Appendix D-2

Monthly Analytical Reports

December 2020 & February 2021
Air Quality Report
Site 107, Fashionland

Attached is a technical summary of air quality data for December 2020, including November 30, 2020, and February 2021 at the Site 107 cleanup site submitted by PPG Industries' air monitoring consultant.

This report provides air monitoring information about conditions at the perimeter associated with Site 107 (Fashionland).

Also, this document notes any deviations from the monitoring plan and work schedule caused by factors beyond the control of cleanup contractors, such as inclement weather and malfunctioning equipment.

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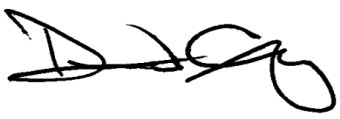
Monthly Air Monitoring Report
Site 107, Fashionland
Jersey City, New Jersey

Reporting Period:
December 2020 & February 2021

Monthly Air Monitoring Report
Site 107, Fashionland
Jersey City, New Jersey

Reporting Period:
December 2020 & February 2021

Prepared By: Carey Wu



Reviewed By: Dave Tomsey
February 25, 2021

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AAC – Acceptable Air Concentration

AMP – Air Monitoring Plan

AMS – Air Monitoring Station

Cr^{+6} – Hexavalent Chromium

FAM – Fixed Air Monitoring

LPM – Liters per Minute

ng/m^3 – Nanograms per Cubic Meter of Air

NJDEP – New Jersey Department of Environmental Protection

PM_{10} – Particulate Matter 10 Microns or less in Diameter

PPG – PPG Industries, Inc.

$\mu g/m^3$ – Micrograms per Cubic Meter of Air

Executive Summary

Air monitoring conducted at Site 107 was completed in accordance with the Site-Specific Air Monitoring Plan (AMP), and included sampling and analysis for 8-hour integrated hexavalent chromium (Cr^{+6}) and total particulates, as well as real-time monitoring for PM_{10} at all air monitoring stations. In addition to the air monitoring conducted in accordance with the AMP, 24-hour Cr^{+6} and total particulate sampling with lab analysis was also conducted at one station. This program is designed to measure various aspects of air quality at the Site to ensure that remedial activities at the Site do not have an adverse effect on Site workers and the surrounding community.

Results of the integrated Cr^{+6} sampling and analysis indicate that program-to-date average airborne Cr^{+6} concentrations are significantly below the Acceptable Air Concentration (AAC) at each of the AMS locations. The results and calculations document continuing compliance with the current AAC set by the New Jersey Department of Environmental Protection (NJDEP), confirm that dust control measures continue to be effective, and indicate that the levels of Cr^{+6} in dust generated at the Site do not represent an emission source of Cr^{+6} sufficient to create potential offsite exposure to Cr^{+6} at or exceeding the AAC.

1.0 Introduction

This monthly air monitoring report update includes both tabular information and written discussions summarizing the ambient air quality data collected in accordance with the Air Monitoring Plan (AMP) at Site 107 (referred herein as Site), in Jersey City, New Jersey.

This monthly report is designed to provide a summary of the air monitoring data collected during the intrusive activities associated with Site 107 through the reporting period. This monthly report includes both monthly and program-to-date summaries of the following:

- Integrated hexavalent chromium analytical results;
- Integrated total particulate analytical results;
- Real-time 15-minute average PM_{10} readings; and
- Meteorological conditions.

Results have been evaluated and compared to the Site-specific Acceptable Air Concentration (AAC) and the Action Levels in accordance with the AMP.

2.0 Air Monitoring

This report summarizes air monitoring at the Site performed during the reporting period, with a focus on data collected during the recent month of activities. No baseline monitoring was conducted for this work as it is a continuation of work completed in 2018 and 2019 at the Site.

Intrusive activities began in the northern portion of the Site on November 30, 2020. Air monitoring stations provided protection during intrusive work from November 30, 2020 through December 22, 2020 and February 12, 2021 through February 16, 2021. The site contains four ground level stations. One station collects Cr^{+6} and total particulate samples for 24 hours during the week and 72 hours over the weekend. **Figure 2-1** provides an overview of the Site and a typical configuration of the AMS for the Site through the end of the reporting period. **Table 2-1** provides an overview of the air monitoring approach.

Air monitoring results to date have confirmed protection of the community, and the overall effectiveness of the program will be evaluated on a continuous basis. Success will ultimately be determined at the end of the remediation program when the average Cr^{+6} concentrations at each AMS location are compared to the AAC. This monthly report has been designed to evaluate the program's effectiveness on a monthly basis and a program-to-date basis. The Cr^{+6} average concentrations measured at each AMS will continually be compared to the site-specific AAC for Cr^{+6} to confirm the effectiveness of the program. Thus, the monthly reports will focus largely on the integrated analytical results collected as part of the Cr^{+6} fence-line air monitoring.

Air monitoring data collected at the Site includes:

- 8-hour integrated Cr^{+6} and total particulate sample collection and associated laboratory analysis;
- 24-hour and 72-hour integrated Cr^{+6} and total particulate samples collection and laboratory analysis; and
- Real-time 15-minute average PM_{10}, readings measured at the perimeter.
- Hand-held readings for PM_{10} measured at the perimeter.

The following sections outline the types of data collected, frequency of collection, and the corresponding locations.

Table 2-1: Air Monitoring Approach

Site	Station	Integrated Air Monitoring	Real-Time Air Monitoring
Site 107	**AMS1, AMS2, AMS3, AMS4**	Integrated 8-hour Cr^{+6} and total particulate sampling and analysis during work days. One 24-hour sample during the week and 72-hour over the weekend.	15-minute average PM_{10} readings measured for a 24-hour period.

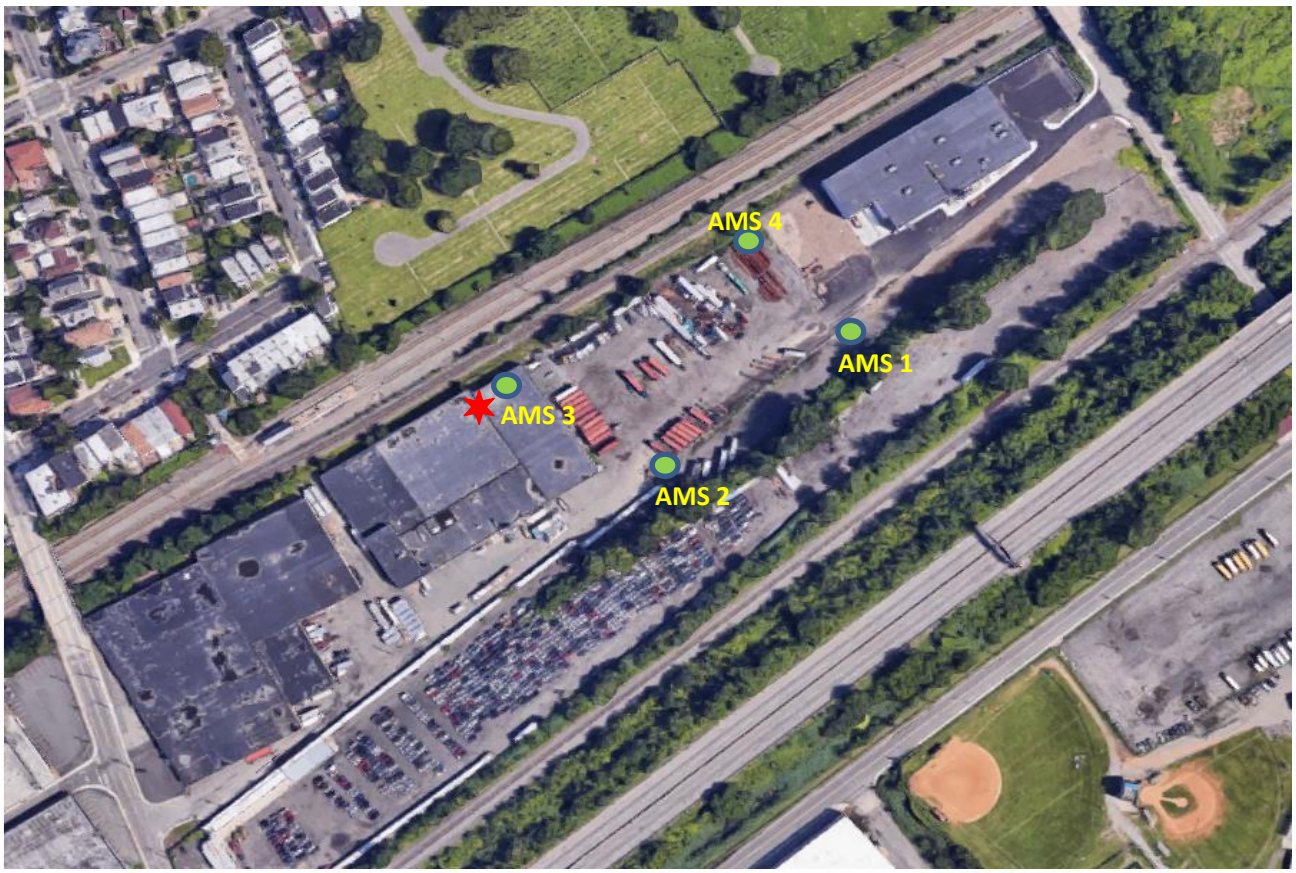
Note: 24-hour and 72-hour Cr^{+6} sampling was conducted at station AMS3 for the reporting period.

