



Hagler Bailly Pakistan

**Environmental and Social Impact
Assessment of
Reko Diq Mining Project**

Air Quality

Final Report

HBP Ref.: D5AQ14RKI

February 12, 2025

Reko Diq Mining Company

Quetta

Executive Summary

Barrick Gold Corporation (hereafter Barrick) through its subsidiary Reko Diq Mining Company (RDMC), in a Joint Venture partnership with the Government of Pakistan and the Government of Balochistan, is completing a feasibility study for the Reko Diq Mining Project (also referred to as the 'Project') in the western part of Balochistan Province of Pakistan. As part of the feasibility study, an Environmental and Social Impact Assessment (ESIA) has been conducted, including specialist studies. The ESIA will be part of the environmental permitting process and will provide a basis for the integration of environmental and social considerations into the Project design. RDMC appointed Digby Wells Environmental (hereafter Digby Wells) and Hagler Bailly Pakistan Pvt. Ltd (hereafter HBP) to carry out the proposed environmental and social studies and permitting process for the Project. This Specialist Report presents baseline air quality where the Project facilities will be situated, potential Project related impacts that will be implemented to mitigate the impacts and monitoring that will be carried out to assess the effectiveness of mitigation.

The Project is a Copper-Gold mining operation with an onsite processing plant to produce a high-quality copper-gold concentrate (the Concentrate) that will be exported for final processing. The current Life-of-Mine (LoM) is 38 years in terms of defined resources (resources that have been identified already) with significant exploration upside.

The construction phase is anticipated to take approximately 40 months, including pre-stripping. The mine will be a truck-and-shovel open pit mining operation with processing facilities that include crushing, grinding, and flotation. The final Concentrate will be railed to Port Qasim for final export by ship.

The mine will be developed in two phases, Phase 1 is expected to have a capacity of 45 Mt per annum (Mtpa) and Phase 2 is expected to have a combined processing capacity of 90 Mtpa. Phase 1 operations are anticipated to commence in 2028 and Phase 2 operations in 2030.

Air Quality Baselines

The air quality sampling was conducted at three sampling locations. For particulate matter (PM₁₀ and PM_{2.5}), a continuous sampling for a period of seven months was conducted at the proposed location of Reko Diq Mine while the baseline concentrations gaseous pollutants (SO₂, NO₂, and O₃) were measured using the passive diffusion tubes, which were deployed at the Reko Diq Mine Site, Humai settlement and Nok Kundi.

The reported concentrations of the gaseous pollutants remained within the limits prescribed in NEQS, and IFC General EHS Guidelines at all locations.

In terms of the PM₁₀ and PM_{2.5} concentrations, the air quality data from the continuous monitoring was used. This data indicated no exceedance of PM₁₀ concentrations of the applicable limits. While the PM_{2.5} exceeded for 1% of the total monitoring duration. Considering the wind direction which predominantly blows from the north direction,

desert environment in the upwind of the Project was the common source of PM₁₀ and PM_{2.5} concentrations.

A detailed description of the air quality sampling locations and baseline results is provided in **Section 4** and **Section 5**.

Impact Assessment

The following impacts of air quality due to various Project activities were assessed:

- ☞ Increase in dust levels due construction of a concentrate storage shed at the port facilities
- ☞ Impacts on air quality due to construction and operations activities at Reko Diq Mine Site
- ☞ Increase in dust levels during transportation of material along the Road Transport Route
- ☞ Impacts on air quality due to decommissioning activities

All of the impacts due to construction and decommissioning of the Project were of minor significance. In terms of operations of the Reko Diq Mine Site, pollutant concentrations above the NEQS and IFC General EHS Guidelines Interim Target 1 are expected to occur at the onsite accommodation camp for 4-6 days per year. In comparison with the limits prescribed in IFC General EHS Guidelines (guideline limits), the Predicted Ambient Concentrations of PM₁₀ are expected to exceed the applicable limits for 41 days of the year while the those of PM_{2.5} are expected to remain above the limits for 17 days of the year. Exceedances of PM₁₀ and PM_{2.5} at this receptor can be linked with emissions from TSF when the winds blow from southeast towards northwest. Such wind conditions are expected to occur for 4% time of the year. The receptors are also expected to experience high concentrations of PM₁₀ and PM_{2.5} exceeding the prescribed limits of NEQS, and IFC General EHS Guidelines when the wind speeds exceed 12.5 m/s. Considering the wind speeds and directions, these elevated concentrations will be due to elevated background concentrations with very low contribution from the mining operations. Exceedances of particulate matter (PM₁₀ and PM_{2.5}) are not expected at Humai settlement due to Project operations due to large distance and limited durations of wind blowing from Project towards this receptor. However, elevated concentrations are also expected at this receptor due to high wind speeds in the background direction.

The following dust mitigation measures are considered as part of the Project design (the project base-case) to reduce PM₁₀ and PM_{2.5} emissions at the source:

- ☞ Installation of dust control measures to reduce dust emissions from the mining equipment including hoppers, conveyors and other equipment. This includes fabric filters and equipment enclosures.
- ☞ Progressive closure of the cleaner cells of the TSF to prevent dust generation and release of other pollutants from the impoundment. This will be done using the waste rock extracted from mining.
- ☞ Wet operations at the rougher cells of TSF to retain water content and keep the tailings moist.

- ⑥ Regular maintenance of vehicles as per manufacturers specifications to ensure that the exhaust emissions do not exceed the prescribed limits.
- ⑥ Gravel the top surface of haul roads for reduction in emissions during haulage.

Details on the efficiency of the emission control measures are provided in **Section 4.4.5**. Additionally, the Project will also adopt the following mitigation measures on top of the control measures to reduce particulate emissions during construction and operations.

- ⑥ Installation of windrows along haul and other roads, and at other vehicular movement locations including laydown yards to minimise wind erosion.
- ⑥ Setting of speed limits along all site roads.
- ⑥ Investigation of options for reduction in haulage speed to reduce haul road emissions.
- ⑥ Investigation of installation of wind breaks in the northwest of TSF for further reduction in particulate emissions.
- ⑥ Use of respiratory masks and other appropriate PPE – and ensure PPE is readily available.
- ⑥ Continual monitoring of air quality at the onsite accommodation camp.
- ⑥ Installation and regular maintenance of air filtration systems installed as part of air-conditioning units in onsite accommodation camp and other buildings.
- ⑥ Maintenance of window and door seals in accommodation rooms.

Key Recommendations

The key findings and recommendations of this Specialist Report are summarized below:

- ⑥ Dynamic baselines of PM₁₀ and PM_{2.5} that account for varying background levels of particulate matter as a function of wind speed should be used instead of static baselines to account for PM concentrations due to changing wind speeds.
- ⑥ The staff working within the lease area of the Reko Diq Mine Site should be provided with suitable respiratory masks which can reduce the impacts of elevated pollutant concentrations.
- ⑥ For the onsite accommodation camp, the Project should conduct continuous monitoring of PM₁₀ and PM_{2.5} concentrations. In case of any exceedance from the limits prescribed in NEQS, or IFC General EHS Guidelines, restrictions should be placed on the movement of staff outside the buildings to reduce exposure to high dust levels.

Acronyms

BEQS	Balochistan Environmental Quality Standards
DWE	Digby Wells Environmental
EHS	Environmental, Health, and Safety
ESIA	Environmental and Social Impact Assessment
GLM	General Linear Model
HBP	Hagler Bailly Pakistan
IFC	International Finance Corporation
NAAQS	National Ambient Air Quality Standards
NEQS	National Environmental Quality Standards
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
NOC	No Objection Certificate
O ₃	Ozone
PM ₁₀	Particulate Matter 10
PM _{2.5}	Particulate Matter 2.5
RDMC	Reko Diq Mining Company
SO ₂	Sulphur Dioxide
UKAS	United Kingdom Accreditation Service

Contents

1. Introduction.....	1-1
1.1 Objectives.....	1-1
2. Project Description.....	2-1
2.1 Reko Diq Mine Site and Associated Facilities.....	2-1
2.1.1 Supporting Infrastructure	2-1
2.1.2 Water Supply and Management	2-2
2.2 Transport and Marine Port	2-2
2.2.1 Transport of Concentrate to Port Qasim.....	2-2
3. Legislative and Regulations Framework.....	3-1
4. Methodology for Data Collection and Impact Assessment.....	4-1
4.1 Overview of the Study Area	4-1
4.2 Scheduling of Data Collection	4-3
4.3 Collection of Air Quality Data	4-3
4.3.1 Air Quality Sampling Locations.....	4-3
4.3.2 Methodology for Sampling of Air Quality	4-4
4.3.3 Meteorological Data.....	4-10
4.4 Air Dispersion Modelling.....	4-13
4.4.1 Model Description.....	4-13
4.4.2 Sensitive Receptors.....	4-13
4.4.3 Model Configuration.....	4-14
4.4.4 Emission Sources.....	4-15
4.4.5 Emission Control Measures.....	4-15
4.4.6 Modelling Scenario	4-16
4.5 Assessment of Project Level Impacts	4-17
4.6 Assumptions, Exclusions, and Limitations.....	4-21
5. Baseline Description	5-1
5.1 Meteorological Conditions.....	5-1
5.2 Particulate Matter (PM₁₀ and PM_{2.5}).....	5-3
5.2.1 Results and Discussion of Primary Data Collected	5-4
5.2.2 Sources of Particulate Matter at Reko Diq Mine Site.....	5-5
5.2.3 Background PM Concentrations	5-5
5.3 Oxides of Nitrogen, Sulphur Dioxide and Ozone	5-7

5.3.1	Reko Diq Mine Site	5-7
5.3.2	Nok Kundi	5-11
6.	Impacts Screening.....	6-1
6.1	Impacts on Air Quality Due to Mining Operation at Reko Diq Mine Site.....	6-1
6.1.1	Comparison of Predicted Incremental Concentrations with IFC General EHS Guidelines Interim Target 1	6-9
6.1.2	Assessment of Emissions from Power Generation.....	6-13
6.1.3	Measures Taken by Project for Compliance with IFC General EHS Guidelines – Guideline Limit.....	6-14
6.1.4	Assessment of Accommodation Camp Location with respect to Particulate Matter Concentrations	6-14
6.2	Other Impacts on Air Quality Due to Construction and Decommissioning Activities	6-15
6.3	Screening of Impacts.....	6-15
7.	Impact Assessment.....	7-1
7.1	Increase in Dust Levels due to Expansion of Port Facilities During Construction Phase	7-1
7.2	Impacts on Air Quality Due to Construction and Mining Activities	7-2
7.3	Impacts on Air Quality Due to Decommissioning Activities.....	7-4
7.4	Impacts on Air Quality due to Changing Climate	7-5
8.	Environmental / Social Management Plan	8-1
9.	Monitoring Plan	9-1
10.	Conclusions and Recommendations	10-1
10.1	Specialist Impact Statement	10-1
10.2	Key Recommendations	10-2
11.	References	11-1
Appendices		
Appendix A: Air Dispersion Modelling of Reko Diq Mining Project		
Appendix B: PM₁₀ and PM_{2.5} Concentrations from Onsite Monitoring Station		
Appendix C: Development of Relationship of Background Concentrations of Particulate Matter with Wind Speed		
Appendix D: Laboratory Results of Gaseous Pollutants		

Exhibits

Exhibit 2.1: Proposed Reko Diq Mine Site Layout.....	2-3
Exhibit 2.2: Reko Diq Spatial Extent and Transport Routes (Rail Transport Route and Road Transport Route)	2-4
Exhibit 2.3: Proposed Rail Yard Layout at Port Qasim.....	2-5
Exhibit 2.4: Layout of Concentrate Facilities at PIBT at Port Qasim	2-6
Exhibit 3.1: Applicable Legislations and International Guidelines	3-1
Exhibit 4.1: Map of Study Areas along Reko Diq Mine Site and Project Components .	4-2
Exhibit 4.2: Air Quality Sampling Locations and their Rationale of Selection.....	4-5
Exhibit 4.3: Study Area and Air Quality Sampling Locations.....	4-7
Exhibit 4.4: Active Air Quality Sampling – Reko Diq Mine Site	4-8
Exhibit 4.5: Photographs of Air Quality Sampling – Reko Diq Mine Site.....	4-9
Exhibit 4.6: Photographs of Ambient Air Quality Sampling at Location A2-20 – Nok Kundi	4-10
Exhibit 4.7: Changes in Wind Speed of Lakes Environmental with respect to Onsite Weather Station (September 25, 2023 to November 17, 2023).....	4-12
Exhibit 4.8: Trend Analysis of Wind Speeds – Lakes Environment v/s Onsite Weather Station	4-12
Exhibit 4.9: Comparison of Wind Directions – Onsite Weather Station v/s Lakes Environmental (September 25, 2023 to November 17, 2023).....	4-13
Exhibit 4.10: Sensitive Receptors near Reko Diq Mine Site.....	4-13
Exhibit 4.11: Configuration of Air Dispersion Model	4-14
Exhibit 4.12: Emission Control Measures for Mining Operations	4-16
Exhibit 4.13: Impact Assessment Parameter Ratings	4-18
Exhibit 4.14: Probability Consequence Matrix.....	4-20
Exhibit 4.15: Significance Threshold Limits.....	4-21
Exhibit 5.1: Monthly Temperature (°C) at Reko Diq Mine Site	5-2
Exhibit 5.2: Average Monthly Precipitation (mm/month) at Reko Diq Mine Site.....	5-2
Exhibit 5.3: Average Monthly Relative Humidity (%) at Reko Diq Mine Site	5-3
Exhibit 5.4: Average Annual Wind Rose of Reko Diq Mine Site.....	5-3
Exhibit 5.5: Baseline Concentrations of PM ₁₀ and PM _{2.5} at A1-23 and Comparison with NEQS and IFC General EHS Guidelines – Round 2	5-4

Exhibit 5.6: Baseline Concentrations of PM ₁₀ and PM _{2.5} and Comparison with NEQS and IFC General EHS Guidelines – Round 3.....	5-5
Exhibit 5.7: Simulated Background PM ₁₀ Concentrations as Function of Wind Speeds	5-6
Exhibit 5.8: Simulated Background PM _{2.5} Concentrations as Function of Wind Speed	5-6
Exhibit 5.9: Results of Ambient Air Quality Sampling Conducted in Round 1 – Reko Diq Mine Site	5-9
Exhibit 5.10: Results of Ambient Air Quality Sampling Conducted in Round 2 – Reko Diq Mine Site.....	5-10
Exhibit 5.11: Results of Ambient Air Quality Sampling – Road Transport Route	5-11
Exhibit 6.1: Predicted Ambient Concentrations at Sensitive Receptors in Scenario 1 – Ultimate Footprint.....	6-4
Exhibit 6.2: Predicted Ambient Concentrations at Sensitive Receptors in Scenario 2 – Year 2050.....	6-6
Exhibit 6.3: Predicted Ambient Concentrations of Gaseous Pollutants at Maxima Locations in Scenario 1 – Ultimate Footprint	6-7
Exhibit 6.4: Predicted Ambient Concentrations of Respirable Dust at Maxima Locations	6-8
Exhibit 6.5: Number of Hours and Days Exceeded per Year for NO ₂ and SO ₂ Sensitive Receptors.....	6-9
Exhibit 6.6: Number of Days Exceeded per Year for PM ₁₀ and PM _{2.5} in Scenario 1 – Ultimate Footprint.....	6-10
Exhibit 6.7: Number of Days Exceeded per Year for PM ₁₀ and PM _{2.5} in Scenario 2 – Year 2050.....	6-11
Exhibit 6.8: Number of Exceedances per Year of PM ₁₀ at Onsite Accommodation Camp – Project Contribution.....	6-12
Exhibit 6.9: Number of Exceedances per Year of PM _{2.5} at Onsite Accommodation Camp – Project Contribution.....	6-12
Exhibit 6.10: Comparison of Maximum Flue Gas Emission of HFO Power Plant with World Bank EHS Guidelines for Thermal Power Plants.....	6-13
Exhibit 6.10: Screening of Air Quality Impacts	6-15
Exhibit 6.11: Topography of the Project Area	6-16
Exhibit 8.1: Environmental Management Plan – Air Quality.....	8-2
Exhibit 9.1: Environmental Monitoring Plan – Air Quality.....	9-1

1. Introduction

Barrick Gold Corporation (hereafter Barrick) through its subsidiary Reko Diq Mining Company (RDMC), in a Joint Venture partnership with the Government of Pakistan and the Government of Balochistan, is completing a feasibility study for the Reko Diq Mining Project (the 'Project') in the western part of Balochistan province of Pakistan. As part of the feasibility study, an Environmental and Social Impact Assessment (ESIA) has been conducted, which encompasses a number of specialists studies. The ESIA forms part of the environmental permitting process and provides a basis for the integration of environmental and social considerations into the Project design. RDMC appointed Digby Wells Environmental (hereafter Digby Wells) and Hagler Bailly Pakistan Pvt. Ltd (hereafter HBP) to carry out the relevant environmental and social studies and permitting process for the Project.

This Specialist Report presents the baseline air quality where the Project facilities will be situated and details potential Project related impacts on air quality, the mitigation measures and monitoring requirements.

1.1 Objectives

The objectives of this specialist study were to:

- ⑤ Establish and assess pre-project baseline air quality at various components through primary data collection.
- ⑤ Compare the baseline air quality with applicable limits prescribed in national legislations and international standards to assess compliance.
- ⑤ Determine potential project-related impacts on the environments and receptors, and
- ⑤ Provide mitigation measures along with monitoring and reporting requirements for various phases of the Project to ensure that the potential impacts i.e. airborne pollutant concentrations are in compliance with the applicable guidelines, standards, or limits.

2. Project Description

The Project is a Copper-Gold mining operation with an onsite processing plant to produce a high-quality copper-gold concentrate (the Concentrate) that will be exported for final processing into various products. The current Life-of-Mine (LoM) is 38 years in terms of defined resources (resources that have been identified already) with significant exploration upside.

The construction phase is anticipated to take approximately 40 months, including pre-stripping. The mine will be a truck-and-shovel open pit mining operation with processing facilities that include crushing, grinding, and flotation. The final Concentrate will be railed to Port Qasim for final export by ship.

The mine will be developed in two phases, Phase 1 is expected to have a capacity of 45 Mt per annum (Mtpa) and Phase 2 is expected to have a combined processing capacity of 90 Mtpa. Phase 1 operations are anticipated to commence in 2028 and Phase 2 operations in 2030.

2.1 Reko Diq Mine Site and Associated Facilities

Exhibit 2.1 provides an overview of the RDMS and the major proposed infrastructure.

The core infrastructure that will be established at the RDMS includes:

- ☞ Two main pits, Western Porphyry and Tanjeel (**Exhibit 2.1**). The mining method of these pits will be a 24-hour open-pit shovel and truck operation;
- ☞ Two designated Waste Rock Dumps (WRD) for the waste rock from the Western Porphyries pit. The Tajeel Pit will have a separate WRD in its proximity.
- ☞ Tailings storage facility (TSF).
- ☞ A processing plant.

2.1.1 Supporting Infrastructure

The proposed supporting infrastructure at the RDMS includes:

- ☞ Several sources for power supply will be utilised for the Project. The Project's estimated peak power requirements will be 183 megawatts (MW) in Phase 1 and 348 MW in Phase 2:
 - ☞ Diesel generators during the early works and construction phases until the establishment of the Heavy Fuel Oil (HFO) power station;
 - ☞ A Solar Photovoltaic (PV) system with an installed capacity of 183 MW in Phase 1 and 384 MW in Phase 2;
 - ☞ It is anticipated that the Project's energy requirements will be met through a grid connection from Year 15 (operational phase).
- ☞ Diesel, HFO and other sources of fuel will be railed to the site from Port Qasim and stored in bunded contained atmospheric tanks at the designated storage areas.

- ☞ Accommodation Facility to provide on-site accommodation for all employees and contractors;
- ☞ Security infrastructure;
- ☞ Waste management facilities;

2.1.2 Water Supply and Management

Water for the Construction Phase, Phase 1 and Phase 2 of the Project will be sourced from a sedimentary groundwater system located approximately 70 km to the northwest of the mining area referred to as the Northern Groundwater System (**Exhibit 2.1**). The system represents a small and isolated part of a much larger basin and there are no communities or community water sources located within the proposed bore field and its area of influence.

2.2 Transport and Marine Port

The Project will use the existing road and rail networks to transport materials during construction and operational phases and utilise the air transportation option for personnel. The main Project transport routes (Road Transport Route and Rail Transport Route) are shown in **Exhibit 2.2**.

2.2.1 Transport of Concentrate to Port Qasim

The Concentrate will be transported from the RDMS processing plant to Port Qasim via an existing railway line, passing through the Balochistan and Sindh provinces. The existing rail route is approximately 1,350 km in length as outlined in **Exhibit 2.2**.

The Project will make use of the existing PIBT Terminal where all facilities are owned and operated by PIBT. An area will be leased to RDMC for the construction of a Concentrate storage shed.

An extract of the onshore and offshore layout is shown in **Exhibit 2.4**.

Exhibit 2.1: Proposed Reko Diq Mine Site Layout

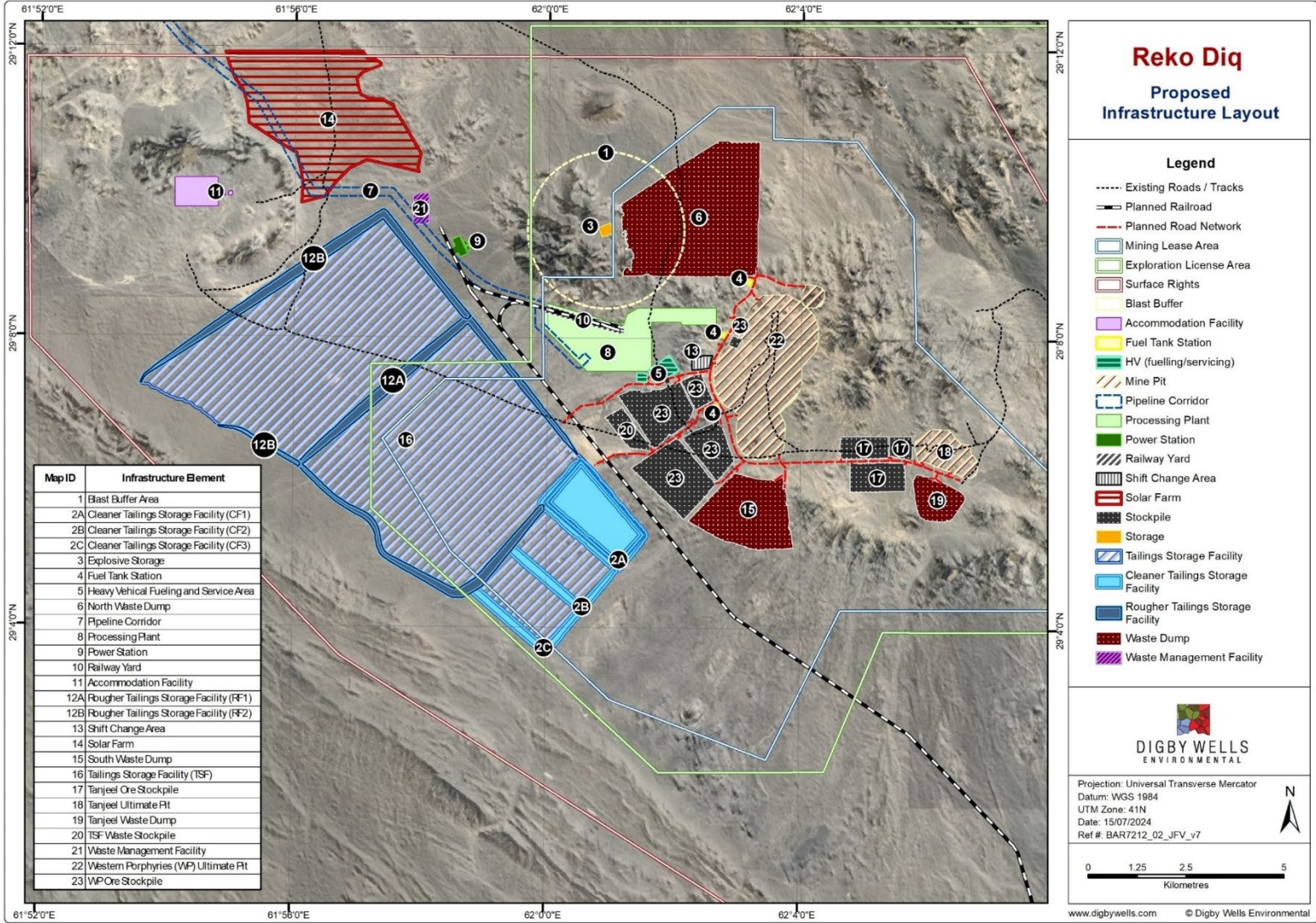


Exhibit 2.2: Reko Diq Spatial Extent and Transport Routes (Rail Transport Route and Road Transport Route)

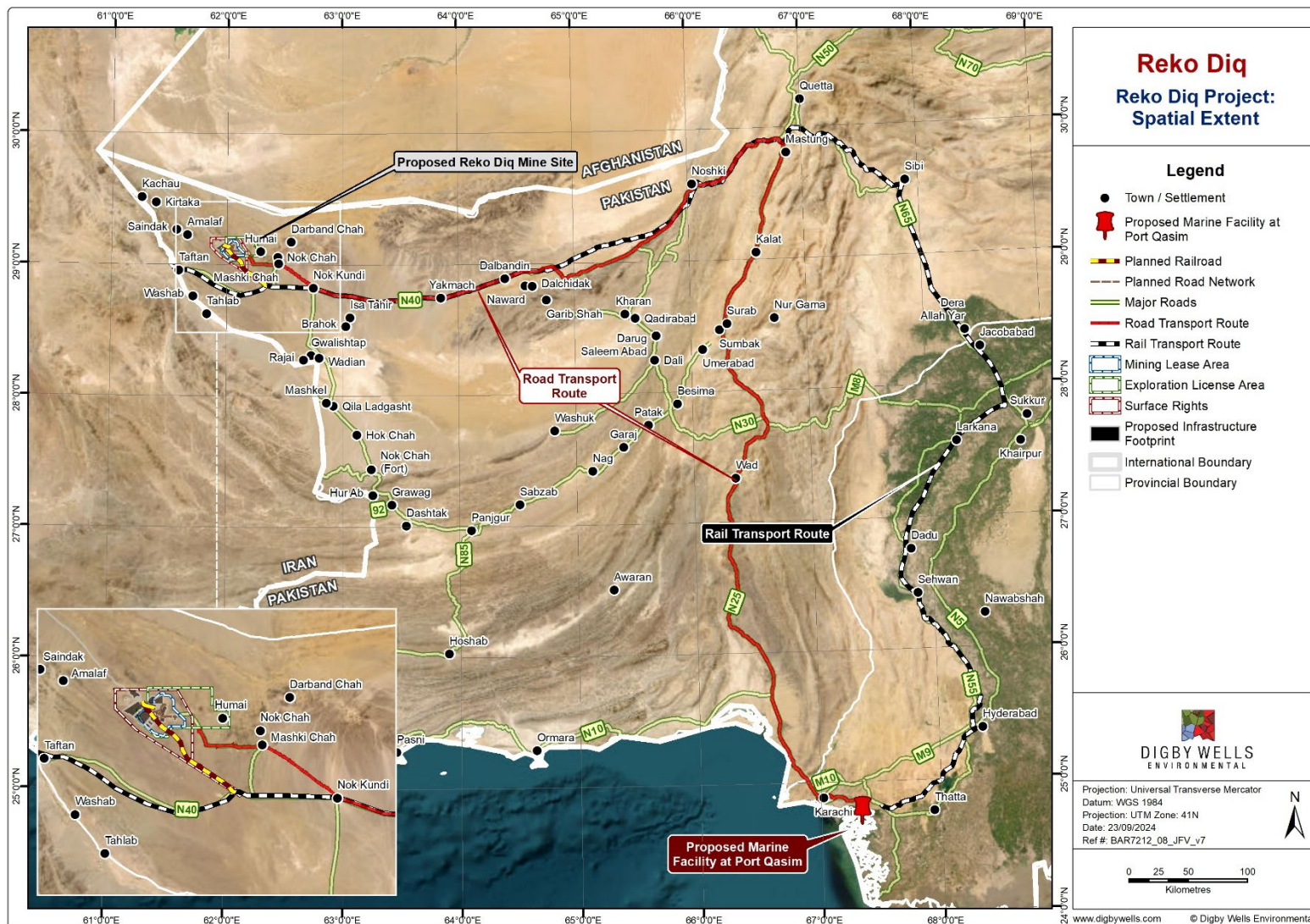


Exhibit 2.3: Proposed Rail Yard Layout at Port Qasim

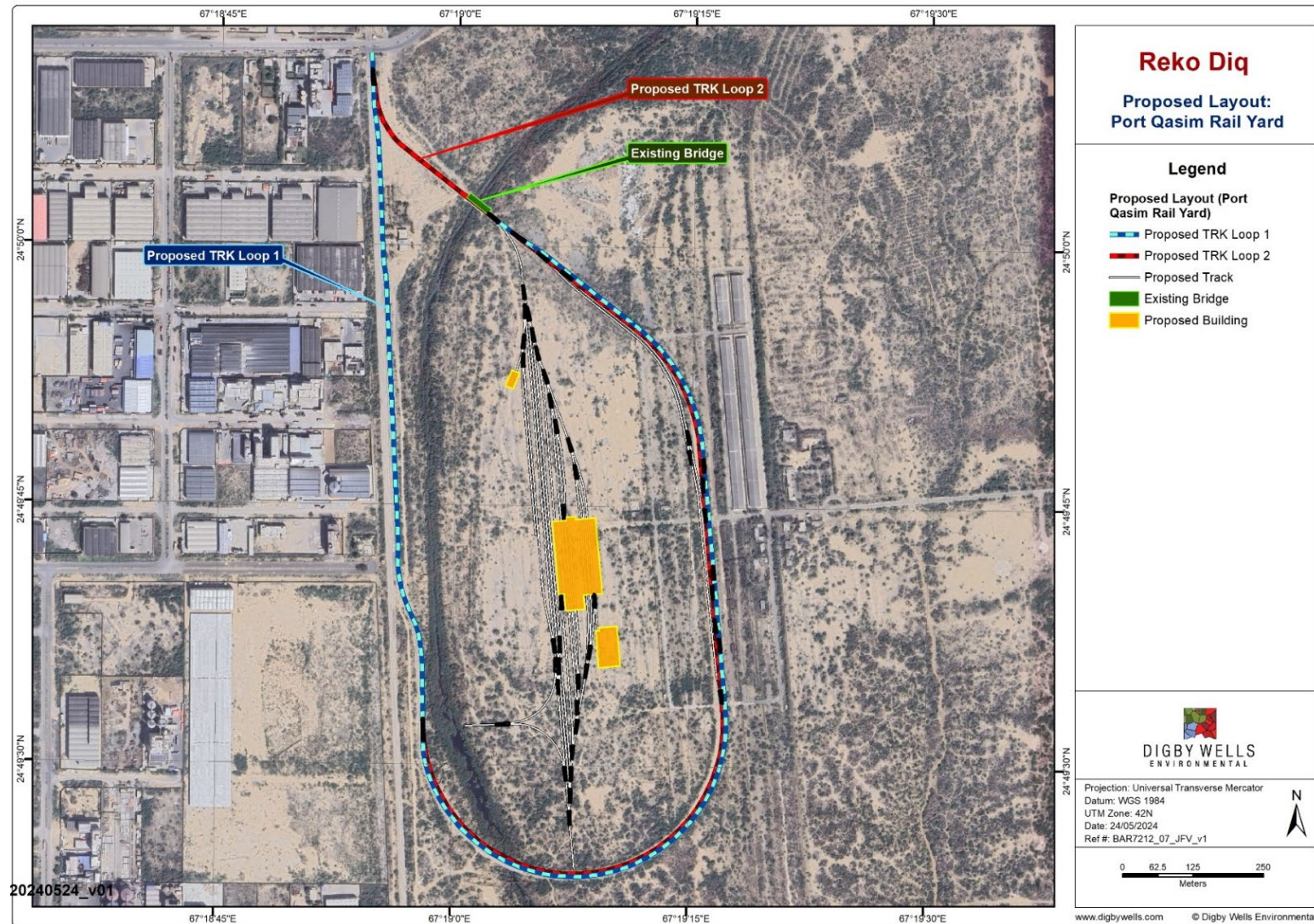
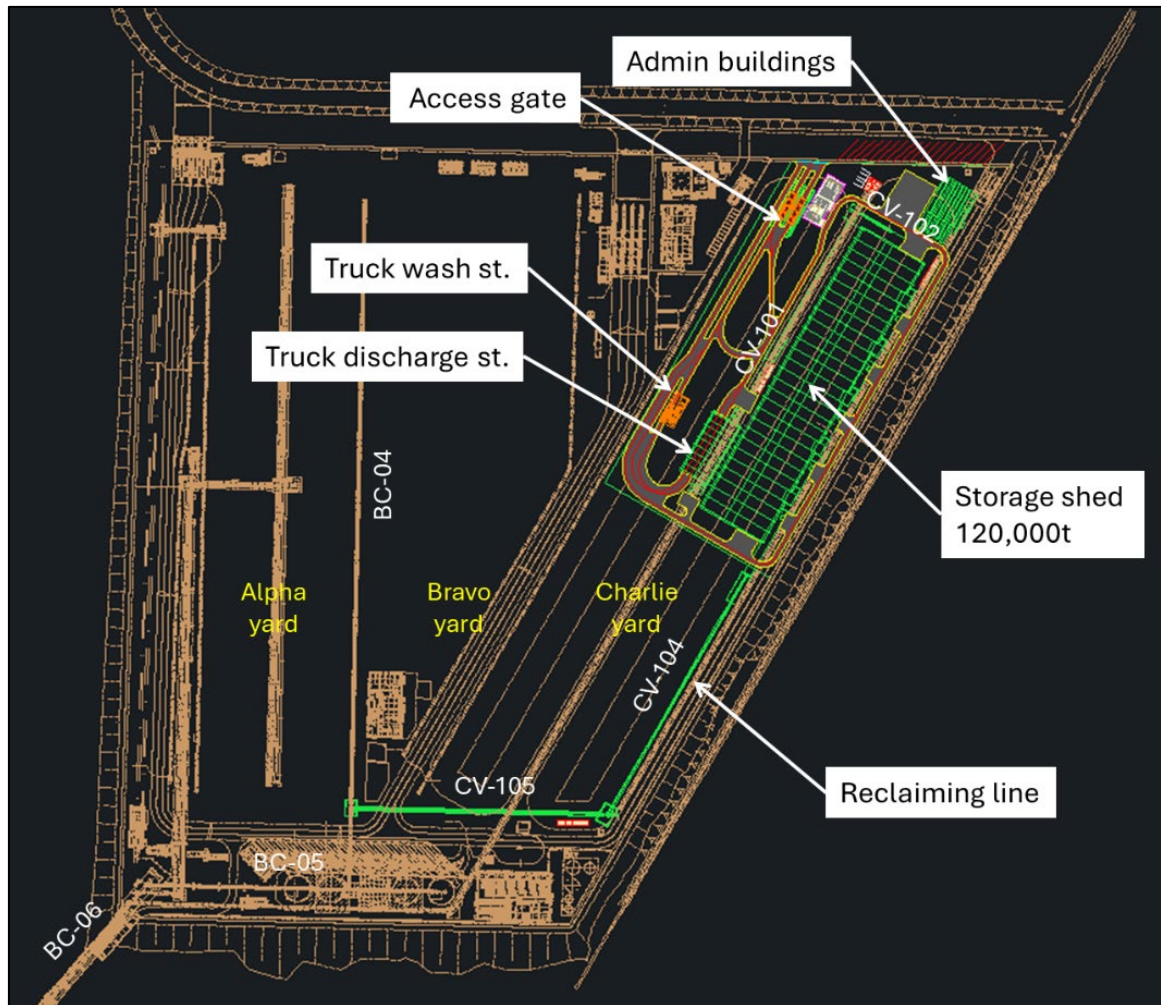


Exhibit 2.4: Layout of Concentrate Facilities at PIBT at Port Qasim



3. Legislative and Regulations Framework

Exhibit 3.1 provides the list of applicable legislations, guidelines and standards which have been used as reference for assessment of the ambient air quality.

Exhibit 3.1: Applicable Legislations and International Guidelines

<i>Legislation or Guideline</i>	<i>Description and Relevance</i>
Provincial and National Legislations	
National Environmental Quality Standard, 2000*	The National Environmental Quality Standards (NEQS) prescribe the limits for ambient concentrations of pollutants for different averaging periods. The NEQS also provide limits for exhaust emissions from diesel generators and motor vehicles (both diesel and motor gasoline) which the Project. The Project will have to ensure that the exhaust emissions from all of the construction and operations phase equipment remain within the limits prescribed in NEQS.
International Guidelines and Standards	
International Finance Corporation (IFC) Performance Standard (PS) 3 – Resource Efficiency and Pollution Prevention	Although IFC PS 3 does not directly prescribe the limits for ambient air quality, the Project will be required to ensure that all the activities during construction, operations, and decommissioning phase are aligned with the requirements set forth in this PS. This will enable the Project to ensure that resources are utilized in an efficient manner to reduce air emissions and prevent pollution in the area of influence.
IFC General Environmental Health, and Safety (EHS) Guidelines, 2007	The IFC General EHS Guidelines prescribe limits for ambient concentrations of pollutants for different averaging periods. IFC General EHS Guidelines also provide measures to ensure that the construction and decommissioning are carried out in such a manner that the resultant impacts on the nearby receptors are reduced.
IFC EHS Guidelines for Mining	The EHS Guidelines for Mining are applicable to underground and open-pit mining, alluvial mining, solution mining, and marine dredging. Therefore, the Project will ensure that the management requirements for air quality outlined in these guidelines are complied with to reduce impacts of air quality of the region.

*At the time of this writing, the Balochistan Environmental Quality Standards, 2020 were in the draft phase and their formal notification was awaited. Therefore, according to Section 42 sub-section 5 of the Balochistan Environmental Protection Act, 2012, the NEQS will remain applicable until the BEQS are formally notified. When the implementation of BEQS will be notified, the NEQS will be repealed within the provincial jurisdiction of the Balochistan province and projects will be obligated to conform with the limits prescribed in the BEQS.

4. Methodology for Data Collection and Impact Assessment

This section provides the methodology followed for collection of baseline air quality data and impact assessment for the Reko Diq Mine Site, Road Transport Route, and Rail Transport Route.

4.1 Overview of the Study Area

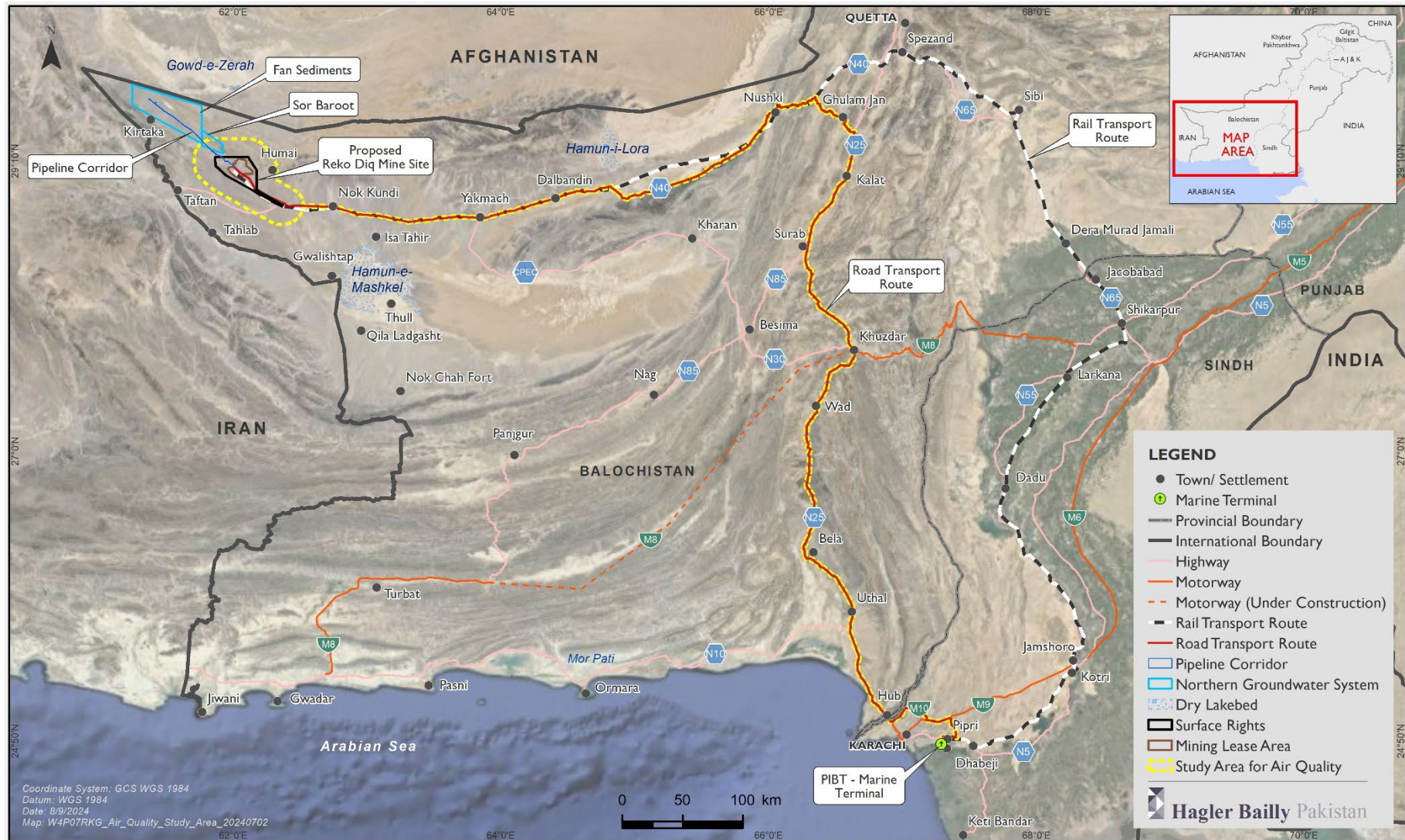
A Study Area was delineated to determine the scope for baseline data collection and impact assessment based on spatial extent of potential impacts on air quality, previous experience in air modelling in similar project settings, and the location of sensitive receptors. **Exhibit 4.1** provides the map of Study Area. The rationale for selection of sampling locations is elaborated in **Section 4.3.1**.

The air quality sampling was not conducted at the Northern Groundwater System. The impacts from Project activities in this area are considered to be negligible.

Air quality sampling along the Rail Transport Route was not conducted. Although the railway track is close to human dwellings at several locations, the Project's impacts to baseline air quality along the already utilised railway line are anticipated to be negligible.

Air quality sampling was also not conducted at Port Qasim. As Port Qasim is a designated industrial estate, its air quality is already severely degraded and the Project is not expected to have any change on existing air quality at this location.

Exhibit 4.1: Map of Study Areas along Reko Diq Mine Site and Project Components



4.2 Scheduling of Data Collection

The baseline data was collected through field surveys to assess the air quality conditions within the Study Area. The field surveys were carried out at the Project facilities in the Balochistan province. The primary data was collected using pre-designed forms and monitoring equipment. The laboratory results also provide the description of primary data collection including the date, time, location, and duration of monitoring. These results are attached as **Appendix D** of this specialist study. To ensure accuracy, quality control samples were also collected where required. The field surveys were carried out in multiple rounds as follows:

- ⌚ *Round 1:* The surveys completed under this round, referred to as ‘2020 Surveys’, were carried out between August 24 - 27, 2020. The information collected in this round was reported in a previous ESIA completed for the Tanjeel pit and included data related to the air quality at the proposed Reko Diq Mine Site and surrounds.
- ⌚ *Round 2:* The surveys completed under this round as part of the Reko Diq Mining Project ESIA, referred to as ‘2023 Surveys’, were carried out between August 15, 2023 to September 10, 2024. The monitoring surveys during this round included ambient air quality measurements using passive air sampling technique for gaseous pollutants Oxides of Nitrogen (NO₂), Sulphur Dioxide (SO₂), and Ozone (O₃) at the Reko Diq Mine Site. The passive air sampling was carried out between October 24, 2023 and April 15, 2024. During the Round 2, active air sampling was also conducted for collecting data of Particulate Matter (PM₁₀ and PM_{2.5}) concentrations at the Reko Diq Mine site. This activity was carried out between August 15, 2023 to September 10, 2024. In addition, onsite meteorological data, with parameters, such as wind speed and direction, temperature, precipitation, and relative humidity etc. were collected for similar period, at the Reko Diq Mine Site.
- ⌚ *Round 3:* The surveys completed under this round, referred to as ‘2024 Surveys’, were carried out between October 21 - 27, 2024. The data collection during these surveys included particulate matter (PM₁₀ and PM_{2.5}) sampling at the Mine area and in Humai settlement.

Exhibit 4.2 provides the description of sample collection along with the description of sampling technique. A detailed description of the sampling process along with the associated limitations are provided in **Section 4.6**.

4.3 Collection of Air Quality Data

This section provides an overview of the air quality sampling locations, the methodology followed, and the equipment used for collection of baseline data.

4.3.1 Air Quality Sampling Locations

The air quality sampling was conducted at 5 locations in Round 1 and Round 2 to assess the air quality at various Project Components.

These locations were selected based on the prevailing wind conditions to account for the pollutant source and potential receptors. **Exhibit 4.2** provides description of air quality

sampling locations in different rounds of the survey and their rationale for selection. **Exhibit 4.3** provides the map of air quality sampling locations.

Air quality sampling was not conducted at the Northern Groundwater System, Rail Transport Route, and Port Qasim. **Section 4.1** provides the basis of exclusion of air quality sampling along these components.

4.3.2 Methodology for Sampling of Air Quality

The air quality was sampled using both active and passive sampling techniques. The subsequent sub-sections provide a brief description of the air quality sampling techniques.

