	0.11 µg/m3	100 µg/m^3	10 µg/m^3
	Acenaphthylene	ND	0.11 µg/m3	100 µg/m^3	10 µg/m^3
	Anthracene	ND	0.11 µg/m3	1 µg/m^3	0.067 µg/m^3
	Benzo(a)anthracene	ND	0.11 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(a)pyrene	ND	0.11 µg/m3	NE	0.017 µg/m^3
	Benzo(b)fluoranthene	ND	0.11 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(e)pyrene	ND	0.11 µg/m3	NE	NE
	Benzo(g,h,i)perylene	ND	0.11 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(k)fluoranthene	ND	0.11 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Chrysene	ND	0.11 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Dibenz(a,h)anthracene	ND	0.11 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluoranthene	ND	0.11 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluorene	ND	0.11 µg/m3	10 µg/m^3	1 µg/m^3
	Indeno(1,2,3-cd)pyrene	ND	0.11 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	1-Methylnaphthalene	ND	0.11 µg/m3	NE	NE
	2-Methylnaphthalene	ND	0.11 µg/m3	NE	NE
	Naphthalene	ND	0.28 µg/m3	500 µg/m^3	50 µg/m^3
	Perylene	ND	0.11 µg/m3	NE	NE
	Phenanthrene	ND	0.11 µg/m3	8 µg/m^3	0.8 µg/m^3
	Pyrene	ND	0.11 µg/m3	0.5 µg/m^3	0.05 µg/m^3

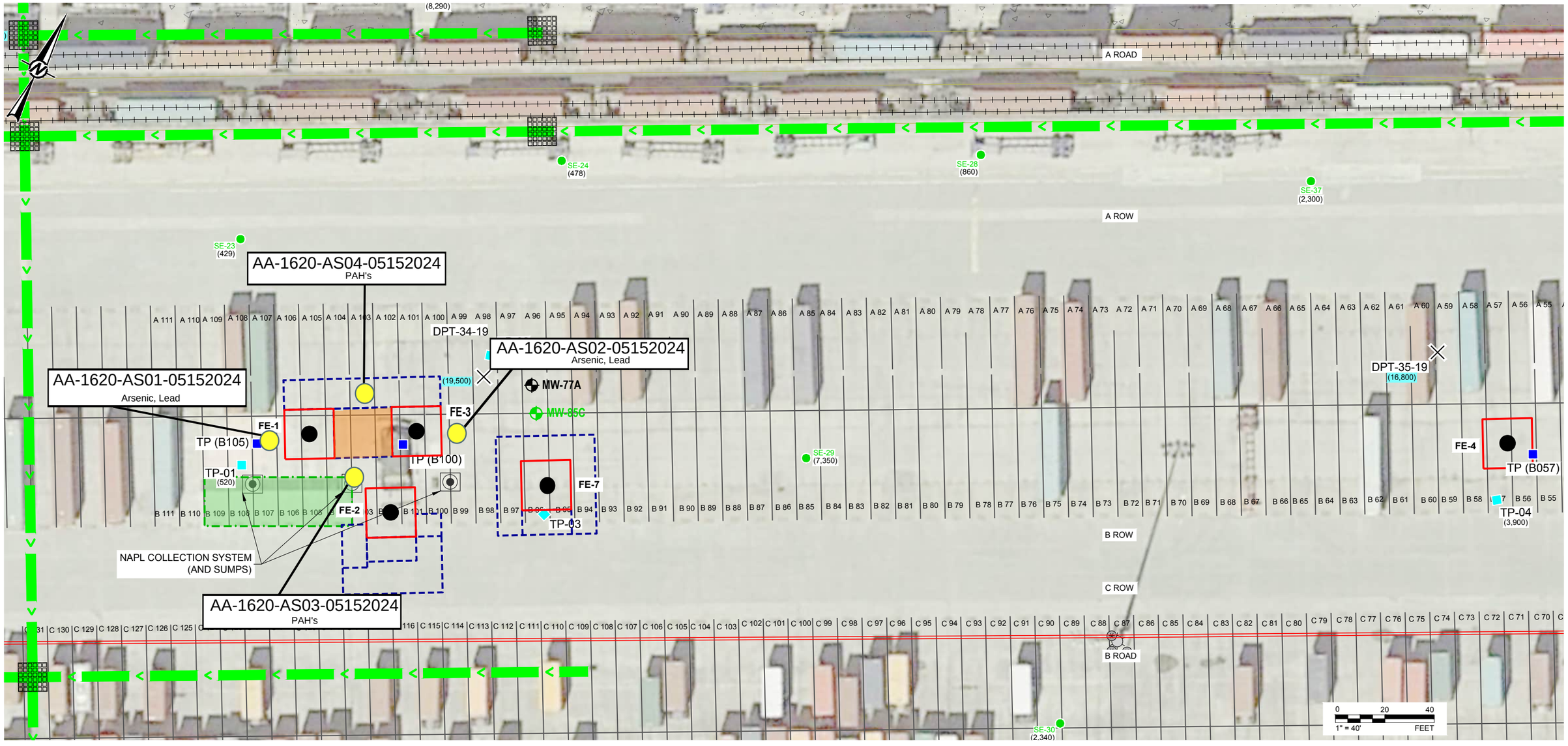
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
May 6, 2024 to May 10, 2024