2.1 Integrated Air Sampling

Integrated Cr^{+6} and total particulate samples are collected at each of the AMS for an 8-hour-to-10-hour duration each working day (typically Monday – Friday). Samples are collected on a pre-weighed polyvinyl chloride 37mm filter cassette for both Cr^{+6} and total particulate. Sampling pumps operate at or around 2 liters per minute and are calibrated at the beginning and end of each sampling run.

Figure 2-1: Site Overview

11/30/2020 – End of Reporting Period



2.1.1 Integrated Cr^{+6} Sampling

The exposed Cr^{+6} filters are shipped to an American Industrial Hygiene Association Industrial Hygiene Laboratory Accreditation Program-certified analytical laboratory for Cr^{+6} analysis using Modified OSHA ID 215. The sample weights are provided by the laboratory with a laboratory detection limit of 20.0 ng. The sample weights and flow information are utilized to calculate 8-hour to 10-hour integrated Cr^{+6} air concentrations in nanograms per cubic meter of air (ng/m^3). Filter weights reported as non-detect are included in the concentration calculation at one-half the laboratory detection limit for data reporting purposes.

In addition to sampling performed during working hours, 24-hour and 72-hour Cr^{+6} sampling and analysis are also performed at one AMS. These longer duration samples show Cr^{+6} concentrations during overnight and weekend periods. The 24-hour samples are typically collected daily from 7AM to 7AM Monday through Thursday, and a single 72-hour sample is collected from 7AM Friday through 7AM Monday.

2.1.2 Integrated Total Particulate Sampling

The exposed total particulate filters are shipped to an American Industrial Hygiene Association Industrial Hygiene Laboratory Accreditation Program-certified analytical laboratory for total particulate analysis using NIOSH Method 0500. The sample weights are provided by the laboratory with a laboratory detection limit of 100 ug. The sample weights and flow information are utilized to calculate 8-hour-to-10-hour integrated total particulate air concentrations in micrograms per cubic meter of air ($\mu g/m^3$). Filter weights reported as non-detect are included in the concentration calculation at one half the laboratory detection limit for data reporting purposes.

2.2 Real-Time Air Monitoring

Real-time air monitoring is divided into two types of monitoring including: perimeter monitoring and meteorological monitoring. Each monitoring type is described in more detail in the following sections.

2.2.1 Perimeter

Perimeter air monitoring consists of ground level stations at the perimeter of the Site. Perimeter monitoring includes the following:

- Real-time 15-minute average PM_{10} readings at each AMS location. All AMS operate 24 hours during remedial activities, Monday through Sunday.

2.2.2 Meteorological Measurements

Meteorological measurements of 15-minute average wind speed and direction, relative humidity, pressure, and temperature are recorded onsite at station AMS-3, 24-hours a day, seven days a week.

2.3 Hand-held Air Monitoring

Hand-held air monitoring consists of the collection of perimeter PM_{10} readings. Monitoring is described in more detail in the following section.

2.3.1 Perimeter PM_{10} Hand-held Monitoring

Hand-held readings will be taken along the downwind perimeter of the Site periodically each day during remedial activities and logged to be reported weekly. The readings will be collected as instantaneous readings and if levels are elevated, 15-minute averages will be recorded for comparison to adjacent perimeter stations.

3.0 Site-Specific Acceptable Air Concentration and Real-Time Action Levels

Site-specific Acceptable Air Concentration (AAC) and real-time Action Levels have been established for Cr^{+6} and real-time PM_{10} concentrations by NJDEP as part of the approved AMP, in compliance with risk assessment procedures. The AAC and real-time Action Levels have been developed to protect off-site receptors from potential adverse health impacts from Cr^{+6} and particulates over the duration of the intrusive remediation activities.

Real-time monitoring and integrated results are compared against the AAC and the real-time action levels to alert Site management of the potential need to enhance control of emissions and curtail operations to maintain concentrations at levels below the specified criteria. The AAC and real-time action levels for integrated Cr^{+6} concentrations and real-time PM_{10} are outlined in the following sections.

3.1 Integrated Cr^{+6} Acceptable Air Concentration

A Site-specific Cr^{+6} AAC has been established by NJDEP to protect off-site receptors from potential adverse health impacts due to potential exposure to Cr^{+6} in dust. The AAC for Cr^{+6} was developed to represent the maximum allowable average concentration of Cr^{+6} in the air at each AMS over the project duration. The AAC is protective of human health based on a carcinogenic exposure endpoint with a duration more than one calendar year for intrusive remedial activities.

The AAC of 100 ng/m^3 is applicable at the perimeter and represents the maximum allowable average concentration measured over the project duration and was developed to ensure the protection of human health. This AAC is also used to evaluate the effectiveness of dust control. PPG has established an operational goal of achieving a project average hexavalent chromium air concentration of 49 ng/m^3 to the extent practicable using best management practices throughout the duration of intrusive remedial activities at the site.

To ensure ongoing compliance with the AAC, shorter duration rolling averages are utilized to provide for the early and regular assessment of performance trends and, if necessary, allow for responsive corrective measures to be implemented to ensure that emissions of Cr^{+6} are maintained well below the AAC over the duration of the project, and are minimized to the greatest extent practicable. These shorter duration average concentrations metrics include: program-to-

date, 90-day, 60-day, and 15-day running averages where the average Cr^{+6} concentration over the previous 90-day, 60-day, and 15-day periods are calculated for each sample day. Sampling days are considered days where routine sampling was conducted (typically Monday – Friday). The shorter-term average concentrations are compared against the list of metrics provided in Table 3-1 which also depicts respective response actions.

Table 3-1: Running Cr^{+6} Metrics

Metric Observation	Response Action
15-day[1] Cr^{+6} average concentration greater than or equal to 100 ng/m3	External meeting to review levels, evaluate activities each day when elevated concentrations were observed, and trigger corrective action if required.
60-day[1] Cr^{+6} average concentration greater than or equal to 90 ng/m3	
90-day[1] Cr^{+6} average concentration greater than or equal to 81 ng/m3	
[1] Refers to days on which samples were collected, not necessarily calendar days	

3.2 Real-Time Alert and Action Levels

Real-time Alert and Action Levels were designed to monitor and assist in control of Site emissions to ensure protection of human health, and represent an important aspect of the remedial program at the Site. The real-time Alert and Action Levels used on Site are shown in Table 3-2.

Table 3-2: Site-specific Alert and Action Levels

Parameter	Alert Level (15-min TWA)	Action Level (15-min TWA)
PM_{10}	235 µg/m^3	339 µg/m^3

4.0 Air Sampling and Monitoring Results

Results of air sampling and monitoring conducted between November 30, 2020 and February 16, 2021 are summarized herein. The following sections present both tabular and written discussions of the air sampling and monitoring results for the reporting period including:

- Monthly integrated and real-time results;
- Program-to-date integrated and real-time statistics;
- Evaluation of program success versus the Site-specific AAC and action levels;
- Meteorological results; and
- Hand-held monitoring results

Air sampling and monitoring results are presented in detail in the Appendices of this report. Appendix A includes summary of the air sampling and monitoring results for the reporting period. Appendix B includes program-to-date statistics and monthly comparison of results.

4.1 Integrated Air Sampling Results

Results of the integrated Cr^{+6} and total particulate sampling and analysis are presented in the following sections.

4.1.1 Cr^{+6} Sampling Results

Results of the Cr^{+6} sampling from the reporting period and a program-to-date evaluation are discussed in the following sections.

Reporting Period

Individual integrated 8-hour Cr^{+6} concentrations measured during the reporting period are presented in Table A-1. If an individual sample result exceeds 80% of the project duration AAC, additional evaluation and review of relevant Site conditions and activities were performed to potentially modify procedures if necessary to reduce the potential for increasing Cr^{+6} concentration trends. Any elevated concentration data during the reporting period are listed and discussed in Table A-5.

Program-to-date

Sampling and analytical statistics for integrated 8-hour Cr^{+6} results are shown in Table B-1 and include various program-to-date metrics relative to Cr^{+6} analytical data. Monthly average 8-hour Cr^{+6} concentration results are shown in Table B-2 for each AMS location.