Active Air Quality Sampling

Active air quality sampling during Round 1 was conducted using ECO Environmental PRAXIS/OPCUBE which is an air quality monitor used for continuous monitoring of Particulate Matter (PM₁₀ and PM_{2.5}), and gaseous pollutants (NO₂ and SO₂) installed by RDMC. PRAXIS/OPCUBE has an Alphasense Optical Counter for PM₁₀ and PM_{2.5} which has ultra-low noise circuitry for maximizing repeatability of electrochemical sensing. The equipment uses high frequency sampling with variable sampling frequency of up to 30 samples per minute. During the course of the sampling period, the equipment was mounted at a height of 2.5 m above the ground level, to minimize surface disturbances, at a sampling rate of 4 samples per minute over the monitoring duration starting from October 1, 2023 and terminating at April 15, 2024.

During the Round 3, particulate matter was sampled using Airmetrics MiniVol Portable Air Samplers. This equipment draws an air sample through an inlet by a vacuum pump at a fixed flow rate (~5.0 L/min). The sampling is normally carried out for 24-hours duration. The particulates are filtered using an impactor and collected on filter paper, which is dried and weighed after the sampling to obtain the weight of particulates in the sampled volume of air.

A weather station was also installed in conjunction with the air quality monitoring station to record key weather parameters which can potentially impact the recorded concentrations of PM₁₀ and PM_{2.5}. The weather parameters measured included wind speed and direction, precipitation, temperature, relative humidity, and air pressure.

Exhibit 4.4 provides the photographs of active air quality sampling at location A1-23.

Exhibit 4.2: Air Quality Sampling Locations and their Rationale of Selection

<i>ID</i>	<i>Location</i>	<i>Project Component</i>	<i>Coordinates</i>	<i>Time of Survey</i>	<i>Monitoring Round</i>	<i>Pollutants Sampled</i>	<i>Rationale for Site Selection and Sampling Equipment Used</i>
A1-20	Mine area	Reko Diq Mine Site	29°08'52.40"N 62°06'49.00"E	October 06, 2020 to October 22, 2020 (~2 weeks)	Round 1	♦ SO₂ ♦ NO₂	To assess the baseline ambient air quality of the settlement north of the proposed Reko Diq Mine Site before Project activities. This settlement is now moved to Humai and only abandoned structures are left there (upwind of Project facilities). The sampling of SO₂ and NO₂ at this location was carried out using diffusion tubes. Section 4.3.2 describes the detailed methodology of air quality data collection.
A3-20	Humai Settlement	Reko Diq Mine Site	29°04'58.80"N 62°18'35.90"E	October 06, 2020 to October 22, 2020 (~2 weeks)	Round 1	♦ SO₂ ♦ NO₂	To assess the baseline ambient air quality of the settlement before Project (downwind of Project facilities) The sampling of SO₂ and NO₂ at this location was carried out using diffusion tubes. Section 4.3.2 describes the detailed methodology of air quality data collection.
A1-23	Mine area	Reko Diq Mine Site	29°08'21.60"N 62°06'47.20"E	Active Air Quality Sampling: August 15, 2023 to September 10, 2024 Passive Air Quality Sampling: October 24, 2023 to April 15, 2024	Round 2	♦ PM₁₀ ♦ PM_{2.5} ♦ NO ♦ NO₂ ♦ NO_x ♦ SO₂ ♦ O₃	To assess the baseline ambient air quality at the proposed Reko Diq Mine Site. At this location, PM₁₀ and PM_{2.5} were sampled following the active air quality sampling approach using ECO Environmental PRAXIS/OPCUBE air quality monitor. The sampling of gaseous pollutants including SO₂, NO, NO₂, NO_x, and O₃ at this location was carried out using diffusion tubes. Section 4.3.2 describes the detailed methodology of air quality data collection.

<i>ID</i>	<i>Location</i>	<i>Project Component</i>	<i>Coordinates</i>	<i>Time of Survey</i>	<i>Monitoring Round</i>	<i>Pollutants Sampled</i>	<i>Rationale for Site Selection and Sampling Equipment Used</i>
A2-23	Humai Settlement	Reko Diq Mine Site	29°05'44.00"N 62°17'37.80"E	October 24, 2023 to April 28, 2024*	Round 2	♦ NO ♦ NO₂ ♦ NO_x ♦ SO₂ ♦ O₃	To assess the baseline ambient air quality of the settlement east of the proposed Reko Diq Mine Site before Project activities (downwind of Project facilities).
A1-24	Mine area	Reko Diq Mine Site	29°08'21.60"N 62°06'47.20"E	October 23, 2024 to October 24, 2024 (24-hours)	Round 3	♦ PM₁₀ ♦ PM_{2.5}	To assess the baseline ambient air quality of the Mine area of the proposed Reko Diq Mine Site before Project activities.
A2-24	Humai Settlement	Reko Diq Mine Site	29°05'44.00"N 62°17'37.80"E	October 21, 2024 to October 23, 2024 (~2 days)	Round 3	♦ PM₁₀ ♦ PM_{2.5}	To assess the baseline ambient air quality of the settlement before Project activities at the nearest sensitive receptor.
A2-20	Nok Kundi	Road Transport Route	28°49'23.00" N 62°44'25.30" E	October 06 to October 22, 2020 (~2 weeks)	Round 1	♦ SO₂ ♦ NO₂	To assess the baseline of the nearest major town. The sampling of SO ₂ and NO ₂ at this location was carried out using diffusion tubes. Section 4.3.2 describes the detailed methodology of air quality data collection.

The sampling locations were named as AX-Y to depict sampling location and year of sampling. In this ID, 'X' presents the air quality sampling location and 'Y' presents the year of sample collection. An ID of A1-20 presents that the sample was collected at location A1 in year 2020.

Air Quality Sampling in Round 1 was conducted in 2020 as part of the 2020 ESIA (HBP, 2020).

*During Round 2, the air quality sampling was carried out following passive air sampling technique over a period of 6 months. Diffusion tubes were installed for a period of 2-4 weeks each at selected locations. After completion of the recommended exposure period, each set was replaced by a new set for the upcoming exposure period. The exposed set of diffusion tubes was analysed following the methodology described in **Section 4.3.2**.

Exhibit 4.3: Study Area and Air Quality Sampling Locations

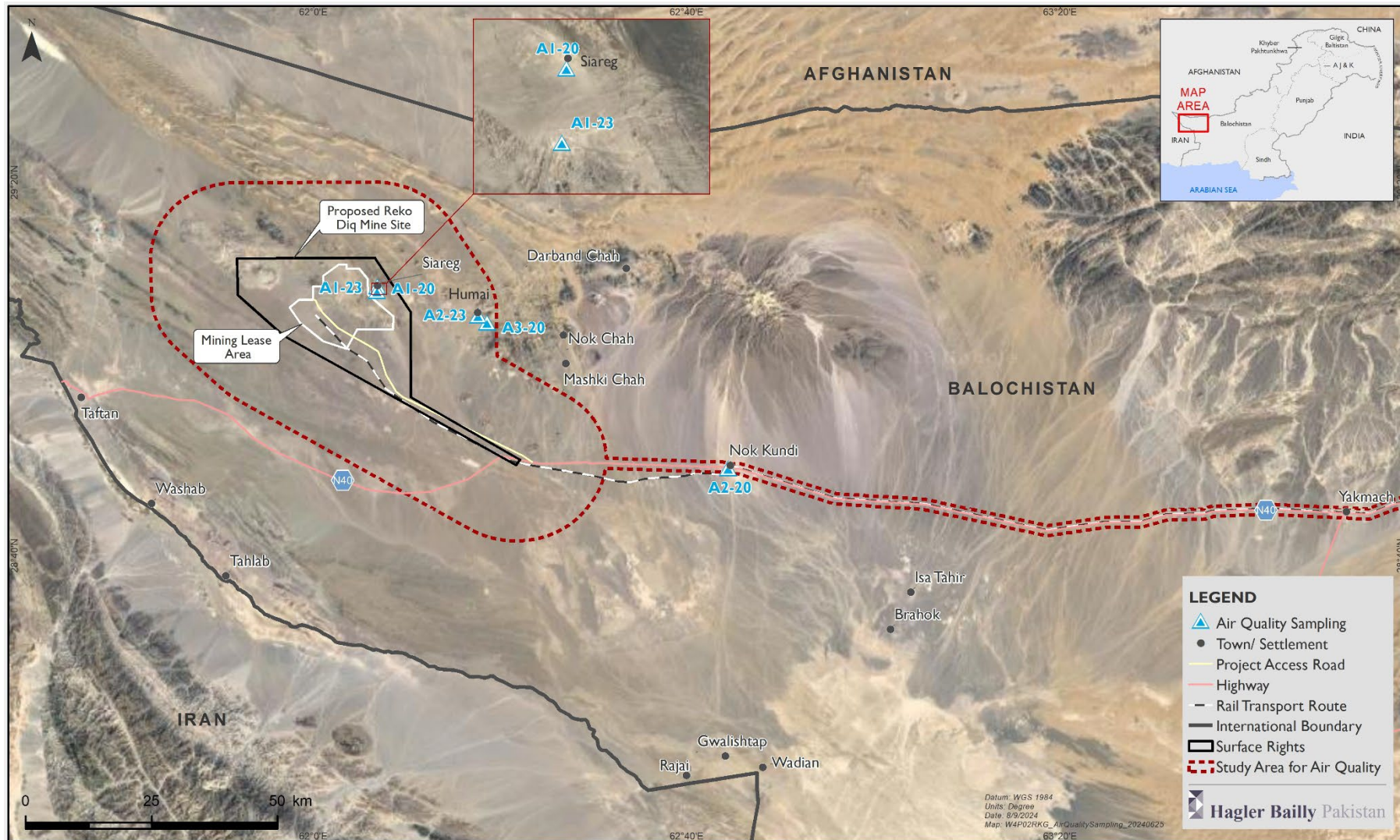


Exhibit 4.4: Active Air Quality Sampling – Reko Diq Mine Site



Active Air Quality Sampling and Weather Data Collection at A1-23 during Round 2



Active Air Quality Sampling at A1-24 during Round 3



Active Air Quality Sampling at A2-24 during Round 3



Weather data collection at A2-24 during Round 3

Passive Air Quality Sampling

Passive diffusion tubes were used for the measurement of gaseous pollutants. The diffusion tubes passively uptake pollutants via diffusion and are typically exposed for two to four weeks. The diffusion tubes were provided and analysed by Gradko International, an internationally recognized and United Kingdom Accreditation Service (UKAS) accredited laboratory. The list of parameters analysed using the passive diffusion tubes along with the method of analysis is provided below.

- ☞ NO₂ was analysed using ultraviolet/visible spectroscopy (UKAS Number: GLM7)
- ☞ SO₂ was analysed using ion chromatography (UKAS: Number GLM1)

- ⑥ O₃ concentrations were quantitatively determined by Ion Chromatography with reference to a calibration curve derived from the analysis of standard nitrate solutions (UKAS: Number GLM2).

The following measures were considered for installation of diffusion tubes:

- ⑥ Open surface allowing free circulation of air around the tube, and
- ⑥ Installation height of at least about 2 to 4 meters to ensure free circulation of air.

One field duplicate sample was collected as quality control samples during sampling in 2020 and 2023 to ensure the absence of any contaminants in diffusion tubes that can affect the results.

Exhibit 4.5 provides the photographs of passive air quality sampling at the Reko Diq Mine Site during Round 1 and 2. **Exhibit 4.6** provides the photographs of passive air quality sampling conducted at Nok Kundi.

Exhibit 4.5: Photographs of Air Quality Sampling – Reko Diq Mine Site



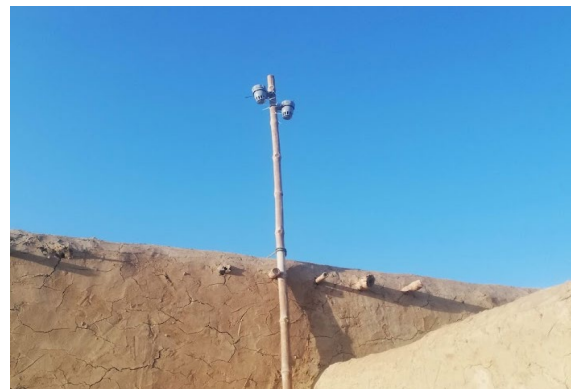
Diffusion tubes installed at A1-23



Diffusion tubes installed at A1-23



Diffusion tubes installed at A2-23



Diffusion tubes installed at A2-23



Diffusion tubes at A1-20



Diffusion tubes at A3-20

Exhibit 4.6: Photographs of Ambient Air Quality Sampling at Location A2-20 – Nok Kundi



4.3.3 Meteorological Data

A weather station was installed onsite in September 2023 to collect meteorological data. However, air dispersion modelling of criteria pollutants (Agency, 2010) requires data for a minimum of three year period to account for annual variations in weather patterns. Furthermore, the weather data being collected onsite does not cover secondary variables such as Bowen Ratio, albedo etc. required for air quality modelling, which can only be collected using satellite-based datasets. The meteorological dataset from Lakes Environmental for a three-year period from January 1, 2021, to December 31, 2023,

which is appropriate for modelling of air quality was therefore used as discussed in **Section 4.4.3**.

The Lakes Environmental dataset was compared with the data for wind speed and direction collected onsite to assess the similarity of the two datasets and to ascertain the validity of the satellite-based data for modelling purposes. As depicted in **Exhibit 4.7**, the Lakes Environmental dataset shows an R^2 of 0.6055 when compared with the wind speed data collected at the Reko Diq Mine Site for the comparable period (September 25, 2023 to November 17, 2023). Although the R^2 (coefficient of determination)¹ is somewhat low, the dataset depicts the peaks accurately and does not show altered peaks timings (see **Exhibit 4.8**). **Exhibit 4.9** also indicates that the wind directions recorded by the onsite weather stations and those reproduced by Lakes Environment remain relatively similar (between northwest and northeast).

The comparison of other parameters such as temperature and precipitation is not made as these parameters are computed in rather direct manner via level 1 or level 2 datasets² with limited interference of the induced atmospheric phenomena during the computations (Donat et al., 2014). Therefore, variance in these parameters with respect to in situ measurements is expected to be low as compared to the level 3 computed variables such as wind speeds, directions, etc. Therefore, primary variables including temperature and precipitation are expected to have lower biases and do not usually require correction.

Based on this analysis, the meteorological dataset from Lakes Environmental does not significantly deviate from the onsite weather station data and was used for modelling of air quality. A meteorological baseline including assessment of trends in temperature, precipitation, and relative humidity are provided in **Section 5.1**.

¹ In statistical analysis, R^2 ranges between 0 and 1 and is a measure to analyse the variance of a dependent variable with respect to an independent variable.

² In the meteorological datasets, levels define the level of processing in the dataset. Level 1 shows the raw imagery captured by the sensors in various bands. Level 2 presents a dataset which has been pre-processed for further computations or analysis.

Exhibit 4.7: Changes in Wind Speed of Lakes Environmental with respect to Onsite Weather Station (September 25, 2023 to November 17, 2023)

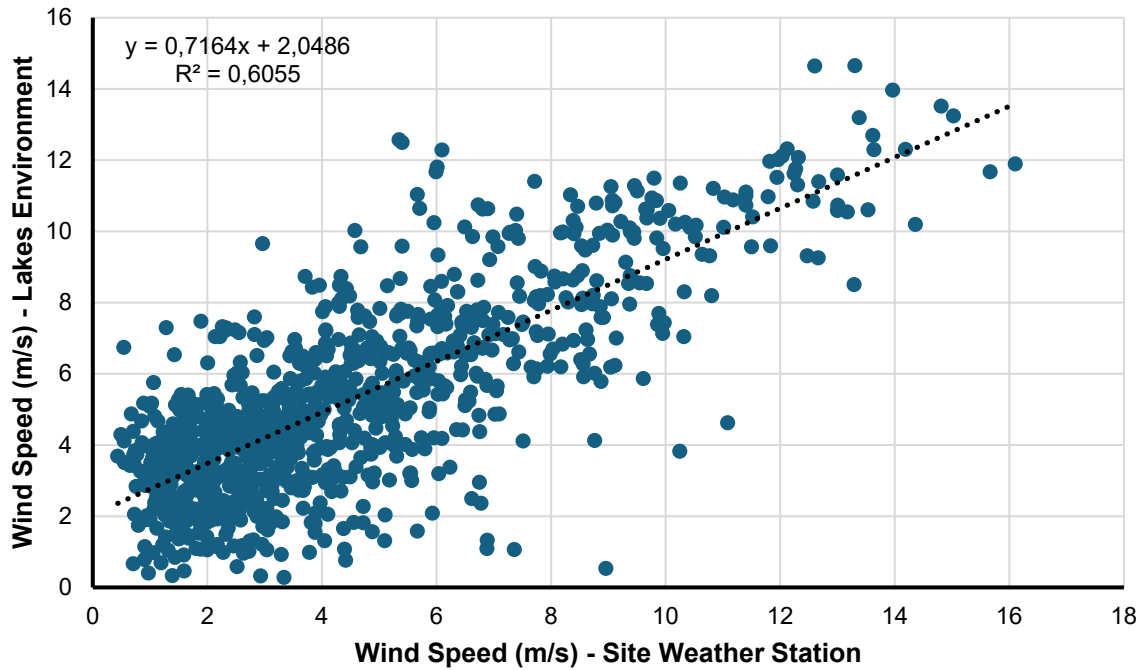


Exhibit 4.8: Trend Analysis of Wind Speeds – Lakes Environment v/s Onsite Weather Station

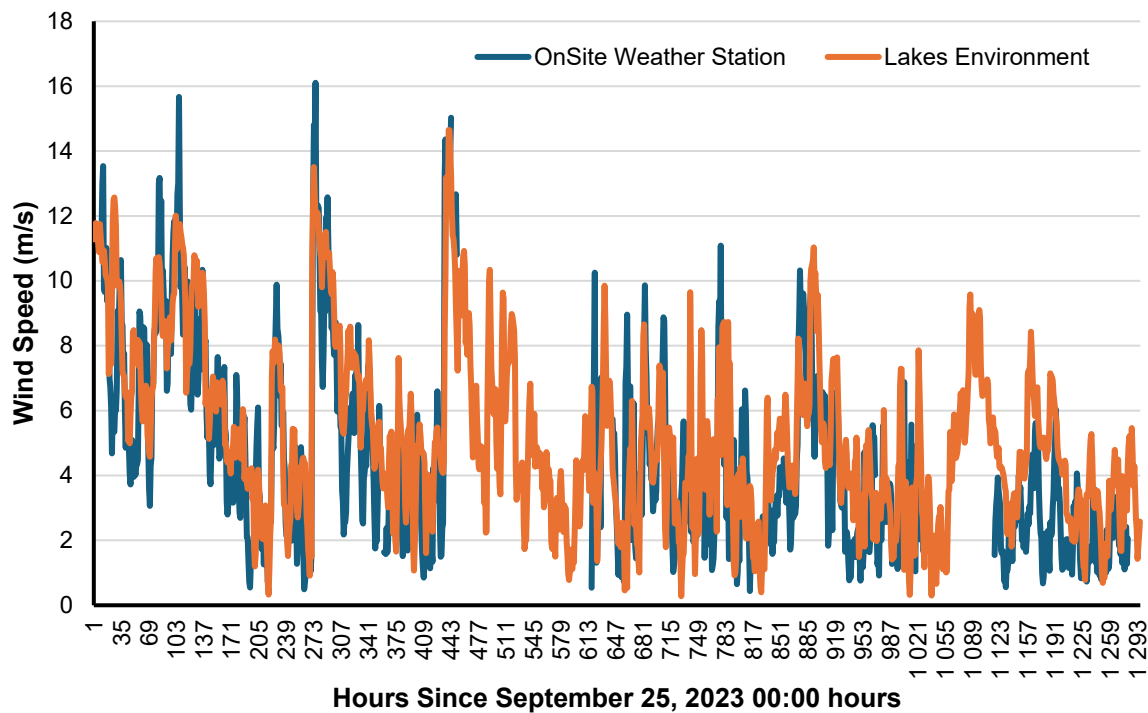
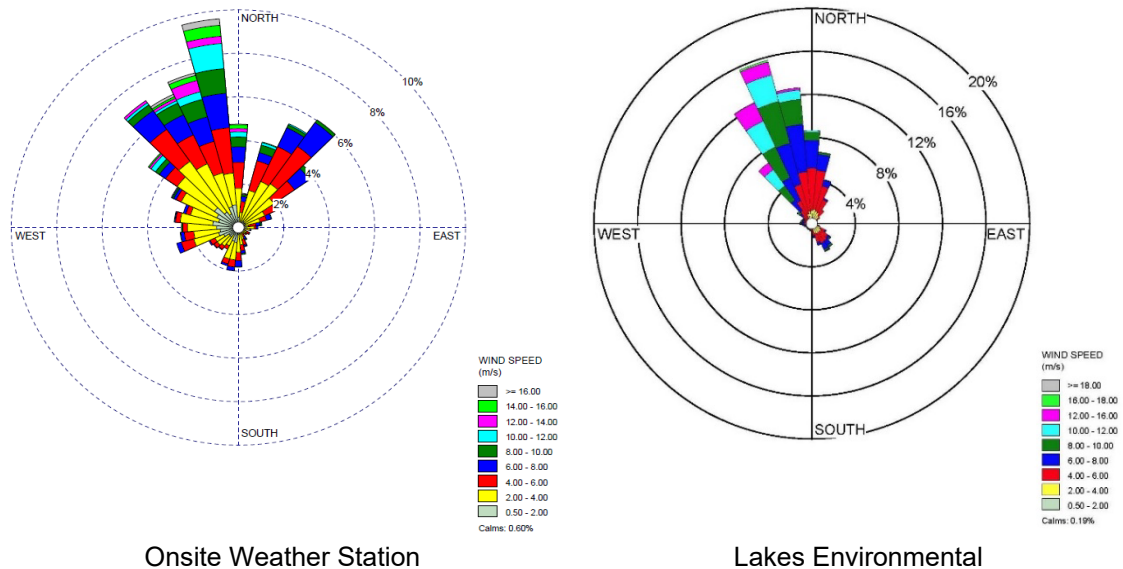


Exhibit 4.9: Comparison of Wind Directions – Onsite Weather Station v/s Lakes Environmental (September 25, 2023 to November 17, 2023)



4.4 Air Dispersion Modelling

This section provides the approach followed for the deterministic modelling of air dispersion during Project operations. Key model parameters along with the boundary conditions which set forth the basis of this air dispersion modelling have also been described in detail in the subsequent subsections. A detailed methodology of the air dispersion modelling is provided in **Section 3 of D5AM13RKI – Air Dispersion Modelling Report** which is attached as **Appendix A**.

4.4.1 Model Description

For this study, Lakes Environmental AERMOD View 12.0.0 was utilized. This software provides a compact platform for modelling air dispersion via combining AERMOD, AERMET, and AERMAP in a single tool. This platform provides a User Interface (UI), key limitation faced in the open-source versions, thus enabling the modelers to conduct simulations in a single platform with ability to look at the graphical outputs.

4.4.2 Sensitive Receptors

Human populations are expected to be most susceptible to air emissions. Most of the human dwellings were located at relatively larger distances from the Reko Diq Mine Site (see **Exhibit 4.10**).

Exhibit 4.10: Sensitive Receptors near Reko Diq Mine Site

<i>Settlement Name</i>	<i>Estimated Population</i>	<i>Distance from Open-Pit (km)</i>	<i>Direction</i>
Onsite Accommodation Camp	5,832	8.9	West
Humai Settlement	900	30	East

<i>Settlement Name</i>	<i>Estimated Population</i>	<i>Distance from Open-Pit (km)</i>	<i>Direction</i>
Mashki Chah Settlement	160	41	East
Nok Chah Settlement	100	39	East
Durband Chah Settlement	1,550	50	Northeast
Nok Kundi Town	15,000	77	Southeast
Amalaf Settlement	125	40	Northwest
Saindak Settlement	570	50	Northwest

Source: H. B. P. HBP (2024)

As human dwellings are located more than 30 km from the Reko Diq Mine Site (see **Exhibit 4.10**), the emitted pollutants will be dispersed to relatively negligible concentrations before reaching these settlements. However, there are exceptions: the Humai settlement and the onsite accommodation camp for employees, both of which are closer to the site. Due to their proximity, these locations can be more susceptible to air emissions. Therefore, they were selected as sensitive receptors for the purpose of air dispersion modelling.

4.4.3 Model Configuration

The air dispersion model was simulated using AERMOD v23132. **Exhibit 4.11** provides a detailed description of the model configuration along with the description of the pre-processors.

Exhibit 4.11: Configuration of Air Dispersion Model

<i>Model Detail</i>	<i>Description</i>
Version	AERMOD v23132
Model type	Gaussian Plume Model Gaussian plume treatment in horizontal and vertical directions for stable atmospheres. Non-Gaussian treatment in vertical for unstable atmospheres.
Types of sources modelled	♦ Point ♦ Line ♦ Area ♦ Area Polyline ♦ Open pit
Meteorological data	Lakes Environmental Pre-Processed AERMOD Ready Data for 3-years between 2021 and 2023
Digital Elevation Model (DEM)	♦ Data source: NASA Shuttle Radar Topography Mission (SRTM) Version 3.0 (SRTM Plus) - 30m" ♦ Datum: World Geodetic System 1984 (WGS84)
Receptor grid	♦ Grid type: Uniform cartesian receptor grid ♦ Number of receptors in X direction: 135 ♦ Number of receptors in Y direction: 110

<i>Model Detail</i>	<i>Description</i>
	♦ Receptor spacing: 400 m ♦ Total number of receptors grids: 14,850
Modelled pollutants	♦ Particulate matter (PM₁₀ and PM_{2.5}) ♦ Nitrogen dioxide (NO₂) ♦ Sulphur dioxide (SO₂)

4.4.4 Emission Sources

The modelled emissions sources included the following:

- ☞ Mobile emissions from vehicles and mining equipment
- ☞ Primary crushing
- ☞ Secondary crushing
- ☞ Mill area (including HPGR crusher)
- ☞ Haul roads from open pit to waste rock dumps
- ☞ Pit operations (loading and unloading emissions of Run-of-Mine ore)
- ☞ Drilling and blasting
- ☞ Material handling in waste rock dumps
- ☞ Wind erosion from waste rock dumps, stockpiles, and tailings storage facility
- ☞ HFO power plant, and
- ☞ Incinerator for heavy fuel oil sludge management

The emission rates for this air dispersion modelling were estimated using the emission rates developed by U. S. E. P. A. USEPA (2006). For mobile emissions, the emission rates for non-road diesel equipment developed by USEPA (1998) were used for estimating emission rates.

In terms of TSF emissions, the tailings from processing of the ore can be composed of fine particles. These tailing are subjected to crust formation due to high evaporation rate in the region, causing atmospheric exposure of the fine particles. Emissions from tailing can be triggered due to several disturbances such as cracks due to high temperatures, material handling in TSF etc., and are subject to number of disturbances in a year. Therefore, the emissions estimation procedures for wind erosion from stockpiles (USEPA, 2006) were taken as reference to estimate emissions from TSF. This procedure takes emissions from TSF as an area source with total emission rate depending on the exposed area and threshold friction velocity of the particles.

4.4.5 Emission Control Measures

Exhibit 4.12 provides the list of control measures and their efficiency for reducing air emissions from the mining operations at Reko Diq Mine Site.

Exhibit 4.12: Emission Control Measures for Mining Operations

<i>Measure</i>	<i>Efficiency</i>	<i>Description</i>	<i>Source</i>
Dust control measures	0-99.5%	Enclosures of the open equipment, installation of fabric filters, use of mist sprays, as deemed feasible for operations.	Zimwara, Mugwagwa, and Chikowore (2012) Breedveld, Timellini, Casoni, Fregni, and Busani (2007)
Wet operations	0-100%	Wet operations in open areas such as TSF	Neuman, Boulton, and Sanderson (2009)
Graveling	20-40%	Graveling of haul roads for reduction of emissions during ore transportation.	Edvardsson (2009)
Progressive closures	0-100%	Progressive closures of cleaner cells of TSF using waste rock to prevent dust generation and release of other pollutants from the impoundment.	Neuman et al. (2009)

Efficiency of the control measure depends on Project's capacity of implementation of the control measures. If strict enforcement is ensured, the Project can achieve maximum efficiency in each process.

4.4.6 Modelling Scenario

The following scenarios have been modelled for the Reko Diq Mine Site. The emission rates in both scenarios have been taken such that they represent the actual Project case emissions. In areas where implementation of control measures is not practical, this scenario assumes uncontrolled emissions from such sources e.g., mining and ore handling in open-pits, waste management in waste rock dumps etc.

- ☞ *Scenario 1 – Ultimate Footprint:* This scenario simulates emissions assuming adaptation of control measures suggested in **Section 4.4.5**. This scenario presents the ultimate footprint of the Project upon completion of the LOM and presents maximum emissions from each source. The pollutants modelled in this scenario include PM₁₀, PM_{2.5}, NO₂, and SO₂.
- ☞ *Scenario 2 – Year 2050:* This scenario presents Year 2050 or Stage 22 of the TSF at which TSF will reach 50% of its designed capacity. To ensure alignment with actual Project conditions in year 2050, this scenario assumes length of haul roads to be 7.56 km instead of 10 km of its ultimate length and does not include emissions from Tanjeel open-pit or from any of its facilities, except wind erosion at its waste rock dump.³ Particulate matter (PM₁₀ and PM_{2.5}) are modelled in this scenario.⁴

³ Operations at Tanjeel are expected to get initiated in year 2037 and conclude in 2046, therefore, contribution from its facilities is not expected to last till year 2050, except from wind erosion.

⁴ Gaseous pollutants are excluded from this scenario as their emissions rates are expected to remain somewhat similar with limited variation after year 2033 till completion of LOM. Therefore, emissions of gaseous pollutants modelled in Scenario 1 will be somewhat similar in Scenario 2 and do not require additional modelling.

4.5 Assessment of Project Level Impacts

This section describes impact assessment methodology used for the Project ESIA. Assessment of impacts for the ESIA involves two phases, namely impact identification and impact assessment. Impact identification was performed using an input-output model, whereby Project activities are superimposed onto the environmental and social baseline characteristics of the project area to generate assessment outputs in the form of instances of potential positive or negative biophysical and socio-economic changes in the environment.

A numerical assessment of the significance of potential Project-induced impacts was done as follows:

$$\text{Significance} = \text{Consequence} \times \text{Probability}$$

Whereby

$$\text{Consequence} = \text{Type of Impact} \times (\text{Intensity} + \text{Spatial Scale} + \text{Duration})$$

And

$$\text{Probability} = \text{Likelihood of an Impact Occurring}$$

In addition, the formula for calculating consequence:

$$\text{Type of Impact (Nature)} = +1 \text{ (Positive Impact) or } -1 \text{ (Negative Impact)}$$

The weight assigned to the various parameters for positive and negative environmental, social and cultural heritage impacts is provided for in the formula and is presented in **Exhibit 4.13** with the impact significance ratings described in **Exhibit 4.14**.

Exhibit 4.13: Impact Assessment Parameter Ratings

Rating	Intensity		Spatial scale	Duration (duration of an impact without mitigation)	Probability (over the life of the project)
	Negative Impacts (Type of Impact = -1)	Positive Impacts (Type of Impact = +1)			
5	Significant impact on the environment. Irreparable and irreplaceable damage to highly valued species, habitat or ecosystem. Persistent severe damage. Irreparable and irreplaceable damage to highly valued items of great cultural significance or complete breakdown of social order.	Significant improvement to livelihoods and living standards of a large percentage of population, as well as significant increase in the quality of the receiving environment.	<u>Global</u> Contribute to global impact	<u>Inter -Generational</u> >20 years	<u>Certain / Definite</u> There are sound evidence-based reasons to expect that the impact will definitely occur (90-100%)
4	Serious long-term environmental effects. Environmental damage can be reversed in less than a year. On-going serious social issues. Significant damage to structures / items of significance.	On-going and widespread positive benefits to local communities which improves livelihoods, as well as a positive improvement to the receiving environment. Average to intense social benefits to some people. Average to intense environmental enhancements.	<u>Regional</u> Will affect the entire province or region. A broad geographical area distinguished by similar features.	<u>Long term</u> 5-20 years	<u>Likely</u> The impact may occur (50-90%)
3	Moderate, short-term effects but not affecting ecosystem function. Rehabilitation requires intervention of external specialists and can be done in less than a month. On-going social issues. Damage to items of significance.	Average, on-going positive benefits, not widespread but felt by some.	<u>Sub-regional</u> Will affect the sub-regional / commune area e.g. district level/ areas within the region with similar features	<u>Medium term</u> 2 to 5 years	<u>Probable</u> Has occurred here or elsewhere and could therefore occur (20-50%)

Rating	Intensity		Spatial scale	Duration (duration of an impact without mitigation)	Probability (over the life of the project)
	Negative Impacts (Type of Impact = -1)	Positive Impacts (Type of Impact = +1)			
2	Moderate, short-term effects but not affecting ecosystem function. Rehabilitation requires intervention of external specialists and can be done in less than a month. On-going social issues. Damage to items of significance.	Average, on-going positive benefits, not widespread but felt by some.	<u>Local</u> Extending across the site and to nearby settlements. Sub-division of a district.	<u>Short term</u> Up to 2 years	<u>Unlikely</u> Has not happened yet but could happen once in the lifetime of the Project, therefore there is a possibility that the impact will occur (5-20%)
1	Minor effects on biological or physical environment. Environmental damage can be rehabilitated internally with/without help of external consultants. Minor medium-term social impacts on local population. Mostly repairable. Functions and processes not affected	Low positive impacts experience by very few of population.	<u>Site Specific</u> Limited to the site and its immediate surroundings.	<u>Immediate</u> Hours to weeks but less than 1 month	<u>Rare / improbable</u> Conceivable, but only in extreme circumstances and / or has not happened during lifetime of the Project but has happened elsewhere. The possibility of the impact materialising is very low as a result of design, historic experience or implementation of adequate mitigation measures (1-5%).

Exhibit 4.14: Probability Consequence Matrix

Probability	Significance																											
	5	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	15	20	25	30	35	40	45	50	55	60	65	70	75	
	4	-60	-56	-52	-48	-44	-40	-36	-32	-28	-24	-20	-16	-12	12	16	20	24	28	32	36	40	44	48	52	56	60	
	3	-45	-42	-39	-36	-33	-30	-27	-24	-21	-18	-15	-12	-9	9	12	15	18	21	24	27	30	33	36	39	42	45	
	2	-30	-28	-26	-24	-22	-20	-18	-16	-14	-12	-10	-8	-6	6	8	10	12	14	16	18	20	22	24	26	28	30	
	1	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	3	4	5	6	7	8	9	10	11	12	13	14	15	
		-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	3	4	5	6	7	8	9	10	11	12	13	14	15	
Consequence																												

Exhibit 4.15: Significance Threshold Limits

Score	Description	Rating
57 to 75	A very beneficial impact which may be sufficient by itself to justify implementation of the Project. The impact may result in permanent positive change.	Major (positive)
39 to 56	A beneficial impact which may help to justify the implementation of the Project. These impacts would be considered by society as constituting a major and usually a long-term positive change to the (natural and/or social) environment.	Moderate (positive)
20 to 38	An important positive impact. The impact is insufficient by itself to justify the implementation of the Project. These impacts will usually result in positive medium to long-term effect on the social and/or natural environment.	Minor (positive)
3 to 19	A small positive impact. The impact will result in medium to short term effects on the social and/or natural environment.	Negligible (positive)
-3 to -19	An acceptable negative impact for which mitigation is desirable but not essential. The impact by itself is insufficient even in combination with other low impacts to prevent the development being approved. These impacts will result in negative medium to short term effects on the social and/or natural environment. The impacts are reversible and will not result in the loss of irreplaceable aspects.	Negligible (negative)
-20 to -38	An important negative impact which requires mitigation. The impact is insufficient by itself to prevent the implementation of the Project but which in conjunction with other impacts may prevent its implementation. These impacts will usually result in negative medium to long-term effect on the social and/or natural environment.	Minor (negative)
-39 to -56	A serious negative impact which may prevent the implementation of the Project. These impacts would be considered by society as constituting a major and usually a long-term change to the (natural and/or social) environment and result in severe effects. The impacts may result in the irreversible damage to irreplaceable environmental or social aspects should mitigation measures not be implemented.	Moderate (negative)
-57 to -75	A very serious negative impact which may be sufficient by itself to prevent implementation of the Project. The impact may result in permanent change. Very often these impacts are immitigable and usually result in very severe effects. The impacts will be irreplaceable and irreversible should adequate mitigation and management measures not be successfully implemented.	Major (negative)

4.6 Assumptions, Exclusions, and Limitations

Key limitations related to data collection and impact assessment for this Specialist Report are listed below.

- ⑥ The Project had maintained a historic dataset of PM₁₀, and PM_{2.5} concentrations which was collected for three years between 2008 and 2010. This dataset is hereafter referred to as ‘Historic Dataset’. However, the temporal resolution of this Historic Dataset is relatively low, with measurements taken only 4 days per month. Due to its low temporal resolution, a correlation between wind speeds and

PM concentrations cannot be established. Furthermore, most of the measurement were taken during unstable wind conditions when average speed was more than 10 m/s. As the meteorological data depicts that the calm wind conditions (<6 m/s) occur for approximately 60% time in a year, this Historic Dataset cannot be used to establish air quality baseline. Furthermore, the analysis conducted in **Section 5.2.3** indicates that PM₁₀ and PM_{2.5} concentrations remain relatively stable during calm conditions when wind speeds are below 6 m/s, a phenomenon that could not be assessed using the Historic Dataset. Therefore, the PM₁₀ and PM_{2.5} concentrations recorded in year 2023 to 2024 are more appropriate and have been taken for establishing air quality baselines.

- ⑥ A comparison of the simulated background PM₁₀ and PM_{2.5} concentrations with historic data use in a previous ESIA (2010) cannot be made due to inconsistencies in the recorded concentrations. The Historic Dataset shows extremely low PM₁₀ and PM_{2.5} concentrations (<75 µg/m³) at some intervals when the wind speeds were over 20 m/s (72 km/hr.) without any precipitation. Formation of such conditions is highly unlikely due to desert conditions in upwind direction. High speed winds over 10 m/s can transport dust particles to longer distance, and can result in formation of a dust storm. Therefore, in consideration of such inconsistencies, a comparison against simulation background PM₁₀ and PM_{2.5} concentrations is not made for validation.
- ⑥ The PM₁₀ and PM_{2.5} concentrations recorded using the active monitoring approach had several discontinuities due to which a continuous timeseries cannot be established.
- ⑥ The Reko Diq Mine Site has a desert environment and expected to have elevated PM₁₀ and PM_{2.5} concentrations due to wind erosion in its upwind direction. Therefore, this location (A1-23) should capture lower PM₁₀ and PM_{2.5} concentrations during low-speed winds (<6 m/s). However, this dataset contained several instances when the recorded PM₁₀ and PM_{2.5} concentrations were relatively high and not aligned with the wind speeds. Based on detailed assessments carried out in **Appendix C**, most of these elevated PM₁₀ and PM_{2.5} concentrations were attributed to wind gusts which last for relatively shorter durations. Once the wind speed tends to calm, the particulates tend to remain suspended in the atmosphere due to lower horizontal mixing which causes high PM₁₀ and PM_{2.5} concentrations even during low-speed winds. A detailed assessment based on comparison of PM₁₀ and PM_{2.5} concentrations and associated wind speeds is provided in **Appendix C**.
- ⑥ The Project's onsite air quality monitoring station actively collects gaseous pollutant concentrations (see **Section 4.3.1**); however, this data was not used for developing baselines of NO₂ and SO₂. Instead, the results from passive sampling were used for this purpose. This is since the monitoring station was overestimating and producing high concentrations which is highly unlikely given the nature of Project area and no active emission sources in the upwind direction. The results from passive air sampling are indicative of the actual site conditions and hence used for developing baselines of gaseous pollutants.

5. Baseline Description

5.1 Meteorological Conditions

An overview of the meteorological conditions of a region is critical as it governs the dispersion of air pollutants within that region. According to the comparison of meteorological data from the onsite weather station and Lakes Environmental in **Section 4.3.3**, the two datasets show good correlation with similar peak timing. Therefore, the meteorological dataset of Lakes Environmental for a period of 3-years (2021-2023) is taken to prepare the meteorological baseline used for the air quality modelling.

Exhibit 5.1 through **Exhibit 5.3** provide the monthly temperature, precipitation, and relative humidity at the Reko Diq Mine Site and **Exhibit 5.4** illustrates the annual wind rose.

Overall, winter monsoon is the climatic driver of the region which is caused by westerly winds (also known as western disturbances) from the Tibetan Plateau. This winter monsoon remains active for a very short period, not lasting more than the one month i.e., January. The winter monsoon also causes a substantial variation in the diurnal temperature when the minimum temperatures can reach as low as -9°C. However, temperatures as low as this only persist for short periods with typical average temperatures in January remaining well above the frost point, at ~8°C. The weather in January can be characterized as windy conditions with a number of wet days, high relative humidity, and low temperatures.

In rest of the months, the area experiences a dry desert climate with high temperature and low relative humidity. The region experiences very limited contribution from the South Asian Summer Monsoon (SASM), a major climatic driver of the country. Typically, June, July, and August are the months during which low pressure system forms in the region. This low-pressure system results in relatively unstable atmospheric conditions, usually characterized with low relative humidity and high-speed winds, reaching to wind speeds of up to 18 m/s. Rainfall is extremely limited during this period, ranging between 0 mm and 6 mm per month.

The wind directions at the Reko Diq Mine Site mostly remain similar throughout the year with wind blowing predominantly from the northwest and north direction for ~80% of the time. However, minor winds of the frequency of ~3% also occur from the southeast direction. Winds during June, July, and August can be categorized as the high-speed winds during which most of the dust storms occur. The dust storms are also linked with low precipitation and high temperature, resulting in relatively quicker dispersion of the particulates.