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E1038-03	May 6, 2024	9:08 AM	5:08 PM	See Map

Field Sample	Analyte	Results	Reporting Level
AA.1620-A503-20240506	Arsenic	ND	1.2 µg/m3
	Lead	ND	1.2 µg/m3

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E1038-04	May 6, 2024	9:05 AM	5:11 PM	See Map

Field Sample	Analyte	Results	Reporting Level
AA.1620-A504-20240506	Arsenic	ND	1.2 µg/m3
	Lead	ND	1.2 µg/m3



LEGEND

EXISTING CONCRETE	EXISTING NAPL COLLECTION SUMP
EXISTING ASPHALT	A-TZ MONITORING WELL LOCATION
EXISTING RAIL SPURS	C-TZ MONITORING WELL LOCATION
EXISTING PARKING STALL STRIPE	EXISTING NAPL COLLECTION SYSTEM (CONSTRUCTED FEB. 2019)
B100 EXISTING PARKING STALL LABELS	NAPL SEEP LOCATION
EXISTING 2 in ELECTRICAL CONDUIT (PVC SCH 80 OR HDPE OF EQUVALENT THICKNESS)	TEST PIT LOCATION (2019)
EXISTING LIGHT POLE	TEST PIT LOCATION (JULY 2020)
EXISTING BOLLARD	2013 SOIL BORING LOCATION
STORMWATER DRAIN LINE	TPH (TX1005) SOIL SAMPLE LOCATION (2019-2020)
ORIGINAL FOCUSED EXCAVATION AREA	PHASE 3 SOIL EVALUATION SOIL BORING LOCATION (2023)
EXTENDED FOCUSED EXCAVATION AREA	(308) TOTAL TPH (TX1005) CONCENTRATION (mg/kg)
PLANNED FOCUSED EXCAVATION EXTENSION AREA	Air Sampling Location

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, DATED 02-23-2019

NOTE(S)

1. UNDERGROUND UTILITIES SHOW HEREON ARE APPROXIMATE BASED ON A RIGHT-OF-WAY AND TRACK MAP PROVIDED FOR INFORMATION. ALWAYS CALL 811 BEFORE YOU DIG.
2. TOTAL TPH CONCENTRATIONS GREATER THAN 10,000 mg/kg (TIER 1 $SOIL_{Res}$ PCL) ARE HIGHLIGHTED BLUE.

May 15, 2024 Sampling Locations

CLIENT
UNION PACIFIC RAILROAD CO

PROJECT
HOUSTON WOOD PRESERVING WORKS
ENGLEWOOD INTERMODAL YARD

TITLE
ON-GOING FOCUSED EXCAVATION

CONSULTANT
wsp

YYYY-MM-DD	2024-05-10
DESIGNED	AJD
PREPARED	AJD
REVIEWED	ECM/KG
APPROVED	RLB

PROJECT NO. 31406585.016 | REV. 0 | FIGURE 1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
May 13, 2024 to May 17, 2024

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E2440-03	May 15, 2024	7:42 AM	3:43 PM	See Map