Table 4-1: Short-Term Average 8-hour Integrated Cr^{+6} Metrics

Running Cr^{+6} Metrics[1]		Site 107			
	Metric (ng/m^3)	**AMS-1 ng/m^3**	**AMS-2 ng/m^3**	**AMS-3 ng/m^3**	**AMS-4 ng/m^3**
15-day[2]	**100**	5.8	6.4	2.6	6.7
60-day[2]	**90**	N/A	N/A	N/A	N/A
90-day[2]	**81**	N/A	N/A	N/A	N/A
PTD[3]	**73**	5.8	6.4	2.6	6.7

ng/m^3 – nanograms per cubic meter
N/A – Not available due to insufficient amount of sampling days to calculate the metric.

1. Running Cr^{+6} metrics are utilized to provide for the early and regular assessment of performance trends and, if necessary, allow for responsive corrective measures to be implemented ensuring that emissions of Cr^{+6} are maintained well below the AAC over the duration of the project, and are minimized to the greatest extent practicable. The running Cr^{+6} metrics are designed to evaluate the program success on short duration intervals (monthly) and do not represent the long-term (program) ending success.
2. Running Cr^{+6} metrics are valid on the last day in the report period and include the previous 15, 60, or 90-days of sample results.
3. Program-to-date - Air monitoring conducted from November 30, 2020 through the end of the reporting period.

4.1.2 Total Particulate Sampling Results

Results of the 8-hour integrated total particulate sampling and analysis from the reporting period and program-to-date results are discussed in the following sections.

Reporting Period

Individual integrated 8-hour total particulate concentrations measured at each station during the reporting period are presented in Table A-2.

Program-to-date

Sampling and analytical statistics for integrated total particulate are shown in Table B-3 and include various metrics relative to total particulate analytical data. Monthly average total particulate concentration results are shown in Table B-4 for each AMS.

4.1.3 Integrated Air Sampling Results Summary

There have been 19 sample days between November 30th and the end of the reporting period for stations AMS-1 through AMS-4. The results of the sample analysis are summarized in the following sections.

Air Monitoring

The program through this reporting period shows the 8-hour Cr^{+6} average concentrations, based upon lab analytical results at each AMS, were less than 6.74% of the AAC, demonstrating that the dust control measures continue to be effective.

4.2 Real-Time Air Monitoring Results

Real-time air monitoring for PM_{10} is conducted during all remedial activities. The results of the real-time air monitoring are presented in the following sections.

4.2.1 PM_{10} Monitoring Results

Results of the real-time PM_{10} sampling for the reporting period and the start of intrusive activities are discussed in the following sections.

Reporting Period

Real-time 15-minute PM_{10} averages measured during the reporting period are presented in Figure A-1. Real-time 15-minute PM_{10} averages were compared directly to the PM_{10} Action Level (339

µg/m^3) and averages greater than the action level are subject to additional evaluation. If applicable, elevated PM_{10} averages are listed and discussed in Table A-5.

Program-to-date

Real-time monthly PM_{10} averages are shown in Table B-5 for each AMS. Dust readings measured during the reporting period are similar to those during the baseline period (when no intrusive activities were occurring). This indicates that dust control measures during intrusive activities have been effective.

4.3 Meteorological Monitoring Results

Time series plots for wind speed, temperature, and relative humidity for the reporting period are shown in Figure A-2 through Figure A-4, respectively. A wind-rose for the month displaying the primary wind directions is shown in Figure A-5.

4.4 Hand-held Monitoring Results

Maximum hand-held monitoring results during the reporting period are displayed in Table A-3. Readings were compared directly to the 15-Minute TWA Action Level (339 ug/m^3) and averages greater than the action level are subject to additional evaluation. If applicable, elevated averages are listed and discussed in Table A-5.

4.5 Site Activities

Activities which occurred on the site during the months of December and February included:

- Excavation and side wall sampling of soils and chromium-impacted soils;
- Stock piling soils from excavations.

4.6 Site Map(s)

Site maps during the reporting period are documented and included in Figure A-6.

5.0 Conclusions

Results of the December 2020 & February 2021 reporting period for the Site 107 air sampling and monitoring program indicate that the average Cr^{+6} concentrations for each AMS are well below the site safety goal of 49 ng/m^3 and below the AAC of 100 ng/m^3. The Cr^{+6} concentrations and the percent Cr^{+6} in dust samples through this period demonstrate that the dust control measures continue to be effective at maintaining concentrations of Cr^{+6} in airborne dust at the Site well below the AAC. These results indicate that dust generated at the Site contains very small percentages of Cr^{+6} and does not represent an emission source of Cr^{+6} sufficient to create potential offsite exposure to Cr^{+6} at or exceeding the AAC.

Appendix A

Monthly Results Summaries

- Integrated 8-hour Cr^{+6} Concentrations
- Integrated 8-hour Total Particulate Concentrations
- Real-time PM^{10} Readings
- Hand-held Readings
- Meteorological Data
- Site Map

Table A- 1: Daily Integrated 8-hour Cr^{+6} Sampling Results

Date of Sample	AMS 1	AMS 2	AMS 3	AMS 4
Monday, November 30, 2020	12.0	12.0	12.0	
Tuesday, December 1, 2020	4.7	4.7	1.8	4.7
Wednesday, December 2, 2020	4.8	4.9	1.8	4.9
Thursday, December 3, 2020	4.4	4.7	1.8	4.6
Friday, December 4, 2020	4.5	4.6	0.6	4.6
Saturday, December 5, 2020			0.6	
Sunday, December 6, 2020			0.6	
Monday, December 7, 2020	5.5	4.7	1.7	4.6
Tuesday, December 8, 2020	4.3	4.9	1.8	4.9
Wednesday, December 9, 2020	4.8	4.9	1.8	5.0
Thursday, December 10, 2020	4.9	4.9	5.6	5.0
Friday, December 11, 2020	4.8	11.0	2.9	5.0
Saturday, December 12, 2020			2.9	
Sunday, December 13, 2020			2.9	
Monday, December 14, 2020	4.8	5.0	1.8	5.0
Tuesday, December 15, 2020	5.5	5.5	1.7	5.5
Wednesday, December 16, 2020	9.5	9.5	2.1	28.0
Thursday, December 17, 2020			2.1	
Friday, December 18, 2020	7.0	9.5	1.5	9.5
Saturday, December 19, 2020			1.5	
Sunday, December 20, 2020			1.5	
Monday, December 21, 2020	4.3	4.5	1.8	4.5
Tuesday, December 22, 2020	10.5	11.5	12.5	11.0
Temporary Shutdown				
Friday, February 12, 2021	4.8	5.0	1.2	5.0
Saturday, February 13, 2021			1.2	
Sunday, February 14, 2021			1.2	
Monday, February 15, 2021	4.6	4.8	1.8	4.8
Tuesday, February 16, 2021	4.8	5.0	1.7	5.0

Results in nanograms per cubic meter. Highlighted cells indicate a detectable level of Cr^{+6}. All other values are below the laboratory method detection limit (MDL).
Values below the MDL are shown in the table at one-half the MDL for data reporting purposes. This established practice is consistent with PPG's Site 114 reporting of non-detects by AECOM.
No sample collected at AMS 4 on 11/30/20 due to equipment failure. Monitoring discontinued after 12/22/20 during site shut down and resumed on 02/12/21. Monitoring discontinued after completion of intrusive activities on 02/16/21.

Table A- 2: Daily Integrated 8-hour Total Particulate Sampling Results

Date of Sample	AMS 1	AMS 2	AMS 3	AMS 4
Monday, November 30, 2020	115.0	120.0	115.0	
Tuesday, December 1, 2020	46.0	46.0	17.5	46.0
Wednesday, December 2, 2020	47.5	48.0	17.5	48.5
Thursday, December 3, 2020	43.5	46.0	17.0	44.5
Friday, December 4, 2020	44.5	45.5	6.0	45.5
Saturday, December 5, 2020			6.0	
Sunday, December 6, 2020			6.0	
Monday, December 7, 2020	55.0	45.0	16.5	44.0
Tuesday, December 8, 2020	41.5	48.0	17.5	47.5
Wednesday, December 9, 2020	46.5	47.0	17.5	48.5
Thursday, December 10, 2020	47.0	48.0	17.5	50.0
Friday, December 11, 2020	47.0	49.0	24.0	48.5
Saturday, December 12, 2020			24.0	
Sunday, December 13, 2020			24.0	
Monday, December 14, 2020	47.5	50.0	17.5	49.0
Tuesday, December 15, 2020	50.0	55.0	17.0	55.0
Wednesday, December 16, 2020	95.0	95.0	8.6	100.0
Thursday, December 17, 2020			8.6	
Friday, December 18, 2020	70.0	95.0	19.0	95.0
Saturday, December 19, 2020			19.0	
Sunday, December 20, 2020			19.0	
Monday, December 21, 2020	42.0	44.5	17.5	44.5
Tuesday, December 22, 2020	105.0	115.0	120.0	110.0
Temporary Shutdown				
Friday, February 12, 2021	47.0	49.0	17.0	50.0
Saturday, February 13, 2021			17.0	
Sunday, February 14, 2021			17.0	
Monday, February 15, 2021	45.0	47.0	17.0	46.5
Tuesday, February 16, 2021	46.5	49.0	16.5	49.0

Results in micrograms per cubic meter. Highlighted cells indicate a detectable level of total particulate. All other values are below the laboratory method detection limit (MDL).
Values below the MDL are shown in the table at one-half the MDL for data reporting purposes. This established practice is consistent with PPG's Site 114 reporting of non-detects by AECOM.
No sample collected at AMS 4 on 11/30/20 due to equipment failure. Monitoring discontinued after 12/22/20 during site shut down and resumed on 02/12/21. Monitoring discontinued after completion of intrusive activities on 02/16/21.