Exhibit 5.1: Monthly Temperature (°C) at Reko Diq Mine Site

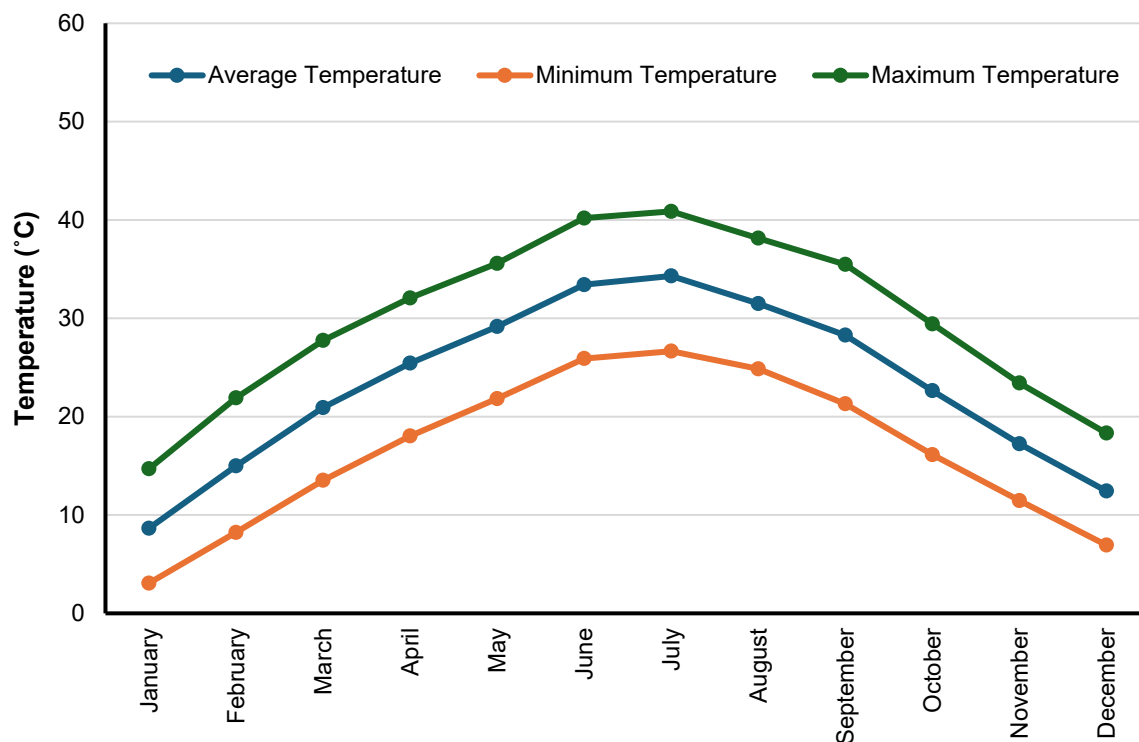


Exhibit 5.2: Average Monthly Precipitation (mm/month) at Reko Diq Mine Site

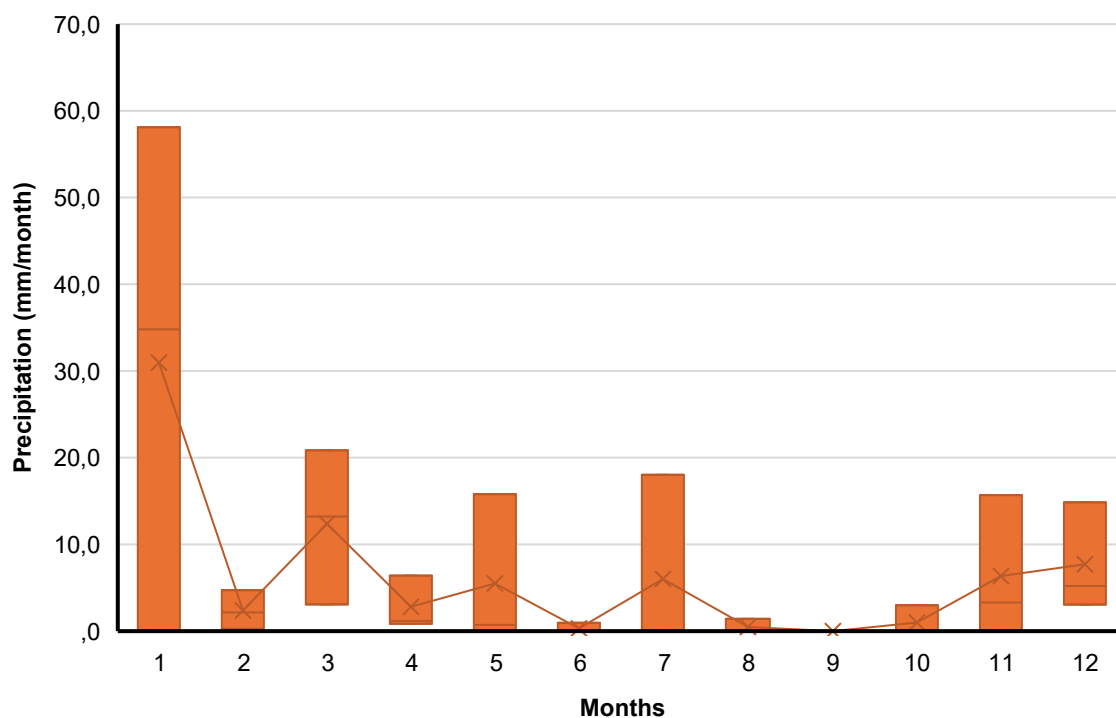


Exhibit 5.3: Average Monthly Relative Humidity (%) at Reko Diq Mine Site

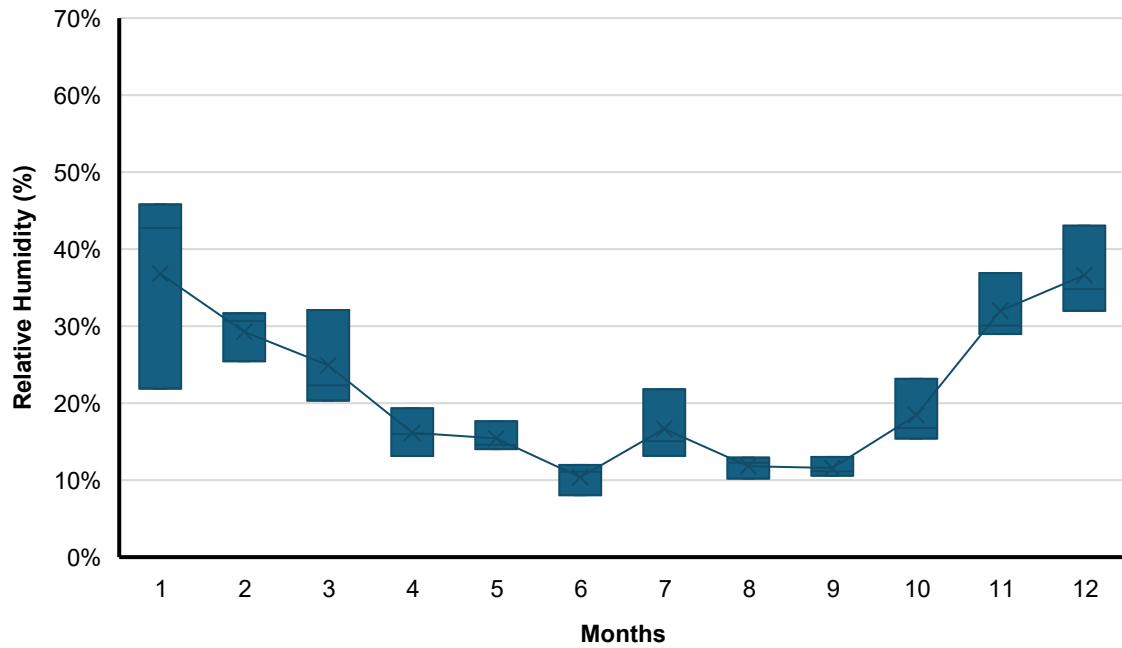
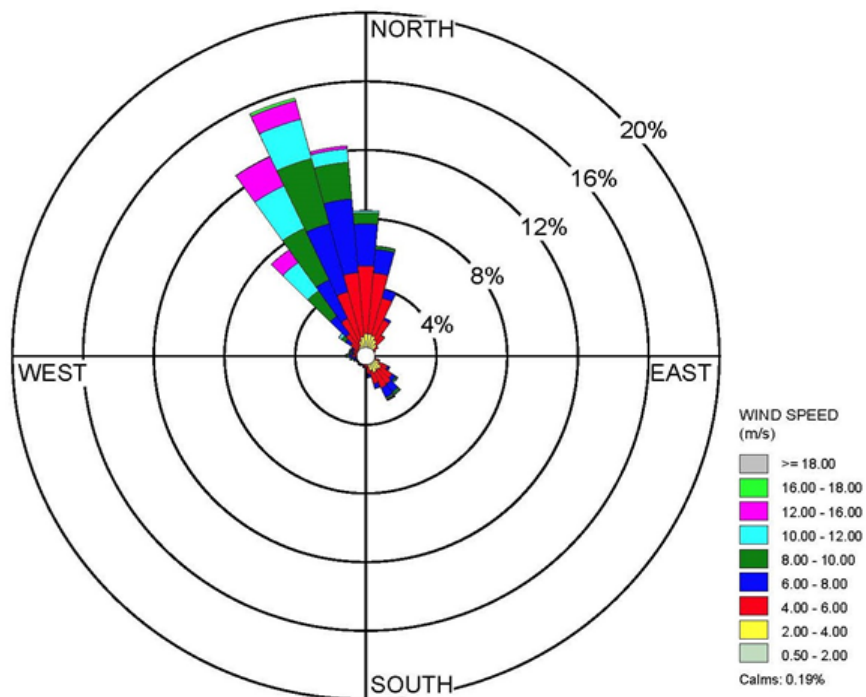


Exhibit 5.4: Average Annual Wind Rose of Reko Diq Mine Site



5.2 Particulate Matter (PM₁₀ and PM_{2.5})

The subsequent sub-sections provide the description of the PM₁₀ and PM_{2.5} baselines and their comparison with the applicable limits. These sub-sections also describe the sources

of PM₁₀ and PM_{2.5} concentrations recorded at the Reko Diq Mine Site along with a comparison with prevailing weather conditions. The air PM₁₀ and PM_{2.5} concentrations recorded at the onsite air quality monitoring station are attached as **Appendix B**.

5.2.1 Results and Discussion of Primary Data Collected

Exhibit 5.5 provides the PM₁₀ and PM_{2.5} concentrations recorded at A1-30 (Mine area) during Round 2 and their comparison with the NEQS and IFC General EHS Guidelines.

Exhibit 5.6 provides the PM₁₀ and PM_{2.5} concentrations recorded at Reko Diq Mine Site during Round 3 and their comparison with the NEQS and IFC General EHS Guidelines.

24-hour Averaging Period

- ☞ PM₁₀: For the 24-hour averaging period, the recorded concentrations of PM₁₀ remained within the limit of 150 µg/m³ prescribed in the NEQS and IFC General EHS Guidelines. In comparison with the IFC General EHS Guideline limit of 50 µg/m³, the reported concentration of PM₁₀ exceeded the limit for 17% time of the total monitoring duration or 27-days. The reported concentrations of PM₁₀ ranged between 13 µg/m³ and 116 µg/m³ with average concentration of 35 µg/m³. Higher concentrations exceeding the average concentration of 35 µg/m³ were primarily attributed to high-speed winds between 6 m/s and 18 m/s blowing from northeast towards southwest.
- ☞ PM_{2.5}: The reported concentration of PM_{2.5} for 24-hour averaging period exceeded the limit of 35 µg/m³ prescribed in NEQS for ambient air quality for 1% (1-day) of the total days monitored. In comparison with the IFC General EHS Guidelines limit of 25 µg/m³, the PM_{2.5} concentrations exceeded the limit for 1% of the time which corresponded to 2-days. However, the baseline concentrations remained within the limit of 75 µg/m³ prescribed in IFC General EHS Guidelines. The reported concentrations of PM_{2.5} for 24-hour averaging period ranged between 3 µg/m³ and 38 µg/m³ with an average concentration of 11 µg/m³ respectively.

Exhibit 5.5: Baseline Concentrations of PM₁₀ and PM_{2.5} at A1-23 and Comparison with NEQS and IFC General EHS Guidelines – Round 2

Description	A1-23	
	PM ₁₀	PM _{2.5}
	µg/m ³	
NEQs (24-hour interval)	150	35
IFC General EHS Guidelines Interim Target 1 (24-hour interval)	150	75
IFC General EHS Guidelines Limit (24-hour interval)	50	25
Minimum concentration over 24-hours interval	8	3
Average concentration over 24-hours interval	35	11
Maximum concentration over 24-hours interval	116	38

Description	A1-23	
	PM ₁₀	PM _{2.5}
	µg/m ³	
Number of 24-hours exceedances from NEQS	0%	1%
Number of 24-hours exceedances from IFC General EHS Guidelines (Guideline Value)	17%	1%
Number of 24-hours exceedances from IFC General EHS Guidelines (Interim Target 1)	0%	0%

Notes: '-' indicates that limits for the corresponding averaging period are not prescribed in the relevant standard. Therefore, number of exceedances for such parameters cannot be estimated.

Exhibit 5.6: Baseline Concentrations of PM₁₀ and PM_{2.5} and Comparison with NEQS and IFC General EHS Guidelines – Round 3

Sample ID	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
A1-24 (Mine area in 2024)	48	30
A2-24 (Humai Settlement in 2024)	27	47
NEQS (24-hour)	150	35
IFC-EHS Guidelines – Guideline Limit (24-hours)	50	25
IFC-EHS Guidelines – Interim Target 1 (24-hours)	150	35

Notes: Grey highlighted cells indicate exceedance from the applicable limits. Exceedance has been estimated by comparison of concentrations with the most stringent limit.

5.2.2 Sources of Particulate Matter at Reko Diq Mine Site

A high variability in the PM₁₀ and PM_{2.5} concentrations was observed. Variation in PM₁₀ and PM_{2.5} concentrations can be linked to either natural sources (such as wind erosion, gusting, dust storms, etc.) or anthropogenic activities such as movement on unpaved roads, construction activities, fossil fuel burning, industrial activities, etc.

As the wind at Project site primarily blows from northwest to southeast direction, contribution in PM₁₀ and PM_{2.5} concentrations from the nearby industrial and domestic sources at the Reko Diq Mine Site is highly unlikely as nearby communities are located in either east or south of the Reko Diq Mine Site.

Similarly, the nearest industrial activities are being carried out at Saindak Copper-Gold Project which is to the west of the Reko Diq Mine. This project was not expected to contribute towards the PM₁₀ and PM_{2.5} concentrations at this sampling location due to it being located more than 50 km away and not upwind. Therefore, the PM₁₀ and PM_{2.5} concentrations at Reko Diq Mine Site can be primarily attributed to natural sources.

5.2.3 Background PM Concentrations

This section describes the relationship between the PM₁₀ and PM_{2.5} concentrations and wind speeds. **Appendix C** provides the details of development of this relationship using the available data.

Exhibit 5.7 and **Exhibit 5.8** show the background PM₁₀ and PM_{2.5} concentrations as a function of wind speed.

Exhibit 5.7: Simulated Background PM₁₀ Concentrations as Function of Wind Speeds

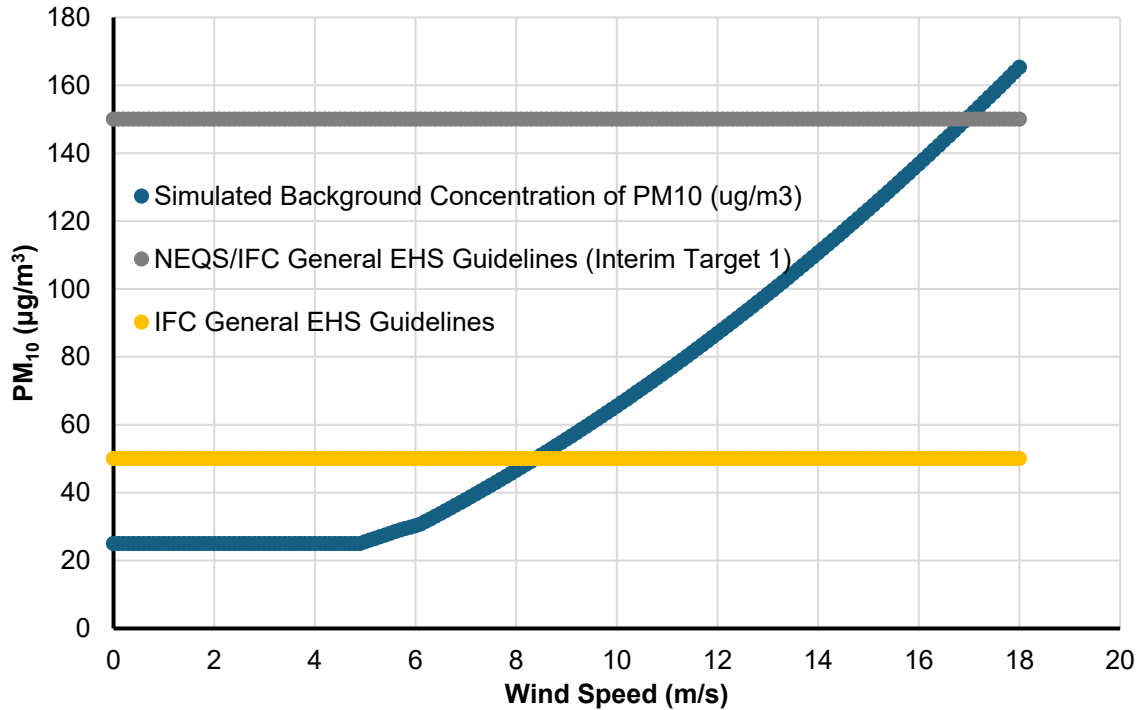
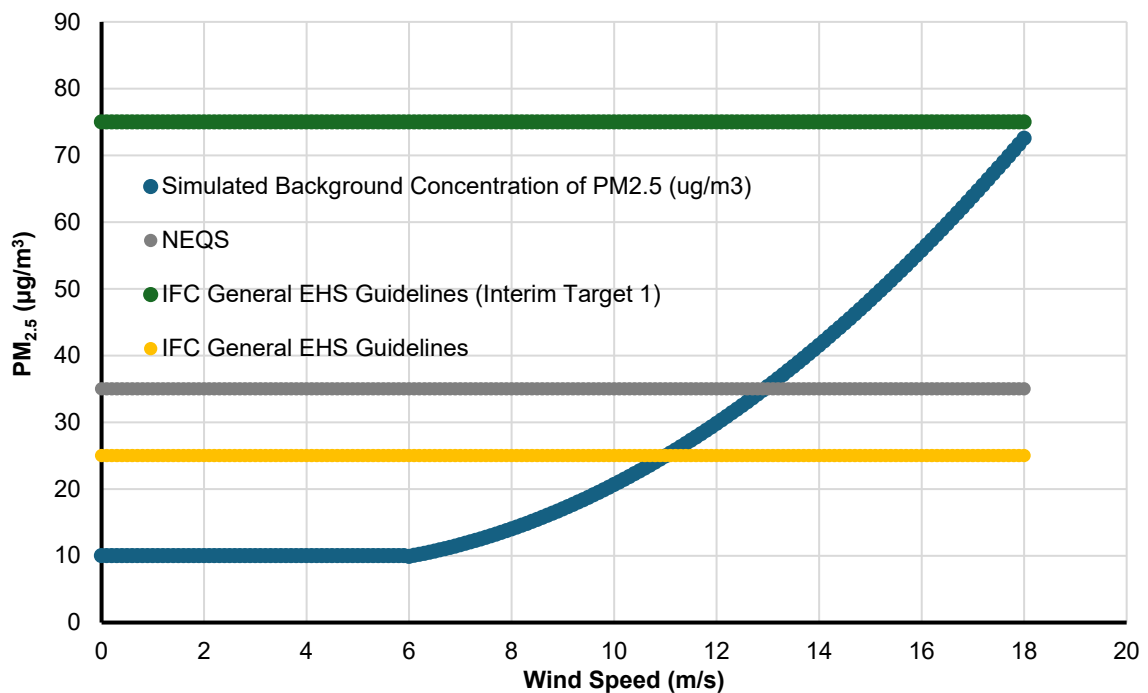


Exhibit 5.8: Simulated Background PM_{2.5} Concentrations as Function of Wind Speed



Both **Exhibit 5.7** and **Exhibit 5.8** indicate an increasing pattern in PM concentrations with increasing wind speeds. The simulated background PM₁₀ and PM_{2.5} concentrations depict biases of less than 10% when the simulated dataset is compared with the PM₁₀ and PM_{2.5} concentrations recorded at the Reko Diq Mine Site for wind speeds ranging between 6 m/s and 10 m/s. Therefore, a bias correction is not necessitated for the background PM₁₀ and PM_{2.5} concentrations. A comparison of the background concentrations of PM₁₀ and PM_{2.5} with the limits prescribed in NEQS for ambient air quality and IFC General EHS Guidelines is provided below.

- ☞ PM₁₀: The background concentrations of PM₁₀ remain within the limit of 150 µg/m³ prescribed in NEQS for ambient air quality and IFC General EHS Guidelines (Interim Target 1) when the wind speeds are less than 16.5 m/s. A maximum concentration of 165 µg/m³ is anticipated when the wind speeds reach 18 m/s. The PM₁₀ concentrations exceed the IFC General EHS Guideline limit of 50 µg/m³ when the wind speed exceeds 8.4 m/s.
- ☞ PM_{2.5}: The background concentrations of PM_{2.5} indicates that PM_{2.5} concentrations remain within the limit of 35 µg/m³ prescribed in NEQS for ambient air quality when the wind speeds are less than 12.5 m/s. For high-speed winds in the range of 12.5 m/s to 18 m/s, the background concentrations of PM_{2.5} range between 35 µg/m³ and 72 µg/m³. However, the background concentration remained within the limit of 75 µg/m³ prescribed in IFC General EHS Guidelines (Interim Target 1) at all wind speeds up to 18 m/s. The PM_{2.5} concentrations exceed the IFC General EHS Guideline limit of 25 µg/m³ when the wind speed exceeds 11 m/s.

5.3 Oxides of Nitrogen, Sulphur Dioxide and Ozone

5.3.1 Reko Diq Mine Site

Exhibit 5.9 and **Exhibit 5.10** provide the air quality sampling results of Round 1 and 2 along with their comparison with NEQS and IFC-EHS Guidelines.⁵ The laboratory results of gaseous pollutants sampled during Round 1 and Round 2 are provided in **Appendix D**. A brief discussion of each of the pollutant concentration along with their sources is provided below:

- ☞ Oxides of Nitrogen (NO): The NO concentrations remained within the limits prescribed in NEQS for annual averaging period.⁶ The reported concentrations of the nitric oxide ranged between 0.9 µg/m³ and 6.70 µg/m³ at all sampling locations during the 2023 Surveys.

⁵ Oxides of nitrogen (NO, NO₂, and NO_x), sulphur dioxide (SO₂), and ozone (O₃) concentrations were measured through passive air sampling which is usually carried out for a period of 2-4 weeks. In the absence of limits for such periods, an indicative comparison is made with the daily and annual limits prescribed in NEQs and IFC General EHS Guidelines. The comparison provided here is for indicative purpose and should not be used to assess compliance or form basis for assessing need for implementation of mitigation measures.

⁶ IFC General EHS Guidelines do not prescribe limits for NO.

- ⑥ *Oxides of Nitrogen (NO₂)*: The measured concentrations of NO₂ were within the limits prescribed in the NEQS and IFC General EHS Guidelines for annual averaging period at all sampling locations in the 2020 and 2023 Surveys. The NO₂ concentrations ranged between 0.6 µg/m³ and 11.30 µg/m³ during the 2020 and 2023 Surveys.
- ⑥ *Oxides of Nitrogen (NO_x)*: The measured concentrations of NO_x ranged between 1.1 µg/m³ and 11.30 µg/m³ at all sampling locations during the 2023 surveys.⁷
- ⑥ *Sulphur Dioxide*: The measured concentration of SO₂ remained within the limits prescribed in the NEQS and IFC General EHS Guidelines for annual averaging period at all sampling locations in the 2020 and 2023 Surveys. The measured concentrations of SO₂ during these surveys ranged between 1.32 µg/m³ and 9.81 µg/m³ respectively at all sampling locations.
- ⑥ *Ozone (O₃)*: The ozone concentrations remained within the limits prescribed in NEQS for 1-hour averaging period. However, the maximum concentration of ozone exceeded the limits prescribed in IFC General EHS Guidelines for 8-hours averaging period. The measured concentrations of ozone ranged between 31.50 µg/m³ and 113.6 µg/m³ during the 2023 Surveys.

A brief discussion on the trends and sources of the emissions based on the above-mentioned description is provided below:

- ⑥ The concentrations of oxides of nitrogen (NO₂, and NO_x), sulphur dioxide (SO₂), and ozone (O₃) were reported to be comparatively higher at sampling location A2-23 (Humai Settlement) than those recorded at A1-23 (Reko Diq Mine Site). High concentration of these pollutants at A2-23 can be attributed to vehicle emissions, and use of fuelwood for heating and cooking within this settlement.
- ⑥ The maximum concentration of NO was reported to be 6.70 µg/m³ at sampling location A1-23 (Reko Diq Mine Site). High concentration of NO at this location was primarily due to vehicle and generator emissions.
- ⑥ The maximum concentration of NO₂ was reported to be 5.0 µg/m³ in the 2023 survey at A2-23 (Humai Settlement) while the minimum concentration was reported to be 0.6 µg/m³ at A1-20 (Mine area) in the 2020 Surveys.
- ⑥ SO₂ concentrations were comparatively lower (less than 1.70 µg/m³) at both sampling locations in the 2023 Survey as compared to 2020 Survey during which the concentrations were reported between 2.32 µg/m³ and 3.62 µg/m³ respectively.
- ⑥ The maximum concentration of ozone (O₃) was reported to be 113.60 µg/m³ at sampling location A2-23 (Humai Settlement). High concentration of ozone was also reported at the controlled location for similar sampling period where no active emission sources were present. Therefore, ozone concentration can be attributed to natural occurrence.

⁷ NEQS and IFC General EHS Guidelines do not prescribe limits for NO_x.

Exhibit 5.9: Results of Ambient Air Quality Sampling Conducted in Round 1 – Reko Diq Mine Site

<i>Sample ID</i>	<i>NO₂ (µg/m³)</i>	<i>SO₂ (µg/m³)</i>
A1-20 (Mine area in 2020)	<0.6	<2.32
A3-20 (Humai settlement in 2020)	4.4	3.62
NEQS (24-hour)	80	120
NEQS (Annual average)	40^a	80^a
IFC-EHS Guidelines (24-hour) – Interim 1	–	125^b
IFC-EHS Guidelines (24-hour)	–	20^b
IFC-EHS Guidelines (annual average) – Interim 1	–	–
IFC-EHS Guidelines (annual average)	40^a	–

Notes:

- a. Annual limits for NO₂ have been considered for comparison purposes due to a sampling period of 2 weeks during 2020 and 4 weeks during 2023 survey, and direct comparison with the 1-hour limit for NO₂ was not possible. No interim targets for NO₂.
- b. There are no annual limits for SO₂.

Exhibit 5.10: Results of Ambient Air Quality Sampling Conducted in Round 2 – Reko Diq Mine Site

Pollutant ID	Description	A1-23 ($\mu\text{g}/\text{m}^3$)	A2-23 ($\mu\text{g}/\text{m}^3$)	NEQS ($\mu\text{g}/\text{m}^3$)			IFC General EHS Guidelines ($\mu\text{g}/\text{m}^3$)			
				1-Hour	24-Hours	Annual Average	1-Hour	8-Hour	24-Hours	Annual Average
Nitrogen Oxide (NO)	Minimum	<0.90	<0.90	-	40	40	-	-	-	-
	Average	3.30	2.15							
	Maximum	6.70	4.40							
Nitrogen Dioxide (NO ₂)	Minimum	<0.70	<0.90	-	80	40	200	-	-	40
	Average	4.68	3.50							
	Maximum	6.80	11.30							
Oxides of Nitrogen (NO _x)	Minimum	<4.90	<1.1	-	-	-	-	-	-	-
	Average	7.42	4.25							
	Maximum	10.10	11.30							
Sulphur Dioxide (SO ₂)	Minimum	<1.65	<1.23	-	120	80	-	-	20	-
	Average	4.38	5.01							
	Maximum	8.62	9.81							
Ozone (O ₃)	Minimum	<35.88	<31.50	130	-	-	-	100	-	-
	Average	60.78	67.33							
	Maximum	90.10	113.60							

Note: The concentrations of oxides of nitrogen (NO, NO₂, and NO_x), sulphur dioxide (SO₂), and ozone (O₃) were measured through passive air sampling which is usually carried out for a period of 2-4 weeks. In the absence of limits for such periods, an indicative comparison is made with the hourly, daily, and annual limits prescribed in NEQs and IFC General EHS Guidelines. The comparison provided here is for indicative purpose and should not be used to assess compliance or form basis for assessing need for implementation of mitigation measures.

'-' indicates that the limits are not prescribed in the standard or guideline.

For parameters which have limits prescribed in both NEQS and IFC General EHS Guidelines, the stringent of the two has been taken as reference to assess exceedance.

5.3.2 Nok Kundi

Exhibit 5.11 provides the air quality sampling results and comparison with NEQS and IFC General EHS Guidelines. The laboratory results of gaseous pollutants sampled during Round 1 are provided in **Appendix D**.

- ☞ The measured concentrations of NO₂ and SO₂ were within the limits prescribed in the NEQS and IFC General EHS Guidelines for annual averaging period.⁸ The NO₂ concentration was reported to be 1.7 µg/m³ while the SO₂ concentration was 2.78 µg/m³ at this sampling location.
- ☞ As witnessed during the field visits, anthropogenic activities were the primary source of NO₂, and SO₂ concentrations in Nok Kundi. These activities included vehicular emissions from the national highway N-40, and ongoing construction activities. This location also received contribution of pollutants from fuelwood burning which is the secondary source for heating and cooking in the households.

Exhibit 5.11: Results of Ambient Air Quality Sampling – Road Transport Route

<i>Sample ID</i>	<i>NO₂ (µg/m³)</i>	<i>SO₂ (µg/m³)</i>
A2-20 (Nok Kundi in 2020)	1.7	2.78
NEQS (24-hour)	80	120
NEQS (Annual average)	40^a	80^a
IFC-EHS Guidelines (24-hour)	—	125
IFC-EHS Guidelines (annual average)	40^a	—

a. Annual limits for NO₂ and SO₂ were considered for comparison purposes due to a sampling period of 2 weeks during Round 1.

⁸ NO₂ and SO₂ concentrations were measured through passive air sampling which is usually carried out for a period of 2-4 weeks. In the absence of limits for such periods, an indicative comparison is made with the daily and annual limits prescribed in NEQs and IFC General EHS Guidelines. The comparison provided here is for indicative purpose and should not be used to assess compliance or form basis for assessing need for implementation of mitigation measures.

6. Impacts Screening

This section provides the proposed Project activities during construction, operations, and decommissioning phases along with estimation of ground-level concentrations of pollutants at the sensitive receptors.

6.1 Impacts on Air Quality Due to Mining Operation at Reko Diq Mine Site

The Project's operations will involve emissions of Sulphur Dioxide (SO₂), and Nitrogen Dioxide (NO₂) from vehicular movement, as well as operations of mining equipment, explosives detonation, power generation, and waste incineration. The Project will also emit particulate matter (PM₁₀ and PM_{2.5}) from blasting and drilling, movement of Run-of-Mine (RoM) ore and waste rock from the open-pit, and waste rock dumps, milling and crushing of the RoM ore, vehicular movement on haul roads, power generation, and wind erosion.

The air dispersion modelling for operations of the proposed Project was carried out for the for two scenarios i.e., ultimate footprint and year 2050 when the LOM will be completed by 50%. In these scenarios, the actual emissions rates estimated during the Project operations depending on the ongoing capacities for the time of scenarios were used to model Project footprint on ambient air quality. A detailed description of these scenarios is provided in **Section 4.4.6**. The details of emission control measures considered are provided in **Section 4.4.5**.

In terms of receptors, human receptors are generally at large distances from the Project. Therefore, the Humai settlement (located at ~30 km to the east of the western porphyries) and onsite accommodation camp (located at ~8.9 km to the west of the open-pit) have been considered as primary receptors. Additional details on the nearby sensitive receptors are provided in **Section 4.4.2**.

A staged approach has been deployed for assessing the Project exceedance from the guideline limits prescribed in the IFC General EHS Guidelines. This is done to reduce emissions while ensuring resource efficiency of the Project. Based on the findings of air dispersion modeling, the following can be drawn while comparing Project contribution at sensitive receptors with limits prescribed for interim target 1 and guideline value in IFC General EHS Guidelines.

- ⑤ A comparison of the SO₂ concentrations with the guideline limit of IFC General EHS Guidelines is not made as the concentration from Project were within this guideline limit of 20 µg/m³ at both onsite accommodation camp and Humai settlement due to Project operations. The Predicted Incremental Concentrations were reported to be 6 µg/m³ at the onsite accommodation camp and 5 µg/m³ at the Humai settlement.
- ⑤ The Predicted Incremental Concentrations for annual averaging period remained within the annual guideline limit of 80 µg/m³ prescribed in IFC General EHS Guidelines for NO₂. The comparison of Predicted Incremental Concentrations of

NO₂ for 24-hours averaging period is not provided as IFC General EHS Guidelines do not prescribe guideline limits for the associated averaging period.

A detailed comparison of the Predicted Incremental Concentrations of SO₂ and NO₂ with the applicable limits is provided in **Exhibit 6.1**. A brief discussion of the Predicted Ambient Concentrations of particulates is provided below:

- ⑥ **Humai Settlement:** The Predicted Ambient Concentrations of PM₁₀ and PM_{2.5} remained within the applicable limits at this receptor for both 24-hours and annual averaging period in Scenario 1 and Scenario 2 (see **Exhibit 6.1** and **Exhibit 6.2**). This receptor is in the east direction of the Project and only receives contribution from Project when the predominant winds blow from west direction, which occurs for 1% to 7% time of the year (see **Exhibit 5.4**). When the winds blow from Project towards the Humai settlement, the wind speeds range between 4 m/s and 10 m/s respectively. Lower contribution of Project at this receptor can be attributed to its larger distance from the Project boundary which causes particulate to decay before reaching this receptor.
- ⑥ **Onsite Accommodation Camp:** Both PM₁₀ and PM_{2.5} exceed the applicable limits prescribed in NEQS for a period of 6 days and 11 days per year in Scenario 1 – Ultimate Footprint at onsite accommodation camp (see **Exhibit 6.1** and **Exhibit 6.6**). In scenario 2, these exceedances are relatively lower and expected to occur for 4 days per year for PM₁₀ and 6 days per year for PM_{2.5} (see **Exhibit 6.2** and **Exhibit 6.7**). The annual averaged Predicted Ambient Concentrations of PM₁₀ and PM_{2.5} are expected to remain within the applicable limits prescribed in NEQS for ambient air quality and IFC General EHS Guidelines at this receptor.
- ⑥ **Contribution of Elevated Baselines at Receptors:** Periods having high wind speeds (>6 m/s) occur for ~47% time of the year. During this period, high PM₁₀ and PM_{2.5} concentrations are expected to be experienced in Humai settlement and onsite accommodation camp for 51 days per year. These high concentrations exceeding the applicable ambient limits occur due to wind erosion from desert in the upwind direction. These high-speeds winds, blowing from the north and northwest direction can potentially cause elevated concentrations of particulates at the receptors.
- ⑥ **Operational Areas:** The Predicted Ambient Concentrations of gaseous pollutants and particulate matter in the operational areas of the Project remained within the applicable Occupational Health and Safety (OHS) limits for 8-hour averaging periods (see **Exhibit 6.3** and **Exhibit 6.4**). The maximum Predicted Ambient Concentrations are expected to occur at the western porphyries, Tanjeel open pit, and north waste rock dump.

Impacts of Tailing Storage Facility at the Receptors: The onsite accommodation camp or the operational areas experience an exceedance in the particulate matter concentrations due to TSF when the winds blow from southeast towards northwest which occurs for approx. 4% time of the year. These winds blowing from TSF towards the accommodation camp result in elevated Predicted Ambient Concentrations at this receptor. It is worth mentioning that the emissions from wind erosion do not respond to lower wind speeds

and only initiate with wind gusts (USEPA, 2006). Therefore, contribution of TSF at the onsite accommodation camp in low wind speeds below 5 m/s is unlikely⁹. Contribution of TSF in concentrations at Humai settlement is expected to be minimum. This is since particulates tend to decay before reaching at larger distances.

⁹ The wind speed for tailings dust mobilization refers to a wind speed of 5 m/s at 10 m height. This is since the mobilization velocity is estimated using the dataset which provides wind speed at 10 m height. As the wind speed reduces logarithmically with decrease in height, a wind speed of 5 m/s at 10 m height refers to the wind speed of 3 m/s at 0.1 m height above ground. Therefore, a wind speed of 3 m/s or above close to ground surface will mobilize dust from the TSF.

Exhibit 6.1: Predicted Ambient Concentrations at Sensitive Receptors in Scenario 1 – Ultimate Footprint

Receptor	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	Prescribed Limits		Status of Compliance
					NEQS	IFC General EHS Guidelines	
					µg/m³		
Nitrogen Dioxide (NO₂)							
Onsite Accommodation Camp	1-hour	6.8	78	85	-	200	Compliant
	24-hours	6.8	6	12	80	-	Compliant
	Annual	6.8	1	7	40	40	Compliant
Humai Settlement	1-hour	6.8	79	86	-	200	Compliant
	24-hours	6.8	5	11	80	-	Compliant
	Annual	6.8	0.4	7	40	40	Compliant
Sulphur Dioxide (SO₂)							
Onsite Accommodation Camp	1-hour	8.6	78	86	-	-	Compliant
	24-hours	8.6	6	14	120	125	Compliant
	Annual	8.6	1	9	80	-	Compliant
Humai Settlement	1-hour	8.6	81	90	-	-	Compliant
	24-hours	8.6	5	14	120	125	Compliant
	Annual	8.6	0.4	9	80	-	Compliant

Receptor	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	Prescribed Limits		Status of Compliance
					NEQS	IFC General EHS Guidelines	
					µg/m³		
Particulate Matter (PM ₁₀)							
Onsite Accommodation Camp	24-hours	25	174	199 ¹⁰	150	150	Non-compliant
	Annual	32	16	48	120	70	Compliant
Humai Settlement	24-hours	25	23	48	150	150	Compliant
	Annual	32	2	34	120	70	Compliant
Particulate Matter (PM _{2.5})							
Onsite Accommodation Camp	24-hours	10	39	49 ¹¹	35	75	Non-compliant
	Annual	10	4.7	14.7	15	35	Compliant
Humai Settlement	24-hours	10	4	14	35	75	Compliant
	Annual	10	1	11	15	35	Compliant

Notes: For pollutants which have multiple applicable limits, the stringent of the 3 limits is taken as reference for assessing compliance status.

“-” indicates that limits are not prescribed in the reference standards or guidelines.

Grey highlighted cells indicate exceedance from the applicable limits.

¹⁰ The exceedance of PM₁₀ above limit of 150 $\mu\text{g}/\text{m}^3$ occurs for 6 days per year. Rest of the 359 days of years are expected to remain within this limit.

¹¹ The exceedance of PM_{2.5} above limit of 35 $\mu\text{g}/\text{m}^3$ occurs for 11 days per year. Rest of the 354 days of years are expected to remain within this limit.

Exhibit 6.2: Predicted Ambient Concentrations at Sensitive Receptors in Scenario 2 – Year 2050

Receptor	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	Prescribed Limits		Status of Compliance
					NEQS	IFC General EHS Guidelines	
					µg/m ³		
Particulate Matter (PM ₁₀)							
Onsite Accommodation Camp	24-hours	25	168	193 ¹²	150	150	Non-compliant
	Annual	32	14	47	120	70	Compliant
Humai Settlement	24-hours	25	17	42	150	150	Compliant
	Annual	32	1	33	120	70	Compliant
Particulate Matter (PM _{2.5})							
Onsite Accommodation Camp	24-hours	10	32	42 ¹³	35	75	Non-compliant
	Annual	10	4	14	15	35	Compliant
Humai Settlement	24-hours	11	3	14	35	75	Compliant
	Annual	10	1	11	15	35	Compliant

Notes: For pollutants which have multiple applicable limits, the stringent of the 3 limits is taken as reference for assessing compliance status.

“-” indicates that limits are not prescribed in the reference standards or guidelines.

Grey highlighted cells indicate exceedance from the applicable limits.

¹² The exceedance of PM₁₀ above limit of 150 $\mu\text{g}/\text{m}^3$ occurs for 4 days per year. Rest of the 361 days of years are expected to remain within this limit.

¹³ The exceedance of PM_{2.5} above limit of 35 $\mu\text{g}/\text{m}^3$ occurs for 6 days per year. Rest of the 359 days of years are expected to remain within this limit.

Exhibit 6.3: Predicted Ambient Concentrations of Gaseous Pollutants at Maxima Locations in Scenario 1 – Ultimate Footprint

Receptor	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	OSHA Standards	Status of Compliance
		µg/m³				
Nitrogen Dioxide (NO₂)						
Western Porphyries	1-hour	6.8	3,616	3,623	9,000	Compliant
Explosives Storage Buffer	1-hour	6.8	1,071	1,078	9,000	Compliant
Tanjeel Open-Pit	1-hour	6.8	1,391	1,397	9,000	Compliant
North Waste Rock Dump	1-hour	6.8	851	858	9,000	Compliant
Sulphur Dioxide (SO₂)						
Western Porphyries	1-hour	8.6	11,437	11,446	13,000	Compliant
Explosives Storage Buffer	1-hour	8.6	2,249	2,258	13,000	Compliant
Tanjeel Open-Pit	1-hour	8.6	389	397	13,000	Compliant
North Waste Rock Dump	1-hour	8.6	2,324	2,333	13,000	Compliant

Notes: Limits prescribed in OSHA Standard 1910.1000 for Air Contaminants are for 8-hour averaging period while the Predicted Ambient Concentrations are of 1-hour averaging period. The concentrations are considered as compliant as 8-hour limits are relatively much stringent as compared to 1-hour limits. Therefore, if Predicted 1-hour Ambient Concentration of a pollutant is within limits prescribed for 8-hour averaging period, its 8-hour weighted average will also remain within the 8-hour limits prescribed in OSHA 1910.1000. This approach is taken as reference from the Canadian Air Dispersion Modelling Guideline (Ontario Regulation 419/05: Air Pollution – Local Air Quality).

Exhibit 6.4: Predicted Ambient Concentrations of Respirable Dust at Maxima Locations

Receptor	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	OSHA Standards	Status of Compliance
		µg/m³				
Scenario 1 – Ultimate Footprint						
Western Porphyries	24-hour	35	2,331	2,366	5,000	Compliant
Explosives Storage Buffer	24-hour	35	32	67	5,000	Compliant
Tanjeel Open-Pit	24-hour	35	380	415	5,000	Compliant
North Waste Rock Dump	24-hour	35	353	388	5,000	Compliant
Scenario 2 – Year 2050						
Western Porphyries	24-hour	35	1,992	2,027	5,000	Compliant
Explosives Storage Buffer	24-hour	48	26	74	5,000	Compliant
Tanjeel Open-Pit	24-hour	41	76	117	5,000	Compliant
North Waste Rock Dump	24-hour	35	318	353	5,000	Compliant

Notes: The model was simulated for NO₂, SO₂, PM₁₀ and PM_{2.5}. As the OSHA Standard does not segregate the respirable dust into PM₁₀ and PM_{2.5}, the respirable is taken as the sum of PM₁₀ and PM_{2.5}.

The compliance for respirable dust is assessed through comparison of Predicted 24-hours Ambient Concentrations with 8-hour limits prescribed in OSHA Standard. In case where the Predicted 24-hours Ambient Concentration is less than 73% of the prescribed limit, a compliant status is assigned. If the exceedance is more than 73% of the prescribed limit, the Predicted 24-hours Ambient Concentration is taken as non-compliant. This approach is taken as reference from the Canadian Air Dispersion Modelling Guideline (Ontario Regulation 419/05: Air Pollution – Local Air Quality).

Grey highlighted cells indicate exceedance from the applicable limits.

6.1.1 Comparison of Predicted Incremental Concentrations with IFC General EHS Guidelines Interim Target 1

The Predicted Incremental Concentrations at the Humai settlement remain within the applicable limit prescribed in the interim target 1 limit of IFC General EHS Guidelines. The onsite accommodation camp depicts few exceedances in both low and high wind speeds, which are described below:

- ⑥ PM₁₀: The PM₁₀ concentrations due to Project operations remain within the applicable limits prescribed in interim target 1 and guideline limits of IFC General EHS Guidelines at Humai settlement. At the onsite accommodation camp, the Project exhibits an exceedance of 6 days per year in Scenario 1 and 4 days per year in Scenario 2 from the applicable limit of 150 µg/m³ prescribed in IFC General EHS Guidelines Interim Target 1 and NEQS.
- ⑥ PM_{2.5}: The PM_{2.5} concentrations at the accommodation camp exceeded the limits prescribed in IFC General EHS Guidelines Interim Target 1 and NEQS for a period of 11 days per year in Scenario 1 and for 6 days per year in Scenario 2.

Exhibit 6.5: Number of Hours and Days Exceeded per Year for NO₂ and SO₂ Sensitive Receptors

Receptor	Averaging Period	Applicable Limits (µg/m ³)	No. of Exceedances per Year
Nitrogen Dioxide (NO₂)			
Onsite Accommodation Camp	1-hour	188	0
	24-hours	80	0
Humai Settlement	1-hour	188	0
	24-hours	80	0
Sulphur Dioxide (SO₂)			
Onsite Accommodation Camp	1-hour	-	0
	24-hours	120	0
Humai Settlement	1-hour	-	0
	24-hours	120	0

Notes: '-' indicates that limits are not prescribed for the reference averaging period.

Exhibit 6.6: Number of Days Exceeded per Year for PM₁₀ and PM_{2.5} in Scenario 1 – Ultimate Footprint

<i>Receptor</i>	<i>Averaging Period</i>	<i>Applicable Limits (µg/m³)</i>	<i>Reference Standard/Guideline</i>	<i>No. of Exceedances per Year in Baseline</i>	<i>No. of Exceedances per Year due to Project</i>	<i>No. of Total Exceedances per Year¹⁴</i>	<i>Permitted Exceedances per Year</i>
Particulate Matter (PM₁₀)							
Onsite Accommodation Camp	24-hours	150	NEQS/IFC Interim Target 1	51	6	57	-
	24-hours	50	IFC Guideline Limit	84	46	130	35
Humai Settlement	24-hours	150	NEQS/IFC Interim Target 1	51	0	51	-
	24-hours	50	IFC Guideline Limit	84	0	84	35
Particulate Matter (PM_{2.5})							
Onsite Accommodation Camp	24-hours	75	IFC Interim Target 1	0	0	0	-
	24-hours	35	NEQS	10	11	21	-
	24-hours	25	IFC Guideline Limit	28	21	49	-
Humai Settlement	24-hours	75	IFC Interim Target 1	0	0	0	-
	24-hours	35	NEQS	10	0	10	-
	24-hours	25	IFC Guideline Limit	28	0	28	-

Notes: '-' in the permitted exceedances per year indicates that yearly permitted exceedances are not prescribed in the European Commission Air Quality Standards. Grey highlighted cells indicate exceedance from the permitted exceedances per year prescribed in European Commissions Air Quality Standards.

¹⁴ Number of total exceedances is sum of number of exceedances per year in baseline and number of exceedances per year due to Project.

Exhibit 6.7: Number of Days Exceeded per Year for PM₁₀ and PM_{2.5} in Scenario 2 – Year 2050

<i>Receptor</i>	<i>Averaging Period</i>	<i>Applicable Limits (µg/m³)</i>	<i>Reference Standard/Guideline</i>	<i>No. of Exceedances per Year in Baseline</i>	<i>No. of Exceedances per Year due to Project</i>	<i>No. of Total Exceedances per Year¹⁵</i>	<i>Permitted Exceedances per Year</i>
Particulate Matter (PM₁₀)							
Onsite Accommodation Camp	24-hours	150	NEQS/IFC Interim Target 1	51	4	55	-
	24-hours	50	IFC Guideline Limit	84	41	125	35
Humai Settlement	24-hours	150	NEQS/IFC Interim Target 1	51	0	51	-
	24-hours	50	IFC Guideline Limit	84	0	84	35
Particulate Matter (PM_{2.5})							
Onsite Accommodation Camp	24-hours	75	IFC Interim Target 1	0	0	0	-
	24-hours	35	NEQS	10	6	16	-
	24-hours	25	IFC Guideline Limit	28	17	45	-
Humai Settlement	24-hours	75	IFC Interim Target 1	0	0	0	-
	24-hours	35	NEQS	10	0	10	-
	24-hours	25	IFC Guideline Limit	28	0	28	-

Notes: '-' in the permitted exceedances per year indicates that yearly permitted exceedances are not prescribed in the European Commission Air Quality Standards. Grey highlighted cells indicate exceedance from the permitted exceedances per year prescribed in European Commissions Air Quality Standards.

¹⁵ Number of total exceedances is sum of number of exceedances per year in baseline and number of exceedances per year due to Project.