Field Sample	Analyte	Results	Reporting Level	Short Term AMCV	Long-Term AMCV
AA-1620-AS03-05152024	Acenaphthene	ND	0.10 µg/m3	100 µg/m^3	10 µg/m^3
	Acenaphthylene	ND	0.10 µg/m3	100 µg/m^3	10 µg/m^3
	Anthracene	ND	0.10 µg/m3	1 µg/m^3	0.067 µg/m^3
	Benzo(a)anthracene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(a)pyrene	ND	0.10 µg/m3	NE	0.017 µg/m^3
	Benzo(b)fluoranthene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(e)pyrene	ND	0.10 µg/m3	NE	NE
	Benzo(g,h,i)perylene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(k)fluoranthene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Chrysene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Dibenz(a,h)anthracene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluoranthene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluorene	ND	0.10 µg/m3	10 µg/m^3	1 µg/m^3
	Indeno(1,2,3-cd)pyrene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	1-Methylnaphthalene	ND	0.10 µg/m3	NE	NE
	2-Methylnaphthalene	0.10 µg/m3	0.10 µg/m3	NE	NE
	Naphthalene	0.30 µg/m3	0.26 µg/m3	500 µg/m^3	50 µg/m^3
	Perylene	ND	0.10 µg/m3	NE	NE
	Phenanthrene	ND	0.10 µg/m3	8 µg/m^3	0.8 µg/m^3
	Pyrene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E2440-04	May 15, 2024	7:48 AM	3:48 PM	See Map

Field Sample	Analyte	Results	Reporting Level	Short Term AMCV	Long-Term AMCV
AA-1620-AS04-05152024	Acenaphthene	0.30 µg/m3	0.099 µg/m3	100 µg/m^3	10 µg/m^3
	Acenaphthylene	ND	0.099 µg/m3	100 µg/m^3	10 µg/m^3
	Anthracene	ND	0.099 µg/m3	1 µg/m^3	0.067 µg/m^3
	Benzo(a)anthracene	ND	0.099 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(a)pyrene	ND	0.099 µg/m3	NE	0.017 µg/m^3
	Benzo(b)fluoranthene	ND	0.099 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(e)pyrene	ND	0.099 µg/m3	NE	NE
	Benzo(g,h,i)perylene	ND	0.099 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(k)fluoranthene	ND	0.099 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Chrysene	ND	0.099 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Dibenz(a,h)anthracene	ND	0.099 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluoranthene	ND	0.099 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluorene	0.21 µg/m3	0.099 µg/m3	10 µg/m^3	1 µg/m^3
	Indeno(1,2,3-cd)pyrene	ND	0.099 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	1-Methylnaphthalene	0.28 µg/m3	0.099 µg/m3	NE	NE
	2-Methylnaphthalene	0.47 µg/m3	0.099 µg/m3	NE	NE
	Naphthalene	0.95 µg/m3	0.25 µg/m3	500 µg/m^3	50 µg/m^3
	Perylene	ND	0.099 µg/m3	NE	NE
	Phenanthrene	0.20 µg/m3	0.099 µg/m3	8 µg/m^3	0.8 µg/m^3
	Pyrene	ND	0.099 µg/m3	0.5 µg/m^3	0.05 µg/m^3

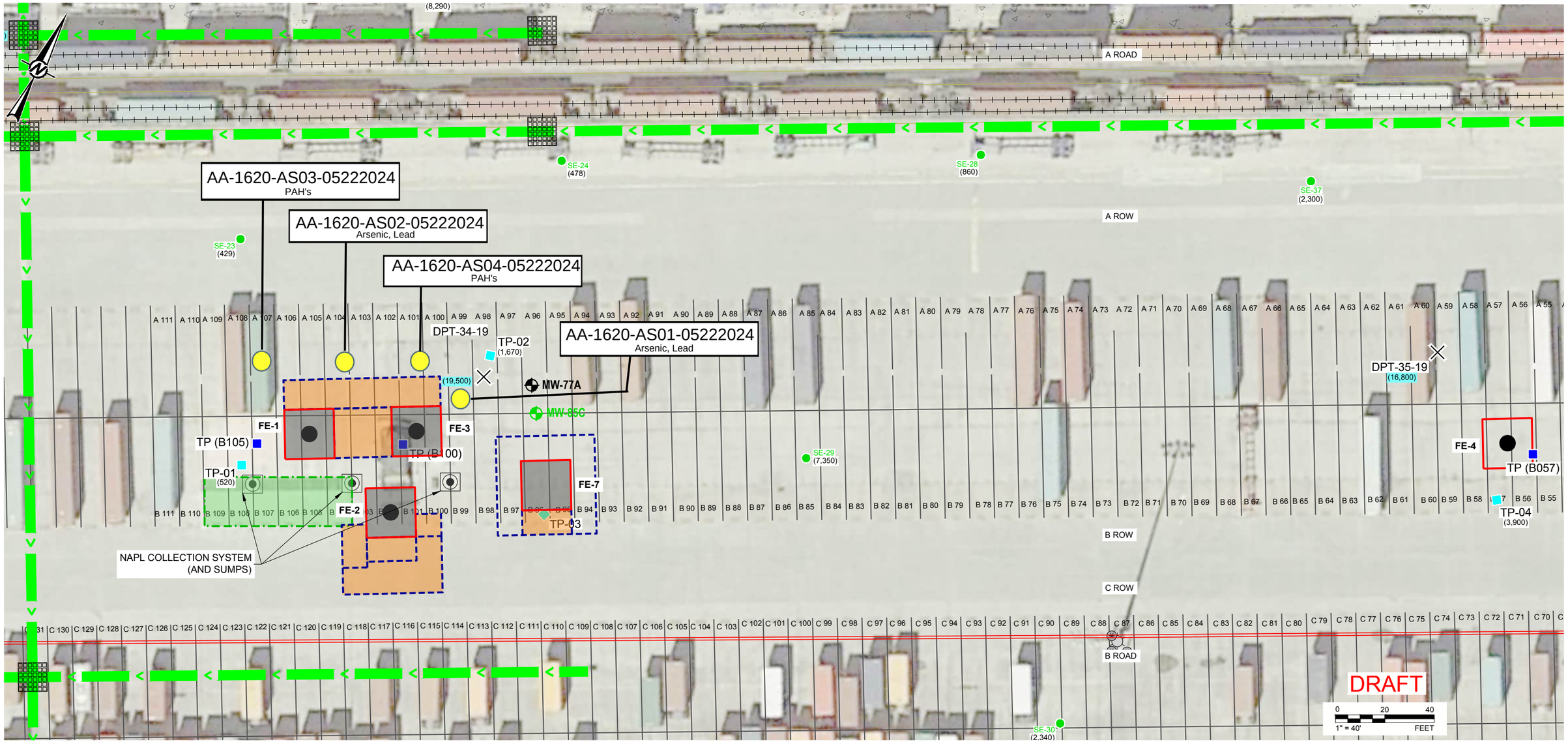
Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
May 13, 2024 to May 17, 2024