Figure A- 1: Real-Time 15-minute average PM_{10} Monitoring Results

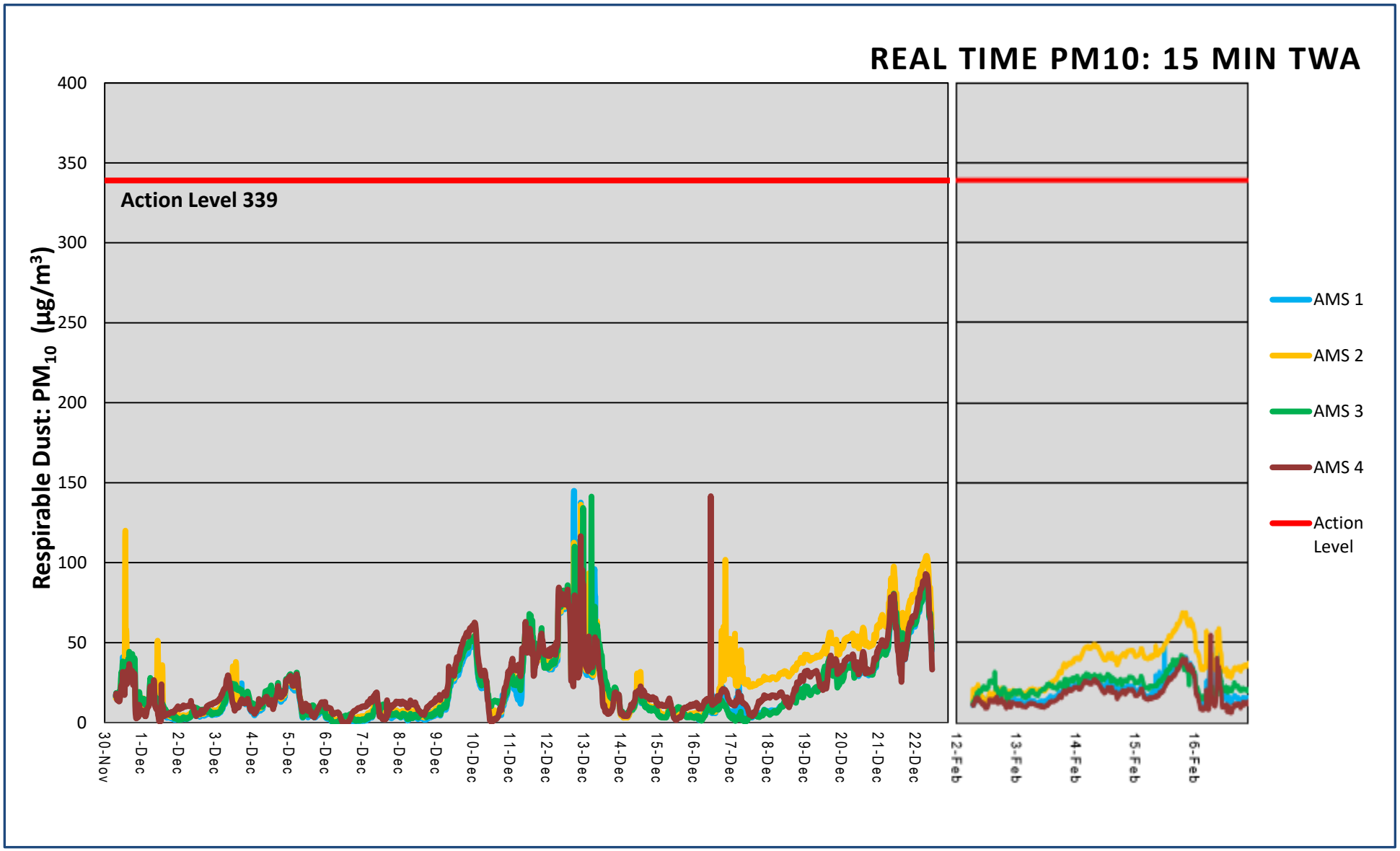


Table A-3: Daily Maximum Hand-held Monitoring Instantaneous Results

Date	PM10 (µg/m^3)	Time	Location
Monday, November 30, 2020	36	11:00	AMS2
Tuesday, December 1, 2020	20	9:00	AMS3
Wednesday, December 2, 2020	15	13:00	AMS3
Thursday, December 3, 2020	22	10:00	AMS1
Friday, December 4, 2020	24	8:00	AMS4
Saturday, December 5, 2020	N/A	N/A	N/A
Sunday, December 6, 2020	N/A	N/A	N/A
Monday, December 7, 2020	17	9:00	AMS3
Tuesday, December 8, 2020	11	13:00	AMS2
Wednesday, December 9, 2020	85	14:00	AMS2
Thursday, December 10, 2020	59	8:00	AMS2
Friday, December 11, 2020	142	11:00	AMS3
Saturday, December 12, 2020	N/A	N/A	N/A
Sunday, December 13, 2020	N/A	N/A	N/A
Monday, December 14, 2020	18	12:00	AMS4
Tuesday, December 15, 2020	7	14:00	AMS3
Wednesday, December 16, 2020	26	10:00	AMS4
Thursday, December 17, 2020	N/A	N/A	N/A
Friday, December 18, 2020	7	9:00	AMS3
Saturday, December 19, 2020	N/A	N/A	N/A
Sunday, December 20, 2020	N/A	N/A	N/A
Monday, December 21, 2020	141	11:00	AMS2
Tuesday, December 22, 2020	116	8:00	AMS3
Temporary Shutdown			
Friday, February 12, 2021	47	10:00	AMS3
Saturday, February 13, 2021	N/A	N/A	N/A
Sunday, February 14, 2021	N/A	N/A	N/A
Monday, February 15, 2021	33	10:00	AMS4
Tuesday, February 16, 2021	29	9:00	AMS3

Note: Blank cells are days where no hand-held monitoring occurred. Monitoring discontinued after 12/22/20 during site shut down and resumed on 02/12/21. Monitoring discontinued after completion of intrusive activities on 02/16/21.

Table A- 5: Elevated Concentration Summary

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration	Explanation
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

PM_{10} – Respirable Particulate Matter measured in micrograms per cubic meter ($\mu g/m^3$)