Exhibit 6.8: Number of Exceedances per Year of PM₁₀ at Onsite Accommodation Camp
 – Project Contribution

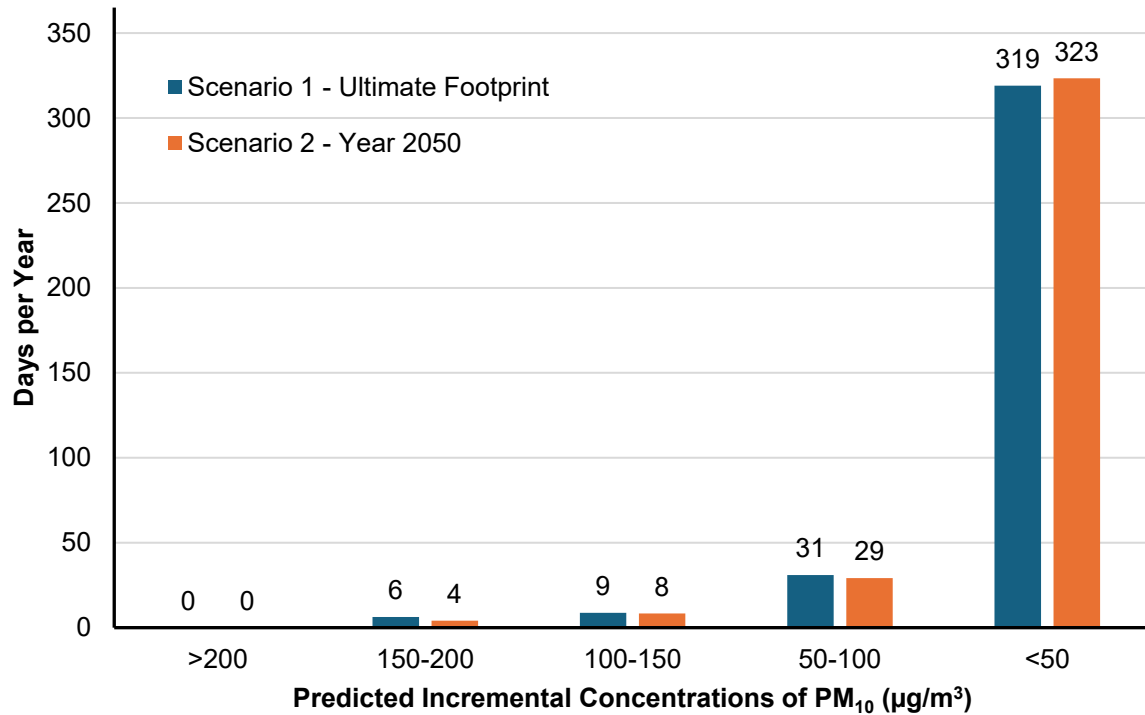
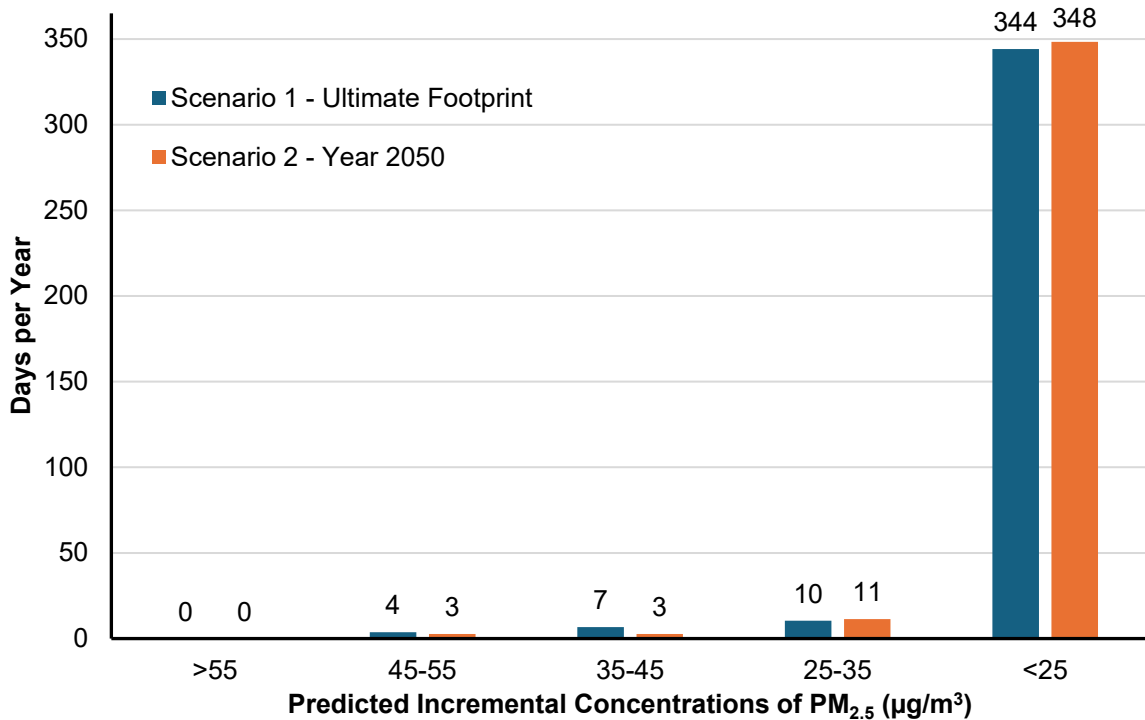


Exhibit 6.9: Number of Exceedances per Year of PM_{2.5} at Onsite Accommodation Camp
 – Project Contribution



6.1.2 Assessment of Emissions from Power Generation

The Project will use Heavy Fuel Oil (HFO) power plant during operations phase to cater their electrical power demand. The HFO power plant is expected to emit particulate matter and gaseous emissions during its operations. **Exhibit 6.10** provides a comparison of the emissions rates of HFO power plant with the emissions guidelines prescribed in World Bank EHS Guidelines for Thermal Power Plant.

Exhibit 6.10: Comparison of Maximum Flue Gas Emission of HFO Power Plant with World Bank EHS Guidelines for Thermal Power Plants

Pollutant	Percentage O ₂ Content	HFO Power Plant	World Bank EHS Guidelines	Status
		mg/Nm ³		
Particulate Matter (PM)	15%	100	50	Above limit
Sulphur Dioxide (SO ₂)	15%	2,100	585	Above limit
Nitrogen Dioxide (NO ₂)	15%	2,000	740	Above limit

Source: DESA00022910 - Reco Diq Gold Mine 18V50DF D (HFO) - Emission Data Sheet. WÄRTSILÄ, 2023

Notes: Grey highlighted cells where emission rates of HFO power plant exceed the applicable guideline.

Compliance status is not given in **Exhibit 6.10** as the compliance is typically assessed through ambient concentrations at the receptors. Therefore, a status of 'Above Limits' is given to provide an analytical perspective. This approach aligns with the World Bank EHS Guidelines for Thermal Power Plants which states that: 'Environmental Assessments (EA) may justify more stringent or less stringent limits due to ambient environment, technical and economic considerations provided there is compliance with applicable ambient air quality standards and incremental impacts are minimized.'

The flue gas emissions provided in **Exhibit 6.10** are estimated for steady-state emissions from the HFO power plant at 100% load. These emission rates present the actual emissions under control conditions with exhaust gas heat recovery.

Although the emission rates are above the limits prescribed in World Bank EHS Guidelines for Thermal Power Plants (for ≥300 MWth), the Predicted Ambient Concentration of the gaseous pollutants remain within the applicable limits in operational areas and at the sensitive receptors (see **Exhibit 6.1** and **Exhibit 6.3**). This is since the stack height and flue gas temperature of the stack emissions have been kept relatively high to prevent accumulation of pollutants at ground levels close to HFO power plant.

In terms of particulate matter, the contribution of HFO power plant in elevated Predicted Ambient Concentrations at the onsite accommodation camp is negligible. This receptor, receives maximum concentrations of particulate matter from TSF which and causes exceedance of Predicted Ambient Concentrations from the applicable limits. Contribution of PM emissions from HFO power plant is approx. 0.5% of the total PM emissions from Project.

6.1.3 Measures Taken by Project for Compliance with IFC General EHS Guidelines – Guideline Limit

The air dispersion modelling was conducted by considering the final footprints of the open-pit and TSF as well as when the LOM is 50% completed. The predicted impacts, therefore, represent the impact of the Project on air quality which will occur TSF achieves its 50% and full capacity. The emissions are expected to be relatively lower during initial phases of the Project operations, when the open-pit and TSF will be relatively small and their associated emission rates will be much lower as compared to those anticipated for peak operations. This will allow the Project to investigate for additional dust reduction options for TSF based on emerging advancements in the dust reduction technologies. Therefore, the Project can further reduce their footprint as compared to those predicted under this final footprint scenario.

A detailed description of methodology, results and contour maps of the Predicted Ambient Concentrations are provided in **D5AM13RKI – Air Dispersion Modelling of Reko Diq Mine Site** which is attached as **Appendix A** of this specialist report.

6.1.4 Assessment of Accommodation Camp Location with respect to Particulate Matter Concentrations

The current location of the onsite accommodation camp is selected to be in the northwest of the TSF and in the west of the mining facilities. This location is selected as it receives limited contribution from the Project operations. This is since the wind blows for a limited duration of less than 10% of days from mining facilities or TSF towards the onsite accommodation camp. Due to this, limited contribution is expected in elevated PM concentrations at the camp due to Project operations. Other locations, such as constructing the onsite accommodation camp in the north or east of the Project will cause severe contribution of Project at the onsite accommodation camp through a significant increase in number of annual exceedances. Similarly, locating the camp in the south will cause all of the PM concentrations from TSF to accumulate at the onsite accommodation camp as winds blow from north towards south for 80% time of the year. Therefore, constructing the onsite accommodation camp in south of the TSF will result in exceedance of PM concentration throughout the year.

In addition to the Project contribution, the onsite accommodation camp is also exposed to elevated particulate matter (PM) concentrations due to desert conditions in the background. Based on the assessment carried out in **Appendix C**, the baseline PM concentrations tend to increase with increase in wind speed. The increase in baseline concentration occurs when the wind speed exceeds the threshold friction velocity of the particulates.

The current location of camp has a topographic barrier in its north (upwind direction) due to which it receives limited contribution from the wind-blown dust in the background (see topographical map in **Exhibit 6.11**). While the Project may construct this camp at any location in the north of Project, those locations do not have natural barriers in their upwind direction and can potentially experience elevated PM concentrations due to wind-blown dust in the background.

6.2 Other Impacts on Air Quality Due to Construction and Decommissioning Activities

The Project construction and decommissioning activities will impact the air quality of the Project Area and surroundings through emissions of gaseous pollutants and particulate matter. However, the scale of these impacts will be relatively small as most of the human receptors are located at larger distances from the open pit. The pollutants are expected to disperse before reaching these receptors and will result in very low contribution towards the ambient concentrations. Therefore, such the air dispersion modelling of such impacts is not carried out.

6.3 Screening of Impacts

Air quality related impacts are identified in **Exhibit 6.10**. These impacts are further assessed as part of the impact assessment in **Section 7**.

Exhibit 6.11: Screening of Air Quality Impacts

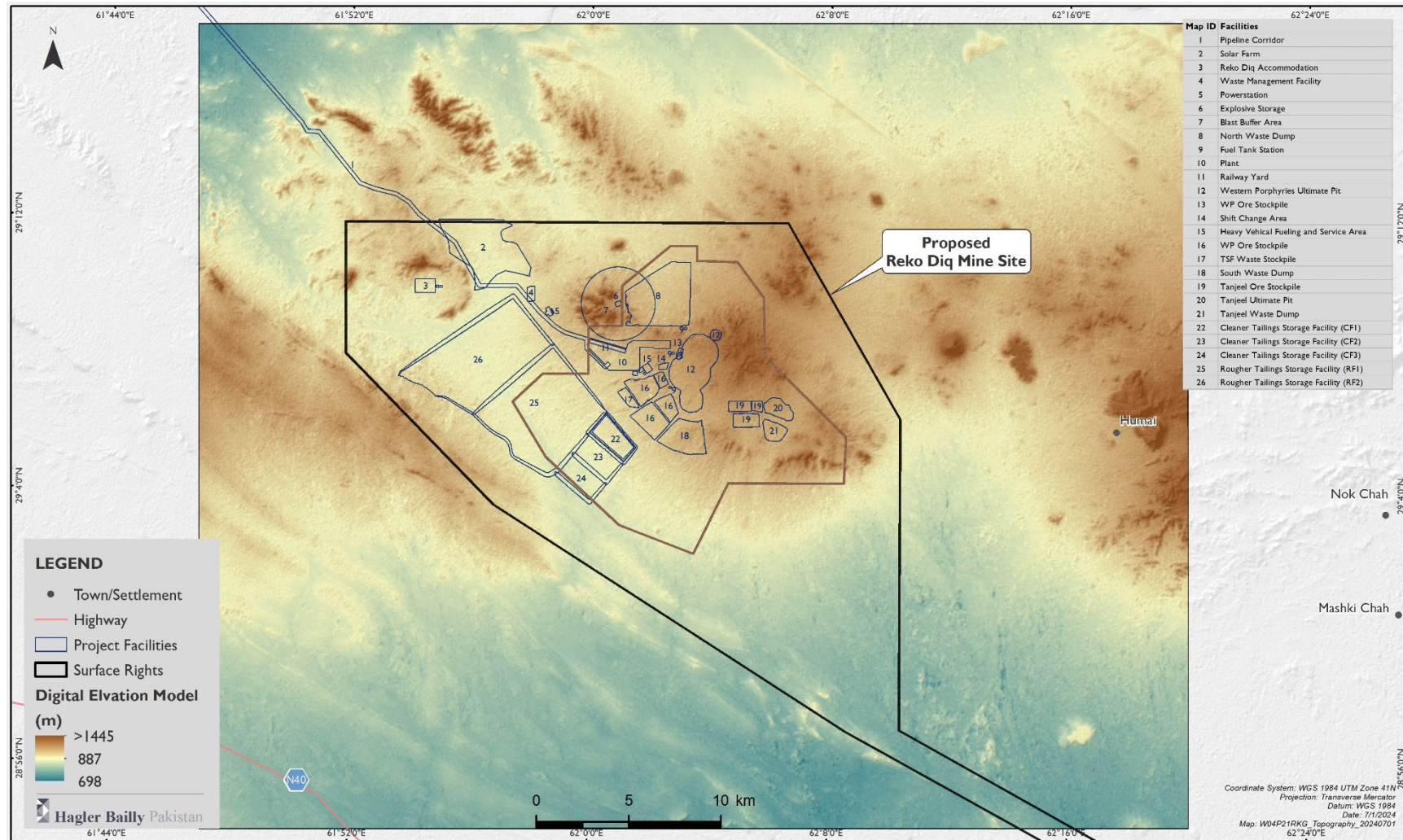
No.	Activity	Sensitivity/Impact	Project Phase	Further Assessment as Part of this Study	Impact Assessment Section
1.	Construction of Reko Diq Mine	The construction of the Reko Diq Mine Site will cause an increment in the baseline concentrations of air pollutants, thus, causing nuisance among the receptors.	C	Yes	Section 7.2
2.	Expansion of Port Facilities	Expansion of Port facilities for storage of copper concentrate can potentially result in dust generation.	C	Yes	Section 7.1
3.	Mining operations	The operations of the Reko Diq Mine Site will cause an increase in the baseline concentrations of air pollutants, thus, causing nuisance among the receptors.	O	Yes	Section 7.2
4.	Decommissioning Activities	The decommissioning of the Reko Diq Mine Site will cause an increment in the baseline concentrations of air pollutants, thus, causing nuisance among the receptors.	D	Yes	Section 7.3

C: Construction

O: Operations

D: Decommissioning

Exhibit 6.12: Topography of the Project Area



7. Impact Assessment

This section discusses the potential impacts that may result from the Project, along with associated mitigation measures. The assessment has been undertaken in accordance with the methodology provided in **Section 4.4**.

The following impacts have been detailed below:

- ☞ Impact A01: Increase in dust levels due construction of a concentrate storage shed at the port facilities
- ☞ Impact A02: Impacts on air quality due to construction activities
- ☞ Impact A03: Impacts on air quality due to mine operations
- ☞ Impact A04: Impacts on air quality due to decommissioning activities

7.1 Increase in Dust Levels due to Expansion of Port Facilities During Construction Phase

The expansion activities at the port facilities which includes construction of concentrate storage shed at the PIBT site. These expansion activities can result elevated levels of dust in the area.

The port facilities for export of Concentrate Export terminal will be located in Port Qasim, Karachi, which is a designated industrial zone. Based on assessments conducted by HBP (2016) and GEMS (2017), (HBP, 2016) the baseline PM_{10} concentration in the Port Qasim ranged between $140 \mu\text{g}/\text{m}^3$ and $147 \mu\text{g}/\text{m}^3$. Similarly, the $PM_{2.5}$ concentrations at this location usually range between $20 \mu\text{g}/\text{m}^3$ and $45 \mu\text{g}/\text{m}^3$ respectively (HBP, 2016) (GEMS, 2017). Therefore, the $PM_{2.5}$ concentrations are already expected to exceed the applicable limit of $35 \mu\text{g}/\text{m}^3$ prescribed in Sindh Environmental Quality Standards (SEQS) for ambient air quality.

The storage area for concentrate export will be constructed at an existing terminal at the PITB and will involve the addition of facilities for the purpose of the Project. The expansion activities are, however, expected to be of relatively small spatial scale and will last for a short duration not lasting more than few months. Due to this, the Project's impacts on the ambient air quality will be temporary and will remain for short durations, not lasting after completion of the construction phase of the Project. The extent of Project's expansion activities will be small as the PIBT site already has established port facilities such as facilities for ship loading and unloading, roads for transportation of materials etc. The intensity of these impacts will also be minor as the baseline air quality is already very high and Project's contribution will be relatively negligible.

The Project will implement precautionary mitigation measures to ensure compliance with the limits prescribed in NEQS and IFC General EHS Guidelines to ensure that the expansion activities do not impact the nearby receptors.

Impact A01: Increase in dust levels due to construction of the Concentrate Export Terminal			
Phase: Construction			
Impact Description: Construction at the existing terminal may cause fugitive dust emissions.			
Prior to Mitigation/Management			
Dimension	Rating	Interpretation of Rating	Significance
Duration	2	Short term Up to 2 years	Negligible (negative) -12
Extent	1	Site specific	
Intensity	1	Minor effects on environment. Minor medium-term social impacts.	
Probability	3	Probable Has occurred here or elsewhere and could therefore occur (20-50%)	
Mitigation/Management Actions			
• Watering exposed construction material it moist as it will can reduce the total dust emissions by ~75%. • Investigate cover options (where practical) for the stockpiles and exposed surfaces to reduce dust emissions from high-speed winds. • Storage of construction materials in covered areas with three sided barriers to avoid fugitive dust emissions due to wind erosion.			
Post-Mitigation			
Dimension	Rating	Interpretation of Rating	Significance
Duration	2	Short term Up to 2 years	Negligible (negative) -8
Extent	1	Site Specific Limited to the site and its immediate surroundings.	
Intensity	1	Minor effects on or physical environment. Minor medium-term social impacts on local population. Mostly repairable.	
Probability	2	Unlikely Has not happened yet but could happen once in the lifetime of the Project, therefore there is a possibility that the impact will occur (5-20%)	
Nature	Negative		

7.2 Impacts on Air Quality Due to Construction and Mining Activities

Construction and operations at the mine can cause elevated concentrations of PM₁₀ and PM_{2.5} due to emissions from activities including power generation, blasting and drilling, material handling, primary and secondary crushing, screening, milling, vehicle movement, wind erosion, etc. The mining activities can also result in emissions of gaseous pollutants including NO₂, and SO₂ from power generation, vehicular movement, explosives detonation etc.

According to the analysis carried out in **Section 6.1**, the gaseous emissions from the Project are expected to remain within the applicable limits at the primary receptors and in the operational areas for 1-hour, 24-hours, and annual averaging period. Particulate matter will also remain within the applicable limits at Humai settlement and within operational areas.

An exceedance in PM₁₀ and PM_{2.5} concentrations is expected at the onsite accommodation camp due to Project operations during low wind speeds, however, this exceedance will occur for 4-6 days per year only. For remaining 359-361 days of the year, the PM₁₀ and PM_{2.5} concentrations due to Project operations will remain within the applicable limits at this location. It is pertinent to mention that these concentrations occur with emission control measures and mitigation measures stated in **Section 4.4.5**, are in place. In the absence of such controls and mitigation measures, elevated Predicted Concentrations of PM₁₀ are expected beyond the Project boundary. These concentrations are expected to last till several kilometres and multiple days of a year, even resulting in exceedances at Humai settlement, a receptor located at 30 km in the east of western porphyries.

Apart from the Project operations, the Reko Diq Mine Site will also experience elevated PM₁₀ and PM_{2.5} concentrations exceeding the applicable limits for 24-hours for additional 51 days of the year. This exceedance in PM concentrations is due to high wind speeds, causing the elevated PM concentrations due desert conditions in the background.

As occurrence of particulate matter at the proposed Project location is predominantly associated with natural sources, Project's implemented mitigation measures cannot reduce these natural emissions. However, during the high wind speeds, the Project will implement adequate mitigation measures, such as mandatory use of respiratory masks, along with continuous monitoring of the gaseous pollutants and particulate matter to ensure that the onsite personnel remain unaffected.

Impact A02 and A03: Impacts on air quality due to construction and mining operations at Reko Diq Mine Site			
Phase: Operations			
Impact Description: Elevated dust levels and gaseous pollutants within the Project boundary and at the nearby sensitive receptors due to mining operations at the Reko Diq Mine Site			
Prior to Mitigation/Management			
Dimension	Rating	Interpretation of Rating	Significance
Duration	5	Inter-Generational - >20 years	Major (negative) -60
Extent	2	Local Extending across the site and to nearby settlements.	
Intensity	5	Significant impact on the environment. On-going serious social issues.	
Probability	5	Certain / Definite There are sound evidence-based reasons to expect that the impact will definitely occur (90-100%)	
Nature	Negative	-	

Mitigation/Management Actions			
Control Measures: - Installation of dust control measures such as fabric filters and equipment enclosures to reduce dust emissions from the mining equipment including hoppers, conveyors etc., - Progressive closure of the cleaner cells of the TSF to prevent dust generation and release of other pollutants from the impoundment. - Wet operations at the rougher cells of TSF to retain water content and keep the tailings moist. - Investigate options for reduction in haulage speed to reduce haul road emissions. - Gravel the top surface of haul roads for reduction in emissions during haulage. - Investigate options of particulate matter filtration in the heating, ventilation, and air conditioning systems of onsite accommodation camp. - Consider installation of wind breaks in the northwest of TSF for further reduction in particulate emissions. - Regular maintenance of vehicles as per manufacturers specifications to ensure that the exhaust emissions do not exceed the prescribed limits.			
Mitigation Measures: - Installation of windbreaks to reduce emissions due to wind erosion - Setting of speed limits along all site roads. - Use of respiratory masks and appropriate PPE - Frequent maintenance of air filtration system installed as part of HVAC system.			
Post-Mitigation			
Dimension	Rating	Interpretation of Rating	Significance
Duration	5	Inter-Generational - >20 years	Moderate (negative) -40
Extent	1	Site Specific Limited to the site and its immediate surroundings.	
Intensity	2	Minor short-term effects but not affecting ecosystem function.	
Probability	5	Certain / Definite There are sound evidence-based reasons to expect that the impact will definitely occur (90-100%).	
Nature	Negative	-	

7.3 Impacts on Air Quality Due to Decommissioning Activities

The sources of air emissions during the decommissioning phase include contouring the waste rock dumps, demolition of permanent and temporary structures, closure of the open-pit and tailings storage facility, disposal of the debris, and wind erosion on exposed surfaces and stockpiles. Other activities which can cause degraded air quality include consumption of liquid fossil fuels in the decommissioning equipment, and other vehicles.

As there are no human receptors within 500 m of the decommissioning area, the interpretation of the degraded air quality in terms of visible dust by the human receptors is unlikely.

The Project will ensure that the particulate emissions are significantly reduced through implementation of mitigation measures to ensure that the ambient air quality of the area remains within the limits prescribed in National Environmental Quality Standards.

Impact A04: Impacts on air quality due to decommissioning activities			
Phase: Decommissioning			
Impact Description: Air emissions during the decommissioning phase can degrade the ambient air quality			
Prior to Mitigation/Management			
Dimension	Rating	Interpretation of Rating	Significance
Duration	2	Short term Up to 2 years	Negligible (negative) -12
Extent	1	Site Specific Limited to the site and its immediate surroundings.	
Intensity	1	Minor effects environment.	
Probability	3	Probable Has occurred here or elsewhere and could therefore occur (20-50%)	
Nature	Negative		
Mitigation/Management Actions			
- Regularly maintain vehicles and equipment to keep a check on emissions. - Maintain speed limits on all site roads.			
Post-Mitigation			
Dimension	Rating	Interpretation of Rating	Significance
Duration	2	Short term Up to 2 years	Negligible (negative) -12
Extent	1	Site Specific Limited to the site and its immediate surroundings.	
Intensity	1	Minor effects environment.	
Probability	3	Probable Has occurred here or elsewhere and could therefore occur (20-50%)	
Nature	Negative		

7.4 Impacts on Air Quality due to Changing Climate

In a desert environment, changing climate can cause increase in droughts with reduction in vegetation cover, thus increasing desertification of the region. This leads to more dust storms, increasing the concentration of particulate matter (PM₁₀ and PM_{2.5}) in the air. Changes in wind patterns due to climate change can also transport dust and sand from deserts over long distances, worsening air quality even in areas far from the desert.

The climate change assessment of the Reko Diq Mine Site (BAR7212 – Climate Change Specialist Assessment of Reko Diq Gap Analysis and Scope of Work for Environmental Studies) indicates an increase of 2.86°C under the worst-case scenario for mid-term time horizon. This corresponds to an increase of 33.72 extreme heat days¹⁶ from the baseline. Similarly, an increase of 26.69% in precipitation is anticipated at the Reko Diq Mine Site.

In terms of air quality, although the increasing temperature can worsen the PM concentrations in the region, this increase will be compensated by the increased precipitation which usually causes PM to settle at the ground surface and reduces dispersion.

In terms of other Project components such as Road Transport Route, Rail Transport Route, and Port Qasim, the climate change is expected to result in increasing temperature and precipitation in the region. However, the ambient air quality is expected to remain unchanged due to limited sources of particulate matter in the background of these locations.

The climate change assessment of the Reko Diq Mine Site (BAR7212 – Climate Change Specialist Assessment of Reko Diq Gap Analysis and Scope of Work for Environmental Studies) does not assess changes in wind speeds or directions. These are the key parameters in determining the rate of dispersion and destination of pollutants. These variables are challenging to predict for future time horizons due to the complexities of atmospheric circulations, resulting in low confidence in projections (Wu, Shi, & Xu, 2020). Additionally, very few GCMs provide variables such as wind vectors, wind speeds, or wind directions. This is one of the key limitations of the GCM and their dynamically downscaled RCMs. Therefore, an assessment of impacts of climate change on the air quality cannot be assessed.

¹⁶ Extreme heat days are taken as those days when the average temperature is more than 35°C.

8. Environmental / Social Management Plan

Exhibit 8.1 provides the Environmental Management Plan with respect to management of all air quality related impacts.

Exhibit 8.1: Environmental Management Plan – Air Quality

<i>Impact</i>	<i>Activity</i>	<i>Mitigation Measures</i>	<i>Recommended Action Plans</i>	<i>Time period for implementation</i>
Construction Phase				
Impacts on air quality during construction of Reko Diq Mine Site	Mine site construction including installation of mineral processing plant, HFO power plant, tailings storage facility, stripping of the open-pit etc.	♦ Regularly maintain vehicles and equipment to keep a check on emissions. ♦ Follow speed limits for all traffic. ♦ Perform weighing and mixing process of cement in a fully enclosed environment to avoid dust generation at the concrete batch plants and other construction facilities.	-	Continually during construction phase
Increase in dust levels due to expansion of port facilities for export of concentrate	Material handling, open storage of construction materials, vehicular movement etc., during expansion of port facilities.	♦ Watering exposed construction material it moist as it will can reduce the total dust emissions by ~75%. ♦ Investigate cover options (where practical) for the stockpiles and exposed surfaces to reduce dust emissions from high-speed winds.	-	Continually during construction phase
Operations Phase				
Impacts on air quality due to operations of the Reko Diq Mine Site	Mining operations and associated activities including blasting and drilling, material handling, ore crushing and milling, vehicular movement on haul roads, wind erosion, explosives detonation, HFO power plant, and incinerator for management of HFO power plant sludge.	Control Measures: ♦ Installation of dust control measures such as fabric filters and equipment enclosures to reduce dust emissions from the mining equipment including hoppers, conveyors etc., ♦ Progressive closure of the cleaner cells of the TSF to prevent dust generation and release of other pollutants from the impoundment. ♦ Wet operations at the rougher cells of TSF to retain water content and keep the tailings moist. ♦ Investigate options for reduction in haulage speed to reduce haul road emissions. ♦ Gravel the top surface of haul roads for reduction in emissions during haulage.	-	Continually during operations phase

<i>Impact</i>	<i>Activity</i>	<i>Mitigation Measures</i>	<i>Recommended Action Plans</i>	<i>Time period for implementation</i>
		♦ Investigate options of particulate matter filtration in the heating, ventilation, and air conditioning systems of onsite accommodation camp. ♦ Consider installation of wind breaks in the northwest of TSF for further reduction in particulate emissions. ♦ Regular maintenance of vehicles as per manufacturers specifications to ensure that the exhaust emissions do not exceed the prescribed limits. Mitigation Measures: ♦ Installation of windbreaks to reduce emissions due to wind erosion ♦ Setting of speed limits along all site roads. ♦ Use of respiratory masks and appropriate PPE ♦ Frequent maintenance of air filtration system installed as part of HVAC system.		
Decommissioning Phase				
Impacts on air quality due to decommissioning activities	Decommissioning activities including backfilling of the waste rock dumps, demolition of permanent and temporary structures, closure of the open-pit and tailings storage facility, disposal of the debris, and wind erosion on exposed surfaces and stockpiles.	♦ Regularly maintain vehicles and equipment to keep a check on emissions. ♦ Maintain speed limits on all site roads.	-	Continually during decommissioning phase

9. Monitoring Plan

Exhibit 9.1 provides the Environmental Monitoring Plan for monitoring and reporting of the air quality-related aspects during various phase throughout the Project lifecycle.

Exhibit 9.1: Environmental Monitoring Plan – Air Quality

<i>Aspect</i>	<i>Type of Monitoring</i>	<i>Monitoring Frequency</i>
Construction Phase		
Particulate emissions (PM ₁₀ and PM _{2.5})	Dust monitoring and fine PM ₁₀ and PM _{2.5} continuous monitoring at onsite accommodation camp and Humai settlement. Weather monitoring in conjunction with dust monitoring at each receptor for assessing sources of dust.	Continuous
Gaseous emissions	Criteria gaseous pollutants at onsite accommodation camp and Humai settlement	Continuous
Exhaust emissions	Testing of the exhaust emissions of power generators, and vehicles.	Quarterly
Operations Phase		
Particulate emissions (PM ₁₀ and PM _{2.5})	Continuous monitoring of PM ₁₀ and PM _{2.5} at the onsite accommodation camp Weather monitoring in conjunction with dust monitoring for assessing sources of dust	Continuous throughout the operations phase
Particulate emissions (PM ₁₀ and PM _{2.5})	Continuous 24-hours monitoring at the Humai settlement. Weather monitoring in conjunction with dust monitoring for assessing sources of dust.	Monthly Additional monitoring in case of any grievance
Gaseous emissions	Criteria gaseous pollutants at onsite accommodation camp and Humai settlement	Continuous
Exhaust emissions	Testing of the exhaust emissions of power generators, and vehicles.	Quarterly
Decommissioning Phase		
Particulate emissions (PM ₁₀ and PM _{2.5})	Continuous 24-hours monitoring at the accommodation area and Humai settlement.	Quarterly. Additional monitoring case of any grievance
Exhaust emissions	Spot testing of the exhaust emissions of construction equipment, power generators, and vehicles.	Bi-annual

10. Conclusions and Recommendations

10.1 Specialist Impact Statement

The baseline concentrations of PM₁₀ and PM_{2.5} show direct relation with the wind speeds. As there are no anthropogenic sources of PM emissions in the upwind direction, most of the concentrations recorded are due to wind erosion of surrounding landscape. Therefore, any changes in the wind speed can change the PM concentrations at the Reko Diq Mine Site. So, the use of a static baseline for assessing Project's impacts on the air ambient air quality should be avoided and the incremental impacts of Project should be compared with a dynamic baseline in consideration of the wind speeds. In terms of gaseous pollutants (NO, NO₂, SO₂, and O₃), the baseline concentrations do not depict any exceedances from the applicable limits prescribed in the NEQS or IFC General EHS Guidelines for ambient air quality.

During operations of Reko Diq Mine Site, the onsite accommodation camp is expected to experience elevated concentrations of PM₁₀ and PM_{2.5} above the applicable limits for 41 days and 17 days of the year due to Project. This exceedance above the applicable limits is linked with TSF emissions when the winds blow from southeast direction. The Humai settlement is expected to remain unaffected due to Project. The sensitive receptors are also expected to experience high concentrations of PM₁₀ and PM_{2.5} exceeding the prescribed limits of NEQS and IFC General EHS Guidelines during high speed wind blowing from the north direction. Elevated baselines of particulate matter are attributed to desert environment in the upwind direction of the Project.

During construction and decommissioning phase, the Projects' impacts on air quality are not significant as human receptors and dwelling are at significant distances from the Mine site. The impacts will last for shorter durations and will depend on the type of on-going activities, as well as meteorological conditions. These impacts are expected to be further minimized after implementation of the mitigation measures.

Similarly, the impacts due to vehicular movement on the Road Transport Route for transportation of construction material will remain negligible due to 1% increment in the baseline traffic. This impact will be further reduced in operations when the vehicular movement along the Road Transport Route will be further reduced and Project will primarily rely on railway operations.

The increase in dust levels at the Port Qasim due to expansion of port facilities for export of copper concentrate and loading and unloading will remain negligible. This location is in a designated industrial zone where the baseline air quality is above the NEQS for ambient air quality at the time of this writing. Furthermore, the scale of emissions at this location is already higher due to large number of industrial emission sources, and movement of marine and vehicular traffic in the industrial zone. As the Project will have very limited emissions and the expansion activities will last for relatively shorter period, the resultant impact on dust levels will remain minimum.

10.2 Key Recommendations

The key findings and recommendations of this Specialist Report are summarized below:

- ⑥ Dynamic baselines of PM₁₀ and PM_{2.5} that account for varying background levels of particulate matter as a function of wind speed should be used instead of static baselines to account for PM concentrations due to changing wind speeds.
- ⑥ The PM₁₀ and PM_{2.5} recorded by the onsite air quality monitoring station should be cross checked following gravimetric approach. This step is crucial to ensure the quality control of the datasets.
- ⑥ The staff working within the lease area of the Reko Diq Mine Site should be provided with suitable respiratory masks which can reduce the impacts of elevated pollutant concentrations.
- ⑥ For the onsite accommodation camp, the Project should conduct continuous monitoring of PM₁₀ and PM_{2.5} concentrations. In case of any exceedance from the limits prescribed in NEQS, or IFC General EHS Guidelines, restrictions should be placed on the movement of staff outside the buildings to reduce exposure to high dust levels.
- ⑥ Emission control measures such as fabric filters and equipment enclosures to reduce dust emissions from the mining equipment including hoppers, conveyors etc., progressive closure of the cleaner cells of the TSF, wet operations at the rougher cells of TSF should be considered.
- ⑥ Options for reduction in haulage speed should be considered to reduce haul road emissions.
- ⑥ Graveling of the top surface of haul roads should be investigated for reduction in emissions during haulage.
- ⑥ Options of particulate matter filtration in the heating, ventilation, and air conditioning systems should be investigated for onsite accommodation camp and other office buildings.
- ⑥ Installation of wind breaks in the northwest of TSF should be considered for further reduction in particulate emissions.
- ⑥ Regular maintenance of vehicles as per manufacturers specifications to ensure that the exhaust emissions do not exceed the prescribed limits.
- ⑥ Mitigation measures such as setting of speed limits along all site roads, use of respiratory masks and appropriate PPE, and frequent maintenance of air filtration system installed as part of HVAC system should also be implemented for reducing exposure of onsite workers to particulate emissions.

11. References

- Agency, U. S. E. P. (2010). National Ambient Air Quality Standards. Retrieved from <https://www.epa.gov/criteria-air-pollutants/naaqs-table>
- Breedveld, L., Timellini, G., Casoni, G., Fregni, A., & Busani, G. (2007). Eco-efficiency of fabric filters in the Italian ceramic tile industry. *Journal of Cleaner Production*, 15(1), 86-93.
- Donat, M. G., Sillmann, J., Wild, S., Alexander, L. V., Lippmann, T., & Zwiers, F. W. (2014). Consistency of temperature and precipitation extremes across various global gridded in situ and reanalysis datasets. *Journal of Climate*, 27(13), 5019-5035.
- Edvardsson, K. (2009). Gravel roads and dust suppression. *Road Materials and Pavement Design*, 10(3), 439-469.
- GEMS. (2017). *Environmental & Social Impact Assessment (ESIA) of BQPS-III 900 MW RLNG Based Combined Cycle Power Project (BQPS-III RLNG CCPP)*. Retrieved from <https://www.ke.com.pk/download/downloads/Environmental-and-Social-Impact-Assessment-Report-of-900-MW-BQPS-III.pdf>
- HBP. (2016). *Environmental Impact Assessment for Coal Transportation between Port Qasim Coal Unloading Terminal and Pakistan Railway Main Line*. Retrieved from https://openjicareport.jica.go.jp/pdf/12264354_02.pdf
- HBP. (2020). *Tanjeel Copper Project Environmental and Social Impact Assessment*. Retrieved from
- HBP, H. B. P. (2024). *Socioeconomic Report for Environmental and Social Feasibility Studies of Reko Diq Mining Project*. Retrieved from
- Neuman, C. M., Boulton, J. W., & Sanderson, S. (2009). Wind tunnel simulation of environmental controls on fugitive dust emissions from mine tailings. *Atmospheric Environment*, 43(3), 520-529.
- USEPA. (2006). Miscellaneous Sources. *AP 42, Fifth Edition, Volume I Chapter 13*.
- USEPA, U. E. P. A. (1998). *Control of Emissions of Air Pollution from Non-road Diesel Engines*. Retrieved from
- USEPA, U. S. E. P. A. (2006). Mineral Products Industry. *AP 42, Fifth Edition, Volume I*.
- Wu, J., Shi, Y., & Xu, Y. (2020). Evaluation and projection of surface wind speed over China based on CMIP6 GCMs. *Journal of Geophysical Research: Atmospheres*, 125(22), e2020JD033611.
- Zimwara, D., Mugwagwa, L., & Chikowore, T. (2012). Air pollution control techniques for the cement manufacturing industry: A case study for Zimbabwe. *CIE42 proceedings*, 37, 1-13.

Appendix A: Air Dispersion Modelling of Reko Diq Mining Project

See the following pages.



Hagler Bailly Pakistan

**Environmental and Social Impact
Assessment of
Reko Diq Mining Project
Air Dispersion Modelling**

Draft Report

HBP Ref.: D5AM14RKI

February 12, 2025

Reko Diq Mining Company

Quetta

Acronyms

BEQS	Balochistan Environmental Quality Standards
DWE	Digby Wells Environmental
EHS	Environmental, Health, and Safety
ESIA	Environmental and Social Impact Assessment
GLC	Ground Level Concentration
GLM	General Linear Model
HBP	Hagler Bailly Pakistan
IFC	International Finance Corporation
NAAQS	National Ambient Air Quality Standards
NEQS	National Environmental Quality Standards
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
O ₃	Ozone
PM ₁₀	Particulate Matter with an aerodynamic diameter less than 10 microns
PM _{2.5}	Particulate Matter with an aerodynamic diameter less than 2.5 microns
RDMC	Reko Diq Mining Company
SO ₂	Sulphur Dioxide
UKAS	United Kingdom Accreditation Service
USEPA	United States Environmental Protection Agency

Contents

1. Introduction.....	1-1
1.1 Objectives.....	1-1
1.2 Project Description and Settings	1-1
1.3 Applicable Standards and Guidelines	1-2
1.4 Organization of the Report.....	1-4
2. Air Quality Baseline.....	2-1
2.1 Particulate Matter (PM ₁₀ and PM _{2.5}).....	2-1
2.2 Gaseous Pollutants - NO ₂ and SO ₂	2-3
3. Methodology of Air Dispersion Modelling	3-1
3.1 Model Description.....	3-1
3.2 Assessment Methodology	3-1
3.3 Sensitive Receptors.....	3-2
3.4 Model Configuration	3-3
3.4.1 Meteorological Data.....	3-5
3.4.2 Averaging Periods	3-8
3.4.3 Emission Sources.....	3-8
3.5 Emission Control Measures.....	3-9
3.6 Modelling Scenarios	3-11
3.7 Assumptions, Exceptions, and Limitations	3-12
4. Results and Discussion	4-1
4.1 Definitions	4-1
4.2 Predicted Ambient Concentrations at Sensitive Receptors	4-1
4.2.1 Timings of Occurrence of Maximum Pollutant Concentrations at Sensitive Receptors and Associated Wind Conditions	4-20
4.2.2 Frequency of Occurrence of Predicted Incremental Concentrations.....	4-21
4.3 Predicted Ambient Concentrations in Operational Areas.....	4-26
4.3.1 Timings of Occurrence of Maximum Pollutant Concentrations in Operational Areas and Associated Wind Conditions	4-26
4.3.2 Frequency of Occurrence of Predicted Incremental Concentrations.....	4-33
4.4 Emissions from Power Generation	4-33
4.5 Mitigation Measures	4-34

5. Conclusions and Recommendations	5-1
6. References	6-1
7. Supplementary Information – Emission Rates Estimations	7-1
7.1 Mobile Emissions.....	7-1
7.2 Primary Crushing Area.....	7-1
7.3 Secondary Crushing Area.....	7-2
7.4 Mill Area	7-4
7.5 Pit Operations	7-5
7.6 Blasting & Drilling.....	7-7
7.7 Haul Roads	7-8
7.7.1 Scenario 1 – Ultimate Footprint	7-8
7.7.2 Scenario 2 – Year 2025	7-10
7.8 Waste Rock Dumps	7-11
7.9 Wind Erosion.....	7-14
7.9.1 Scenario 1 – Ultimate Footprint	7-14
7.9.2 Scenario 2 – Year 2050	7-15
7.10 Explosives Detonation	7-17
7.11 HFO Power Plant.....	7-17
7.12 Incinerator	7-18

Exhibits

Exhibit 1.1:	Annual Ore Mining (Million Tonnes per Annum)	1-2
Exhibit 1.2:	Applicable Limits and Guidelines for Ambient Air Quality	1-3
Exhibit 1.3:	Annual Permitted Number of Exceedances	1-4
Exhibit 2.1:	Simulated Background PM ₁₀ Concentrations as Function of Wind Speeds.....	2-2
Exhibit 2.2:	Simulated Background PM _{2.5} Concentrations as Function of Wind Speeds.....	2-2
Exhibit 2.3:	Air Quality Sampling Results of NO ₂ and SO ₂ at Reko Diq Mine Site (Upwind Location).....	2-4
Exhibit 2.4:	Background Concentrations of Gaseous Pollutants.....	2-4
Exhibit 3.1:	Sensitive Receptors near Reko Diq Mine Site	3-2
Exhibit 3.2:	Configuration of Air Dispersion Model.....	3-3
Exhibit 3.3:	Map of Receptor Grid.....	3-4
Exhibit 3.4:	Description of Meteorological Dataset	3-5
Exhibit 3.5:	Wind Rose (2021 – 2023)	3-6
Exhibit 3.6:	PSD Fractions of Tailings.....	3-9
Exhibit 3.7:	Emission Control Measures for Mining Operations.....	3-9
Exhibit 3.8:	Emission Control Measures for Mining Operations.....	3-10
Exhibit 4.1:	Predicted Ambient Concentrations at Sensitive Receptors in Scenario 1 – Ultimate Footprint.....	4-3
Exhibit 4.2:	Predicted Ambient Concentrations at Sensitive Receptors in Scenario 2 – Year 2050	4-5
Exhibit 4.3:	Predicted 1-hour Ambient Concentrations of NO ₂ in Scenario 1 – Ultimate Footprint	4-6
Exhibit 4.4:	Predicted 24-hour Ambient Concentrations of NO ₂ in Scenario 1 – Ultimate Footprint.....	4-7
Exhibit 4.5:	Predicted Annual Ambient Concentrations of NO ₂ in Scenario 1 – Ultimate Footprint	4-8
Exhibit 4.6:	Predicted 1-hour Ambient Concentrations of SO ₂ in Scenario 1 – Ultimate Footprint	4-9

Exhibit 4.7:	Predicted 24-hour Ambient Concentrations of SO ₂ in Scenario 1 – Ultimate Footprint	4-10
Exhibit 4.8:	Predicted Annual Ambient Concentrations of SO ₂ in Scenario 1 – Ultimate Footprint	4-11
Exhibit 4.9:	Predicted 24-hour Ambient Concentrations of PM ₁₀ in Scenario 1 – Ultimate Footprint	4-12
Exhibit 4.10:	Predicted Annual Ambient Concentrations of PM ₁₀ in Scenario 1 – Ultimate Footprint	4-13
Exhibit 4.11:	Predicted 24-hour Ambient Concentrations of PM _{2.5} in Scenario 1 – Ultimate Footprint	4-14
Exhibit 4.12:	Predicted Annual Ambient Concentrations of PM _{2.5} in Scenario 1 – Ultimate Footprint	4-15
Exhibit 4.13:	Predicted 24-hour Ambient Concentrations of PM ₁₀ in Scenario 2 – Year 2050	4-16
Exhibit 4.14:	Predicted Annual Ambient Concentrations of PM ₁₀ in Scenario 2 – Year 2050	4-17
Exhibit 4.15:	Predicted 24-hour Ambient Concentrations of PM _{2.5} in Scenario 2 – Year 2050	4-18
Exhibit 4.16:	Predicted Annual Ambient Concentrations of PM _{2.5} in Scenario 2 – Year 2050	4-19
Exhibit 4.17:	Time of Maxima and Associated Wind Conditions Scenario 1 – Ultimate Footprint.....	4-20
Exhibit 4.18:	Time of Maxima and Associated Wind Conditions Scenario 2 – Year 2050	4-21
Exhibit 4.19:	Number of Hours and Days Exceeded per Year for NO ₂ and SO ₂	4-22
Exhibit 4.20:	Number of Days Exceeded per Year for PM ₁₀ and PM _{2.5} in Scenario 1 – Ultimate Footprint	4-23
Exhibit 4.21:	Number of Days Exceeded per Year for PM ₁₀ and PM _{2.5} in Scenario 2 – Year 2050	4-24
Exhibit 4.22:	Number of Exceedances per Year of PM ₁₀ at Onsite Accommodation Camp – Project Contribution	4-25
Exhibit 4.23:	Number of Exceedances per Year of PM _{2.5} at Onsite Accommodation Camp – Project Contribution	4-25
Exhibit 4.24:	Predicted Ambient Concentrations at Maxima Locations in Scenario 1 – Ultimate Footprint.....	4-27
Exhibit 4.25:	Predicted Ambient Concentrations of Respirable Dust at Maxima Locations	4-28
Exhibit 4.26:	Time of Maxima and Associated Wind Conditions in Scenario 1 – Ultimate Footprint.....	4-29

Exhibit 4.27:	Time of Maxima and Associated Wind Conditions in Scenario 2 – Year 2050	4-31
Exhibit 4.28:	Topography of the Reko Diq Mine Site	4-32
Exhibit 7.1:	Summary of Daily Emissions	7-2
Exhibit 7.2:	NO _x and PM _{2.5} Emissions from Mobile Sources	7-3
Exhibit 7.3	SO ₂ Emissions from Mobile Sources	7-1
Exhibit 7.4:	Inputs for Emissions Estimations from Primary Crushing Area.....	7-1
Exhibit 7.5:	Estimated Emissions from Primary Crushing Area	7-2
Exhibit 7.6:	Inputs for Emissions Estimations from Secondary Crushing Area	7-2
Exhibit 7.7:	Estimated Emissions from Secondary Crushing Area	7-3
Exhibit 7.8:	Inputs for Emissions Estimations from Mill Area	7-4
Exhibit 7.9:	Estimated Emissions from Mill Area.....	7-5
Exhibit 7.10:	Inputs for Emissions Estimations from Pit Operations	7-5
Exhibit 7.11:	Estimated Emissions from Pit Operations Scenario 1 – Ultimate Footprint.....	7-6
Exhibit 7.12:	Estimated Emissions from Pit Operations Scenario 2 – Year 2050	7-7
Exhibit 7.13:	Inputs for Emissions Estimations from Blasting and Drilling	7-7
Exhibit 7.14:	Estimated Emissions from Blasting and Drilling.....	7-8
Exhibit 7.15:	Inputs for Emissions Estimations from Haul Roads Scenario 1 – Ultimate Footprint.....	7-8
Exhibit 7.16:	Estimation of Emission Factors in Scenario 1 – Ultimate Footprint	7-9
Exhibit 7.17:	Estimated Emissions from Haul Roads in Scenario 1 – Ultimate Footprint.....	7-10
Exhibit 7.18:	Inputs for Emissions Estimations from Haul Roads Scenario 2 – Year 2050	7-10
Exhibit 7.19:	Estimation of Emission Factors in Scenario 2 – Year 2050	7-11
Exhibit 7.20:	Estimated Emissions from Haul Roads in Scenario 2 – Year 2050	7-11
Exhibit 7.21:	Inputs for Emissions Estimations from Waste Rock Dumps	7-12
Exhibit 7.22:	Emission Factors for Material Handling	7-12
Exhibit 7.23:	Estimated Emissions from Waste Rock Dumps Scenario 1 – Ultimate Footprint.....	7-12
Exhibit 7.24:	Estimated Emissions from Waste Rock Dumps Scenario 2 – Year 2050	7-13
Exhibit 7.25:	Input Parameters for Wind Erosion	7-14
Exhibit 7.26:	Emission Factors for Wind Erosion	7-14

Exhibit 7.27:	Estimated Emissions from Wind Erosion	7-15
Exhibit 7.28:	Input Parameters for Wind Erosion	7-15
Exhibit 7.29:	Emission Factors for Wind Erosion	7-16
Exhibit 7.30:	Estimated Emissions from Wind Erosion	7-16
Exhibit 7.31:	Inputs for Explosives Detonation.....	7-17
Exhibit 7.32:	Estimated Emissions from Explosives Detonation	7-17
Exhibit 7.33:	Stack Characteristics of HFO Power Plant	7-18
Exhibit 7.34:	Emission Rates from HFO Power Plant.....	7-18
Exhibit 7.35:	Stack Characteristics of Incinerator	7-19
Exhibit 7.36:	Inputs for Emission Rates Estimates	7-19
Exhibit 7.37:	Estimated Emissions from Incinerator.....	7-19

1. Introduction

Barrick Gold Corporation (hereafter Barrick) through its subsidiary Reko Diq Mining Company (RDMC), in a Joint Venture partnership with the Government of Pakistan and the Government of Balochistan, is completing a feasibility study for the Reko Diq Mining Project (the 'Project') in the western part of Balochistan province of Pakistan. As part of the feasibility study, an Environmental and Social Impact Assessment (ESIA) has been conducted, which encompasses a number of specialist studies. The ESIA forms part of the environmental permitting process and provides a basis for the integration of environmental and social considerations into the Project design. RDMC appointed Digby Wells Environmental (hereafter Digby Wells) and Hagler Bailly Pakistan Pvt. Ltd (hereafter HBP) to carry out the relevant environmental and social studies and permitting process for the proposed Project.