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E2440-01	May 15, 2024	7:46 AM	3:58 PM	See Map

Field Sample	Analyte	Results	Reporting Level
AA-1620-AS01-05152024	Arsenic	ND	1.1 µg/m3
	Lead	ND	1.1 µg/m3

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E2440-02	May 15, 2024	7:45 AM	3:58 PM	See Map

Field Sample	Analyte	Results	Reporting Level
AA-1620-AS02-05152024	Arsenic	ND	1.3 µg/m3
	Lead	ND	1.3 µg/m3



LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- EXISTING RAIL SPURS
- EXISTING PARKING STALL STRIPE
- B100 — EXISTING PARKING STALL LABELS
- EXISTING 2 in ELECTRICAL CONDUIT (PVC SCH 80 OR HDPE OF EQUVALENT THICKNESS)
- EXISTING LIGHT POLE
- EXISTING BOLLARD
- STORMWATER DRAIN LINE
- ORIGINAL FOCUSED EXCAVATION AREA
- EXTENDED FOCUSED EXCAVATION AREA
- PLANNED FOCUSED EXCAVATION EXTENSION AREA
- EXISTING NAPL COLLECTION SUMP
- A-TZ MONITORING WELL LOCATION
- C-TZ MONITORING WELL LOCATION
- EXISTING NAPL COLLECTION SYSTEM (CONSTRUCTED FEB. 2019)
- NAPL SEEP LOCATION
- TEST PIT LOCATION (2019)
- TEST PIT LOCATION (JULY 2020)
- 2013 SOIL BORING LOCATION
- TPH (TX1005) SOIL SAMPLE LOCATION (2019-2020)
- PHASE 3 SOIL EVALUATION SOIL BORING LOCATION (2023)
- (308) — TOTAL TPH (TX1005) CONCENTRATION (mg/kg)
- Air Sampling Location

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, DATED 02-23-2019

NOTE(S)

1. UNDERGROUND UTILITIES SHOW HEREON ARE APPROXIMATE BASED ON A RIGHT-OF-WAY AND TRACK MAP PROVIDED FOR INFORMATION. ALWAYS CALL 811 BEFORE YOU DIG.
2. TOTAL TPH CONCENTRATIONS GREATER THAN 10,000 mg/kg (TIER 1 $SOIL_{Res}$ PCL) ARE HIGHLIGHTED BLUE.