ng/m^3 – nanograms per cubic meter

$\mu g/m^3$ – micrograms per cubic meter

NA – Not Applicable

ND –No Data

Figure A-2: Wind Speed

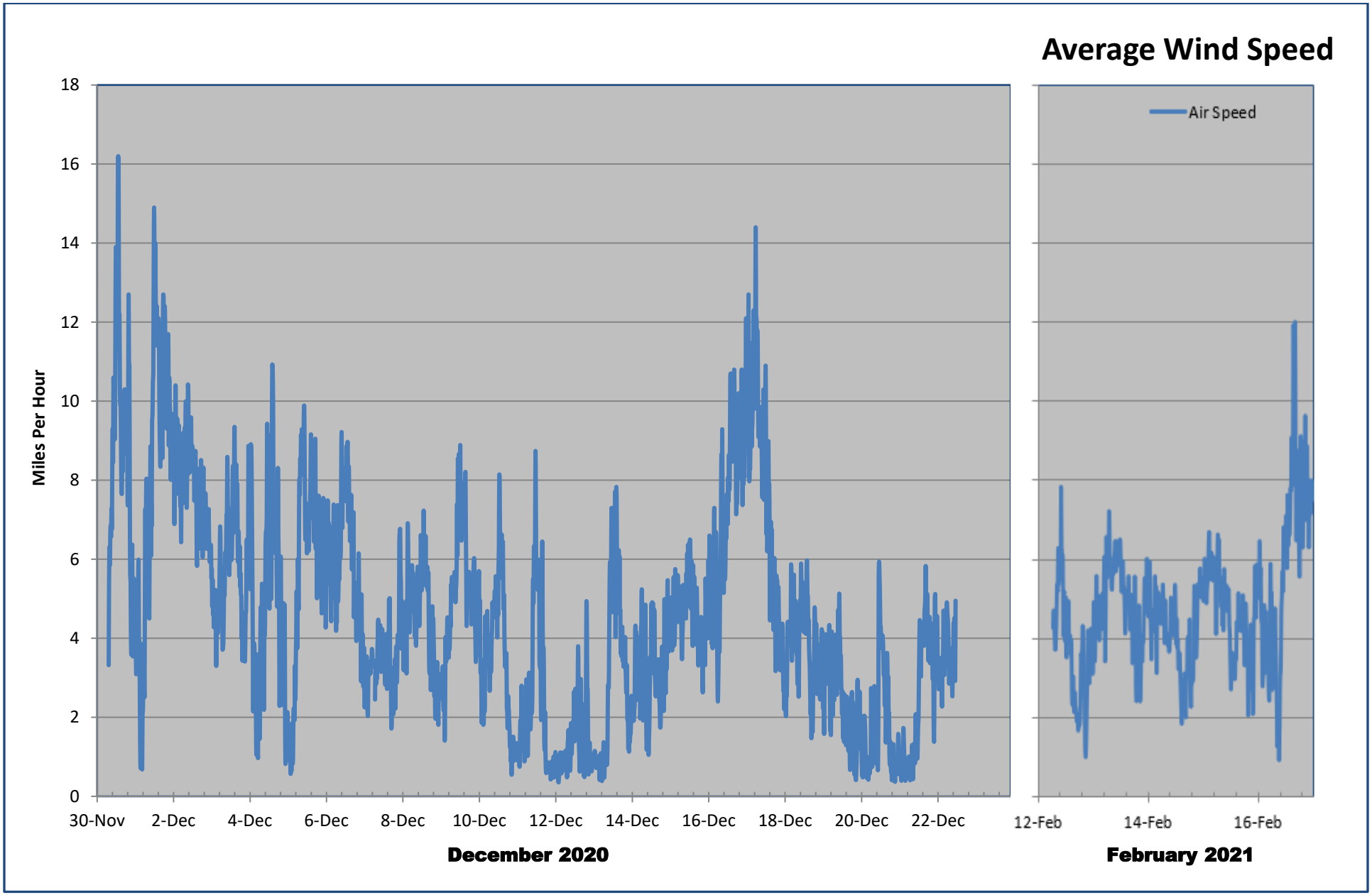


Figure A-3: Temperature

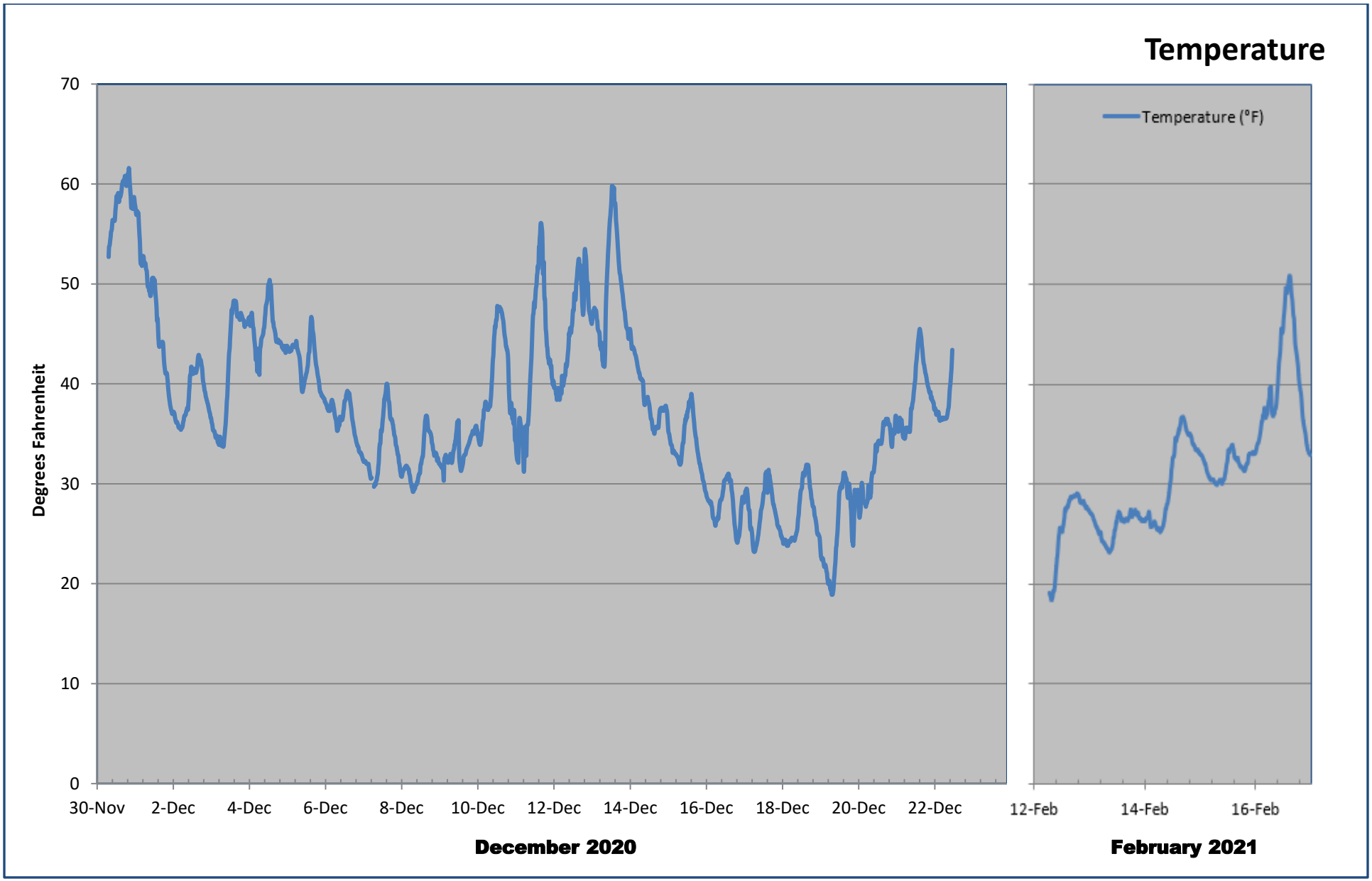


Figure A-4: Relative Humidity

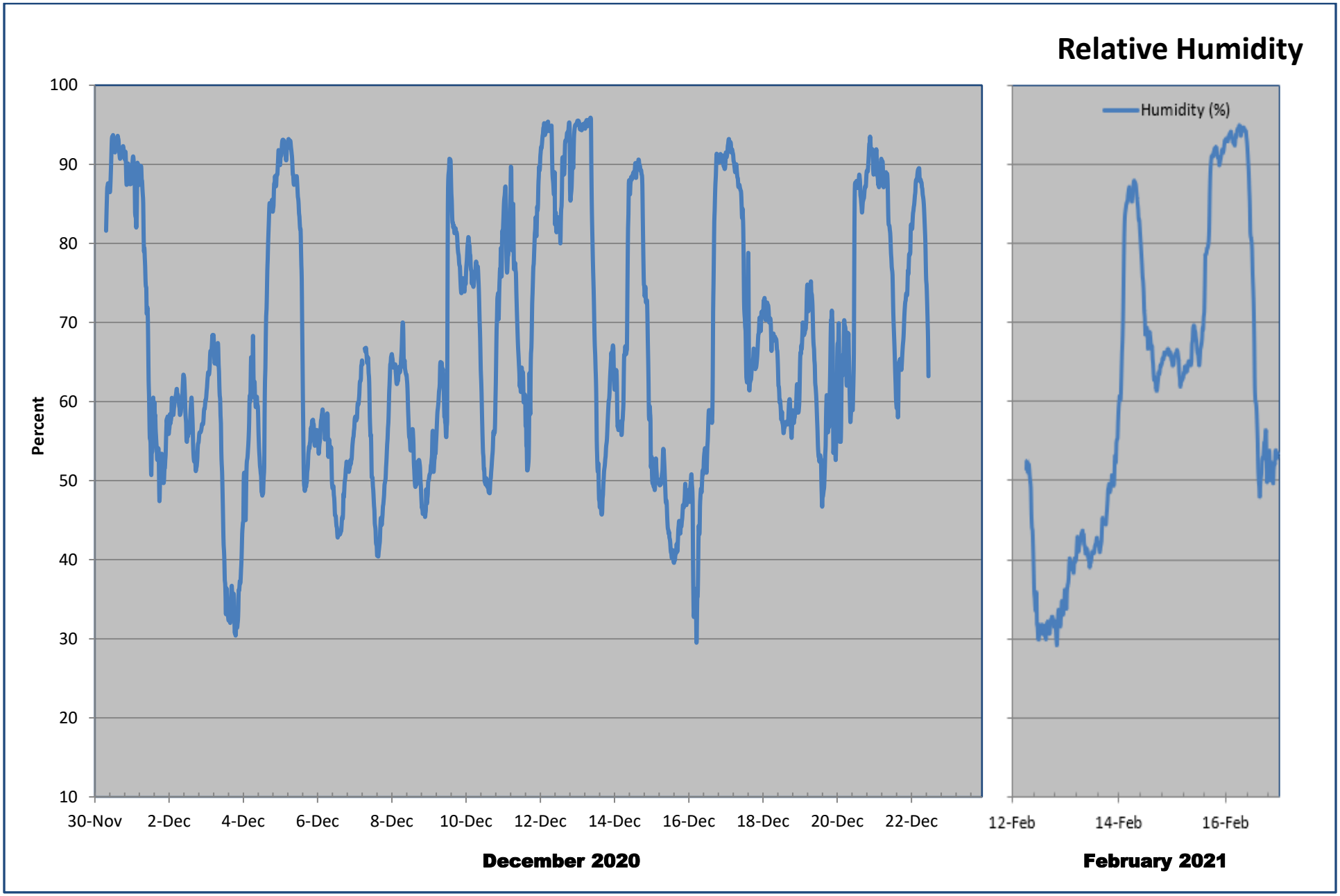


Figure A-5: Monthly Wind-Rose

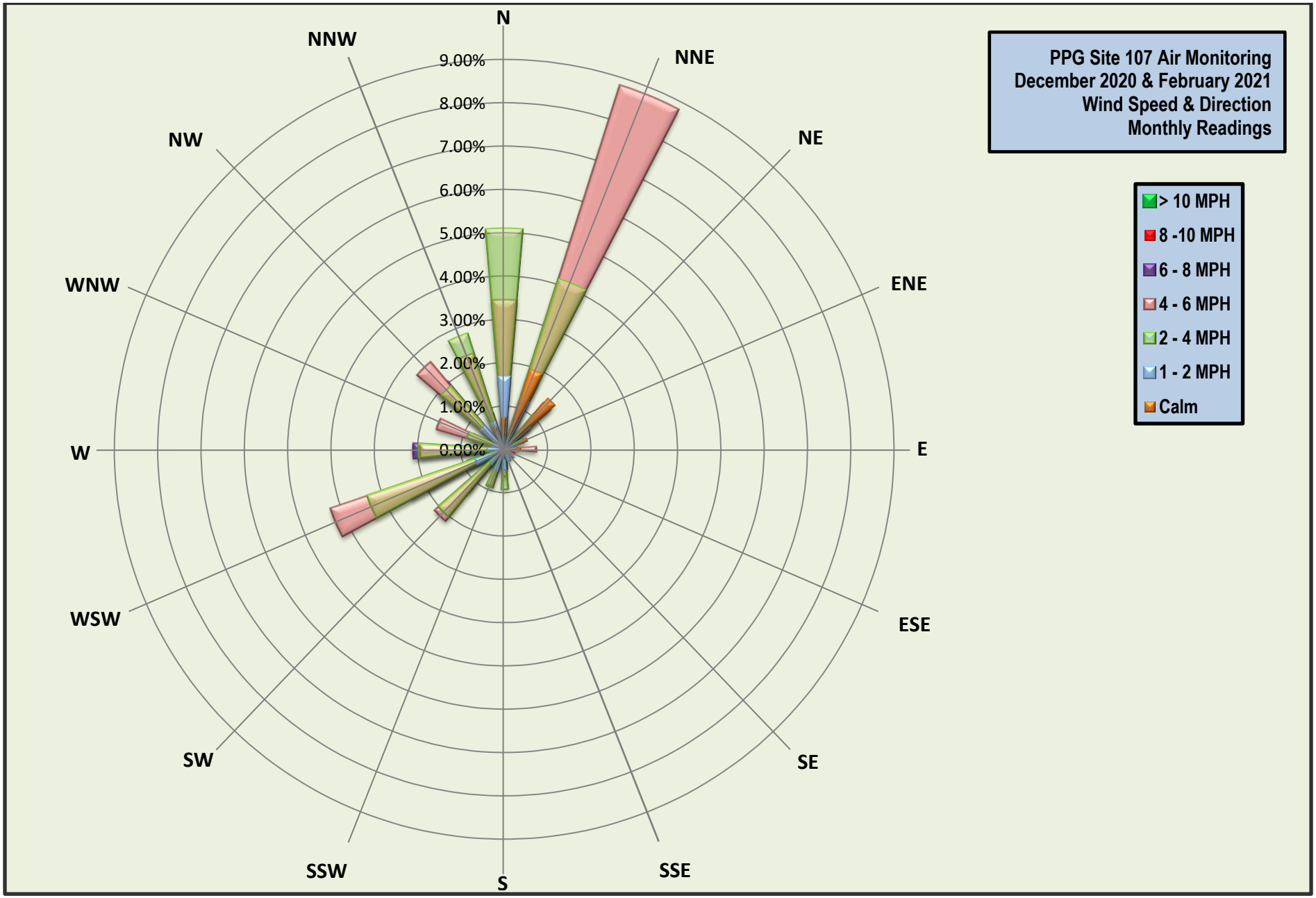
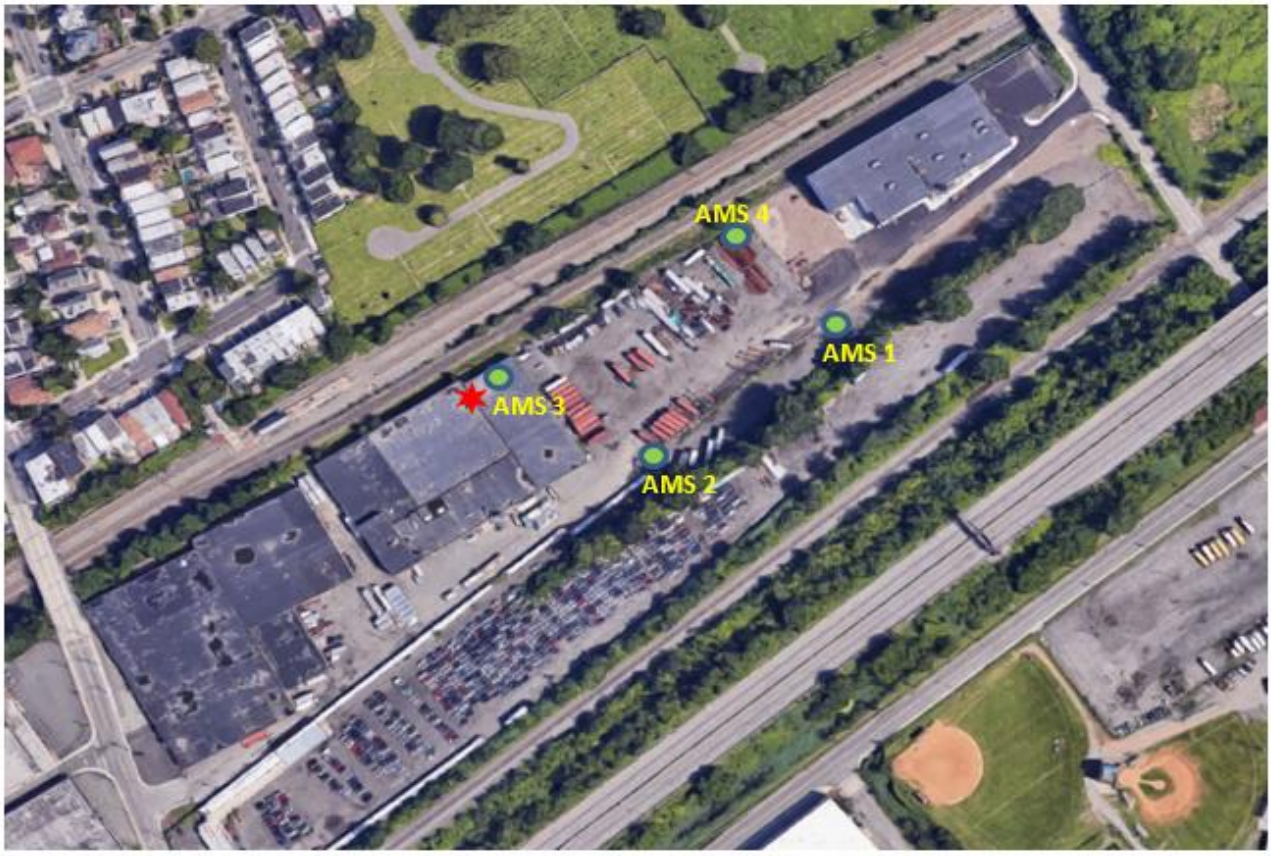


Figure A–6: Site Maps Site 107

(11.30.20 – End of Reporting Period)



Legend:

Fenceline AMS that operates 24-hours per day

Meteorological Station

N

Definitions:

AMS – Air Monitoring Station

Appendix B

Program-to-date Result Summaries

- Integrated 8-hour Cr^{+6} Concentration Summaries
- Integrated 8-hour Total Particulate Concentration Summaries
- Real-time PM^{10} Concentrations Summaries

Table B- 1: Program-to-date Integrated 8-hour Cr^{+6} Sampling Results Statistics

Statistics[1]	Site 107			
	AMS 1	AMS 2	AMS 3	AMS 4
Total Number of Samples[1]	19	19	19	18
Rate of Data Collection	100%	100%	100%	100%
Number of Detected Samples[2]	0	1	5	1
% of Cr^{+6} Samples Greater than MDL	0.0%	5.3%	26.3%	5.5%
Number of Samples Above AAC	0	0	0	0
Average % Cr^{+6} in Dust[3]	0.010%	0.011%	0.012%	0.011%
Maximum % Cr^{+6} in Dust[3]	0.011%	0.022%	0.032%	0.028%

Results in ng/m^3 – nanograms per cubic meter

[1] Total number of samples collected since November 30, 2020. Variations in the number of samples collected are specifically identified in Table A-1 within the report month of the variation. In general variations are caused by sampler malfunctions, site activities, weather conditions, etc.