This document has been prepared to provide the air dispersion modelling of the Reko Diq Mine Site.

1.1 Objectives

Following are the objectives of the air dispersion modelling:

- ⑥ *Assess Ambient Air Quality Impacts:* Evaluate the potential impacts of emissions from the Project on ambient air quality, including ground-level concentrations (GLCs) of criteria pollutants.
- ⑥ *Identify Potential Receptor Sensitivity:* Determine sensitive receptors, such as nearby communities and onsite Project accommodation, and ecological receptors, that may be exposed to elevated concentrations of pollutants emitted.
- ⑥ *Predict Dispersion and Transport of Pollutants:* Model the dispersion and transport of pollutants to estimate GLCs and spatial distribution patterns of pollutants under various meteorological conditions and emission scenarios.
- ⑥ *Assess Compliance with Air Quality Standards:* Determine whether the predicted pollutant concentrations exceed applicable air quality standards, guidelines, or regulatory thresholds, and assess the degree of compliance with regulatory requirements.
- ⑥ *Evaluate Mitigation Measures:* Identify potential mitigation measures to minimize adverse air quality impacts, if there are any.

The air dispersion modelling is carried out for mining operations at the Reko Diq Mine Site. A detailed list of assumption, exclusions, and limitations for this air dispersion modelling is provided in **Section 3.7**.

1.2 Project Description and Settings

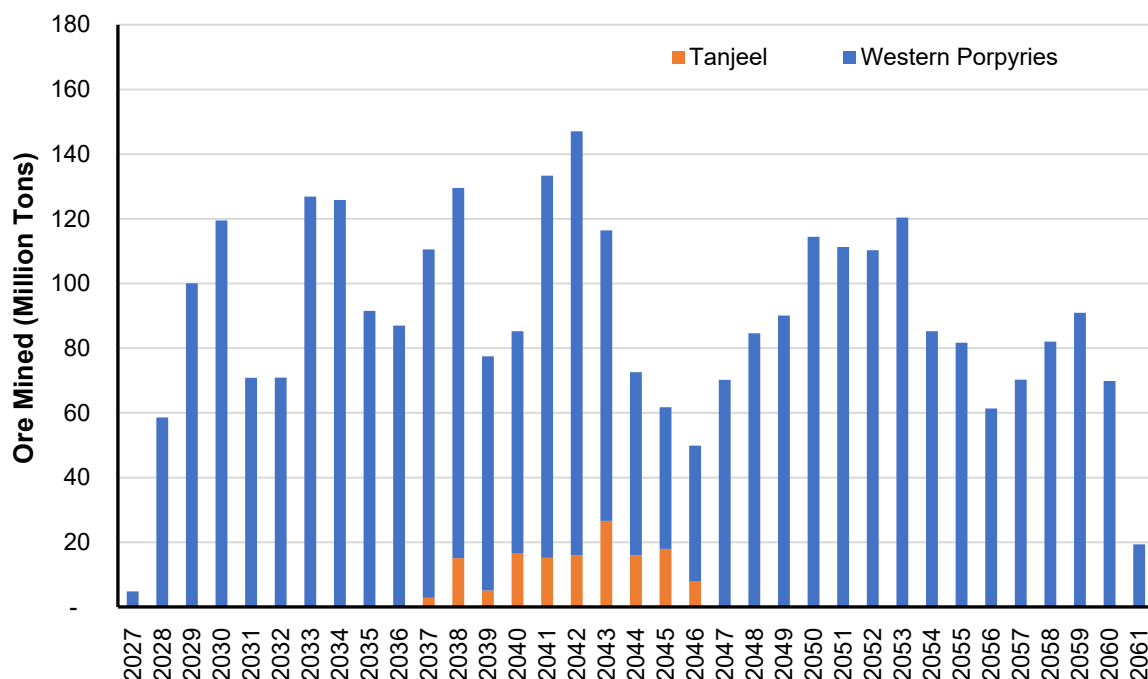
The Reko Diq Mine Site will consist of two main pits, Western Porphyry and Tanjeel. The Western Porphyry Pit (the Pit) is a complex of four adjacent porphyry centres. The Tanjeel Pit has a supergene blanket with associated alteration, oxidation and higher

sulphide content. Mining will be 24-hour open-pit shovel and truck operation. Tanjeel represents a minor component of the ore body and will be brought into production after the first 10 years of mining. Access to the mine will be through external haul roads that are 40 m wide and have 500 millimetres (mm) of aggregate material for a compacted running surface. This includes water rock to build road foundations and aggregate material for final surface. During peak operation, the two pit sections will be combined and will be approximately 3.5×3.5 km in extent.

The ore body or Run of Mine (ROM) will be extracted and stockpiled onto the low-grade stockpile or hauled to the processing plant and the waste rock will be hauled to the two Waste Rock Dumps (WRDs), one located south of the Pit, and one located to the north. Tailings will be piped to the tailings storage facility (TSF), located to the southwest of the Pit.

A total of 3,092 million tonnes of ore will be mined across a period of 35 years, peaking at 120 million tonnes of ore mined in a year with an average of ~88 million tonnes mined per year. Roughly 95% or 2,963 million tonnes of ore will be mined from the Western Porphyry and the remaining 129 million tonnes will be mined from the Tanjeel Pit. The total Life of Mine (LOM) is 49 years. **Exhibit 1.1** provides the annual mining rates of the Western Porphyries Pit and Tanjeel Pit.

Exhibit 1.1: Annual Ore Mining (Million Tonnes per Annum)



1.3 Applicable Standards and Guidelines

The following local standards and international guidelines are taken as reference to assess compliance of air emissions from the operations of Reko Diq Mine Site.

- ☞ The Pakistan - National Environmental Quality Standards (NEQS) for Ambient Air Quality, 2000
- ☞ International Finance Corporation (IFC) General Environmental Health and Safety (EHS) Guidelines for Ambient Air Quality, 2007
- ☞ World Bank EHS Guidelines for Thermal Power Plants
- ☞ European Commission Air Quality Standards, 2008¹
- ☞ Occupational Health and Safety Administration (OSHA) Standard 1910.1000 for Air Contaminants

For sensitive receptors, the results are compared with the NEQS for ambient air quality and IFC General EHS Guidelines. For receptors in operational areas such as mineral processing plant, open pits, and waste rock dumps etc., the results of air dispersion modelling are compared with OSHA Standard.

Exhibit 1.2 provides the limits prescribed in NEQS, IFC General EHS Guidelines, and OSHA Standards for ambient air quality. **Exhibit 1.3** provides the number of yearly permitted exceedances prescribed in EU Air Quality Standards, 2008.

Exhibit 1.2: Applicable Limits and Guidelines for Ambient Air Quality

Pollutant	Averaging Period	NEQS	IFC General EHS Guidelines		OSHA Standard
			Interim Target 1	Guideline Limits	
		µg/m ³			
Nitrogen Dioxide (NO ₂)	1-hour	-	-	200	-
	8-hours	-	-	-	9,000
	24-hours	80	-	-	-
	Annual	40	-	40	-
Sulphur Dioxide (SO ₂)	1-hour	-	-	-	-
	8-hours	-	-	-	13,000
	24-hours	120	125	20	-
	Annual	80	80	-	-
Respirable Dust	8-hours	-	-	-	5,000
Particulate Matter (PM ₁₀)	24-hours	150	150	50	-
	Annual	120	70	20	-
Particulate Matter (PM _{2.5})	24-hours	35	73	25	-
	Annual	15	35	10	-

Notes: '-' indicates that limits are not prescribed in the reference standard/guidelines.

The limits prescribed in OSHA Standard are in mg/m³. These limits are converted to $\mu\text{g}/\text{m}^3$ to make them comparable with NEQS and IFC General EHS Guidelines.

At the time of this writing, the Balochistan Environmental Quality Standards, 2020 were in the draft phase and their formal notification was awaited. Therefore, according to Section 42 sub-section 5 of the Balochistan Environmental Protection Act, 2012, the NEQS will remain applicable until the BEQS are formally notified. When the implementation of BEQS will be notified, the NEQS will be repealed within the provincial jurisdiction of the Balochistan province and projects will be obligated to conform with the limits prescribed in the BEQS.

¹ The European Commission Air Quality Standards were used as a reference to assess the period of exposure of a human receptor to the air quality in which the concentrations of pollutants exceed the prescribed standard.

Exhibit 1.3: Annual Permitted Number of Exceedances

<i>Pollutant</i>	<i>Averaging Period</i>	<i>EU Air Quality Standards, 2008</i>
		<i>No. of Permitted Exceedances per Year</i>
Nitrogen Dioxide (NO ₂)	1-hour	18
	24-hours	-
	Annual	-
Sulphur Dioxide (SO ₂)	1-hour	24
	24-hours	3
	Annual	-
Particulate Matter (PM ₁₀)	24-hours	35
	Annual	-
Particulate Matter (PM _{2.5})	24-hours	-
	Annual	-

‘-’ indicates that number of permitted exceedances are not prescribed in EU Air Quality Standards, 2008 for the reference pollutant.

1.4 Organization of the Report

In addition to this section ‘*Introduction*’, this document consists of the following sections:

- ☞ *Section 2: Air Quality Baselines* – provides the background concentrations of pollutants taken as reference for assessing impacts of Project’s air emissions.
- ☞ *Section 3: Methodology of Air Dispersion Modelling* – describes the methodology followed for modelling air dispersion during mining operations at the Reko Diq Mine Site.
- ☞ *Section 4: Results and Discussions* – provides the results of air dispersion modelling including a discussion of maximum modelled concentrations, their locations, and frequency of occurrence, and sources of emissions. This section also assesses compliance of Project’s emissions at the nearby sensitive receptors.
- ☞ *Section 5: Conclusions and Recommendations* – provides the conclusions and recommendations of the air dispersion modelling.
- ☞ *Section 6: References* – provides the list of publicly published literature cited in the air dispersion methodology.

Additionally, the following supplementary section have been included which provide information on the emission rates estimations.

- ☞ *Section 7: Supplementary Information – Emission Rates Estimations* – provides the detailed process-wise emission rates estimations along with the rationale for each estimate.

2. Air Quality Baseline

This section provides the air quality baseline which is used in the air dispersion modelling to estimate Project's contribution in ambient pollutant concentrations during its operations phase. These new ambient concentrations of pollutants inclusive of the Project contribution are hereby referred to as '*Predicted Ambient Concentrations*'. In **Section 4**, these Predicted Ambient Concentrations are used to assess Project's compliance with the applicable limits.

2.1 Particulate Matter (PM₁₀ and PM_{2.5})

As the Reko Diq Mine Site is in a desert environment with no anthropogenic source of emissions in the upwind direction, the background concentrations of PM₁₀ and PM_{2.5} are expected to be primarily due to wind erosion. Therefore, background concentrations of PM₁₀ and PM_{2.5} are expected to significantly increase with increase in wind speeds. To account for changing background concentrations of these pollutants as a function of the wind speed, a relationship of PM₁₀ and PM_{2.5} concentrations with wind speed was developed using the available data as opposed to a fixing the background concentrations at a constant level. **Exhibit 2.1** and **Exhibit 2.2** show the estimated background PM₁₀ and PM_{2.5} concentrations as a function of wind speeds.

The background PM₁₀ and PM_{2.5} Concentrations were simulated through a detailed assessment of variability in the recorded concentrations as a function of wind speed. This assessment is provided in detail in **Section 5.2** of standalone specialist report **D4AQ14RKI – Air Quality**.

Exhibit 2.1: Simulated Background PM₁₀ Concentrations as Function of Wind Speeds

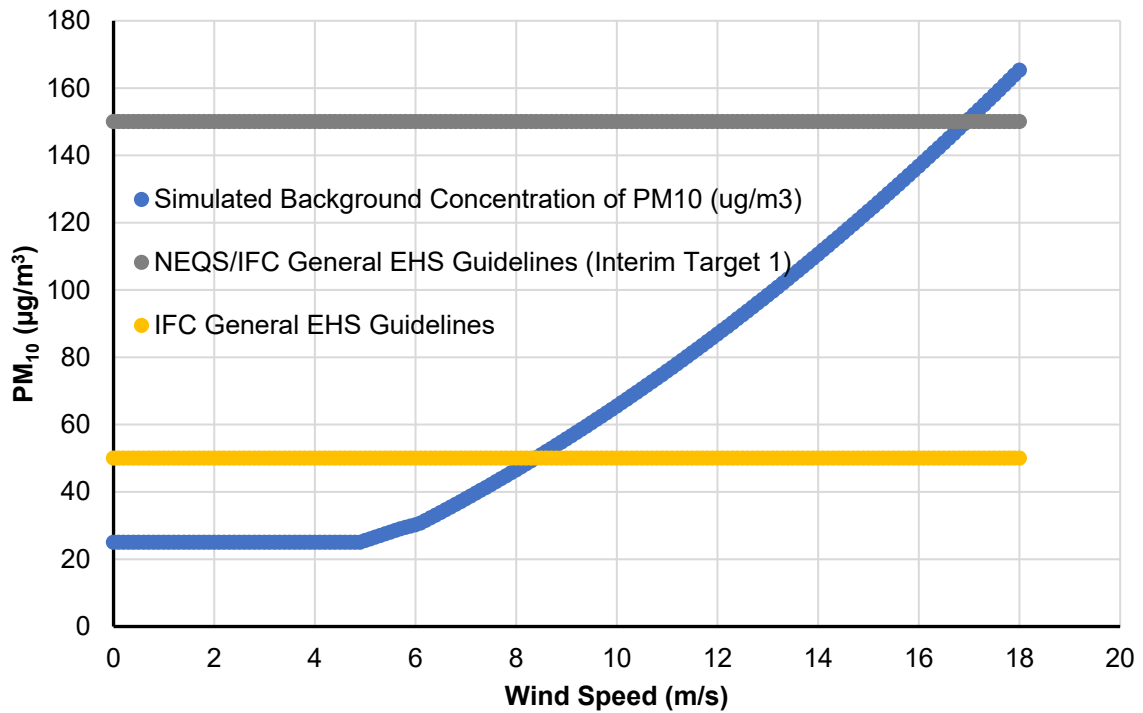
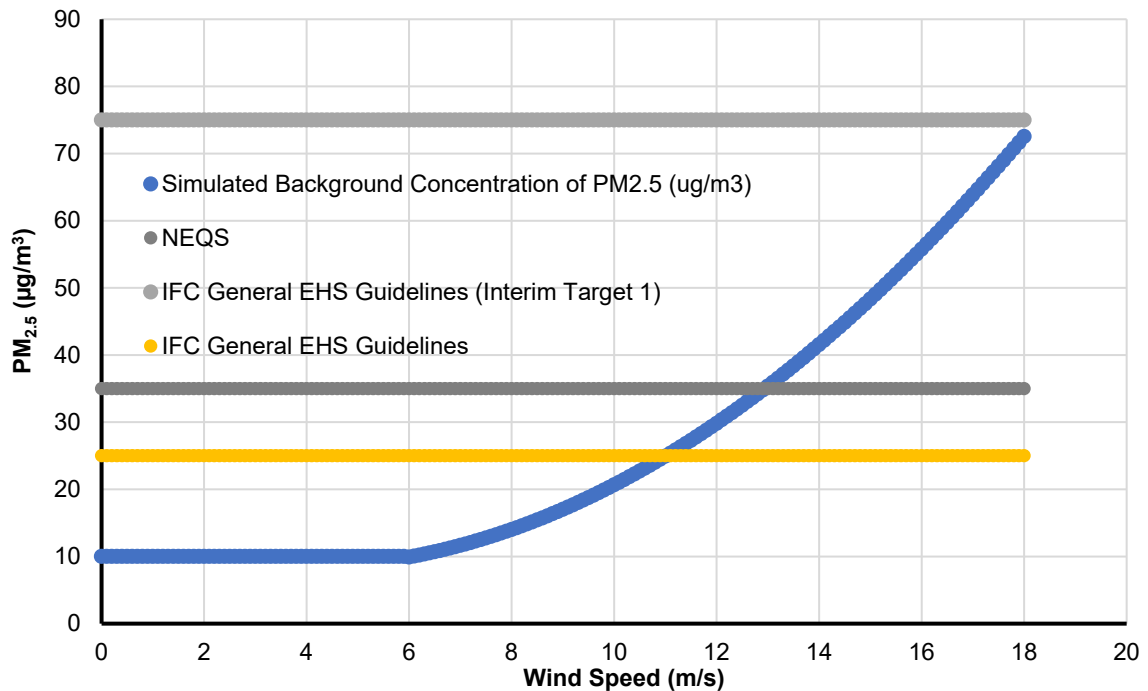


Exhibit 2.2: Simulated Background PM_{2.5} Concentrations as Function of Wind Speeds



Both **Exhibit 2.1** and **Exhibit 2.2** indicate an increasing pattern in PM concentrations with increasing wind speeds. A comparison of the simulated background concentrations

of PM₁₀ and PM_{2.5} with the limits prescribed in NEQS for ambient air quality and IFC General EHS Guidelines is provided below.

- ⊗ PM₁₀: The background concentrations of PM₁₀ remain within the limit of 150 µg/m³ prescribed in NEQS for ambient air quality and IFC General EHS Guidelines (Interim Target 1) when the wind speeds are less than 16.5 m/s. A maximum concentration of 165 µg/m³ is anticipated when the wind speeds reach 18 m/s.
- ⊗ PM_{2.5}: The simulated background indicates that PM_{2.5} concentrations remain within the limit of 35 µg/m³ prescribed in NEQS for ambient air quality when the wind speeds are less than 12.5 m/s. At high-speed winds in the range of 12.5 m/s to 18 m/s, the simulated background concentrations of PM_{2.5} range between 35 µg/m³ and 72 µg/m³. However, the simulated concentration remained within the limit of 75 µg/m³ prescribed in IFC General EHS Guidelines (Interim Target 1) at all wind speeds till 18 m/s.

According to the meteorological data acquired from Lakes Environmental for a period of 3-years (January 1, 2021 to December 31, 2023), the wind speed exceeded the threshold speed for 14% of the total 3-year duration. This indicates that the background PM concentrations exceeded the applicable limits for 51 days/year in the last 3-years.

2.2 Gaseous Pollutants - NO₂ and SO₂

The concentrations of gaseous pollutants, NO₂ and SO₂, were continuously monitored for a duration of 7 months from October 2023 to April 2024 at the upwind location of the Reko Diq Mine Site to assess background concentrations. A detailed description of the air quality sampling locations and sampling methodology is provided in **Section 4** of standalone specialist report **D4AQ11RKI – Air Quality. Exhibit 2.3** provide the air quality sampling results for gaseous pollutants along with their comparison with NEQS and IFC-EHS Guidelines.² A brief discussion on the pollutant concentration along with their sources is provided below:

- ⊗ Nitrogen Dioxide (NO₂): The measured concentrations of NO₂ were within the limits prescribed in the NEQS and IFC General EHS Guidelines for annual averaging period. The NO₂ concentrations ranged between 0.7 µg/m³ and 6.8 µg/m³ respectively.
- ⊗ Sulphur Dioxide (SO₂): The measured concentration of SO₂ remained within the limits prescribed in the NEQS and IFC General EHS Guidelines for annual averaging period. The measured concentrations of SO₂ ranged between 1.65 µg/m³ and 8.6 µg/m³ respectively.

² Nitrogen dioxide (NO₂), and sulphur dioxide (SO₂) concentrations were measured through passive diffusion tubes which are usually exposed for a period of 2-4 weeks. This is an indicative comparison which is made with the daily and annual limits prescribed in NEQs and IFC General EHS Guidelines. The comparison provided here should not be used to assess compliance

**Exhibit 2.3: Air Quality Sampling Results of NO₂ and SO₂ at Reko Diq Mine Site
(Upwind Location)**

Pollutant ID	Description	A1-23 ($\mu\text{g}/\text{m}^3$)	NEQS ($\mu\text{g}/\text{m}^3$)		IFC General EHS Guidelines ($\mu\text{g}/\text{m}^3$)		
			24- Hours	Annual Average	1-Hour	24- Hours	Annual Average
Nitrogen dioxide (NO ₂)	Minimum	<0.70	80	40	200	-	40
	Average	4.68					
	Maximum	6.80					
Sulphur dioxide (SO ₂)	Minimum	<1.65	120	80	-	20	-
	Average	4.38					
	Maximum	8.62					

Note: '-' indicates that the limits are not prescribed in the standard or guideline.

Based on the air quality results provided in **Exhibit 2.3**, the highest concentrations at the upwind location have been taken as background concentrations for air dispersion modelling (see **Exhibit 2.4**).

Exhibit 2.4: Background Concentrations of Gaseous Pollutants

Description	Sulphur Dioxide (SO ₂)	Nitrogen Dioxide (NO ₂)
	$\mu\text{g}/\text{m}^3$	
Background concentrations	8.6	6.8

The background concentrations provided in **Exhibit 2.4** are for 14-days averaging period. The best approach for air dispersion modelling is to scale up these concentrations by using scaling factors for estimating 1-hour, 24-hours, and annual averaged concentrations. This is usually done for environments with multiple active emission sources which present high variability in background concentrations. As the Reko Diq Mine Site has desert conditions in its background with no active emission sources in its upwind direction, the variability in the background concentrations is expected to remain minimum. Therefore, the background concentrations are taken as they were originally reported for 14-days averaging period without introduction of scaling factors to estimate 1-hour, 24-hours, and annual averaged concentrations.

3. Methodology of Air Dispersion Modelling

This section provides the approach followed for the deterministic modelling of air dispersion during Project operations. Key model parameters along with the boundary conditions which set forth the basis of this air dispersion modelling have also been described in detail in the subsequent subsections.

3.1 Model Description

The air dispersion modelling has been carried out using USEPA's AERMOD modelling system. AERMOD is a steady-state plume model that incorporates air dispersion based on Planetary Boundary Layer (PBL) turbulence structure and scaling concepts, including treatment of both surface and elevated sources, for both flat and elevated terrains. AERMOD employs a steady-state Gaussian plume model to simulate the dispersion of pollutants emitted from a point, line, or area source of emission. It considers factors such as atmospheric stability, terrain, building effects, and meteorological conditions to determine pollutant concentrations at receptors (locations of interest).

While AERMOD does not have the built-in capacity for direct processing of terrain and meteorological data, its supporting stand-alone pre-processors are available for preparation of input data. These pre-processors include AERMET and AERMAP. The meteorological pre-processor (AERMET) provides AERMOD with the meteorological information which is required to characterize the PBL for understanding its turbulence structure. The terrain pre-processor AERMAP characterizes the terrain using a network of receptor grids and elevations for the modelling dispersion while accounting for the elevations of the region.

For this study, Lakes Environmental AERMOD View 12.0.0 has been utilized. This software provides a compact platform for modelling air dispersion via combining AERMOD, AERMET, and AERMAP in a single tool. This platform also provides a User Interface (UI), key limitation faced in the open-source versions, thus enabling the modelers to conduct simulations in a single platform with ability to look at the graphical outputs.

3.2 Assessment Methodology

The air dispersion has been modelled in consideration of the following key factors.

- ⑤ *Site information:* Terrain information, land use data have been used to account for the elevation profile of the region.
- ⑤ *Emission Source:* Emission source has direct impact on the pollutant dispersion. Key parameters which have been considered for each of the emission source include emission rates from the point, line, area and area polyline sources. Other parameters applicable to stack emissions include exit temperature, exit velocity, stack height, and stack diameter.
- ⑤ *Meteorological data:* The meteorological data is used to assessed PBL characteristics of the region which can govern the overall transport of the

pollutants. Key meteorological parameters which have been considered as part of this air dispersion modelling include wind speed and direction, dry bulb temperature, dew point temperature, relative humidity, surface roughness, albedo, and Bown ratio.

- ⑥ *Receptor Grid:* The receptor network is set up to prepare receptors points for air dispersion modelling. The AERMOD allows their users to opt for either polar or cartesian grid network. While the polar grid is typically used for modelling dispersion of pollutants in environments where sources are assumed to be closely located, the cartesian grid allows the model to assess spread of pollutants uniformly in all directions due to equal distribution of the grid points. This is one of the key limitations of the polar grid network which uses rather unequal grid distribution with increased spacing at each interval. Hence, the uniform cartesian grid network has been adopted for this modelling.

The output of the AERMOD provides incremental concentrations of each of the pollutant depending on the input parameters. This modelled concentration (referred to as “Predicted Incremental Concentration” hereafter) is added to the pollutant concentration measured at the background location to estimate the predicted ambient concentration (referred to here as ‘Predicted Ambient Concentration’) of the pollutants. The Predicted Ambient Concentrations are used to assess Project compliance with the limits prescribed in applicable standards and guidelines.

3.3 Sensitive Receptors

Human populations are expected to be most susceptible to air emissions. Due to the low population density in the region, most of the human dwellings are located at relatively larger distances from the Reko Diq Mine Site (see **Exhibit 3.1**).

Exhibit 3.1: Sensitive Receptors near Reko Diq Mine Site

<i>Settlement Name</i>	<i>Estimated Population</i>	<i>Distance from Open-Pit (km)</i>	<i>Direction</i>
Onsite Accommodation Camp	5,823	8.9	West
Humai Settlement	900	30	East
Mashki Chah Settlement	160	41	East
Nok Chah Settlement	100	39	East
Durband Chah Settlement	1,550	50	Northeast
Nok Kundi Town	15,000	77	Southeast
Amalaf Settlement	125	40	Northwest
Saindak Settlement	570	50	Northwest

Source: HBP (2024)

As shown in the **Exhibit 3.1**, most human dwellings are located more than 30 km from the Reko Diq Mine Site, allowing the emitted pollutants to disperse to relatively

negligible concentrations before reaching these settlements. However, there are exceptions: the Humai settlement and the onsite accommodation camp for employees, both of which are closer to the site. Due to their proximity, these locations are more susceptible to air emissions. Therefore, they have been selected as sensitive receptors for the purpose of this air dispersion modelling.

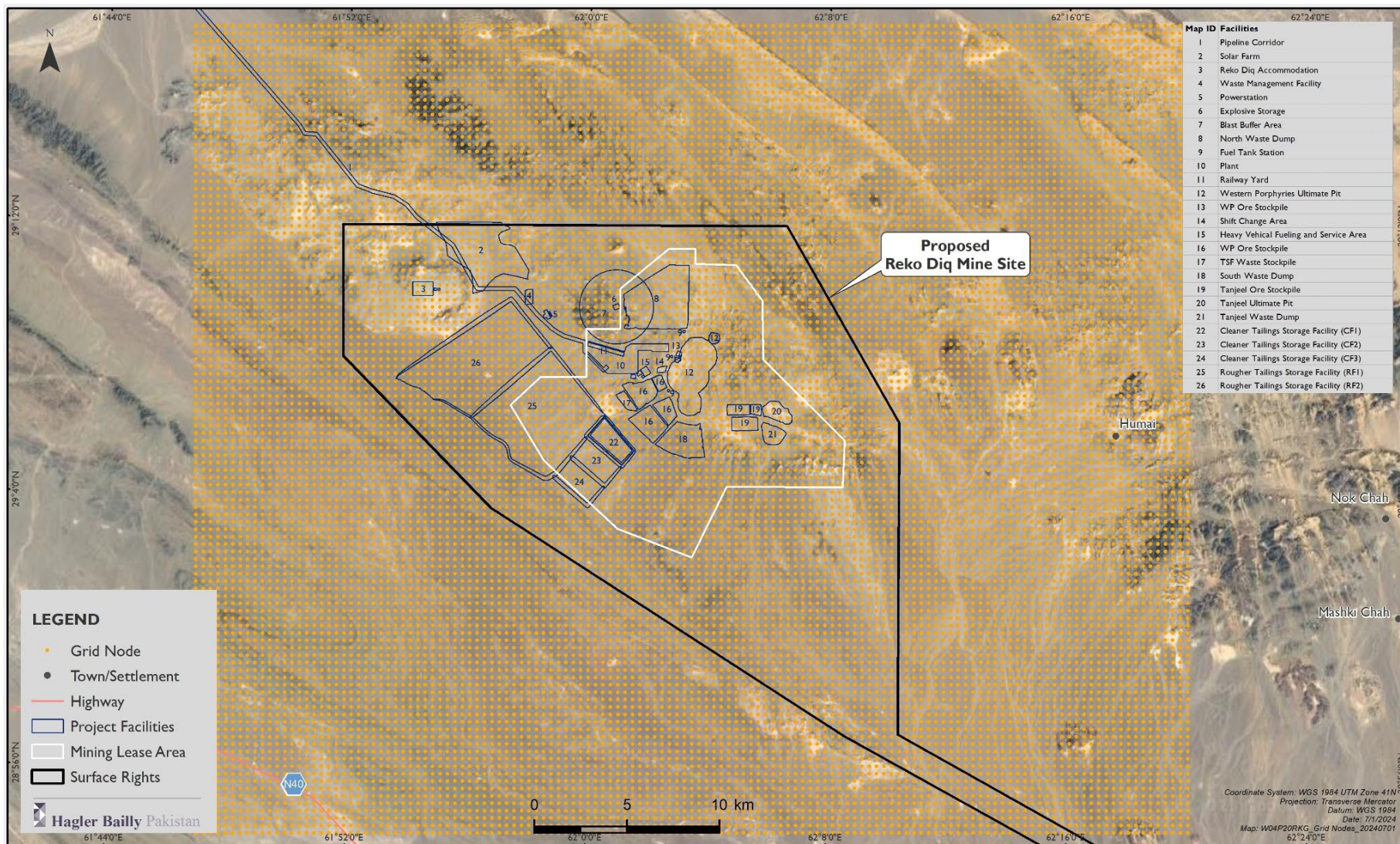
3.4 Model Configuration

The air dispersion model has been simulated using AERMOD v23132. **Exhibit 3.2** provides a detailed description of the model configuration along with the description of the pre-processors. **Exhibit 3.3** provides the map of receptor grid.

Exhibit 3.2: Configuration of Air Dispersion Model

<i>Model Detail</i>	<i>Description</i>
Version	AERMOD v23132
Model type	Gaussian Plume Model Gaussian plume treatment in horizontal and vertical directions for stable atmospheres. Non-Gaussian treatment in vertical for unstable atmospheres.
Types of sources modelled	♦ Point ♦ Line ♦ Area ♦ Area Polyline ♦ Open pit
Digital Elevation Model (DEM)	Data source: NASA Shuttle Radar Topography Mission (SRTM) Version 3.0 (SRTM Plus) - 30m" Datum: World Geodetic System 1984 (WGS84)
Receptor grid	♦ Grid type: Uniform cartesian receptor grid ♦ Number of receptors in X direction: 135 ♦ Number of receptors in Y direction: 110 ♦ Receptor spacing: 400 m ♦ Total number of receptors grids: 14,850
Modelled pollutants	♦ Particulate matter (PM₁₀ and PM_{2.5}) ♦ Nitrogen dioxide (NO₂) ♦ Sulphur dioxide (SO₂)

Exhibit 3.3: Map of Receptor Grid



3.4.1 Meteorological Data

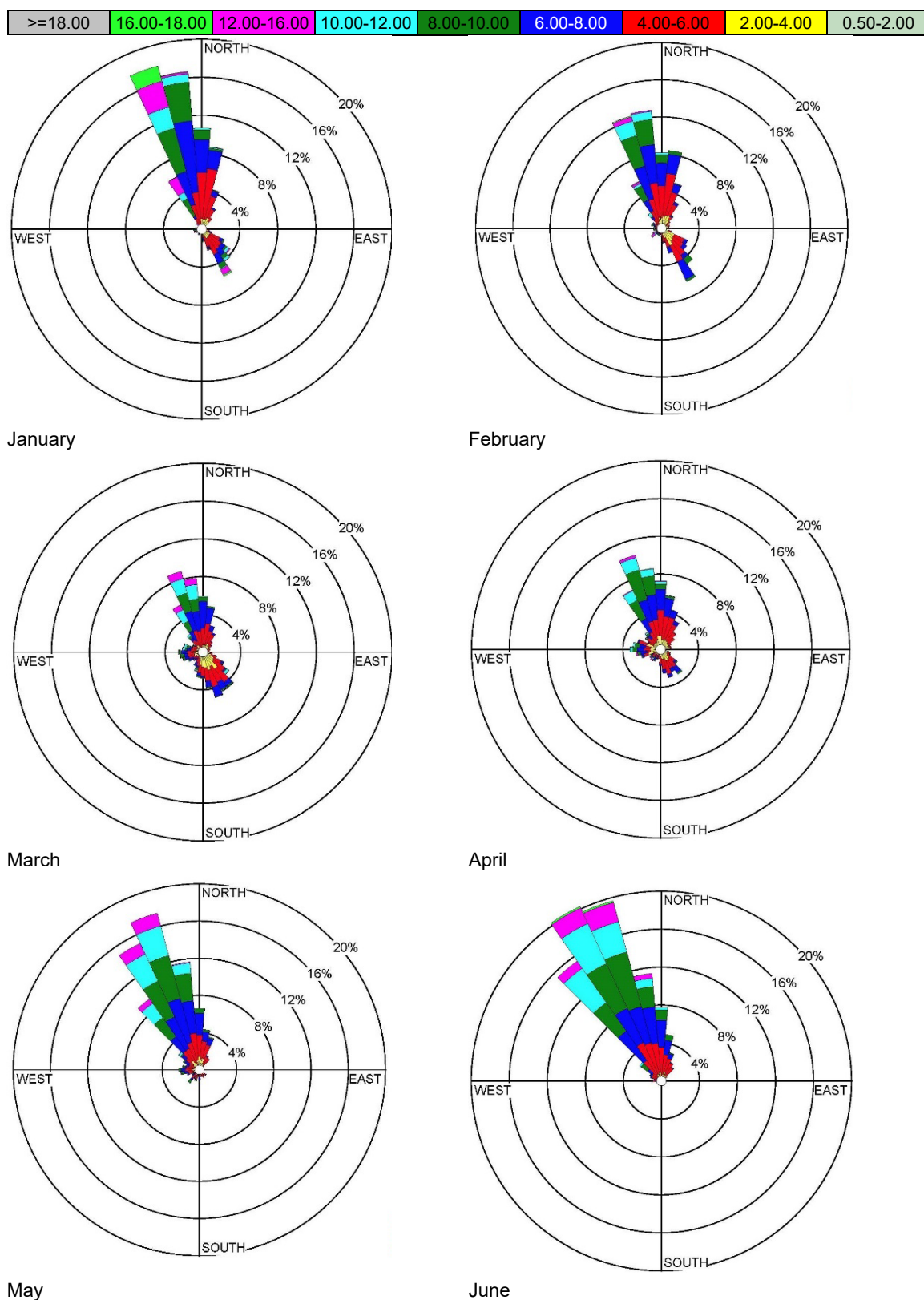
Several data sources are available for characterization of the PBL conditions. These include observed station data, observed gridded datasets, reanalysis datasets, as well as prediction datasets. One of the best approaches is to use observed datasets, either station or grid based, as these describe the atmospheric conditions based on the actual site phenomena without any involvement of external atmospheric factors such as El Nino Southern-Oscillations (ENSO) which is usually accounted for in the reanalysis datasets for better refinement. The station data for the current region is made available by Pakistan Meteorological Department (PMD) which manages a vast network of weather stations across the country. While these stations provide best datasets of primary variables such as temperature, precipitation, wind speed and direction, some of the variables such as albedo, surface roughness, and Bowen ratio are not available. These variables are rather indirectly computed through satellite-based imageries. The observed gridded datasets tend to resolve this issue of missing variables, however, one of the common issues in these datasets is unavailability of the vertical atmospheric characteristics (also known as ‘upper atmospheric characteristics’). This issue is addressed by the reanalysis datasets such as NCEP, ERA Interim, ERA5 etc., which provide data at various pressure levels. However, the functionality of these reanalysis datasets is restricted for air dispersion modelling due to the similar issue which is faced in PMD datasets i.e., unavailability of surface roughness and Bowen ratio.

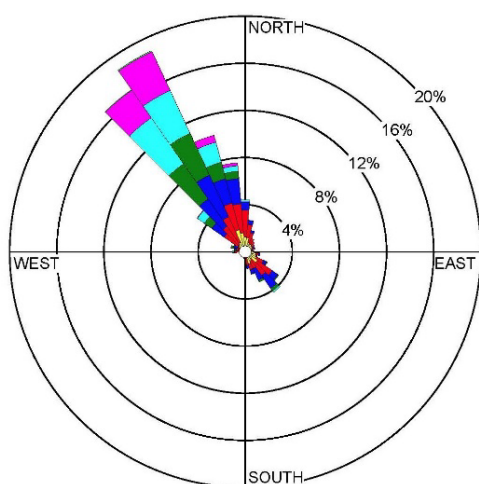
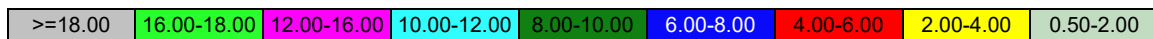
To resolve the above-mentioned issues, Lakes Environment has simulated the Weather Research and Forecasting (WRF) model data through the Mesoscale Model Interface Program (MMIF). The MMIF outputs processes the WRF datasets for their segregation into surface and upper atmospheric characteristics which are used for PBL characterization by the AERMOD. These datasets are usually made AERMOD ready and do not require any pre-processing. Thus, the WRF AERMOD Ready dataset has been used to simulate PBL conditions for air dispersion modelling. **Exhibit 3.4** provides a detailed description of the meteorological data and **Exhibit 3.5** shows the monthly and annual wind rose for 2021 – 2023.

Exhibit 3.4: Description of Meteorological Dataset

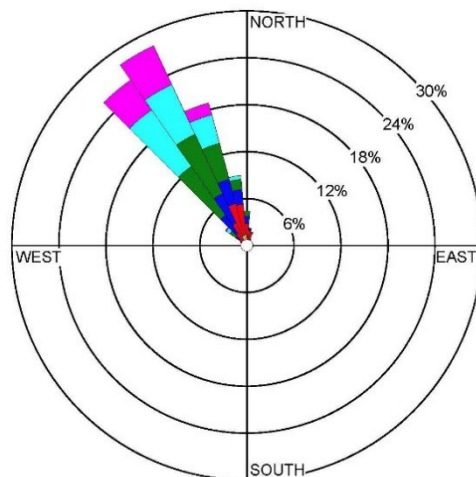
<i>Parameter</i>	<i>Description</i>
Experiment ID	Weather Research and Forecasting
Grid resolution	12 km
Domain size	50 × 50 km
Data profile	♦ Surface ♦ Upper Atmosphere
Temporal resolution	1-hour
Name of Nearest Station	Nok Kundi, Balochistan, Pakistan
Temporal extent	2021 – 2023 (3-years)

Exhibit 3.5: Wind Rose (2021 – 2023)

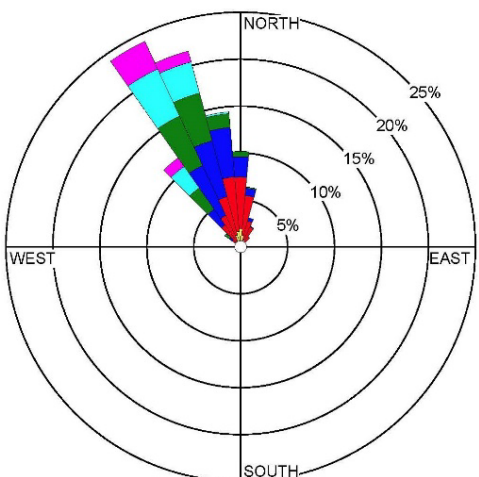




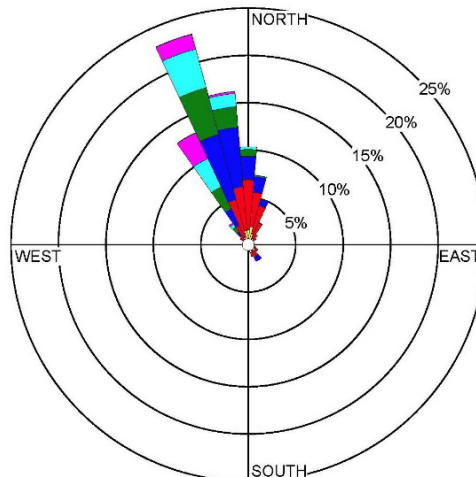
July



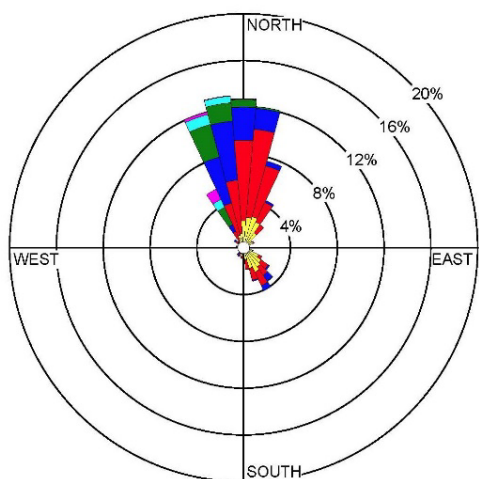
August



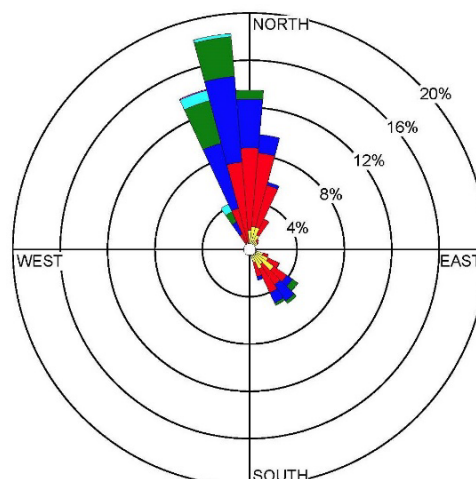
September



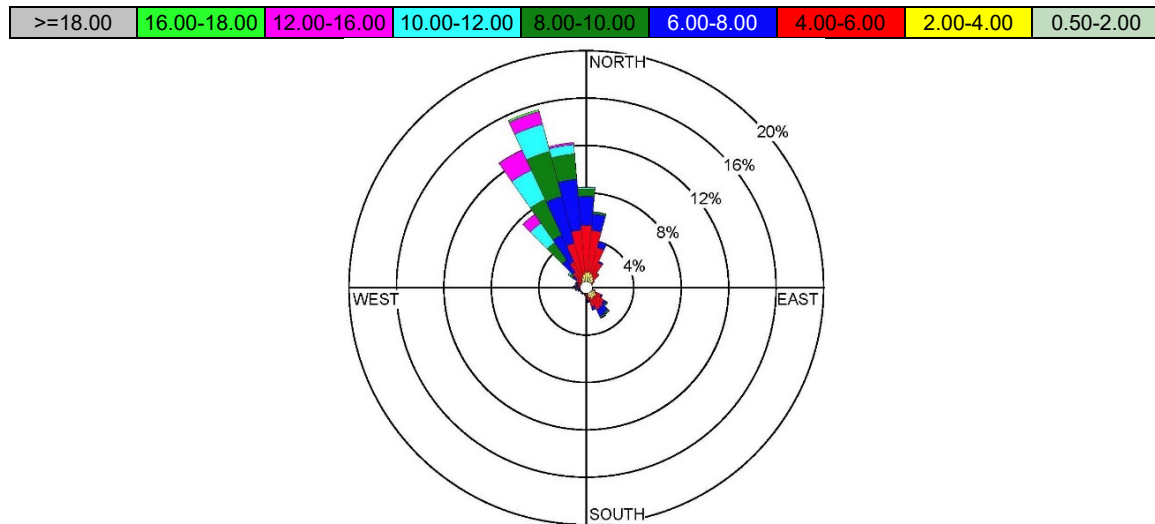
October



November



December



Annual

Source: Lakes Environmental

3.4.2 Averaging Periods

The air dispersion modelling was carried out for three averaging periods i.e., 1-hour, 24-hours and annual average for gaseous pollutants (NO₂ and SO₂). For PM₁₀ and PM_{2.5}, the averaging period of 24-hours and annual average is selected. The selection of these averaging periods is based on the limits prescribed in NEQS for ambient air quality and IFC General EHS Guidelines.