May 22, 2024 Sampling Locations

CLIENT
UNION PACIFIC RAILROAD CO

PROJECT
HOUSTON WOOD PRESERVING WORKS
ENGLEWOOD INTERMODAL YARD

TITLE
ON-GOING FOCUSED EXCAVATIONS (AS OF 05/23/24)

CONSULTANT
wsp

YYYY-MM-DD	2024-05-10
DESIGNED	AJD
PREPARED	AJD
REVIEWED	ECM/KG
APPROVED	RLB

PROJECT NO. 31406585.016 | REV. 0 | FIGURE 1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

Path: \\golder.gds\corp\dex\data\office\Texarkana\Projects - Round Rock_2019\19119232 - HWPW\2024-011 | File Name: 1 - On-Going Focused Excavations.dwg | Last Edited By: adiamond Date: 2024-05-23 Time:2:47:10 PM | Printed By: adiamond Date: 2024-05-23 Time:2:48:13 PM

Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
May 20, 2024 to May 25, 2024

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E3290-03	May 22, 2024	8:11 AM	4:28 PM	See Map

Field Sample	Analyte	Results	Reporting Level	Short Term AMCV	Long-Term AMCV
AA-1620-AS03-05222024	Acenaphthene	ND	0.10 µg/m3	100 µg/m^3	10 µg/m^3
	Acenaphthylene	ND	0.10 µg/m3	100 µg/m^3	10 µg/m^3
	Anthracene	ND	0.10 µg/m3	1 µg/m^3	0.067 µg/m^3
	Benzo(a)anthracene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(a)pyrene	ND	0.10 µg/m3	NE	0.017 µg/m^3
	Benzo(b)fluoranthene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(e)pyrene	ND	0.10 µg/m3	NE	NE
	Benzo(g,h,i)perylene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(k)fluoranthene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Chrysene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Dibenz(a,h)anthracene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluoranthene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluorene	ND	0.10 µg/m3	10 µg/m^3	1 µg/m^3
	Indeno(1,2,3-cd)pyrene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	1-Methylnaphthalene	ND	0.10 µg/m3	NE	NE
	2-Methylnaphthalene	ND	0.10 µg/m3	NE	NE
	Naphthalene	ND	0.26 µg/m3	500 µg/m^3	50 µg/m^3
	Perylene	ND	0.10 µg/m3	NE	NE
	Phenanthrene	ND	0.10 µg/m3	8 µg/m^3	0.8 µg/m^3
	Pyrene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E2440-04	May 22, 2024	8:13 AM	4:36 PM	See Map

Field Sample	Analyte	Results	Reporting Level	Short Term AMCV	Long-Term AMCV
AA-1620-AS04-05152024	Acenaphthene	0.13 µg/m3	0.10 µg/m3	100 µg/m^3	10 µg/m^3
	Acenaphthylene	ND	0.10 µg/m3	100 µg/m^3	10 µg/m^3
	Anthracene	ND	0.10 µg/m3	1 µg/m^3	0.067 µg/m^3
	Benzo(a)anthracene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(a)pyrene	ND	0.10 µg/m3	NE	0.017 µg/m^3
	Benzo(b)fluoranthene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(e)pyrene	ND	0.10 µg/m3	NE	NE
	Benzo(g,h,i)perylene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Benzo(k)fluoranthene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Chrysene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Dibenz(a,h)anthracene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluoranthene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	Fluorene	0.11 µg/m3	0.10 µg/m3	10 µg/m^3	1 µg/m^3
	Indeno(1,2,3-cd)pyrene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3
	1-Methylnaphthalene	ND	0.10 µg/m3	NE	NE
	2-Methylnaphthalene	ND	0.10 µg/m3	NE	NE
	Naphthalene	ND	0.25 µg/m3	500 µg/m^3	50 µg/m^3
	Perylene	ND	0.10 µg/m3	NE	NE
	Phenanthrene	0.15 µg/m3	0.10 µg/m3	8 µg/m^3	0.8 µg/m^3
	Pyrene	ND	0.10 µg/m3	0.5 µg/m^3	0.05 µg/m^3

Union Pacific Railroad
Houston Wood Preserving Works Site
Houston Texas
Air Monitoring Values
May 20, 2024 to May 25, 2024

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E3290-01	May 22, 2024	8:16 AM	4:40 PM	See Map

Field Sample	Analyte	Results	Reporting Level
AA-1620-AS01-05222024	Arsenic	ND	1.3 µg/m3
	Lead	ND	1.3 µg/m3

Sample ID	Sample Date	Start Time	End Time	Sample Location
24E3290-02	May 22, 2024	8:14 AM	4:32 PM	See Map

Field Sample	Analyte	Results	Reporting Level
AA-1620-AS02-05222024	Arsenic	ND	1.3 µg/m3
	Lead	ND	1.3 µg/m3

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.