[2] Total number of sample results since November 30, 2020, reported above the laboratory reporting limit.

[3] The program-to-date average and maximum percent Cr^{+6} in dust was calculated using all the integrated Total Particulate and Cr^{+6} sample results collected since November 30, 2020.

Table B- 2: Monthly Average Integrated 8-hour Cr^{+6} Sampling Results

Statistics	Site 107			
	AMS 1	AMS 2	AMS3	AMS 4
November '20	12.0	12.0	12.0	N/A
December '20	5.6	6.3	2.4	7.1
February '21	4.7	4.9	1.4	4.9
Program to Date	5.8	6.4	2.6	6.7
All readings in ng/m^3 – nanograms per cubic meter				

Table B- 3: Program-to-date Integrated Total Particulate 8-hour Sampling Results Statistics

Statistics	Site 107			
	AMS 1	AMS 2	AMS 3	AMS 4
Total Number of Samples[1]	19	19	19	18
Rate of Data Collection	100%	100%	100%	100%
Number of DetectedSamples[2]	0	0	3	0
% Detection	0.0%	0.0%	15.8%	0.0%

Results in ng/m^3 – nanograms per cubic meter

[1] Total number of samples collected since November 30, 2020. Variations in the number of samples collected are specifically identified in Table A-1 within the report month of the variation. In general variations are caused by sampler malfunctions, site activities, weather conditions, etc.

[2] Total number of sample results since November 30, 2020, reported above the laboratory reporting limit.

Table B- 4: Monthly Average Integrated 8-hour Total Particulate Sampling Results

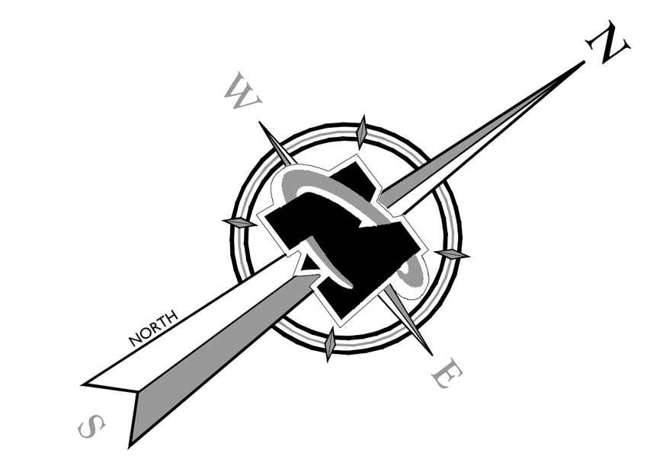
Statistics	Site 107			
	AMS 1	AMS 2	AMS 3	AMS 4
November '20	115.0	120.0	115.0	N/A
December '20	55.2	58.5	20.8	58.4
February '21	46.2	48.3	16.9	48.5
Program to Date	56.9	60.1	23.5	56.8
All readings in µg/m^3 – micrograms per cubic meter				

Table B- 5: Monthly Average Real-Time PM_{10} Monitoring Results

Statistics	Site 107			
	AMS 1	AMS 2	AMS 3	AMS 4
November '20	23.3	26.3	27.0	19.8
December '20	19.0	25.5	20.9	23.0
February '21	21.2	37.2	23.5	17.1
Program to Date	19.5	27.7	21.5	21.8
All readings in µg/m^3 – micrograms per cubic meter				

Appendix F

As-Built Diagrams



LEGEND

- POST EXCAVATION MAJOR CONTOUR
- POST EXCAVATION MINOR CONTOUR

GENERAL NOTES

1. THE SOLE PURPOSE OF THIS PLAN IS TO SHOW POST EXCAVATION CONDITIONS & ELEVATIONS WITHIN THE MSA AREA AT THE PROJECT SITE.
2. MSA AREA POST EXCAVATION LOCATIONS AND ELEVATIONS WERE OBTAINED BY MASER CONSULTING P.A. & ENTACT, LLC. BETWEEN 6/18/18 & 9/27/19
3. HORIZONTAL DATUM NAD 1983, VERTICAL DATUM NAVD '88.

REFERENCES

1. PLANS ENTITLED, "PROPOSED DEMOLITION AND EXCAVATION, PPG SITE 107, FASHIONLAND, 18 CHAPEL AVENUE, JERSEY CITY, NEW JERSEY" PREPARED BY ARCADIS U.S., INC., DATED SEPTEMBER, 2017.
2. PLANS ENTITLED, "FINAL AS-BUILT SURVEY, PPG SITE 107, FASHIONLAND, 18 CHAPEL AVENUE, JERSEY CITY, HUDSON COUNTY, NEW JERSEY" PREPARED BY MASER CONSULTING, P.A., LAST REVISED 3/26/21.
3. PLANS ENTITLED, "POST EXCAVATION SURVEY, PPG SITE 107, FASHIONLAND, 18 CHAPEL AVENUE, JERSEY CITY, HUDSON COUNTY, NEW JERSEY" PREPARED BY MASER CONSULTING, P.A., LAST REVISED 3/10/21.

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R. THOMAS HUGG
NEW JERSEY PROFESSIONAL
LAND SURVEYOR - LICENSE NUMBER: GS36737

POST EXCAVATION SURVEY

FOR

ENTACT, LLC

MSA AREA
PPG SITE 107
FASHIONLAND
18 CHAPEL AVENUE

JERSEY CITY
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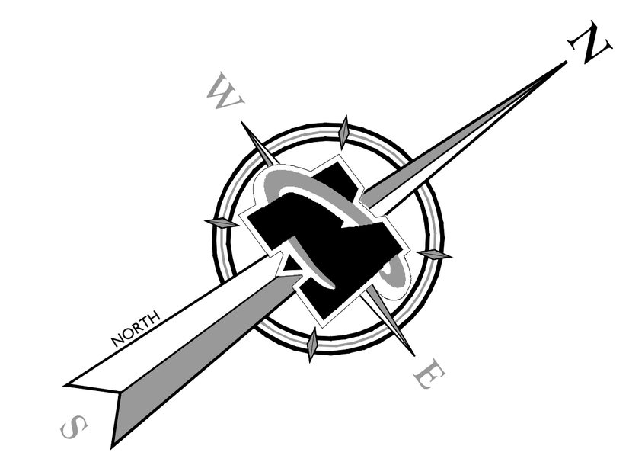
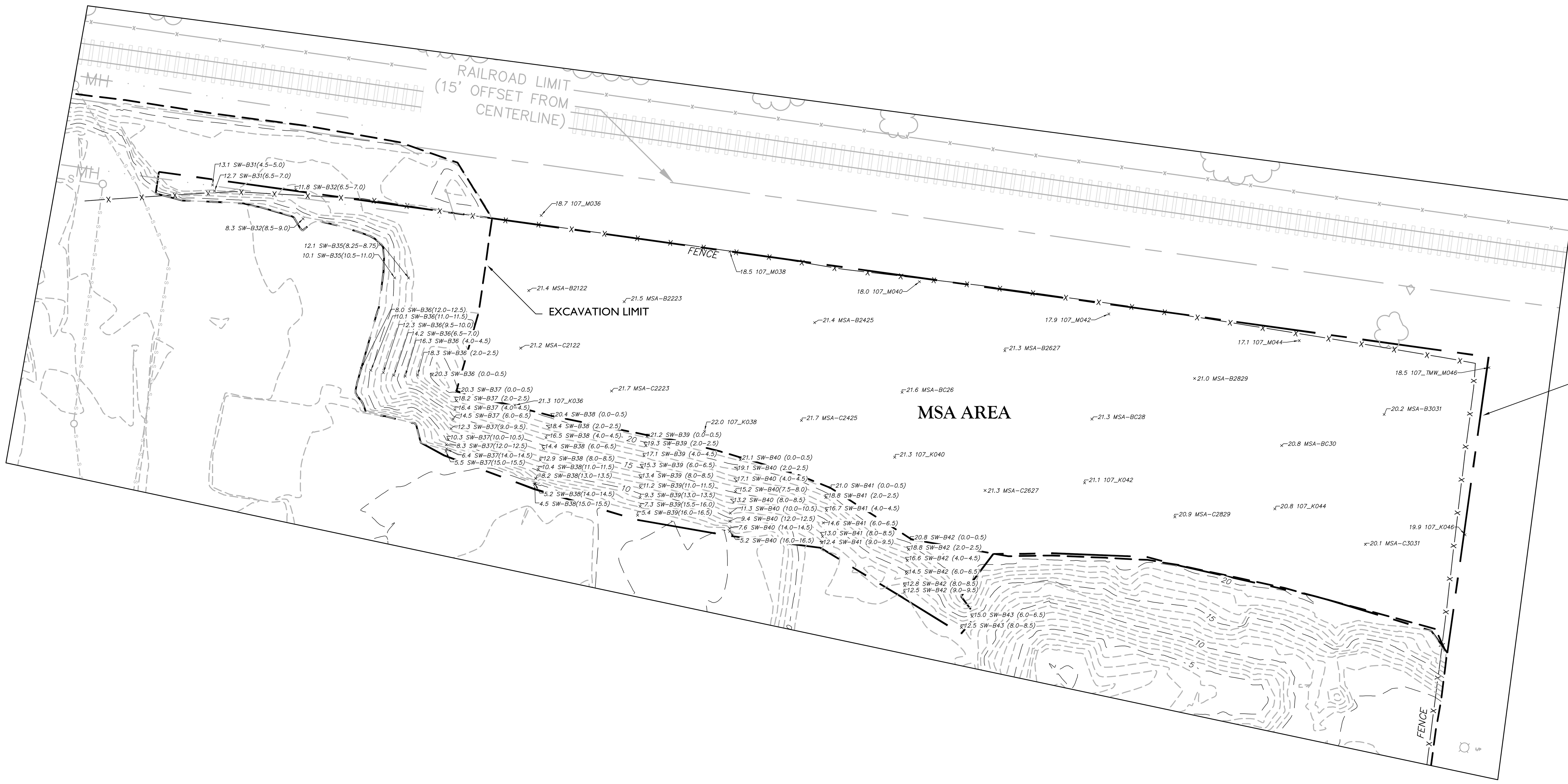
PROJECT NUMBER:	DRAWING NAME:
17007872A	V-POST-EX