3.4.3 Emission Sources

The modelled emissions sources include the following:

- ☞ Mobile emissions from vehicles and mining equipment
- ☞ Primary crushing
- ☞ Secondary crushing
- ☞ Mill area (including HPGR crusher)
- ☞ Haul roads from open pit to waste rock dumps
- ☞ Pit operations (loading and unloading emissions of Run-of-Mine ore)
- ☞ Drilling and blasting
- ☞ Material handling in waste rock dumps
- ☞ Wind erosion from waste rock dumps, stockpiles, and tailings storage facility
- ☞ HFO power plant, and
- ☞ Incinerator for heavy fuel oil sludge management

The emission rates for this air dispersion modelling have been estimated using the emission rates developed by USEPA (2006). While most of the emissions were direct estimations based on the annual mining capacity, and material handle, some of the emission rates cannot be directly estimated. For mobile emissions, USEPA (1998)

provides the emission rates based on HP-hour of a non-road diesel equipment. Therefore, instead of direct estimations, the mobile emissions were estimated using equipment horsepower (HP)³ of the equipment as well as their operational hours over the day.

In terms of TSF emissions, the tailings from processing of the ore are expected to be composed of fine particles and subjected to crust formation due to high evaporation rate in the region. Emissions from tailing are usually triggered due to disturbance from vehicular movement and are subject to number of disturbances in a year. All these factors make it very difficult to estimate TSF emissions since the number of disturbances in a year is unknown during the design phase. Furthermore, there are no explicit guidelines set forth by USEPA for direct estimations of the emissions from TSF. Therefore, the emissions estimation procedures for wind erosion from stockpiles (USEPA 2006) are taken as reference to estimate emissions from TSF. This procedure takes emissions from TSF as an area source with total emission rate depending on the exposed area, and threshold friction velocity of the particles. As the emissions test results due to formation of wind tunnel are not available during design phase, the area is taken as relatively flat with consideration of the surrounding elevations to estimate wind erosion emissions from TSF. To ensure alignment with the actual tailings formation, the emission rates from the TSF have been estimated based on the Particle Size Distribution (PSD) of tailings released in rougher and cleaner cells of the TSF. **Exhibit 3.6** presents the PSD fractions used in estimating TSF emissions. **Section 7** provides the detailed estimations of emissions rates from each source.

Exhibit 3.6: PSD Fractions of Tailings

<i>Particulate Type</i>	<i>PSD Fractions</i>	
	<i>Roughers Cell</i>	<i>Cleaners Cells</i>
PM ₁₀	20%	26%
PM _{2.5}	5%	12%

Source: Tailings composition by Knight Piésold (KP), 2009

3.4.4 Emission Control Measures

Exhibit 3.7 provides the list of control measures and their efficiency for reducing air emissions from the mining operations at Reko Diq Mine Site. **Exhibit 3.8** provides the employed control measures for each emission source.

Exhibit 3.7: Emission Control Measures for Mining Operations

<i>Measure</i>	<i>Efficiency</i>	<i>Description</i>	<i>Source</i>
Dust control measures	0-99.5%	Enclosures of the open equipment, installation of fabric filters, use of mist sprays, as deemed feasible for operations.	Zimwara, Mugwagwa et al. (2012)

³ Information related to actual power rating of the diesel equipment is not expected to remain available during the design phase. In order to bridge this gap, manufacturer specification lists have been consulted getting this information. The emissions rates from the mobile emissions are subject to changes based on power rating of the equipment.

<i>Measure</i>	<i>Efficiency</i>	<i>Description</i>	<i>Source</i>
			Breedveld, Timellini et al. (2007)
Wet operations	0-100%	Wet operations in open areas such as TSF	Neuman, Boulton et al. (2009)
Graveling	20-40%	Graveling of haul roads	Edvardsson (2009)
Progressive closures	0-100%	Progressive closures of cleaner cells of TSF using waste rock to prevent dust generation and release of other pollutants from the impoundment.	Neuman, Boulton et al. (2009)

Efficiency of the control measure depends on Project's capacity of implementation of the control measures. If strict enforcement is ensured, the Project can achieve maximum efficiency in each process.

Exhibit 3.8: Emission Control Measures for Mining Operations

<i>Emission Source</i>	<i>Dust Control Measures</i>	<i>Wet Operations</i>	<i>Graveling</i>	<i>Progressive Closures</i>
Primary crushing	✓			
Secondary crushing	✓			
Milling	✓			
Pit operations				
Blasting and drilling				
Haul roads	✓		✓	
Waste rock dumps				
Wind erosion at waste rock dumps				
Wind erosion at TSF		✓		✓
Wind erosion at stockpiles				
Explosives detonations				
Incinerator		✓		

Emission control measures are not suggested for some of the sources. The following mitigation measures will be considered for such sources during operations phase to reduce the dust levels.

- ⑤ Installation of windbreaks to reduce emissions due to wind erosion
- ⑤ Setting of speed limits along all site roads.
- ⑤ Regular maintenance of vehicles as per manufacturers specifications to ensure that the exhaust emissions do not exceed the prescribed limits.

In the mining operations, emissions from the TSF due to wind erosion are the highest contributors in the PM₁₀ and PM_{2.5} emissions usually accounting for more than 50% of

the total emissions. However, these emissions are only triggered after a disturbance to the crust followed by the wind speeds exceeding the threshold velocity. As such, there are no control measures in place which can directly reduce the emissions from TSF. The emissions from TSF can be reduced by reducing the number of disturbances to the TSF crust. Common sources of disturbances to the TSF crust include truck movement during expansion of TSF, high temperature causing ruptured crust, tailings transfer, and maintenance activities etc.

The Project is expected to generate paste discharge as tailings which will be transported to TSF via pumping stations.⁴ The formations of crusts can be avoided if the water content in the rougher and cleaner cells of the TSF is usually kept high. Based on the water balance, the Project will withdraw 75% of reclaimed water from the rougher cells. Therefore, ~25% of the water is expected to be retained within the rougher cells, thus, reducing the emissions of rougher cells from 100% to 75%. Similarly, the Project will withdraw 40% of the reclaimed water from the cleaner cell of the TSF. Therefore, this cell is expected to retain ~60% of its water content, thus resulting in 60% reduction in emissions from this cell. As the area covered by the cleaner cells is relatively smaller as compared to rougher cells, the Project can also opt for covering the cleaner cells for further reducing the PM emissions from this cell.

3.5 Modelling Scenarios

The following scenarios have been modelled for the Reko Diq Mine Site. The emission rates in both scenarios have been taken such that they represent the actual Project case emissions. In areas where implementation of control measures is not practical, this scenario assumes uncontrolled emissions from such sources e.g., mining and ore handling in open-pits, waste management in waste rock dumps etc.

- ☞ Scenario 1 – Ultimate Footprint: This scenario simulates emissions assuming adaptation of control measures suggested in **Section 3.4.4**. This scenario presents the ultimate footprint of the Project upon completion of the LOM and presents maximum emissions from each source. The pollutants modelled in this scenario include PM₁₀, PM_{2.5}, NO₂, and SO₂.
- ☞ Scenario 2 – Year 2050: This scenario presents Year 2050 or Stage 22 of the TSF at which TSF will reach 50% of its designed capacity. To ensure alignment with actual Project conditions in year 2050, this scenario assumes length of haul roads to be 7.56 km instead of 10 km of its ultimate length and does not include emissions from Tanjeel open-pit or from any of its facilities, except wind erosion at its waste rock dump.⁵ Particulate matter (PM₁₀ and PM_{2.5}) are modelled in this scenario.⁶

⁴ BAR7212 – Draft Project Description for the Reko Diq Project

⁵ Operations at Tanjeel are expected to get initiated in year 2037 and conclude in 2046, therefore, contribution from its facilities is not expected to last till year 2050, except from wind erosion.

⁶ Gaseous pollutants are excluded from this scenario as their emissions rates are expected to remain somewhat similar with limited variation after year 2033 till completion of LOM. Therefore, emissions of gaseous pollutants modelled in Scenario 1 will be somewhat similar in Scenario 2 and do not require additional modelling.

3.6 Assumptions, Exceptions, and Limitations

Following are the key assumptions, exceptions, and limitations of the air dispersion modelling:

- ⑥ The air dispersion modelling has been carried out for mining operations and associated activities including crushing, milling, transportation, power production etc., at the Reko Diq Mine Site only.
- ⑥ The limits prescribed in OSHA Standard are for respirable dust and is not segregated into PM₁₀ and PM_{2.5}. Furthermore, these limits are for 8-hour averaging period. As this air dispersion modelling is conducted for a PM₁₀ and PM_{2.5}, the sum of both pollutants is taken as respirable dust.
- ⑥ The air emissions from construction of the Reko Diq Mine Site, and construction and upgradation, and operations of the Rail Transport Corridor, and vehicular movement along the Road Transport Route during construction and operations phase have not been considered in this document. These emissions are expected to be temporary and will last for relatively short durations. Furthermore, the spatial extent of these emissions will be relatively small, which will cause the pollutants to disperse immediately before reaching the sensitive receptors. Therefore, no impacts on the nearby sensitive receptors are anticipated due to these activities. A quantitative assessment of impacts on air quality due to these activities is discussed in detail in specialist report **D4AQ14RKI - Air Quality**.
- ⑥ As discussed in **Section 3.4.3**, the emissions rates for this modelling were estimated using Project specifications such as averaging mining rate, quantities of waste rock, and ROM ore generated, operations of the mineral processing plant, and the operations of the associated processes. Any changes in Project design or capacity of the mining facilities will affect these emissions rates and will require an updated air dispersion modelling.

4. Results and Discussion

This section provides the results of air dispersion modelling and their comparison with the applicable limits prescribed in NEQS for ambient air quality and IFC General EHS Guidelines. This section also discusses the sources of concentrations along with the duration of exceedances, if any, at the sensitive receptors and at maxima locations within the Reko Diq Mine Site.

4.1 Definitions

The terms which are frequently used in **Section 4** are defined below:

- ☞ Baseline Concentrations – refers to the baseline measured at the upwind location without contribution from the Project operations.
- ☞ Predicted Incremental Concentrations – refers to the pollutant concentrations due to Project operations. These Predicted Increment Concentrations are exclusive of the baseline concentrations of pollutants recorded at the upwind location.
- ☞ Predicted Ambient Concentrations – present the predicted ambient air quality concentrations during operations phase of the Project. These Predicted Ambient Concentrations are inclusive of the baseline concentrations and Predicted Incremental Concentrations.
- ☞ Maxima – refers to the maximum concentrations of pollutants estimated via air dispersion modelling.

4.2 Predicted Ambient Concentrations at Sensitive Receptors

Based on the discussion in **Section 3.3** onsite accommodation camp and Humai settlement are located closer to the Reko Diq Mine Site at ~12 km and 30 km respectively. Therefore, these receptors are susceptible to air quality related impacts and have been considered as sensitive receptors for impact assessment. **Exhibit 4.1** provides the Predicted Ambient Concentrations of modelled pollutants in Scenario 1 at the nearest sensitive receptors and their comparison with the applicable limits. **Exhibit 4.2** provides the Predicted Ambient Concentrations of particulates modelled in Scenario 2 at sensitive receptors and their comparison with the applicable limits.

The 98th percentile Predicted Incremental Concentrations against each grid point of the receptor network is taken as reference to ensure that the results are comparable with NEQS.⁷ The following contour maps illustrate the Predicted Ambient Concentrations of modelled pollutants for Scenario 1 – Ultimate Footprint, and Scenario 2 – Year 2050.

- ☞ Nitrogen Dioxide (NO₂): **Exhibit 4.3** through **Exhibit 4.5** illustrate contour maps of Predicted Ambient Concentrations of NO₂ in for 1-hour, 24-hour, and annual averaging periods in Scenario 1.

⁷ Compliance with NEQS for ambient air quality is assessed through ensuring that the pollutants remain within limits for 98% time of the year.

- ⑥ *Sulphur Dioxide (SO₂)*: **Exhibit 4.6** through **Exhibit 4.8** provide the contour maps of the Predicted Ambient Concentrations of SO₂ for 1-hour, 24-hour, and annual averaging periods in Scenario 1.
- ⑥ *Particulate Matter (PM₁₀)*: **Exhibit 4.9** and **Exhibit 4.10** provide contour maps of Predicted Ambient Concentrations of PM₁₀ for 24-hour and annual averaging periods in Scenario 1. **Exhibit 4.13** and **Exhibit 4.14** provide contour maps of Predicted Ambient Concentrations of PM₁₀ for 24-hour and annual averaging periods in Scenario 2.
- ⑥ *Particulate Matter (PM_{2.5})*: **Exhibit 4.11** and **Exhibit 4.12** illustrate the contour maps of Predicted Ambient Concentrations of PM_{2.5} for 24-hour and annual averaging periods in Scenario 1. **Exhibit 4.15** and **Exhibit 4.16** provide contour maps of Predicted Ambient Concentrations of PM_{2.5} for 24-hour and annual averaging periods in Scenario 2.

The area within red contour lines in the contour maps is area of exceedance from the applicable limits. In case a pollutant has different limits prescribed in NEQS for ambient air quality and IFC General EHS Guidelines, the most stringent limit is taken as reference to assess the areas of exceedances. The areas where these exceedances are recorded are mostly operational areas of the Project in which occupational limits apply with the exclusion of the onsite accommodation camp. A discussion on the Predicted Ambient Concentrations of pollutants for operational areas and their comparison with the OSHA Standard is provided in **Section 4.3**.

The following is an overview of the Predicted Ambient Concentrations at the sensitive receptors. The conditions under which the maximum Predicted Ambient Concentrations occur are described in **Section 4.2.1**.

- ⑥ *Gaseous Pollutants – NO₂ and SO₂*: The Predicted Ambient Concentrations of NO₂ and SO₂ at sensitive receptors remain within the limits prescribed in NEQS and IFC General EHS Guidelines at the onsite accommodation area and Humai settlement.
- ⑥ *Particulate Matter (PM₁₀)*: Predicted Ambient Concentrations of PM₁₀ at Humai settlement remains within the applicable limit for 24-hour and annual averaging period. At the onsite accommodation camp, the Predicted Ambient Concentrations exceed the applicable limits for 24-hours averaging period in both Scenario 1 and Scenario 2, however, these exceedances do not occur for more than 6 days of the year. Further discussion on the duration of exceedances is provided in **Section 4.2.2**.
- ⑥ *Particulate Matter (PM_{2.5})*: Predicted Ambient Concentrations for 24-hours averaging period exceed the applicable limits for both 24-hours and annual averaging period at onsite accommodation camp in Scenario 1. In Scenario 2, the Predicted Ambient Concentrations for 24-hours averaging period exceed the applicable limits at onsite accommodation camp, while the Predicted Ambient Concentrations for annual averaging period remains within the applicable limits at this receptor. These exceedances of 24-hours averaging period do not occur for more than 11 days of the year (see **Section 4.2.2**). The Predicted Ambient Concentrations for both 24-hours and annual averaging period remain within the applicable limits at Humai settlement.

Exhibit 4.1: Predicted Ambient Concentrations at Sensitive Receptors in Scenario 1 – Ultimate Footprint

Receptor	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	Prescribed Limits		Status of Compliance
					NEQS	IFC General EHS Guidelines	
					µg/m³		
Nitrogen Dioxide (NO₂)							
Onsite Accommodation Camp	1-hour	6.8	78	85	-	200	Compliant
	24-hours	6.8	6	12	80	-	Compliant
	Annual	6.8	1	7	40	40	Compliant
Humai Settlement	1-hour	6.8	79	86	-	200	Compliant
	24-hours	6.8	5	11	80	-	Compliant
	Annual	6.8	0.4	7	40	40	Compliant
Sulphur Dioxide (SO₂)							
Onsite Accommodation Camp	1-hour	8.6	78	86	-	-	-
	24-hours	8.6	6	14	120	125	Compliant
	Annual	8.6	1	9	80	-	Compliant
Humai Settlement	1-hour	8.6	81	90	-	-	-
	24-hours	8.6	5	14	120	125	Compliant
	Annual	8.6	0.4	9	80	-	Compliant
Particulate Matter (PM₁₀)							
Onsite Accommodation Camp	24-hours	25	174	199 ⁸	150	150	Non-compliant
	Annual	32	16	48	120	70	Compliant

⁸ The exceedance of PM₁₀ above limit of 150 $\mu\text{g}/\text{m}^3$ occurs for 6 days per year. Rest of the 359 days of years are expected to remain within this limit.

Receptor	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	Prescribed Limits		Status of Compliance
					NEQS	IFC General EHS Guidelines	
		µg/m³					
Humai Settlement	24-hours	25	23	48	150	150	Compliant
	Annual	32	2	34	120	70	Compliant
Particulate Matter (PM _{2.5})							
Onsite Accommodation Camp	24-hours	10	39	49 ⁹	35	75	Non-compliant
	Annual	10	4.7	14.7	15	35	Compliant
Humai Settlement	24-hours	10	4	14	35	75	Compliant
	Annual	10	1	11	15	35	Compliant

Notes: For pollutants which have multiple applicable limits, the stringent of the two (02) limits is taken as reference for assessing compliance status.

“-” indicates that limits are not prescribed in the reference standards or guidelines.

Grey highlighted cells indicate exceedance from the applicable limits.

⁹ The exceedance of PM_{2.5} above limit of 35 $\mu\text{g}/\text{m}^3$ occurs for 11 days per year. Rest of the 354 days of years are expected to remain within this limit.

Exhibit 4.2: Predicted Ambient Concentrations at Sensitive Receptors in Scenario 2 – Year 2050

Receptor	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	Prescribed Limits		Status of Compliance
					NEQS	IFC General EHS Guidelines	
		µg/m ³					
Particulate Matter (PM ₁₀)							
Onsite Accommodation Camp	24-hours	25	168	193 ¹⁰	150	150	Non-compliant
	Annual	32	14	47	120	70	Compliant
Humai Settlement	24-hours	25	17	42	150	150	Compliant
	Annual	32	1	33	120	70	Compliant
Particulate Matter (PM _{2.5})							
Onsite Accommodation Camp	24-hours	10	32	42 ¹¹	35	75	Non-compliant
	Annual	10	4	14	15	35	Compliant
Humai Settlement	24-hours	11	3	14	35	75	Compliant
	Annual	10	1	11	15	35	Compliant

Notes: For pollutants which have multiple applicable limits, the stringent of the two (02) limits is taken as reference for assessing compliance status.

“-” indicates that limits are not prescribed in the reference standards or guidelines.

Grey highlighted cells indicate exceedance from the applicable limits.

¹⁰ The exceedance of PM₁₀ above limit of 150 $\mu\text{g}/\text{m}^3$ occurs for 4 days per year. Rest of the 361 days of years are expected to remain within this limit.

¹¹ The exceedance of PM_{2.5} above limit of 35 $\mu\text{g}/\text{m}^3$ occurs for 6 days per year. Rest of the 359 days of years are expected to remain within this limit.

Exhibit 4.3: Predicted 1-hour Ambient Concentrations of NO₂ in Scenario 1 – Ultimate Footprint

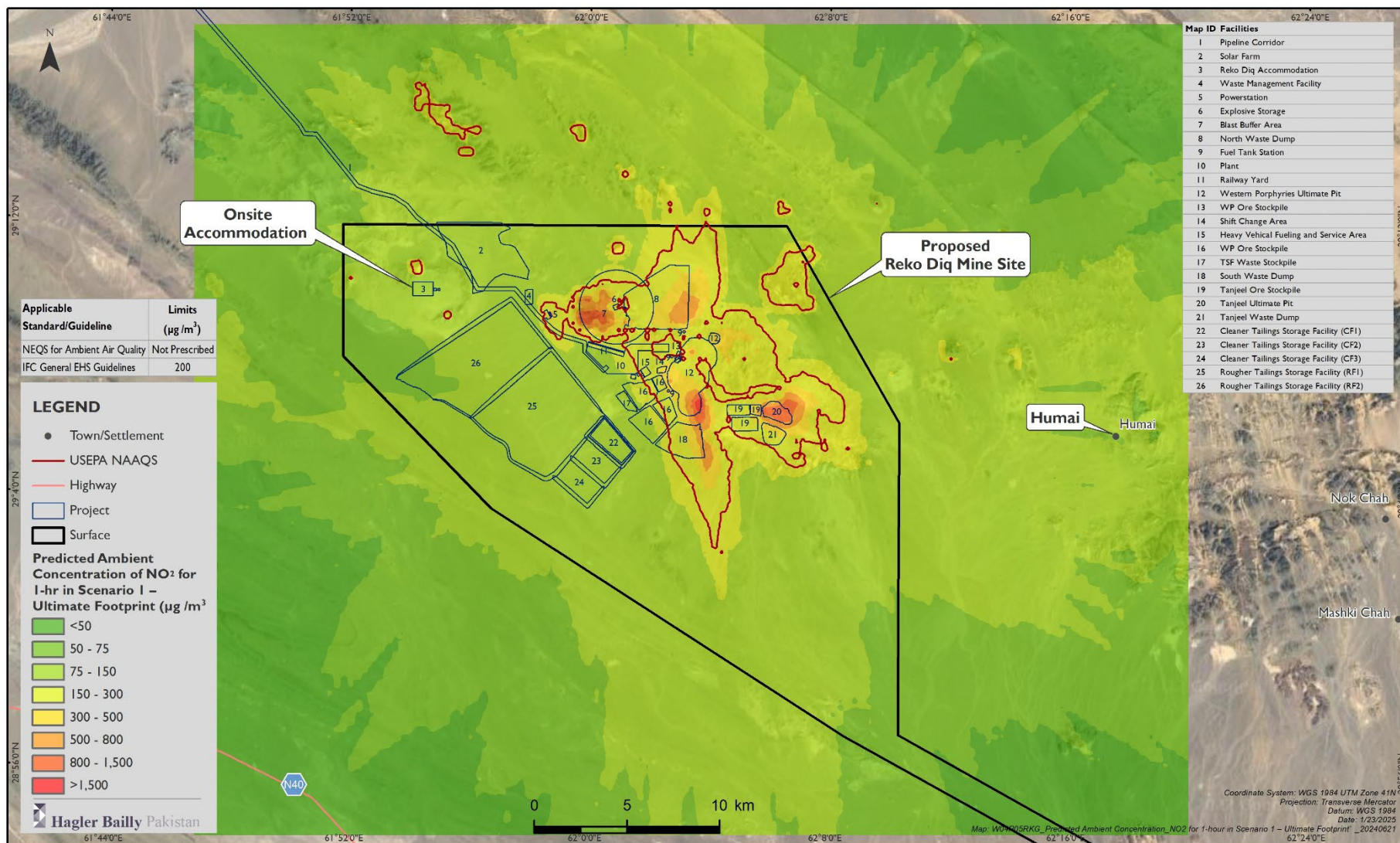


Exhibit 4.4: Predicted 24-hour Ambient Concentrations of NO₂ in Scenario 1 – Ultimate Footprint

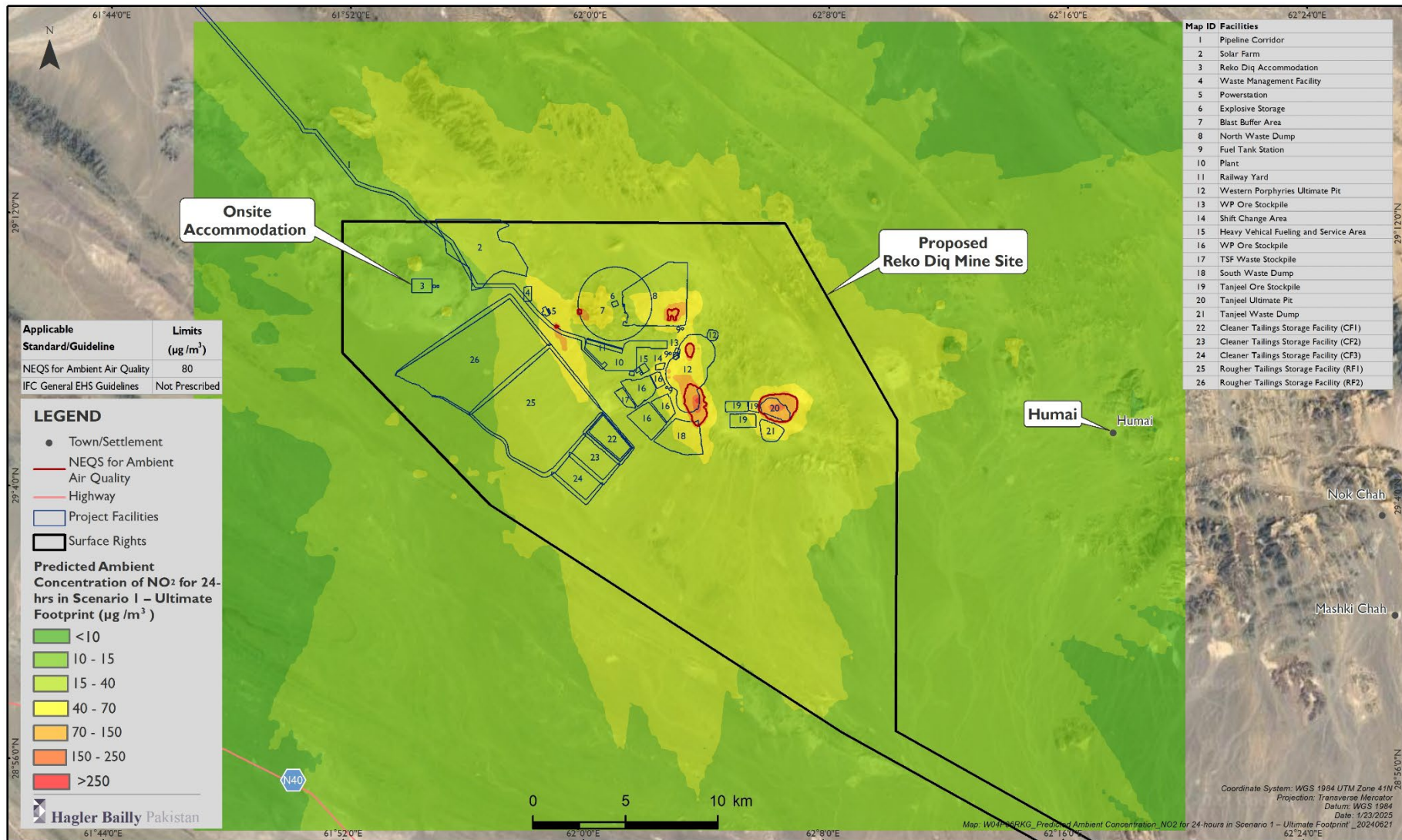


Exhibit 4.5: Predicted Annual Ambient Concentrations of NO₂ in Scenario 1 – Ultimate Footprint

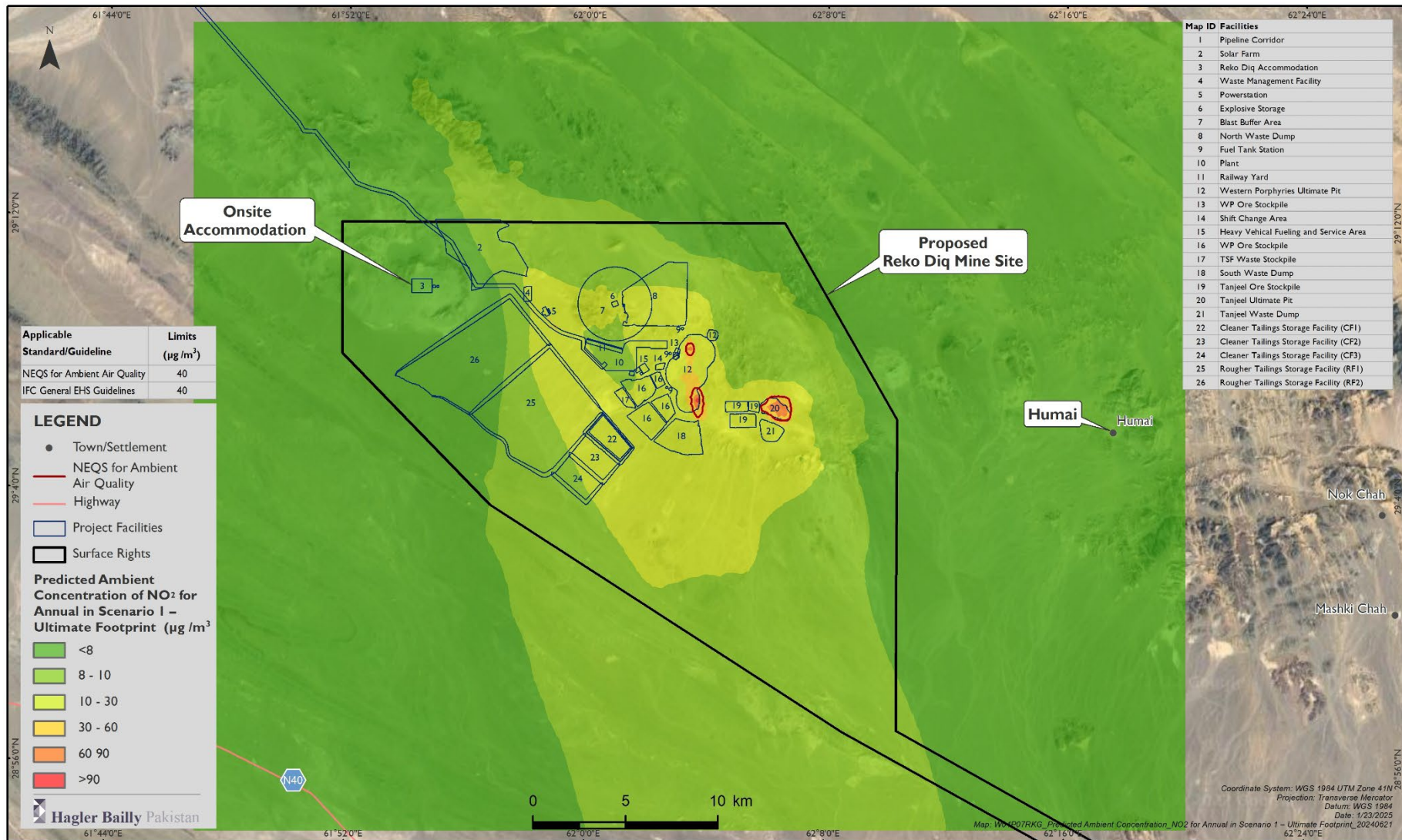


Exhibit 4.6: Predicted 1-hour Ambient Concentrations of SO₂ in Scenario 1 – Ultimate Footprint

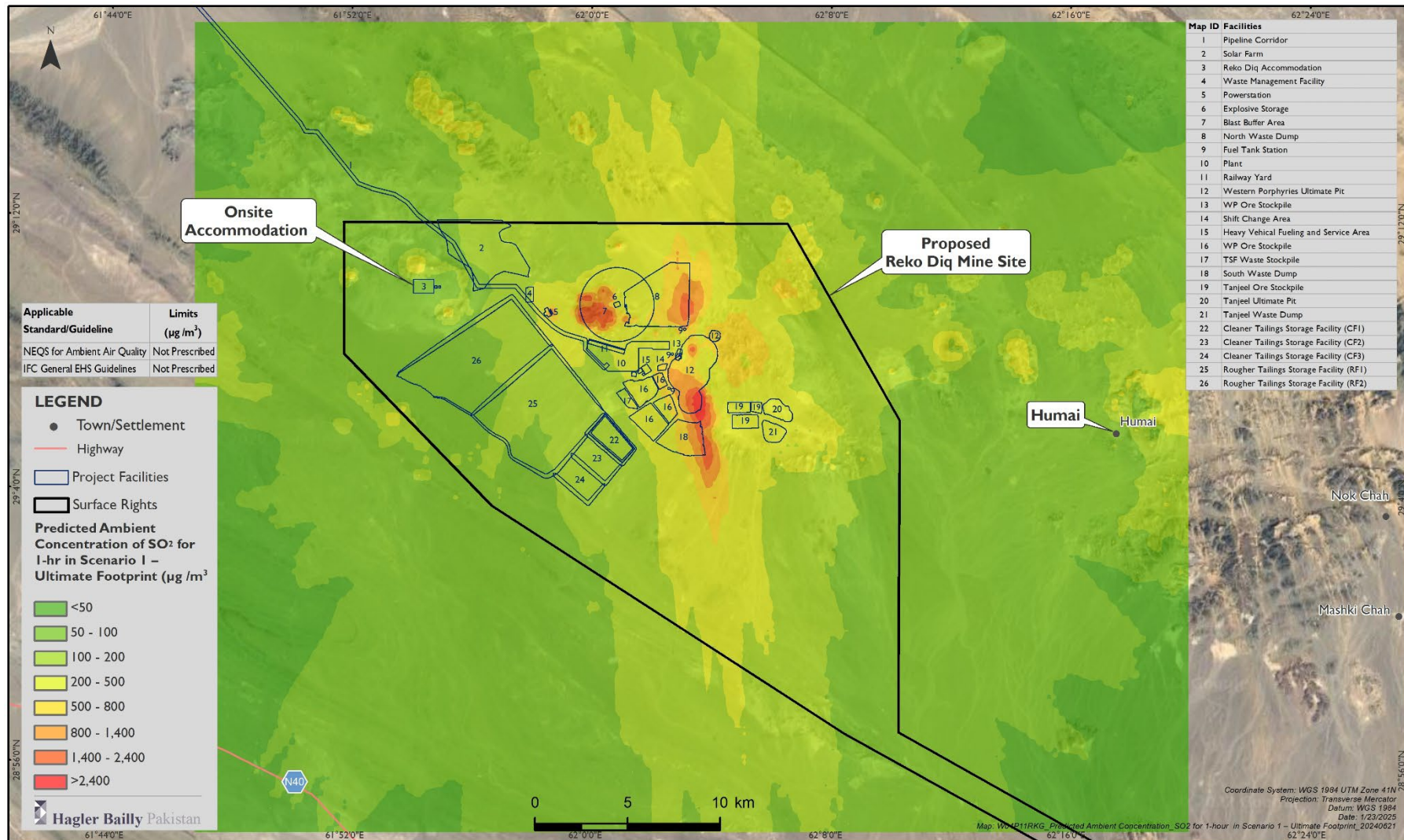


Exhibit 4.7: Predicted 24-hour Ambient Concentrations of SO₂ in Scenario 1 – Ultimate Footprint

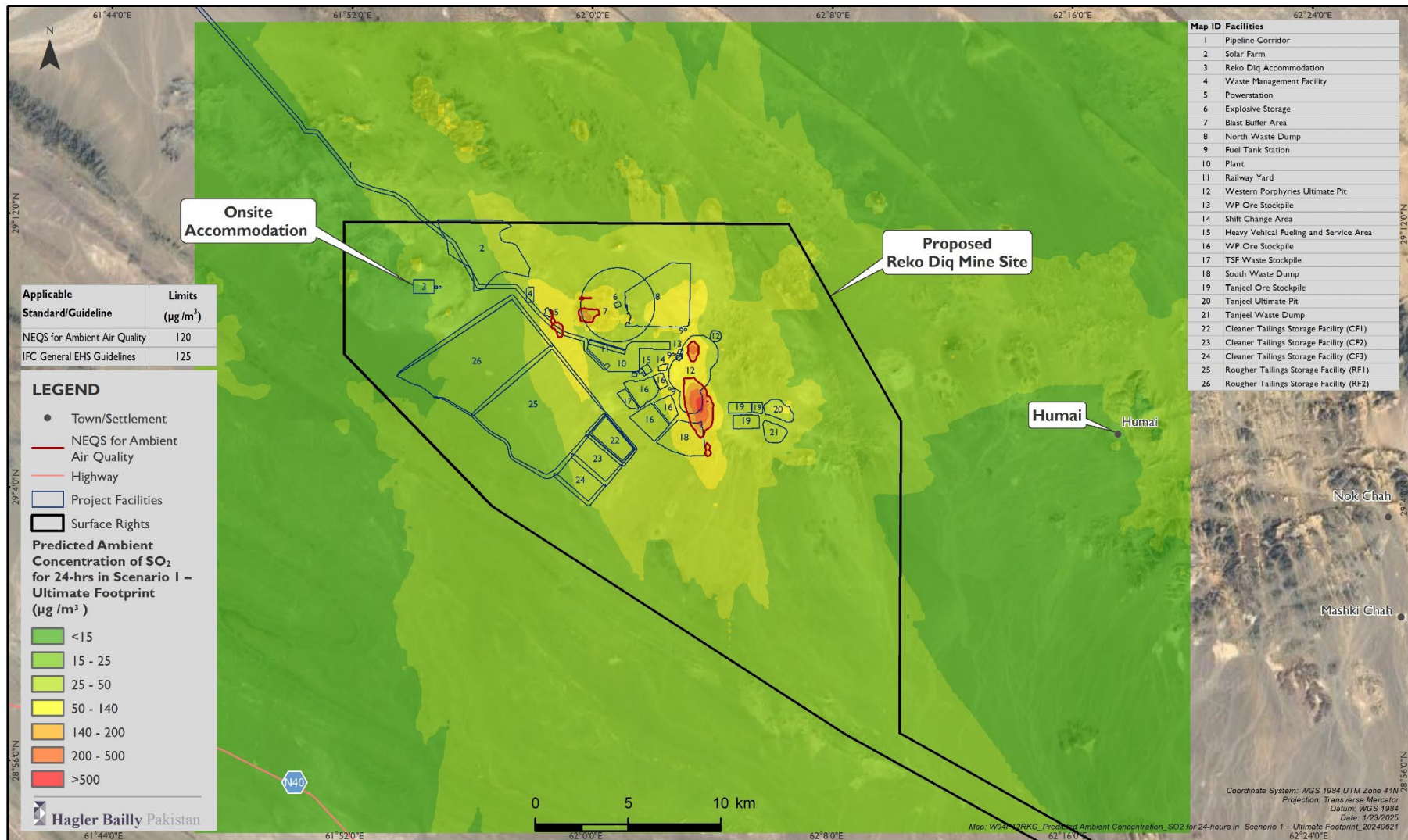


Exhibit 4.8: Predicted Annual Ambient Concentrations of SO₂ in Scenario 1 – Ultimate Footprint

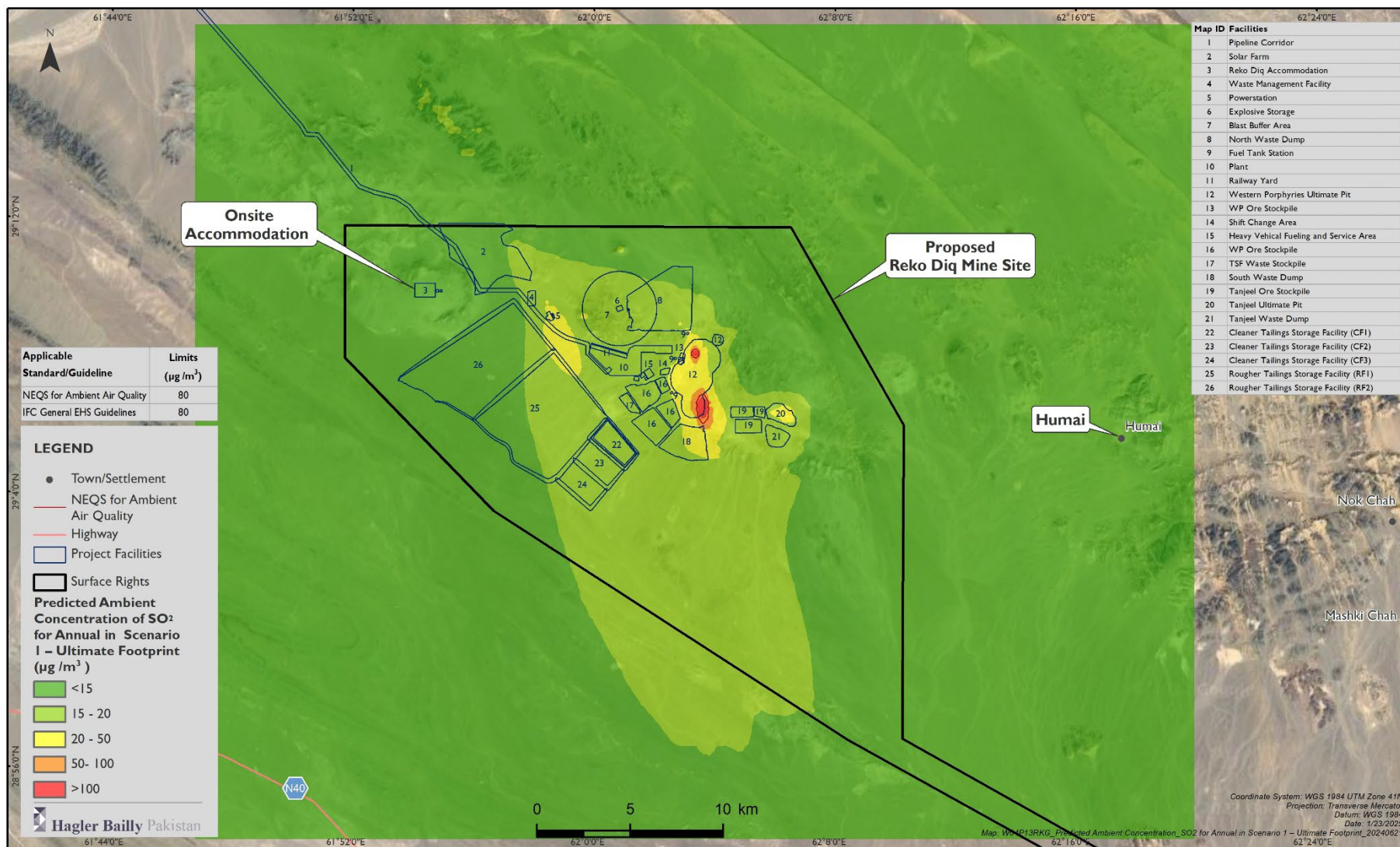


Exhibit 4.9: Predicted 24-hour Ambient Concentrations of PM₁₀ in Scenario 1 – Ultimate Footprint

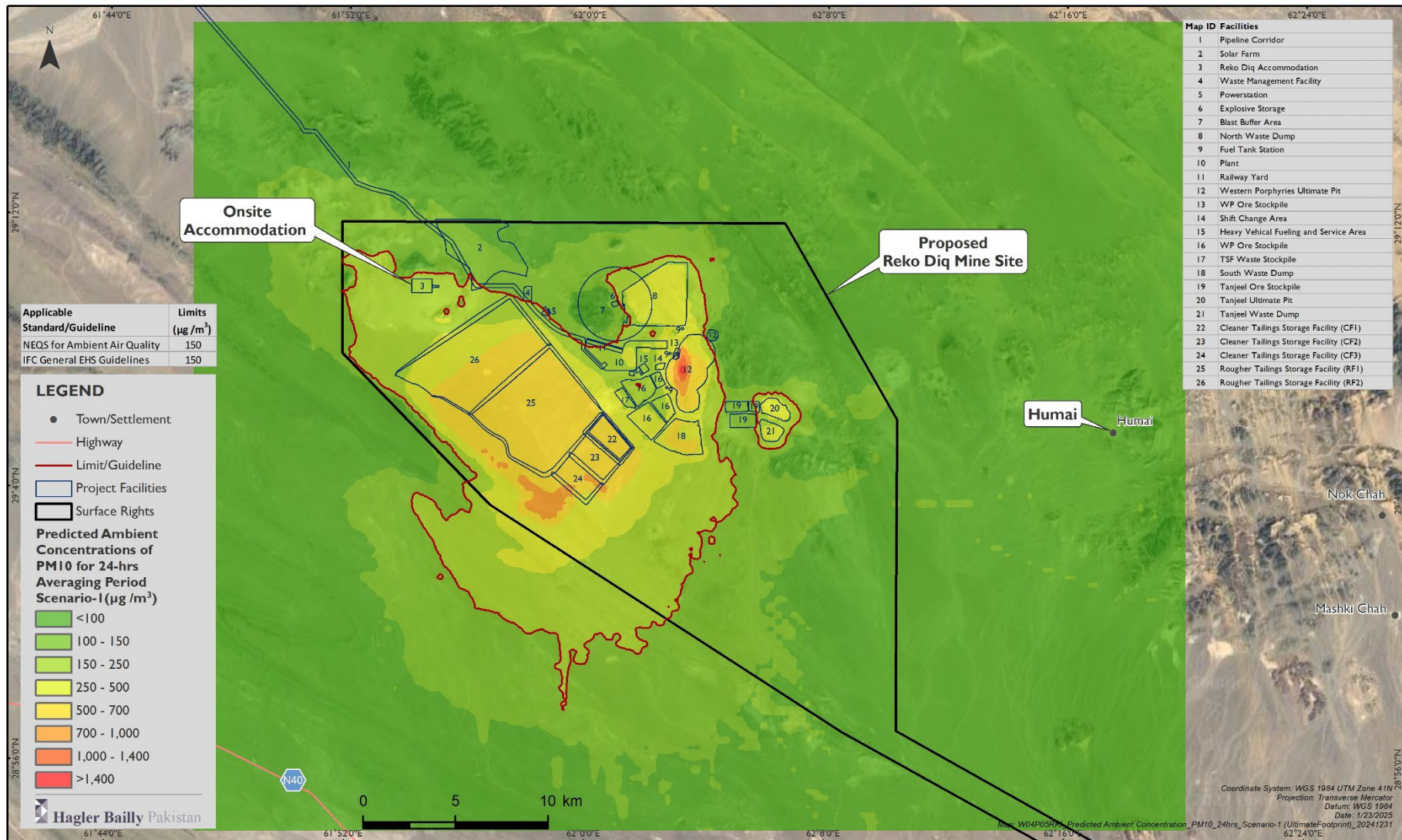


Exhibit 4.10: Predicted Annual Ambient Concentrations of PM₁₀ in Scenario 1 – Ultimate Footprint

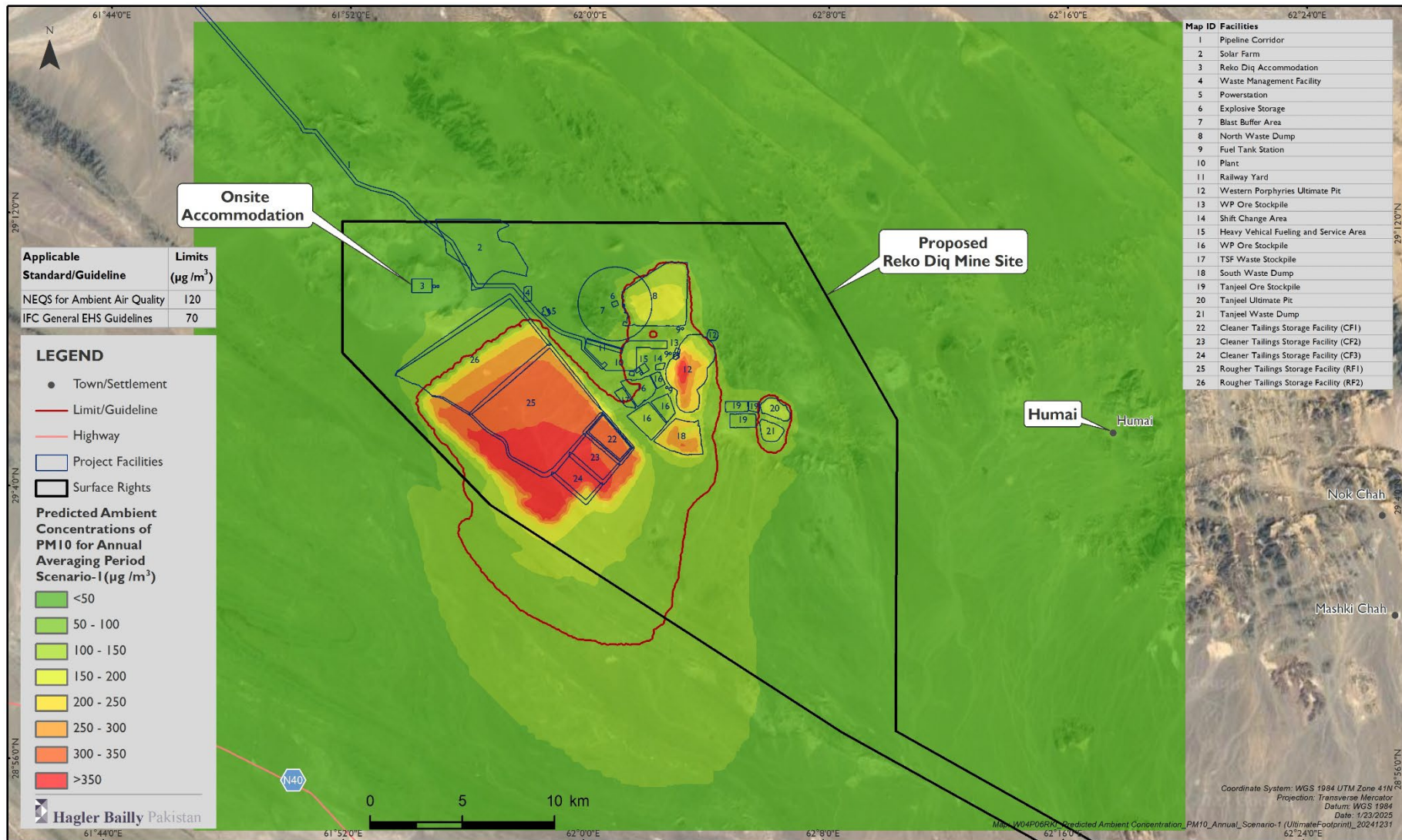


Exhibit 4.11: Predicted 24-hour Ambient Concentrations of PM_{2.5} in Scenario 1 – Ultimate Footprint

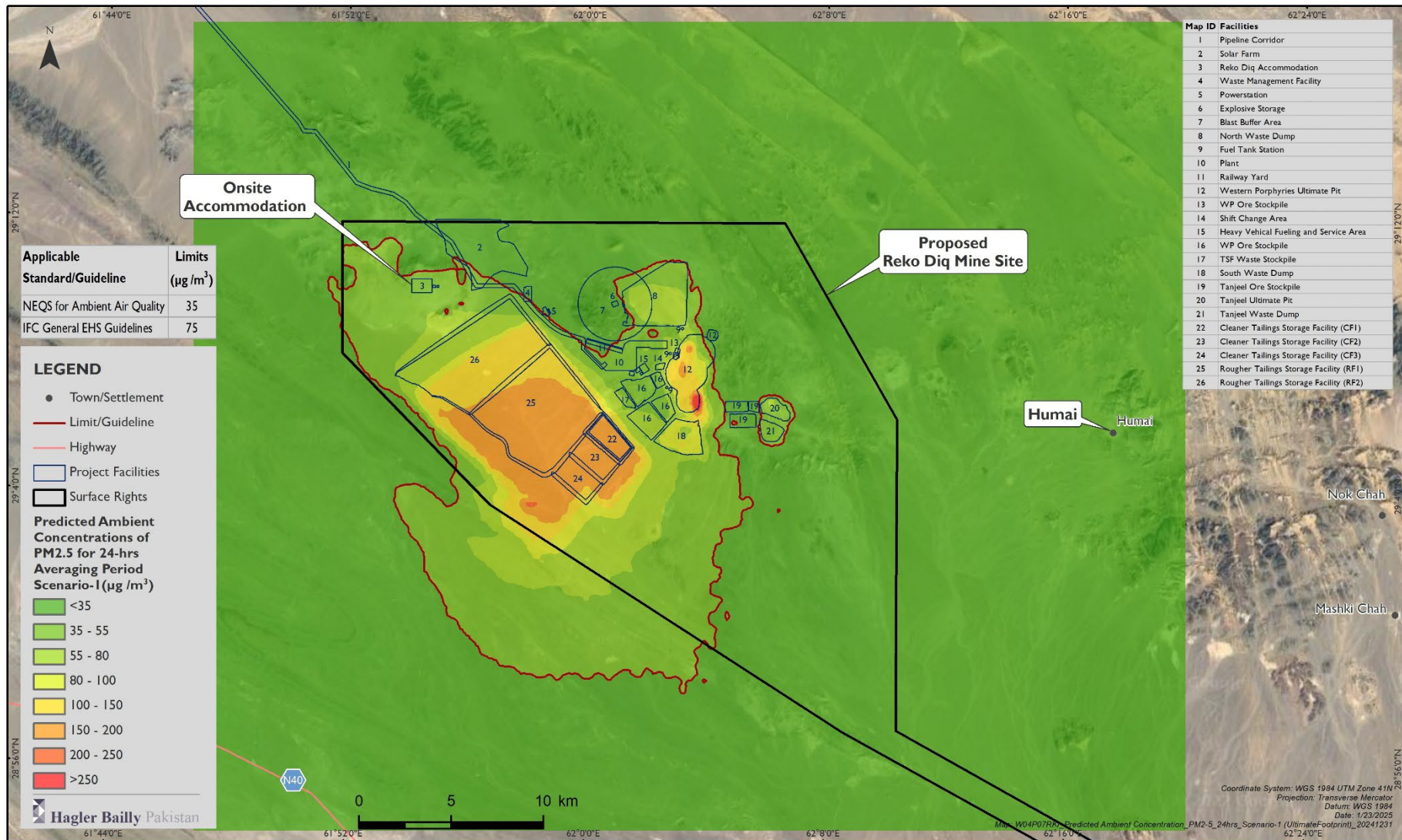


Exhibit 4.12: Predicted Annual Ambient Concentrations of PM_{2.5} in Scenario 1 – Ultimate Footprint

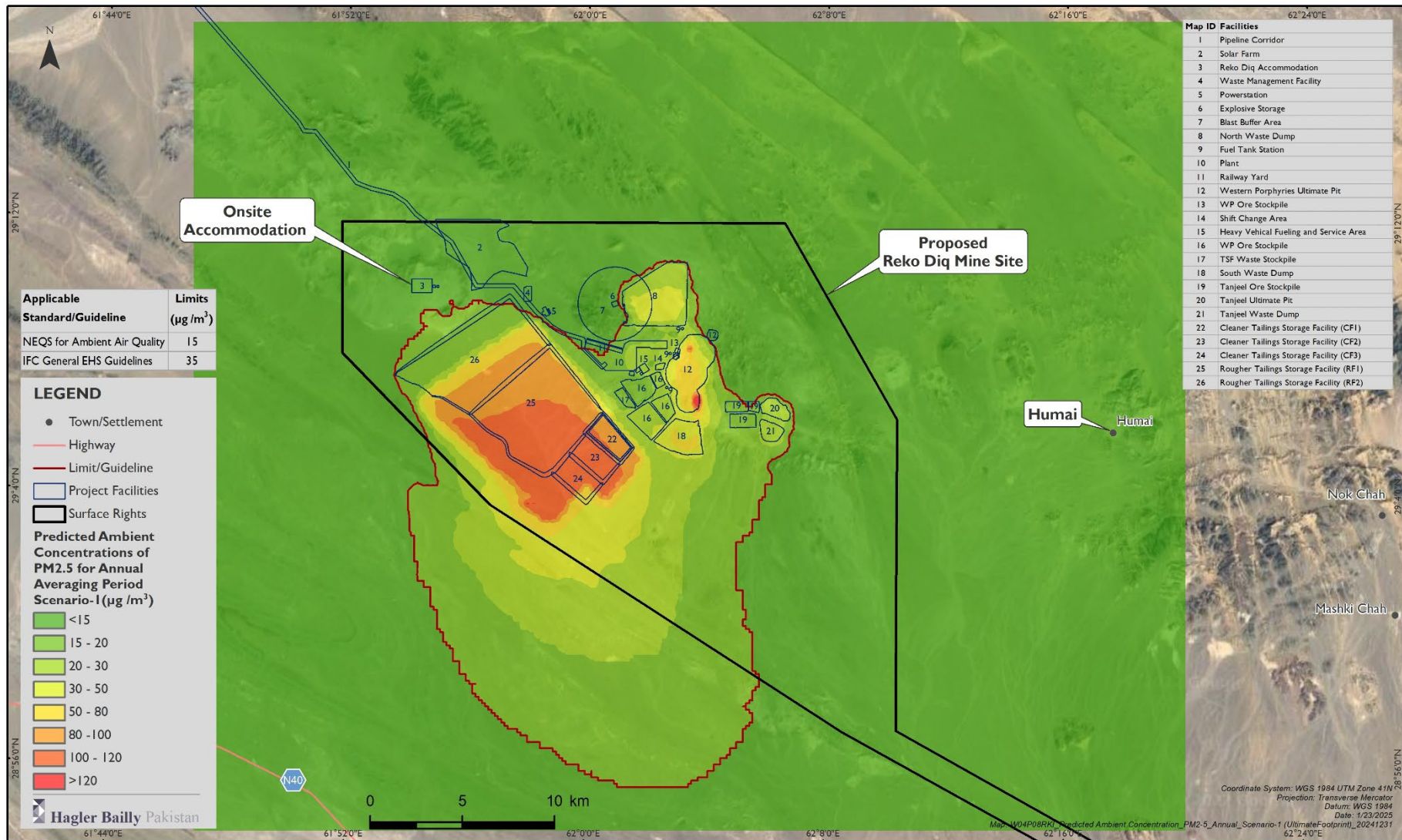


Exhibit 4.13: Predicted 24-hour Ambient Concentrations of PM₁₀ in Scenario 2 – Year 2050

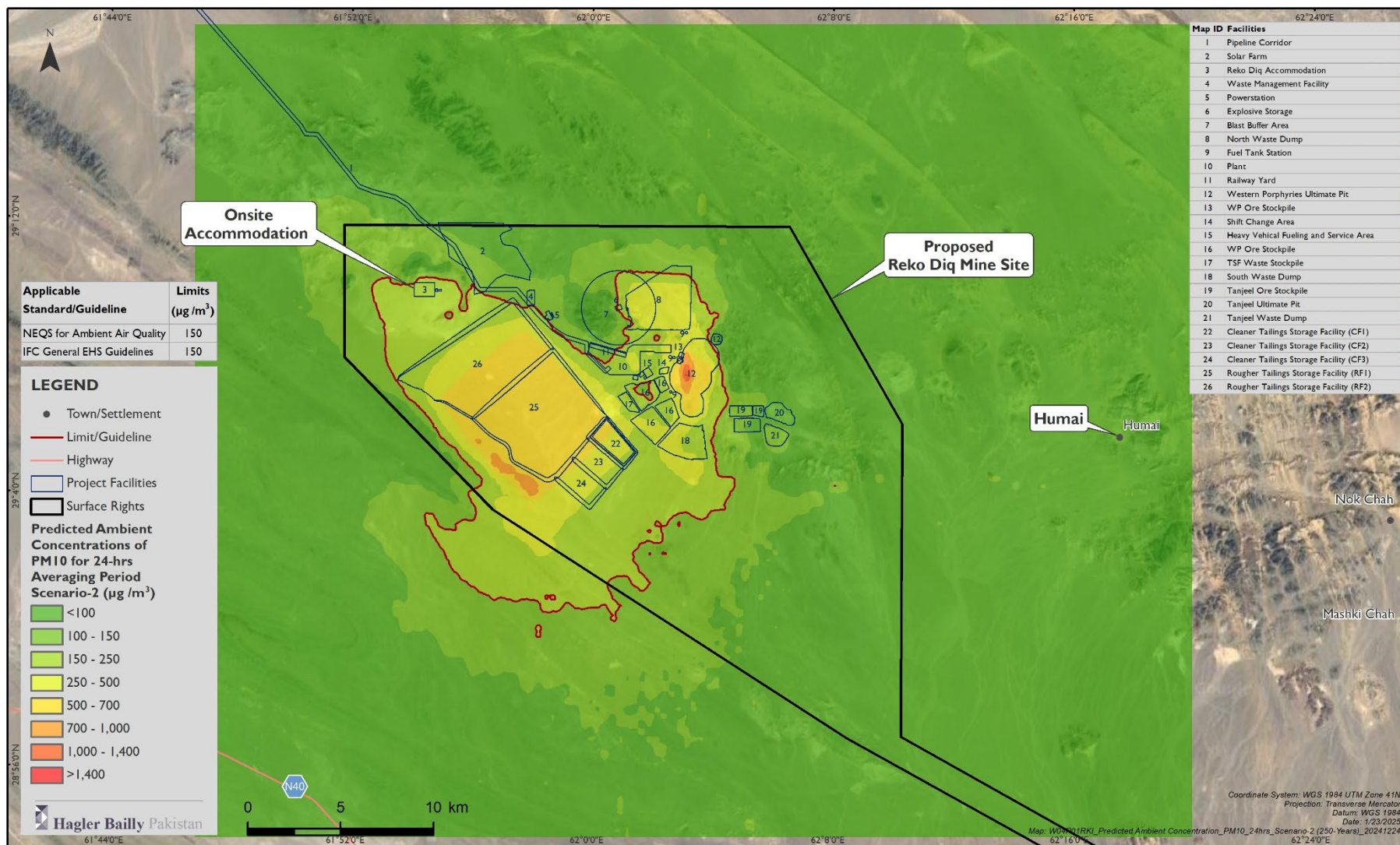


Exhibit 4.14: Predicted Annual Ambient Concentrations of PM₁₀ in Scenario 2 – Year 2050

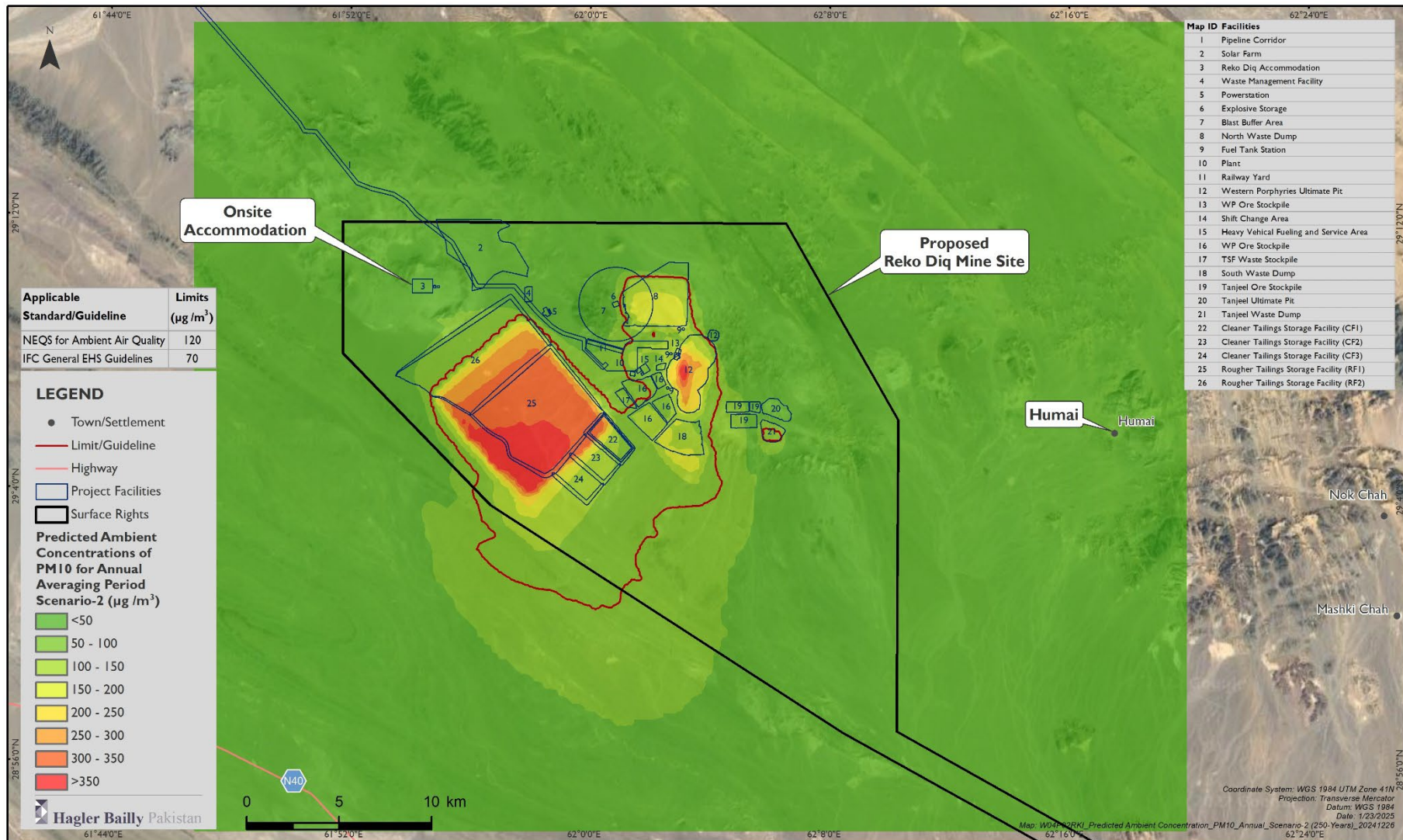


Exhibit 4.15: Predicted 24-hour Ambient Concentrations of PM_{2.5} in Scenario 2 – Year 2050

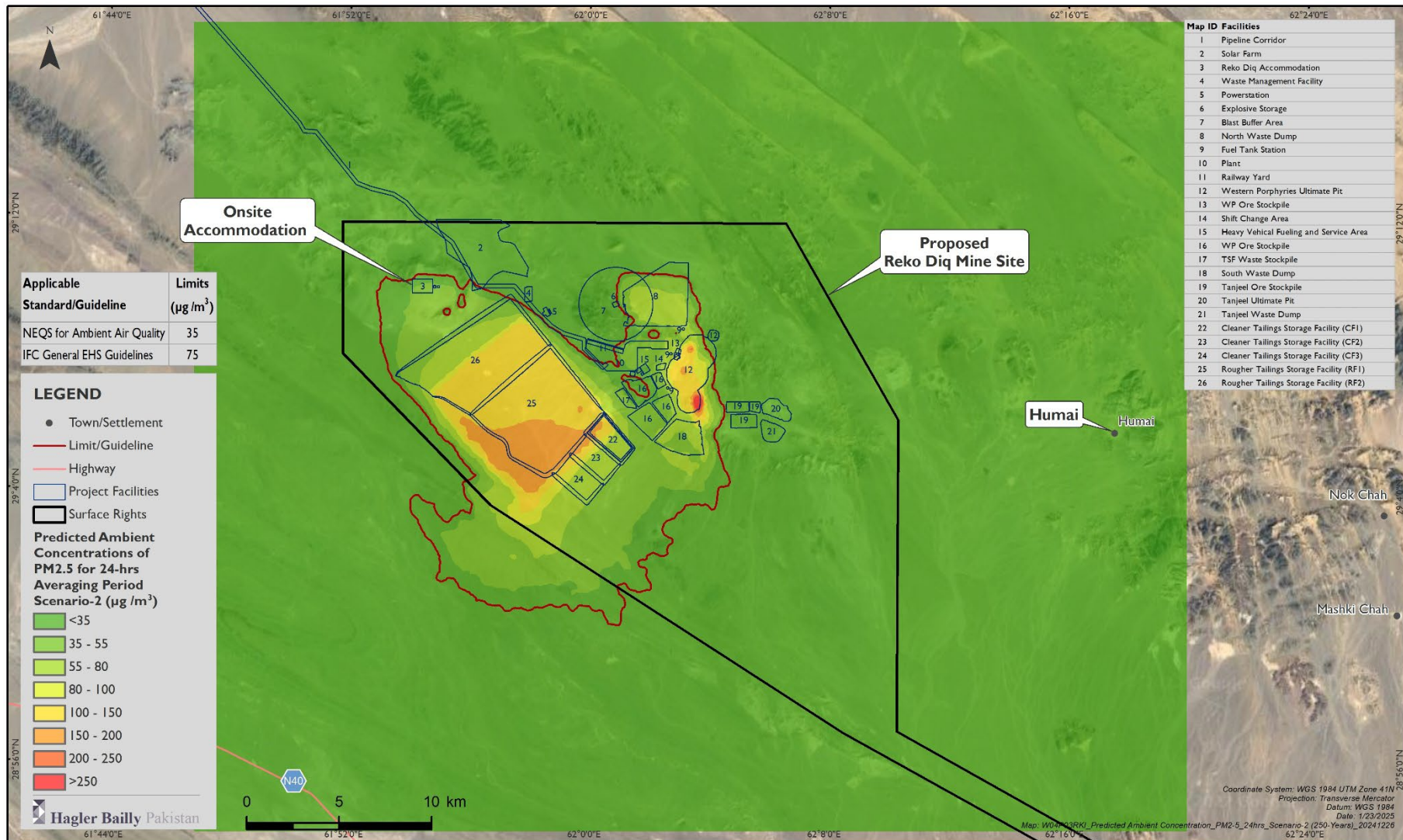
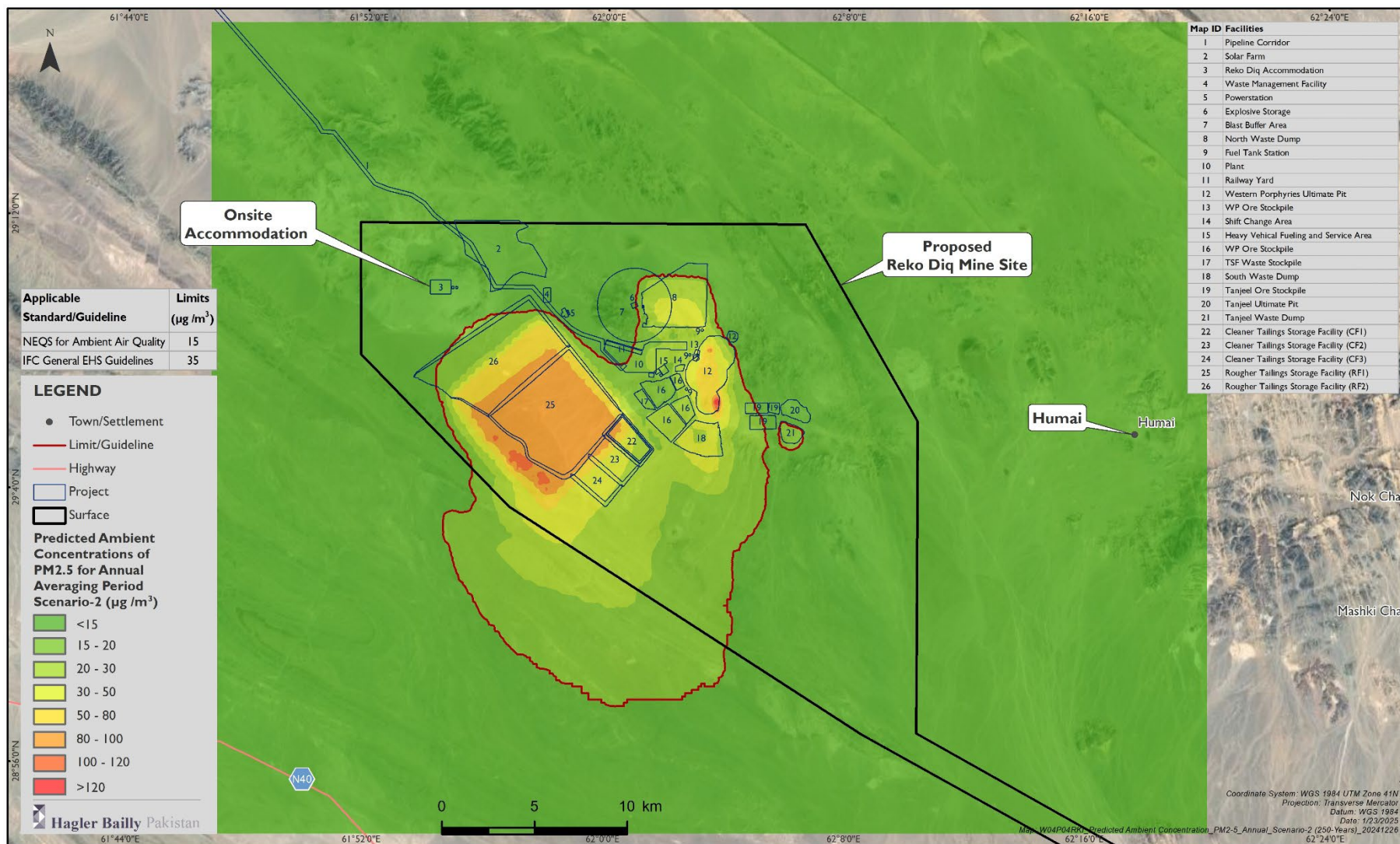


Exhibit 4.16: Predicted Annual Ambient Concentrations of PM_{2.5} in Scenario 2 – Year 2050



4.2.1 Timings of Occurrence of Maximum Pollutant Concentrations at Sensitive Receptors and Associated Wind Conditions

Exhibit 4.17 and **Exhibit 4.18** provide the time when maximum concentrations of pollutants are predicted to occur along with associated wind conditions for all modelled pollutants in Scenario 1 and Scenario 2.

The wind conditions indicate that majority of the highest Predicted Ambient Concentrations occur during low wind speeds in the order of less than 6 m/s. These relatively calm conditions lower the horizontal movement of the pollutants resultantly reducing the dispersion of pollutants.

Exhibit 4.17: Time of Maxima and Associated Wind Conditions
Scenario 1 – Ultimate Footprint

Receptor	Averaging Period	Predicted Ambient Concentration (µg/m³)	Time of Maxima		Wind Speed (m/s)	Wind Direction (Degrees)
			Date	Hour		
Nitrogen Dioxide (NO₂)						
Onsite Accommodation Camp	1-hour	85	7/17/2022	20	5.8	113
	24-hours	13	12/1/2023	24	2.7	143
Humai Settlement	1-hour	86	7/15/2022	3	3.1	320
	24-hours	12	5/18/2022	24	3.1	214
Sulphur Dioxide (SO₂)						
Onsite Accommodation Camp	1-hour	86	7/13/2021	3	2.1	108
	24-hours	14	3/16/2022	24	3.5	180
Humai Settlement	1-hour	90	4/27/2023	22	1.3	280
	24-hours	14	5/22/2023	24	4.5	311
Particulate Matter (PM₁₀)						
Onsite Accommodation Camp	24-hours	199	2/7/2021	24	4.4	142
Humai Settlement	24-hours	48	4/8/2022	24	5.8	230
Particulate Matter (PM₂.₅)						
Onsite Accommodation Camp	24-hours	49	10/20/2021	24	5.3	150
Humai Settlement	24-hours	14	1/9/2023	24	4.5	253

Exhibit 4.18: Time of Maxima and Associated Wind Conditions Scenario 2 – Year 2050

Receptor	Averaging Period	Predicted Ambient Concentration (µg/m³)	Time of Maxima		Wind Speed (m/s)	Wind Direction (Degrees)
			Date	Hour		
Particulate Matter (PM ₁₀)						
Onsite Accommodation Camp	24-hours	193	2/7/2021	24	4.4	142
Humai Settlement	24-hours	42	1/18/2021	24	3.4	210
Particulate Matter (PM _{2.5})						
Onsite Accommodation Camp	24-hours	42	1/30/2021	24	5.1	140
Humai Settlement	24-hours	14	11/22/2023	24	6.5	293

4.2.2 Frequency of Occurrence of Predicted Incremental Concentrations

The air dispersion modelling is carried out for a period of 3-years (1,095 days consisting of total 26,280 hours) starting from January 1, 2021, to December 31, 2023. The frequency of occurrence of the Predicted Incremental Concentrations is compared with the annual permitted exceedances prescribed EU Air Quality Standards.

Overall, the Predicted Ambient Concentrations of gaseous pollutants remain within the applicable limits at both onsite accommodation camp and Humai settlement. The Predicted Ambient Concentrations of PM₁₀ exceed the applicable limits at onsite accommodation camp in both Scenario 1 and Scenario 2. This number of exceedances per year of PM₁₀ is also above the permitted number of exceedances of 35 days per years prescribed in EU Air Quality Standards. These exceedances consist of 64% contribution due to elevated baselines and 36% contribution from Project, mainly its TSF.

Nearly similar pattern is shown by the number of exceedances of PM_{2.5} at this receptor, however, its compliance cannot be assessed due to unavailability of prescribed number of exceedances in the EU Air Quality Standards.

Exhibit 4.19 and **Exhibit 4.20** provide the number of exceedances per year from the applicable limits and their comparison with the permitted number of exceedances per year prescribed by European Commission Air Quality Standards in Scenario 1.

Exhibit 4.21 provides the number of exceedances per year of PM₁₀ and PM_{2.5} modelled in Scenario 2 and their comparison with the applicable limits.

Exhibit 4.22 and **Exhibit 4.23** provide the breakdown of number of exceedances per year based on their concentrations.

Exhibit 4.19: Number of Hours and Days Exceeded per Year for NO₂ and SO₂

<i>Receptor</i>	<i>Averaging Period</i>	<i>Applicable Limits (µg/m³)</i>	<i>No. of Exceedance per Year</i>	<i>Permitted Exceedances per Year</i>
Nitrogen Dioxide (NO₂)				
Onsite Accommodation Camp	1-hour	200	0	18
	24-hours	80	0	-
Humai Settlement	1-hour	200	0	18
	24-hours	80	0	-
Sulphur Dioxide (SO₂)				
Onsite Accommodation Camp	1-hour	-	0	24
	24-hours	120	0	3
Humai Settlement	1-hour	-	0	24
	24-hours	120	0	3

Notes: '-' in the permitted exceedances per year indicates that yearly permitted exceedances are not prescribed in the European Commission Air Quality Standards.

Grey highlighted cells indicate exceedance from the permitted exceedances per year prescribed in European Commissions Air Quality Standards.

Exhibit 4.20: Number of Days Exceeded per Year for PM₁₀ and PM_{2.5} in Scenario 1 – Ultimate Footprint

<i>Receptor</i>	<i>Averaging Period</i>	<i>Applicable Limits (µg/m³)</i>	<i>Reference Standard/ Guideline</i>	<i>No. of Exceedances per Year in Baseline</i>	<i>No. of Exceedances per Year due to Project</i>	<i>No. of Total Exceedances per Year¹²</i>	<i>Permitted Exceedances per Year</i>
Particulate Matter (PM₁₀)							
Onsite Accommodation Camp	24-hours	150	NEQS/IFC Interim Target 1	51	6	57	-
	24-hours	50	IFC Guideline Limit	84	46	130	35
Humai Settlement	24-hours	150	NEQS/IFC Interim Target 1	51	0	51	-
	24-hours	50	IFC Guideline Limit	84	0	84	35
Particulate Matter (PM_{2.5})							
Onsite Accommodation Camp	24-hours	75	IFC Interim Target 1	0	0	0	-
	24-hours	35	NEQS	10	11	21	-
	24-hours	25	IFC Guideline Limit	28	21	49	-
Humai Settlement	24-hours	75	IFC Interim Target 1	0	0	0	-
	24-hours	35	NEQS	10	0	10	-
	24-hours	25	IFC Guideline Limit	28	0	28	-

Notes: '-' in the permitted exceedances per year indicates that yearly permitted exceedances are not prescribed in the European Commission Air Quality Standards. Grey highlighted cells indicate exceedance from the permitted exceedances per year prescribed in European Commissions Air Quality Standards.

¹² Number of total exceedances is sum of number of exceedances per year in baseline and number of exceedances per year due to Project.

Exhibit 4.21: Number of Days Exceeded per Year for PM₁₀ and PM_{2.5} in Scenario 2 – Year 2050

<i>Receptor</i>	<i>Averaging Period</i>	<i>Applicable Limits (µg/m³)</i>	<i>Reference Standard/Guideline</i>	<i>No. of Exceedances per Year in Baseline</i>	<i>No. of Exceedances per Year due to Project</i>	<i>No. of Total Exceedances per Year¹³</i>	<i>Permitted Exceedances per Year</i>
Particulate Matter (PM₁₀)							
Onsite Accommodation Camp	24-hours	150	NEQS/IFC Interim Target 1	51	4	55	-
	24-hours	50	IFC Guideline Limit	84	41	125	35
Humai Settlement	24-hours	150	NEQS/IFC Interim Target 1	51	0	51	-
	24-hours	50	IFC Guideline Limit	84	0	84	35
Particulate Matter (PM_{2.5})							
Onsite Accommodation Camp	24-hours	75	IFC Interim Target 1	0	0	0	-
	24-hours	35	NEQS	10	6	16	-
	24-hours	25	IFC Guideline Limit	28	17	45	-
Humai Settlement	24-hours	75	IFC Interim Target 1	0	0	0	-
	24-hours	35	NEQS	10	0	10	-
	24-hours	25	IFC Guideline Limit	28	0	28	-

Notes: '-' in the permitted exceedances per year indicates that yearly permitted exceedances are not prescribed in the European Commission Air Quality Standards. Grey highlighted cells indicate exceedance from the permitted exceedances per year prescribed in European Commissions Air Quality Standards.

¹³ Number of total exceedances is sum of number of exceedances per year in baseline and number of exceedances per year due to Project.

Exhibit 4.22: Number of Exceedances per Year of PM₁₀ at Onsite Accommodation Camp – Project Contribution

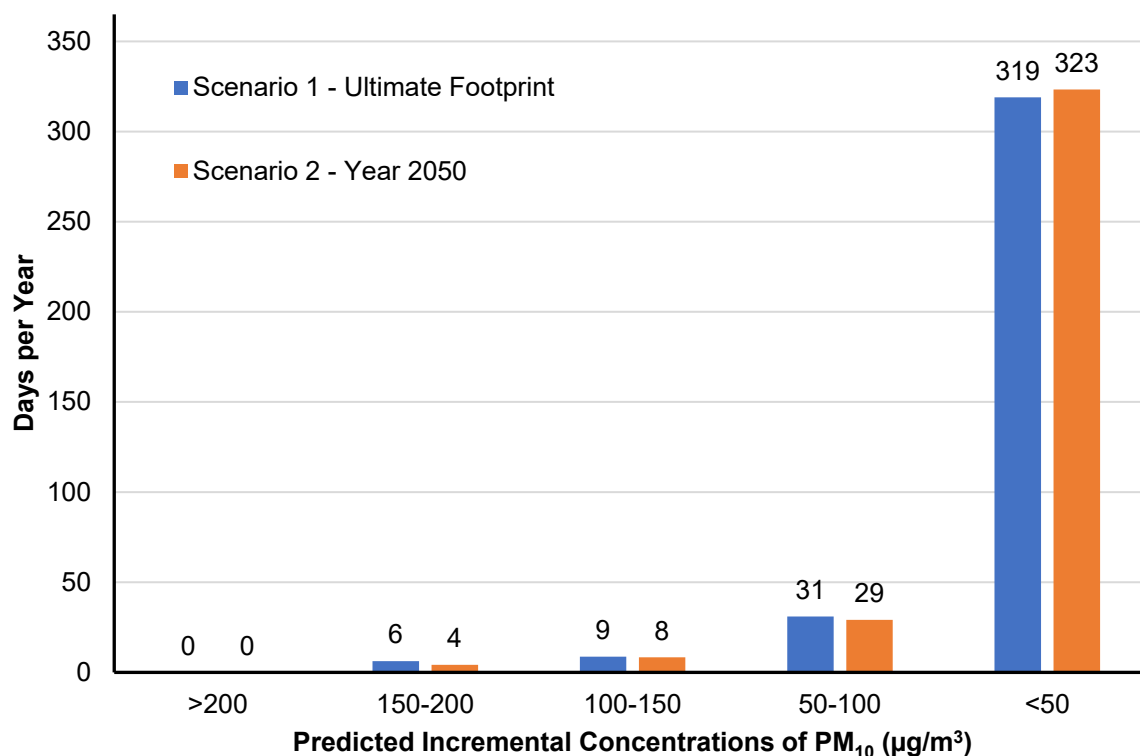
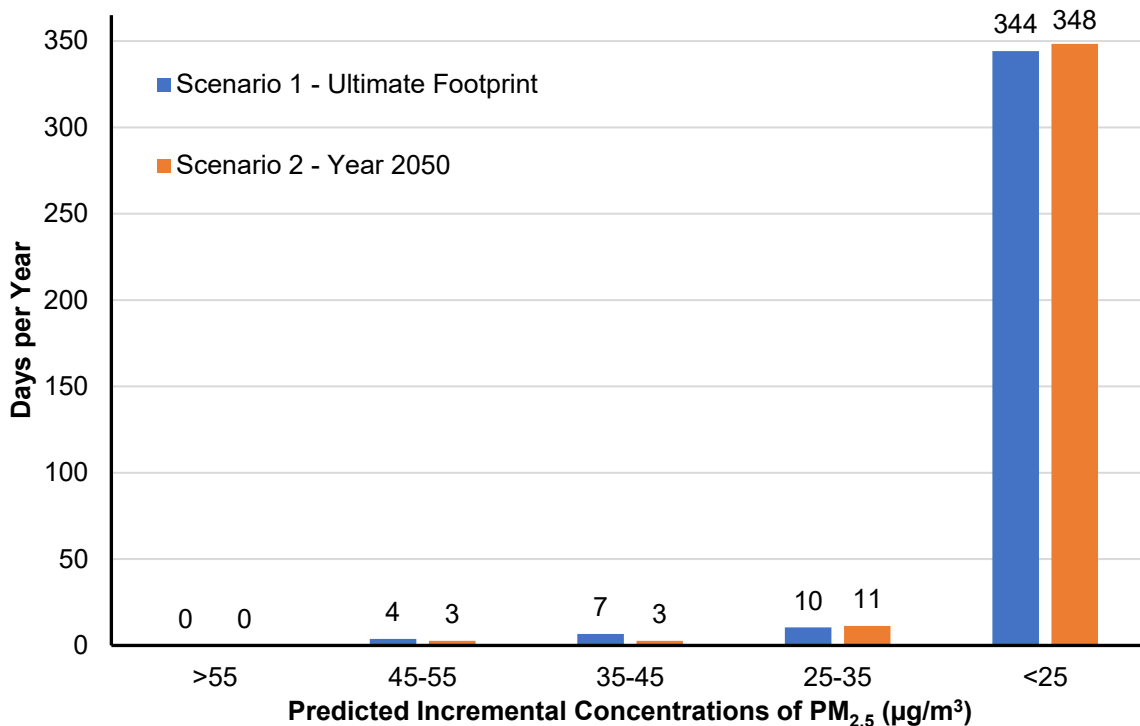


Exhibit 4.23: Number of Exceedances per Year of PM_{2.5} at Onsite Accommodation Camp – Project Contribution



4.3 Predicted Ambient Concentrations in Operational Areas

The maxima are predicted to occur at western porphyries, explosive storage buffer, Tanjeel open-pit, and north waste rock dumps. **Exhibit 4.24** provide the Predicted Ambient Concentrations of NO₂ and SO₂ and their comparison with applicable limits at the locations where maximum pollutant concentrations occur (referred to as ‘Maxima Locations’). **Exhibit 4.25** presents the Predicted Ambient Concentrations of respirable dust in both Scenario 1 and Scenario 2 at the Maxima Locations and their comparison with the occupational limits.

The Predicted Ambient Concentrations at all of the Maxima Locations remain within the limits prescribed in OSHA Standard for operational areas.

4.3.1 Timings of Occurrence of Maximum Pollutant Concentrations in Operational Areas and Associated Wind Conditions

Exhibit 4.26 provides the time when maximum concentrations of pollutants are predicted to occur along with associated wind conditions for all pollutants modelled in Scenario 1.

Exhibit 4.27 provides the time when the maximum concentrations of particulates occur in Scenario 2 along with associated wind conditions.

The wind conditions indicate that the highest Predicted Ambient Concentrations of all pollutants occur during low-speed winds (<6 m/s), when the horizontal movement of the pollutants is low and they tend to accumulate near the source. Furthermore, the topography of the region is also expected to play a significant role in this dispersion (see **Exhibit 4.28**). Therefore, considering these wind speeds, the formation of maxima is expected to remain within the lease area of the Reko Diq Mine Site.

Exhibit 4.24: Predicted Ambient Concentrations at Maxima Locations in Scenario 1 – Ultimate Footprint

Pollutant	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	OSHA Standards	Status of Compliance
		$\mu\text{g}/\text{m}^3$				
Nitrogen Dioxide (NO₂)						
Western Porphyries	1-hour	6.8	3,616	3,623	9,000	Compliant
Explosives Storage Buffer	1-hour	6.8	1,071	1,078	9,000	Compliant
Tanjeel Open-Pit	1-hour	6.8	1,391	1,397	9,000	Compliant
North Waste Rock Dump	1-hour	6.8	851	858	9,000	Compliant
Sulphur Dioxide (SO₂)						
Western Porphyries	1-hour	8.6	11,437	11,446	13,000	Compliant
Explosives Storage Buffer	1-hour	8.6	2,249	2,258	13,000	Compliant
Tanjeel Open-Pit	1-hour	8.6	389	397	13,000	Compliant
North Waste Rock Dump	1-hour	8.6	2,324	2,333	13,000	Compliant

Notes: Limits prescribed in OSHA Standard 1910.1000 for Air Contaminants are for 8-hour averaging period while the Predicted Ambient Concentrations are of 1-hour averaging period. The concentrations are considered as compliant as 8-hour limits are relatively much stringent as compared to 1-hour limits. Therefore, if Predicted 1-hour Ambient Concentration of a pollutant is within limits prescribed for 8-hour averaging period, its 8-hour weighted average will also remain within the 8-hour limits prescribed in OSHA 1910.1000. This approach is taken as reference from the Canadian Air Dispersion Modelling Guideline (Ontario Regulation 419/05: Air Pollution – Local Air Quality).

Grey highlighted cells indicate exceedance from the applicable limits.

Exhibit 4.25: Predicted Ambient Concentrations of Respirable Dust at Maxima Locations

Pollutant	Averaging Period	Baseline Concentration	Predicted Incremental Concentration	Predicted Ambient Concentration	OSHA Standards	Status of Compliance
		µg/m³				
Scenario 1 – Ultimate Footprint						
Western Porphyries	24-hours	35	2,331	2,366	5,000	Compliant
Explosives Storage Buffer	24-hours	35	32	67	5,000	Compliant
Tanjeel Open-Pit	24-hours	35	380	415	5,000	Compliant
North Waste Rock Dump	24-hours	35	353	388	5,000	Compliant
Scenario 2 – Year 2050						
Western Porphyries	24-hours	35	1,992	2,027	5,000	Compliant
Explosives Storage Buffer	24-hours	48	26	74	5,000	Compliant
Tanjeel Open-Pit	24-hours	41	76	117	5,000	Compliant
North Waste Rock Dump	24-hours	35	318	353	5,000	Compliant

The model was simulated for PM₁₀ and PM_{2.5}. As the OSHA Standard does not segregate the respirable dust into PM₁₀ and PM_{2.5}, the respirable is taken as the sum of PM₁₀ and PM_{2.5}.

The compliance for respirable dust is assessed through comparison of Predicted 24-hours Ambient Concentrations with 8-hour limits prescribed in OSHA Standard. In case where the Predicted 24-hours Ambient Concentration is less than 73% of the prescribed limit, a compliant status is assigned. If the exceedance is more than 73% of the prescribed limit, the Predicted 24-hours Ambient Concentration is taken as non-compliant. This approach is taken as reference from the Canadian Air Dispersion Modelling Guideline (Ontario Regulation 419/05: Air Pollution – Local Air Quality).