SHEET TITLE:

POST EXCAVATION SURVEY

SHEET NUMBER:





LEGEND

- POST EXCAVATION MAJOR CONTOUR
- POST EXCAVATION MINOR CONTOUR
- FINAL AS-BUILT MAJOR CONTOUR
- FINAL AS-BUILT MINOR CONTOUR

GENERAL NOTES

1. THE SOLE PURPOSE OF THIS PLAN IS TO SHOW POST EXCAVATION SAMPLE LOCATIONS & ELEVATIONS WITHIN THE MSA AREA AT THE PROJECT SITE.
2. POST EXCAVATION SAMPLE LOCATIONS AND ELEVATIONS WERE OBTAINED BY MASER CONSULTING P.A. BETWEEN 11/30/20 AND 12/16/20.
3. HORIZONTAL DATUM NAD 1983, VERTICAL DATUM NAVD '88.

REFERENCES

1. PLANS ENTITLED, "PROPOSED DEMOLITION AND EXCAVATION, PPG SITE 107, FASHIONLAND, 18 CHAPEL AVENUE, JERSEY CITY, NEW JERSEY" PREPARED BY ARCADIS U.S., INC., DATED SEPTEMBER, 2017.
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NEW JERSEY PROFESSIONAL LAND SURVEYOR - LICENSE NUMBER: GS36737

POST EXCAVATION SAMPLE SURVEY

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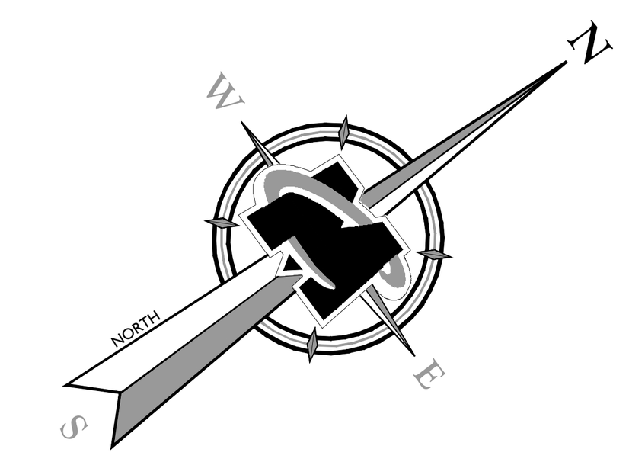

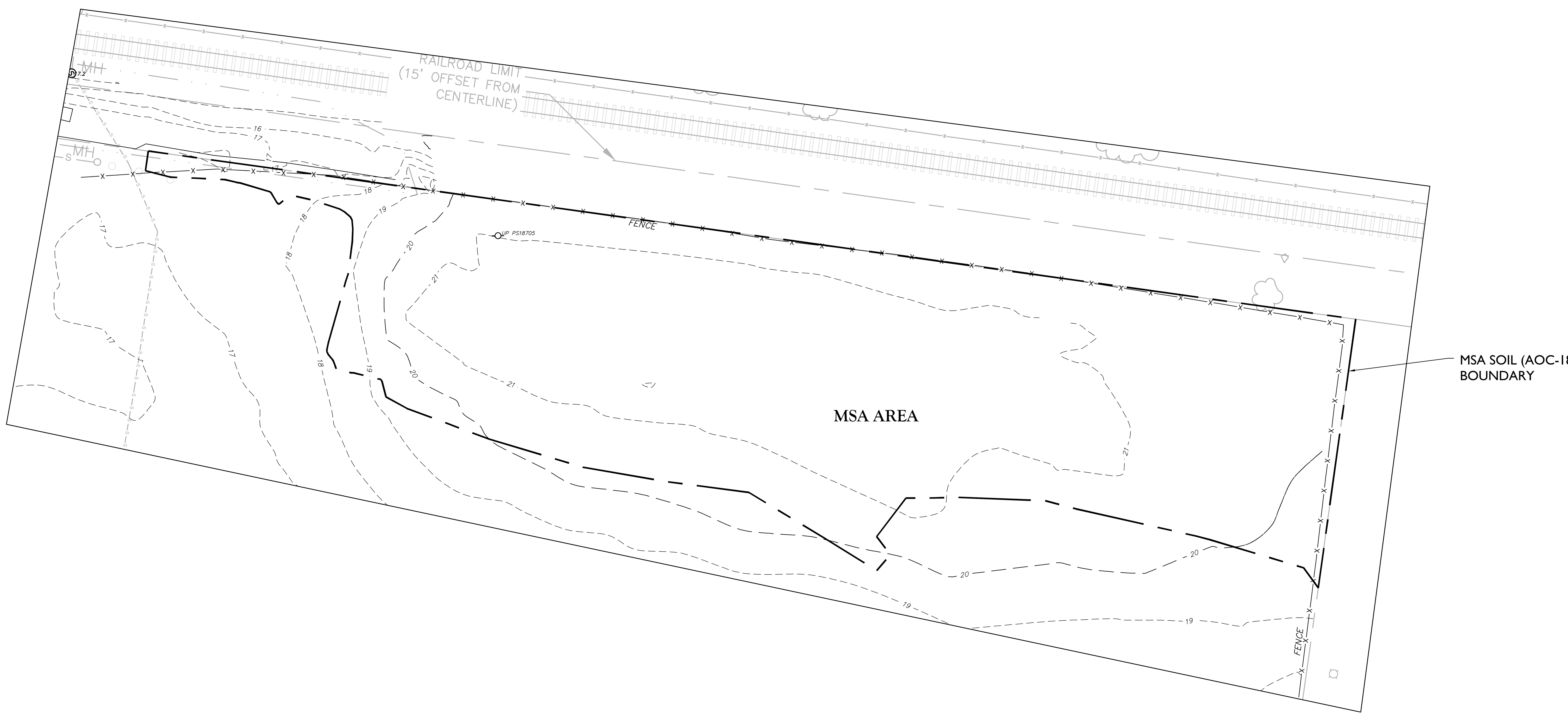

LEGEND

- FINAL AS-BUILT MAJOR CONTOUR
- FINAL AS-BUILT MINOR CONTOUR

GENERAL NOTES

1. THE SOLE PURPOSE OF THIS PLAN IS TO SHOW THE INTREM AS-BUILT LOCATIONS & ELEVATIONS WITHIN THE MSA AREA OF THE PROJECT SITE.
2. MSA INTREM AS-BUILT LOCATIONS AND ELEVATIONS WERE OBTAINED BY MASER CONSULTING P.A. ON 10/19/19 & 03/10/21.
3. HORIZONTAL DATUM NAD 1983, VERTICAL DATUM NAVD '88.

REFERENCES

1. PLANS ENTITLED, "PROPOSED DEMOLITION AND EXCAVATION, PPG SITE 107, FASHIONLAND, 18 CHAPEL AVENUE, JERSEY CITY, NEW JERSEY" PREPARED BY ARCADIS U.S., INC., DATED SEPTEMBER, 2017.
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FINAL AS-BUILT SURVEY

FOR

ENTACT, LLC

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