Grey highlighted cells indicate exceedance from the applicable limits.

Exhibit 4.26: Time of Maxima and Associated Wind Conditions in Scenario 1 – Ultimate Footprint

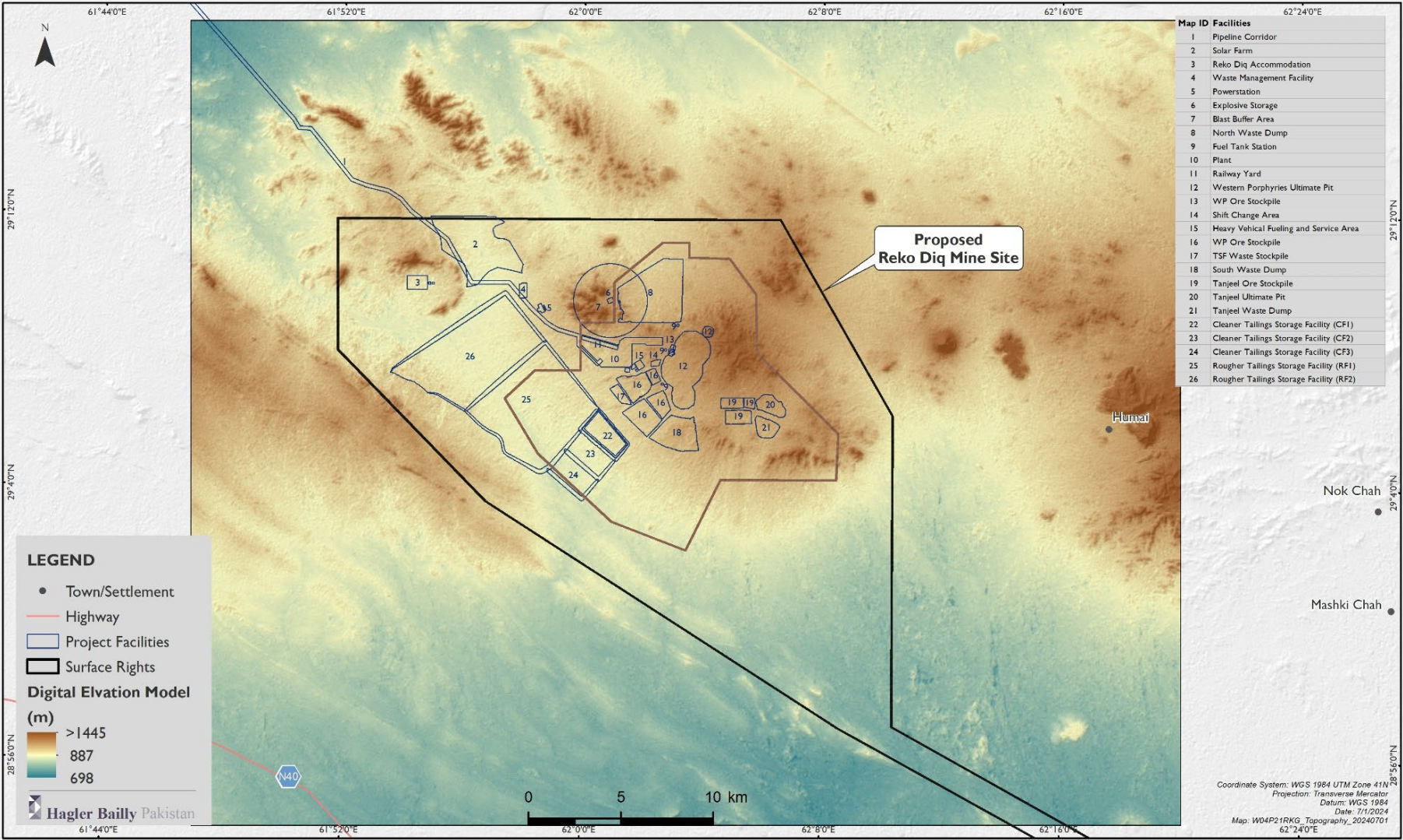
Location	Averaging Period	Predicted Ambient Concentration (µg/m³)	Time of Maxima		Wind Speed (m/s)	Wind Direction (Degrees)
			Date	Hour		
Nitrogen Dioxide (NO₂)						
Western Porphyries	1-hour	3,623	7/24/2022	12	1.5	267
	24-hours	393	11/24/2022	24	3.9	313
Explosives Storage Buffer	1-hour	1,078	5/5/2022	03	3.12	320
	24-hours	72	4/30/2022	24	4.10	239
Tanjeel Open-Pit	1-hour	1,397	1/10/2023	01	2.22	125
	24-hours	190	1/16/2021	24	2.66	344
North Waste Rock Dump	1-hour	858	10/6/2023	04	2.82	268
	24-hours	81	7/26/2023	24	4.24	123
Sulphur Dioxide (SO₂)						
Western Porphyries	1-hour	11,446	7/23/2022	23	3.1	353
	24-hours	1,197	4/4/2022	24	2.8	175
Explosives Storage Buffer	1-hour	2,258	5/5/2022	2	3.12	283
	24-hours	139	3/25/2022	24	4.31	171
Tanjeel Open-Pit	1-hour	397	12/10/2021	2	0.28	356
	24-hours	56	10/25/2022	24	2.16	217
North Waste Rock Dump	1-hour	2,333	10/6/2023	3	0.91	171
	24-hours	115	11/4/2021	24	3.04	155
Particulate Matter (PM₁₀)						
Western Porphyries	24-hours	1,889	1/16/2021	24	2.7	127

<i>Location</i>	<i>Averaging Period</i>	<i>Predicted Ambient Concentration ($\mu\text{g}/\text{m}^3$)</i>	<i>Time of Maxima</i>		<i>Wind Speed (m/s)</i>	<i>Wind Direction (Degrees)</i>
			<i>Date</i>	<i>Hour</i>		
Explosives Storage Buffer	24-hours	52	2/15/2023	24	4.9	162
Tanjeel Open-Pit	24-hours	359	4/6/2023	24	4.7	297
North Waste Rock Dump	24-hours	323	2/23/2023	24	3.9	193
Particulate Matter (PM_{2.5})						
Western Porphyries	24-hours	477	12/10/2021	24	4.0	158
Explosives Storage Buffer	24-hours	15	7/29/2022	24	4.6	191
Tanjeel Open-Pit	24-hours	56	3/17/2023	24	3.6	181
North Waste Rock Dump	24-hours	65	4/3/2021	24	4.2	163

Exhibit 4.27: Time of Maxima and Associated Wind Conditions in Scenario 2 – Year 2050

Location	Averaging Period	Predicted Ambient Concentration ($\mu\text{g}/\text{m}^3$)	Time of Maxima		Wind Speed (m/s)	Wind Direction (Degrees)
			Date	Hour		
Particulate Matter (PM₁₀)						
Western Porphyries	24-hours	1,553	1/16/2021	24	2.7	127
Explosives Storage Buffer	24-hours	60	3/5/2022	24	7.0	173
Tanjeel Open-Pit	24-hours	95	6/8/2023	24	6.2	297
North Waste Rock Dump	24-hours	293	2/23/2023	24	3.9	193
Particulate Matter (PM_{2.5})						
Western Porphyries	24-hours	475	12/10/2021	24	4.0	158
Explosives Storage Buffer	24-hours	14	3/7/2022	24	3.8	229
Tanjeel Open-Pit	24-hours	22	3/4/2023	24	2.8	220
North Waste Rock Dump	24-hours	60	12/9/2021	24	3.2	158

Exhibit 4.28: Topography of the Reko Diq Mine Site



4.3.2 Frequency of Occurrence of Predicted Incremental Concentrations

All the Predicted Ambient Concentrations modelled in both Scenario 1 and Scenario 2 remain within the applicable limits prescribed in OSHA Standard. Therefore, the number of days exceeded is zero for all pollutants within the operational areas.

4.4 Emissions from Power Generation

The Project will use Heavy Fuel Oil (HFO) power plant during operations phase to cater their electrical power demand. The HFO power plant is expected to emit particulate matter and gaseous emissions during its operations. **Exhibit 4.29** provides a comparison of the emissions rates of HFO power plant with the emissions guidelines prescribed in World Bank EHS Guidelines for Thermal Power Plant.

Exhibit 4.29: Comparison of Maximum Flue Gas Emission of HFO Power Plant with World Bank EHS Guidelines for Thermal Power Plants

Pollutant	Percentage O ₂ Content	HFO Power Plant	World Bank EHS Guidelines	Status
		mg/m ³		
Particulate Matter (PM)	15%	100	50	Above limit
Sulphur Dioxide (SO ₂)	15%	2,100	585	Above limit
Nitrogen Dioxide (NO ₂)	15%	2,000	740	Above limit

Source: DESA00022910 - Reco Diq Gold Mine 18V50DF D (HFO) - Emission Data Sheet. WÄRTSILÄ, 2023

Notes: Grey highlighted cells where emission rates of HFO power plant exceed the applicable guideline.

Compliance status is not given in **Exhibit 4.29** as the compliance is typically assessed through ambient concentrations at the receptors. Therefore, a status of 'Above Limits' is given to provide an analytical perspective. This approach aligns with the World Bank EHS Guidelines for Thermal Power Plants which states that: 'Environmental Assessments (EA) may justify more stringent or less stringent limits due to ambient environment, technical and economic considerations provided there is compliance with applicable ambient air quality standards and incremental impacts are minimized.'

The flue gas emissions provided in **Exhibit 4.29** are estimated for steady-state emissions from the HFO power plant at 100% load. These emission rates present the actual emissions under control conditions with exhaust gas heat recovery.

Although the emission rates are above the limits prescribed in World Bank EHS Guidelines for Thermal Power Plants (for ≥300 MWth), the Predicted Ambient Concentration of the gaseous pollutants remain within the applicable limits in operational areas and at the sensitive receptors (see **Section 4.2** and **Section 4.3**). This is since the stack height and flue gas temperature of the stack emissions have been kept relatively high to prevent accumulation of pollutants at ground levels close to HFO power plant.

In terms of particulate matter, the contribution of HFO power plant in elevated Predicted Ambient Concentrations at the onsite accommodation camp is negligible. This receptor, receives maximum concentrations of particulate matter from TSF which and causes exceedance of Predicted Ambient Concentrations from the applicable limits. Contribution

of PM emissions from HFO power plant is approx. 0.5% of the total PM emissions from Project.

4.5 Mitigation Measures

Based on the assessments carried out in **Section 4.2** and **Section 4.3**, most of the maximum Predicted Ambient Concentrations of modelled pollutants will likely occur within the lease area limits of the Reko Diq Mine Site. The Maxima Locations include waste rock dumps, safety buffer zone of explosives storage area, western porphyries, and Tanjeel open pit, all of which are categorized as operational areas. The gaseous pollutants and respirable dust remain within the applicable limits of OSHA Standard at all of these Maxima Locations. The presence of staff at these locations is also expected to be on occasional basis with low likelihood of permanent presence. Therefore, as a good practice, the Project will ensure that the workers are issued with respiratory masks to limit the exposure of onsite personnel.

The Project will also conduct continuous monitoring of PM₁₀ and PM_{2.5} concentrations at the onsite accommodation camp. Despite lower contribution from the mining operations at Reko Diq Mine Site in high wind speeds (>12 m/s), the onsite facilities are expected to experience elevated background PM₁₀ and PM_{2.5} concentrations exceeding the applicable limits when the wind speeds exceed 12.5 m/s. The location of air quality monitoring station at the onsite accommodation camp should therefore be selected such that it captures PM₁₀ and PM_{2.5} concentrations from both Project operations and backgrounds. In case of any exceedance from the limits prescribed in NEQS or IFC General EHS Guidelines, the onsite personnels present in office areas will be provided with appropriate respiratory masks to avoid the potential of any illness or impacts due to Project operations. Additionally, the Project will also consider inclusion of air filters within their Heating, Ventilation, and Air Conditioning (HVAC) system to limit exposure to elevated concentrations of particulates.

The nearest human dwellings are in Humai settlement, which is located at ~30 km from the western porphyries of Reko Diq Mine Site. As discussed in **Section 4.2**, the mining operations will have limited impact on the air quality of this settlement and the Predicted Ambient Concentrations will remain within the applicable limits at this location. Therefore, implementation of mitigation measures to reduce the potential impacts on air quality are not required for this settlement. As a good practice, the Project will periodically monitor the air quality at this receptor. This will ensure that the Project operations do not impact this settlement and will also be used to validate the findings of this air dispersion modelling.

5. Conclusions and Recommendations

The air dispersion modelling is conducted for mining operations and its associated activities at the Reko Diq Mine. The following conclusions can be drawn from the assessment carried out in previous sections.

- ☞ The Predicted Ambient Concentrations of gaseous pollutants are within the applicable limits at onsite accommodation camp and Humai settlement for all averaging periods. In terms of particulate matter, the Predicted Ambient Concentrations at the Humai settlement remain within the applicable limits for 24-hours and annual averaging period. However, the onsite accommodation camp is expected to receive high Predicted Ambient Concentrations of PM₁₀ and PM_{2.5} exceeding the applicable limits. This receptor is in the northeast direction of TSF and is expected to capture high Predicted Ambient Concentrations due to formation of wind tunnel at the TSF.
- ☞ The Predicted Ambient Concentrations of gaseous pollutants and particulate matter within the operational areas of the Project remain within the applicable OHS limits for 8-hour averaging periods. The maximum Predicted Ambient Concentrations are expected to occur at the western porphyries, Tanjeel open pit, safety buffer of explosives storage buffer, and north waste rock dump.

The modelling is conducted by taking into account of both ultimate design of the open-pit and TSF as well as when the Project will complete 50% of its LOM. The emissions in the initial phases of the Project will be relatively lower, when the open-pit and TSF will be relatively small and their associated emission rates will be lower as compared to those anticipated for peak operations.

Based on the conclusions drawn from this assessment, the following mitigation and control measures should be considered for further reduction of the Project impacts.

- ☞ For the onsite accommodation camp and closed office facilities, the Project will conduct continuous monitoring of PM₁₀ and PM_{2.5} concentrations. In case of any exceedance from the limits prescribed in NEQS or IFC General EHS Guidelines, the personnel within these premises will be provided with respiratory masks to avoid impacts due to longer exposure periods. Additionally, the Project will also consider installation of air filters in the HVAC systems of these facilities to limits exposure of the onsite staff.
- ☞ In the operational areas, the Project will ensure that the staff are allocated with suitable respiratory masks and PPEs. The shift hours will not exceed more than 8-hours per day to limit exposure of the onsite personnel.

6. References

Breedveld, L., et al. (2007). "Eco-efficiency of fabric filters in the Italian ceramic tile industry." Journal of Cleaner Production **15**(1): 86-93.

Edvardsson, K. (2009). "Gravel roads and dust suppression." Road Materials and Pavement Design **10**(3): 439-469.

HBP, H. B. P. (2024). Socioeconomic Report for Environmental and Social Feasibility Studies of Reko Diq Mining Project.

Neuman, C. M., et al. (2009). "Wind tunnel simulation of environmental controls on fugitive dust emissions from mine tailings." Atmospheric Environment **43**(3): 520-529.

USEPA (2006). "Miscellaneous Sources." **AP 42, Fifth Edition, Volume I Chapter 13.**

USEPA, U. E. P. A. (1998). Control of Emissions of Air Pollution from Non-road Diesel Engines.

USEPA, U. S. E. P. A. (2006). "Mineral Products Industry." **AP 42, Fifth Edition, Volume I.**

Zimwara, D., et al. (2012). "Air pollution control techniques for the cement manufacturing industry: A case study for Zimbabwe." CIE42 proceedings **37**: 1-13.

7. Supplementary Information – Emission Rates Estimations

Exhibit 7.1 provides the summary of emission rates from various Project facilities which have been used as inputs of the air dispersion modelling. **Section 7.1** through **Section 7.12** provide the detailed inputs along with the calculations of emission rates.

7.1 Mobile Emissions

Exhibit 7.2 provides the estimations and anticipated mobile emission rates of NO_x and PM_{2.5}. **Exhibit 7.3** provides the estimated emission rates of SO₂ based on anticipated diesel consumption during operations phase of the Project. Mobile emissions are expected to remain somewhat similar in both Scenario 1 and 2 due to limited variation in Project operations from 7th year of operations onwards.

Exhibit 7.1: Summary of Daily Emissions

<i>Emission Source</i>	<i>Scenario 1 – Ultimate Footprint (kg/day)</i>				<i>Scenario 2 – Year 2050¹⁴</i>	
	<i>PM₁₀</i>	<i>PM_{2.5}</i>	<i>NOx</i>	<i>SO₂</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Mobile Emissions	-	772	1,017	1,649	-	772
Primary Crushing Area	136	20	-	-	136	20
Secondary Crushing Area	222	33	-	-	222	33
Mill Area	468	70	-	-	468	70
Pit Operations-Western Porphyries	3,326	499	-	-	3,326	499
Pit Operations-Tanjeel	637	96	-	-	-	-
Blasting and Drilling	39	6	-	-	39	6
Haul Roads	5,823	582	-	-	1,101	110
Waste Rock Dumps - Western Porphyries	1,451	218	-	-	1,451	218
Waste Rock Dumps - Tanjeel	312	47	-	-	-	-
Incinerator	-	-	57	-	-	-
Explosives Detonation	-	-	622	78	-	-
Wind Erosion						
Northern Waste Rock Dumps	4,010	601	-	-	3,704	556
Southern Waste Rock Dumps	1,454	218	-	-	1,454	218
Tanjeel Waste Rock Dumps	450	67	-	-	414	62
Tailing Storage Facility	102,033	28,043	-	-	66,355	17,534
Low Grade Stockpile	903	135	-	-	903	135
HFO Power Plant						
Cluster 1	366	55	20,909	21,954	366	55
Cluster 2	293	44	16,762	17,600	293	44

¹⁴ Gaseous pollutants are excluded from Scenario 2 as their emissions rates are expected to remain somewhat similar after year 2033 till completion of LOM.

Exhibit 7.2: NO_x and PM_{2.5} Emissions from Mobile Sources

<i>Item</i>	<i>Model</i>	<i>Horsepower (HP)</i>	<i>Operational Hours/Day</i>	<i>HP-Hour</i>	<i>Quantity</i>	<i>NO_x emissions per day (kg/day)</i>	<i>PM_{2.5} emissions per day (kg/day)</i>
Rope Shovel	4100 XPC	3,200	14	46,080	4	40	30
Face Shovel	PC7000	1,675	14	24,120	3	14	10
Large Front-End Loader	WE2350-2	2,300	14	33,120	3	18	13
Haul Truck	980E_5	3,500	14	50,400	76	765	574
Track Dozer	D11T	850	14	12,240	15	36	27
Wheeled Dozer	854K	2,236	14	32,198	3	17	13
Grader	24M	535	14	7,704	12	12	14
Small Excavator	390DL	523	14	7,531	4	4	5
Water Truck	789D SC	1,450	14	20,880	8	34	26
Service Truck	789D WC	2,100	14	30,240	8	49	37
Production Drill	EPIROC PV271XC LP	800	14	11,520	10	24	18
Presplit Drill	EPIROC SmartROC D65LF	540	14	7,776	3	3	4
Grade Control Drill		260	14	3,744	4	2	2

Source: USEPA 1998 40 CFR 9, 86, 89

Project Information: Fleet Position Summary

Exhibit 7.3 SO₂ Emissions from Mobile Sources

<i>Parameter</i>	<i>Quantity</i>	<i>Unit</i>
Annual diesel consumption	120,000	tonnes/year
Daily diesel consumption	328,767	L/day
Density of diesel	0.8361	kg/L
Daily diesel consumption	274,882	kg/day
Sulphur content in diesel	0.3%	
Estimations		
Daily SO ₂ emissions	1,649	kg/day

http://www.rbbertomeu.es/htmlish/docs_ish/SEC-E-4-Calculation_SO2_dieseloil.pdf

7.2 Primary Crushing Area

Exhibit 7.4 provides the inputs for estimation of emission rates from primary crushing area. **Exhibit 7.5** provides the estimated emission rates from primary crushing area during operations phase of the Project. Emissions from primary crushing area are expected to remain somewhat similar in both Scenario 1 and 2 due to limited variation in Project operations from 7th year of operations onwards.

Exhibit 7.4: Inputs for Emissions Estimations from Primary Crushing Area

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	<i>Source</i>
Capacity of Mineral Processing Plant	90,000,000	tonnes/day	ESIA Mine Plan Summary
Number of Working Days	365	days/year	ESIA Mine Plan Summary
Crusher System Ore Feed Rate	246,575	tonnes/day	
Hopper Feed Rate	246,575	tonnes/day	
Ore Transfer Points	3		Process Design Criteria by Lycopodium
Number of Shifts	2	shifts/day	Process Design Criteria by Lycopodium
Shift Hours	12	hrs./shift	Process Design Criteria by Lycopodium
Control Equipment for Crushers	Fabric Filter & Enclosure		Assumed
Control Equipment for Hopper	Enclosure		Assumed
Ore Type	Low moisture		Assumed
Emission Factors			
Ore Unloading TSP Emissions	0.06	kg/tonnes	USEPA AP-42 S11.24
Ore Unloading PM ₁₀ Emissions	0.03	kg/tonnes	USEPA AP-42 S11.24
Primary Crushing TSP Emissions	0.2	kg/tonnes	USEPA AP-42 S11.24

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	<i>Source</i>
Primary Crushing PM ₁₀ Emissions	0.02	kg/tonnes	USEPA AP-42 S11.24
Discharge/Transfer Points TSP Emissions	0.06	kg/tonnes	USEPA AP-42 S11.24
Discharge/Transfer Points PM ₁₀ Emissions	0.03	kg/tonnes	USEPA AP-42 S11.24
PM _{2.5} /PM ₁₀ ratio	0.15		USEPA AP-42 S11.24
Dust Control Efficiency at Hopper	99%		
Dust Control Efficiency at Crushing Circuit	99.5%		

Exhibit 7.5: Estimated Emissions from Primary Crushing Area

<i>Source</i>	<i>Uncontrolled Emissions</i>			<i>Controlled Emissions</i>		
	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Daily Emissions (kg/day)						
Unloading to feed hopper	14,795	7,397	1,110	148	74	11
Primary crushing	49,315	4,932	740	247	25	4
Drop onto Conveyors	14,795	7,397	1,110	74	37	6
Total	78,904	19,726	2,959	468	136	20
Annual Emissions (kg/annum)						
Unloading to feed hopper	5,400,000	2,700,000	405,000	54,000	27,000	4,050
Primary Crushing	18,000,000	1,800,000	270,000	90,000	9,000	1,350
Drop onto Conveyors	5,400,000	2,700,000	405,000	27,000	13,500	2,025
Total	28,800,000	7,200,000	1,080,000	171,000	49,500	7,425

7.3 Secondary Crushing Area

Exhibit 7.6 provides the inputs for estimation of emission rates from secondary crushing area. **Exhibit 7.7** provides the estimated emission rates from secondary crushing area during operations phase of the Project. Emissions from secondary crushing area are expected to remain somewhat similar in both Scenario 1 and 2 due to limited variation in Project operations from 7th year of operations onwards

Exhibit 7.6: Inputs for Emissions Estimations from Secondary Crushing Area

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	<i>Reference</i>
Capacity of Mineral Processing Plant	90,000,000	tonnes/day	ESIA Mine Plan Summary
Number of Operation Days	365	day/yr.	ESIA Mine Plan Summary

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	<i>Reference</i>
Crusher System Ore Feed Rate	246,575	tonnes/day	
Ore Transfer Points (Conveyors)	15.00		Assuming 700 tonnes/hour capacity of a single conveyor. Process Design Criteria by Lycopodium
Number of Shifts	2	shifts/day	ESIA Mine Plan Summary
Shift Hours	12	hr/shift	ESIA Mine Plan Summary
Control Equipment for Crushers	Fabric Filter & Enclosure		Assumed
Ore Type	Low moisture		
Emission Factors:			
Secondary Crushing Circuit TSP Emissions	0.6	kg/tonnes	USEPA AP-42 S11.24
PM10 Fraction in TSP	10%		USEPA AP-42 S11.24
Secondary Crushing Circuit PM10 Emissions	0.06	kg/tonnes	USEPA AP-42 S11.24
Discharge/Transfer Points TSP Emissions	0.06	kg/tonnes	USEPA AP-42 S11.24
Discharge/Transfer Points PM10 Emissions	0.03	kg/tonnes	USEPA AP-42 S11.24
PM2.5/PM10 ratio	0.15		USEPA AP-42 S11.24
Dust Control Efficiency at Crushing Circuit	99%	%	

Exhibit 7.7: Estimated Emissions from Secondary Crushing Area

<i>Source</i>	<i>Uncontrolled Emissions</i>			<i>Controlled Emissions</i>		
	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Daily Emissions (kg/day)						
Secondary Crushing	147,945	14,795	2,219	1,479	148	22
Drop onto Conveyors	14,795	7,397	1,110	148	74	11
Total	162,740	22,192	3,329	1,627	222	33
Annual Emissions (kg/annum)						
Secondary Crushing	54,000,000	5,400,000	810,000	540,000	54,000	8,100
Drop onto Conveyors	5,400,000	2,700,000	405,000	54,000	27,000	4,050
Total	59,400,000	8,100,000	1,215,000	594,000	81,000	12,150

7.4 Mill Area

Exhibit 7.8 provides the inputs for estimation of emission rates from milling area.

Exhibit 7.9 provides the estimated emission rates from milling area during operations phase of the Project. Emissions from mill area are expected to remain somewhat similar in both Scenario 1 and 2 due to limited variation in Project operations from 7th year of operations onwards

Exhibit 7.8: Inputs for Emissions Estimations from Mill Area

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	<i>Reference</i>
Capacity of Mineral Processing Plant	90,000,000	tonnes/day	ESIA Mine Plan Summary
Number of Operation Days	365	day/yr.	ESIA Mine Plan Summary
Crusher System Ore Feed Rate	246,575	tonnes/day	
Ore Transfer Points	15		Assuming 700 tonnes/hour capacity of a single conveyor. Estimation is based on Process Design Criteria by Lycopodium
Number of Shifts	2	shifts/day	Process Design Criteria by Lycopodium
Shift Hours	12	hr/shift	Process Design Criteria by Lycopodium
Control Equipment for Crushers	Fabric Filter & Enclosure		
Ore Type	Low moisture		Assumed.
Emission Factors:			
HPGR Circuit TSP Emissions	1.2	kg/tonnes	USEPA AP-42 - S11.24
HPGR Circuit PM10 Emissions	0.16	kg/tonnes	USEPA AP-42 - S11.24
Material Handling TSP Emissions	0.06	kg/tonnes	USEPA AP-42 - S11.24
Material Handling PM10 Emissions	0.03	kg/tonnes	USEPA AP-42 - S11.24
PM2.5/PM10 ratio	0.15		USEPA AP-42 - S11.24
Dust Control Efficiency at Crushing Circuit	99%	%	

Exhibit 7.9: Estimated Emissions from Mill Area

Source	Uncontrolled Emissions			Controlled Emissions		
	TSP	PM ₁₀	PM _{2.5}	TSP	PM ₁₀	PM _{2.5}
Daily Emissions (kg/day)						
HPGR Circuit	295,890	39,452	5,918	2,959	395	59
Drop onto Conveyors	14,795	7,397	1,110	148	74	11
Total	310,685	46,849	7,027	3,107	468	70
Annual Emissions (kg/annum)						
HPGR Circuit	108,000,000	14,400,000	2,160,000	1,080,000	144,000	21,600
Drop onto Conveyors	5,400,000	2,700,000	405,000	54,000	27,000	4,050
Total	113,400,000	17,100,000	2,565,000	1,134,000	171,000	25,650

7.5 Pit Operations

Exhibit 7.10 provides the inputs for estimation of emission rates from pit operations at western porphyries and Tanjeel open pit. **Exhibit 7.11** and **Exhibit 7.12** provide the estimated emission rates due to pit operations in Scenario 1 and 2. Emissions from pit operations are expected to remain somewhat similar in both Scenario 1 and 2 due to limited variation in Project operations from 7th year of operations onwards except Tanjeel. Emissions from pit operations at Tanjeel are not applicable in Scenario 2 – Year 2050 as operations at Tanjeel deposits will conclude in year 2046.

Exhibit 7.10: Inputs for Emissions Estimations from Pit Operations

Description	Capacity	Unit	Reference
Working Days	365	days/year	ESIA Mine Plan Summary
Material Silt Content (s)	1%	%	Assumed based on 2010 Feasibility
Material Moisture Content (M)	2%	%	Process Design Criteria by Lycopodium
Average Wind Speed (U)	6.25	tonnes/day	Average wind speed of 3-years
Western Porphyries			
Material handled	163,918,679	tonnes/year	Total Mined Ore during average operations. Based on ESIA Mine Plan Summary
Material handled	449,092	tonnes/day	
Overburden	86,392,336	tonnes/year	ESIA Mine Plan Summary
Overburden	236,691	tonnes/day	

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	<i>Reference</i>
Tanjeel Open-Pit			
Material handled	31,142,133	tonnes/year	Total Mined Ore during average operations. Based on ESIA Mine Plan Summary
Material handled	85,321	tonnes/day	
Overburden	17,257,747	tonnes/year	ESIA Mine Plan Summary
Overburden	47,281	tonnes/day	
Emission Factors: (AP-42 S11.9)			
PM ₁₀ fraction (loading)	0.35		
PM _{2.5} /PM ₁₀ ratio	0.15		
Loading TSP Emissions	0.018	kg/tonnes	USEPA AP-42 S11-9-4
Bulldozing TSP emission	0.006	kg/tonnes	USEPA AP-42 S11-9-4

Exhibit 7.11: Estimated Emissions from Pit Operations Scenario 1 – Ultimate Footprint

<i>Source</i>	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Daily Emissions (kg/day)			
Western Porphyries			
Loading Emissions	8,084	2,829	424
Bulldozing Emissions	1,420	497	75
Total	9,504	3,326	499
Tanjeel Open-Pit			
Loading Emissions	1,536	538	81
Bulldozing Emissions	284	99	15
Total	1,819	637	96
Annual Emissions (kg/yr.)			
Western Porphyries			
Loading Emissions	2,950,536	1,032,688	154,903
Bulldozing Emissions	518,354	181,424	27,214
Total	3,468,890	1,214,112	182,117
Tanjeel Open-Pit			
Loading Emissions	560,558	196,195	29,429
Bulldozing Emissions	103,546	36,241	5,436
Total	664,105	232,437	34,866

Exhibit 7.12: Estimated Emissions from Pit Operations Scenario 2 – Year 2050

Source	TSP	PM ₁₀	PM _{2.5}
Daily Emissions (kg/day)			
Western Porphyries			
Loading Emissions	8,084	2,829	424
Buldozing Emissions	1,420	497	75
Total	9,504	3,326	499
Tanjeel Open-Pit			
Loading Emissions	-	-	-
Buldozing Emissions	-	-	-
Total	-	-	-
Annual Emissions (kg/yr.)			
Western Porphyries			
Loading Emissions	2,950,536	1,032,688	154,903
Buldozing Emissions	518,354	181,424	27,214
Total	3,468,890	1,214,112	182,117
Tanjeel Open-Pit			
Loading Emissions	-	-	-
Buldozing Emissions	-	-	-
Total	-	-	-

7.6 Blasting & Drilling

Exhibit 7.13 provides the inputs for estimation of emission rates from blasting and drilling at western porphyries and Tanjeel open pit. **Exhibit 7.14** provides the estimated emission rates from blasting and drilling during operations phase of the Project. Emissions from pit operations are expected to remain somewhat similar in both Scenario 1 and 2 due to limited variation in Project operations from 7th year of operations onwards. However, emissions from pit operations at Tanjeel are not applicable in Scenario 2 – Year 2050 as operations at Tanjeel deposits will conclude in year 2046.

Exhibit 7.13: Inputs for Emissions Estimations from Blasting and Drilling

Description	Capacity	Unit	Source
Drilling	100	holes/day	Assumed
Blasting	1	blast/day	Assumed
Blast area (A)	80	m ² /hole	Assumed
Workdays	365	day/yr.	Process Design Criteria by Lycopodium

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	<i>Source</i>
Emission Factors			
Drilling emission factor	0.59	kg/hole	USEPA AP-42 S11.9.2
Blasting emission factor	0.157	kg/blast	USEPA AP-42 S11.9.2
PM ₁₀ fraction	0.52		
PM _{2.5} /PM ₁₀ ratio	0.15		

Exhibit 7.14: Estimated Emissions from Blasting and Drilling

<i>Source</i>	<i>Uncontrolled Emissions</i>		
	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Daily Emissions (kg/day)			
Drilling	59.0	30.7	4.6
Blasting	15.7	8.2	1.2
Total	74.7	38.9	5.8
Annual Emissions (kg/annum)			
Drilling	21,535.0	11,198.2	1,679.7
Blasting	5,745.8	2,987.8	448.2
Total	27,280.8	14,186.0	2,127.9

7.7 Haul Roads

7.7.1 Scenario 1 – Ultimate Footprint

Exhibit 7.15 provides the inputs for estimation of emission rates from haul roads. and **Exhibit 7.16** provides the factors used for estimation of emission factor estimations. **Exhibit 7.17** provides the estimated emission rates from haul roads.

Exhibit 7.15: Inputs for Emissions Estimations from Haul Roads
Scenario 1 – Ultimate Footprint

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	
Number of Haul Trucks	76		Average number of haul trucks over the LOM. Source: Fleet Position Summary
Number of Wheels on Trucks (w)	6	per truck	Haul Truck Specification Sheet
Type of Haul Truck	KOMATSU 980E-5		Fleet Position Summary
Haul Truck Load Capacity	363	tonnes	Haul Truck Specification Sheet

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	
Haul Truck Weight (Full) (W)	628	tonnes	Haul Truck Specification Sheet
Haul Truck Weight (Empty) (W)	265	tonnes	Estimated
Average Haul Speed (S)	20	km/hr	Assumed
No. of operational days	365	days/year	ESIA Mine Plan Summary
Average Road Silt Content (s)	1%		Assumed
Total Material transferred to Waste Rock Dump by Haul Trucks	86,392,336	tonnes/year	ESIA Mine Plan Summary
Material handled by Haul Trucks	236,691	tonnes/day	Estimated
Number of Trips to Waste Rock Dump	652	trips/day	Estimated
Total Haul Distance	20,000	m	ESIA Mine Plan Summary
Days with Rainfall < 0.254 mm (p)	362.47	days/year	3-years met data from Lakes Environmental.
Method of Dust Supression	Graveling and sprinkling		Gravels of size 40 mm and thickness of 200 mm on top of haul roads.
Calculations:			
Total vehicle-kilometers traveled	13,041	VKT/day	
Total vehicle-kilometers traveled	4,759,908	VKT/annum	

Exhibit 7.16: Estimation of Emission Factors in Scenario 1 – Ultimate Footprint

<i>Description</i>	<i>Emission Factor</i>	<i>Unit</i>	<i>Source</i>
k for TSP	4.9	lb/VMT	USEPA AP42 13.2.2-2
a for TSP	0.7		USEPA AP42 13.2.2-2
b for TSP	0.45		USEPA AP42 13.2.2-2
c for TSP	1		USEPA AP42 13.2.2-2
d for TSP	1		USEPA AP42 13.2.2-2
Emission Factor for Exhaust, Brake Wear and Tire Wear (C)	0.00047	lb/VMT	USEPA AP42 13.2.2-4
Surface Moisture Content (M)	0.06%	%	USEPA AP42 13.2.2-3
PM10 fraction	0.36		
PM2.5/PM10 ratio	0.1		
Control Efficiency	60%		
Emission Factor for TSP	3.101	kg/VKT	USEPA AP42 13.2.2

Exhibit 7.17: Estimated Emissions from Haul Roads in Scenario 1 – Ultimate Footprint

Source	Uncontrolled Emissions			Controlled Emissions		
	TSP	PM ₁₀	PM _{2.5}	TSP	PM ₁₀	PM _{2.5}
Daily TSP Emission (kg/day)						
Haul Roads Emissions	40,436	14,557	1,456	16,174	5,823	582
Annual TSP Emission (kg/yr)						
Haul Roads Emissions	14,759,264	5,313,335	531,333	5,903,656	2,125,322	212,576

7.7.2 Scenario 2 – Year 2025

Exhibit 7.18 provides the inputs for estimation of emission rates from haul roads. and **Exhibit 7.19** provides the factors used for estimation of emission factor estimations. **Exhibit 7.20** provides the estimated emission rates from haul roads.

Exhibit 7.18: Inputs for Emissions Estimations from Haul Roads Scenario 2 – Year 2050

Description	Capacity	Unit	
Number of Haul Trucks	76		Average number of haul trucks over the LOM. Source: Fleet Position Summary
Number of Wheels on Trucks (w)	6	per truck	Haul Truck Specification Sheet
Type of Haul Truck	KOMATSU 980E-5		Fleet Position Summary
Haul Truck Load Capacity	363	tonnes	Haul Truck Specification Sheet
Haul Truck Weight (Full) (W)	628	tonnes	Haul Truck Specification Sheet
Haul Truck Weight (Empty) (W)	265	tonnes	Estimated
Average Haul Speed (S)	20	km/hr	Assumed
No. of operational days	365	days/year	ESIA Mine Plan Summary
Average Road Silt Content (s)	1%		Assumed
Total Material transferred to Waste Rock Dump by Haul Trucks	86,392,336	tonnes/year	ESIA Mine Plan Summary
Material handled by Haul Trucks	236,691	tonnes/day	Estimated
Number of Trips to Waste Rock Dump	652	trips/day	Estimated
Total Haul Distance	15,120	m	ESIA Mine Plan Summary
Days with Rainfall < 0.254 mm (p)	362.47	days/year	3-years met data from Lakes Environmental.
Method of Dust Supression	Graveling and sprinkling		Gravels of size 40 mm and thickness of 200 mm on top of haul roads.

Description	Capacity	Unit	
Calculations:			
Total vehicle-kilometers traveled	9,859	VKT/day	
Total vehicle-kilometers traveled	3,598,491	VKT/annum	

Exhibit 7.19: Estimation of Emission Factors in Scenario 2 – Year 2050

Description	Emission Factor	Unit	Source
k for TSP	4.9	lb/VMT	USEPA AP42 13.2.2-2
a for TSP	0.7		USEPA AP42 13.2.2-2
b for TSP	0.45		USEPA AP42 13.2.2-2
c for TSP	1		USEPA AP42 13.2.2-2
d for TSP	1		USEPA AP42 13.2.2-2
Emission Factor for Exhaust, Brake Wear and Tire Wear (C)	0.00047	lb/VMT	USEPA AP42 13.2.2-4
Surface Moisture Content (M)	0.06%	%	USEPA AP42 13.2.2-3
PM10 fraction	0.36		
PM2.5/PM10 ratio	0.1		
Control Efficiency	60%		
Emission Factor for TSP	3.10074542	kg/VKT	USEPA AP42 13.2.2

Exhibit 7.20: Estimated Emissions from Haul Roads in Scenario 2 – Year 2050

Source	Uncontrolled Emissions			Controlled Emissions		
	TSP	PM ₁₀	PM _{2.5}	TSP	PM ₁₀	PM _{2.5}
Daily TSP Emission (kg/day)						
Haul Roads Emissions	30,570	11,005	1,101	3,057	1,101	110
Annual TSP Emission (kg/yr)						
Haul Roads Emissions	11,158,004	4,016,881	401,688	1,115,800	401,688	40,169

7.8 Waste Rock Dumps

Exhibit 7.21 provides the inputs for estimation of emission rates from waste rock dumps and **Exhibit 7.22** provides the associated emission factors. **Exhibit 7.23** and **Exhibit 7.24** provide the estimated emission rates from waste rock dumps in Scenario 1 and 2.

Emissions from north and south waste rock dumps are expected to remain somewhat similar in both Scenario 1 and 2 due to limited variation in Project operations from 7th year of operations onwards except Tanjeel. Emissions from waste rock dumps of Tanjeel deposits are not applicable in Scenario 2 – Year 2050 as operations at Tanjeel deposits will conclude in year 2046.

Exhibit 7.21: Inputs for Emissions Estimations from Waste Rock Dumps

<i>Description</i>	<i>Capacity</i>	<i>Unit</i>	<i>Reference</i>
Number of Shifts	2	shift/day	Process Design Criteria by Lycopodium
Number of Dozers for Western Porphyries	3		Fleet Position Summary
Number of Dozers for Tanjeel	1		Assumed
Number of Dozer Operation Hours	12	hr./shift	Process Design Criteria by Lycopodium
Material Silt Content (s)	1%		Assumed
Material Moisture Content (M)	2%		Process Design Criteria by Lycopodium
Wind Speed (U)	6.25	m/s	Averaged over 3-years of met data
Number of operational days	365	days/year	Process Design Criteria by Lycopodium
Material Handled in Western Porphyries			
Total Material Transferred to Waste Rock Dumps	81,598,517.40	tonnes/year	ESIA Mine Plan Summary
Material handled by dozers	223,558	tonnes/day	
Material Handled in Tanjeel Open-Pit			
Total Material Transferred to Waste Rock Dumps	17,257,746.84	tonnes/year	ESIA Mine Plan Summary
Material handled by dozers	47,281	tonnes/day	

Exhibit 7.22: Emission Factors for Material Handling

<i>Description</i>	<i>Emission Factor</i>	<i>Units</i>	<i>Reference</i>
PM10 Fraction	35%		
PM10/PM2.5 Fraction	15%		
Loading TSP Emissions			
Default TSP Emission Rate	0.018	kg/tonnes	USEPA AP-42 S11-9-4
Formula 1	1.674	kg/hr.	USEPA AP-42 S11-9-2

Exhibit 7.23: Estimated Emissions from Waste Rock Dumps Scenario 1 – Ultimate Footprint

Source	TSP	PM ₁₀	PM _{2.5}
	Daily Emissions (kg/day)		
Western Porphyries			
Unloading from Haul Trucks	4,024.04	1,408.41	211.26

Source	TSP	PM ₁₀	PM _{2.5}
	Daily Emissions (kg/day)		
Bulldozing Emissions	120.49	42.17	6.33
Total	4,144.53	1,450.59	217.59
Tanjeel Open-Pit			
Unloading from Haul Trucks	851.07	297.87	44.68
Bulldozing Emissions	40.16	14.06	2.11
Total	891.23	311.93	46.79
	Annual Emissions (kg/yr)		
Western Porphyries			
Unloading from Haul Trucks	1,468,773.31	514,070.66	77,110.60
Bulldozing Emissions	43,980.45	15,393.16	2,308.97
Total	1,512,753.77	529,463.82	79,419.57
Tanjeel Open-Pit			
Unloading from Haul Trucks	310,639.44	108,723.81	16,308.57
Bulldozing Emissions	14,660.15	5,131.05	769.66
Total	325,299.59	113,854.86	17,078.23

Exhibit 7.24: Estimated Emissions from Waste Rock Dumps Scenario 2 – Year 2050

Source	TSP	PM ₁₀	PM _{2.5}
	Daily Emissions (kg/day)		
Western Porphyries			
Unloading from Haul Trucks	4,024.04	1,408.41	211.26
Bulldozing Emissions	120.49	42.17	6.33
Total	4,144.53	1,450.59	217.59
Tanjeel Open-Pit			
Unloading from Haul Trucks	-	-	-
Bulldozing Emissions	-	-	-
Total	-	-	-
	Annual Emissions (kg/yr)		
Western Porphyries			
Unloading from Haul Trucks	1,468,773.31	514,070.66	77,110.60
Bulldozing Emissions	43,980.45	15,393.16	2,308.97
Total	1,512,753.77	529,463.82	79,419.57
Tanjeel Open-Pit			

Source	TSP	PM ₁₀	PM _{2.5}
	Daily Emissions (kg/day)		
Unloading from Haul Trucks	-	-	-
Bulldozing Emissions	-	-	-
Total	-	-	-

7.9 Wind Erosion

7.9.1 Scenario 1 – Ultimate Footprint

Exhibit 7.25 provides the inputs for estimation of emission rates due to wind erosion and **Exhibit 7.26** provides the factors used for estimation of emission factor estimations. **Exhibit 7.27** provides the estimated emission rates from wind erosion at TSF, waste rock dumps and stockpiles.

Exhibit 7.25: Input Parameters for Wind Erosion

Parameter	Quantity	Units
Northern Waste Rock Dump Area	9,900,000	m ²
Southern Waste Rock Dump Area	3,590,000	m ²
Tanjeel Waste Rock Dump Area	1,110,000	m ²
Rougher Tailings Facility (RTF1 + RTF2) Area	54,240,000	m ²
Cleaner Tailings Facility (CTF1 + CTF2 + CF3)	10,410,000	m ²
Total TSF Area	64,650,000	m ²
Low Grade Stockpile	2,230,000	m ²
Waste Rock Dump Silt Content (s)	1%	%
Low Grade Stockpile Silt Content (s)	1%	%
Frequency of High Wind Speed Events	75%	%
Number of days with Rainfall > 0.254 mm (p)	1	days
Average Wind Speed	6.25	m/s

Exhibit 7.26: Emission Factors for Wind Erosion

Parameter	Description	Rationale
Emission Factors:	AP42 S13.2.5	TSF
	AP42 S11.2.3	WRD
Wind erosion TSP emission factor for dumps	11.25	kg/hectare x day
Threshold friction velocity	0.55	m/s
PM ₁₀ fraction	0.36	%
PM _{2.5} /PM ₁₀ ratio	0.15	%

<i>Parameter</i>	<i>Description</i>	<i>Rationale</i>
Roughers Tailings Facility Dust Control Efficiency	25.0%	Based on water retained in the tailings (see water balance)
Cleaners Tailings Facility Dust Control Efficiency	60.0%	Based on water retained in the tailings (see water balance)

Exhibit 7.27: Estimated Emissions from Wind Erosion

<i>Source</i>	<i>Uncontrolled Emissions</i>			<i>Controlled Emissions</i>		
	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Daily Emissions (kg/day)						
Northern Waste Rock Dumps	11,138	4,010	601	11,138	4,010	601
Southern Waste Rock Dumps	4,039	1,454	218	4,039	1,454	218
Tanjeel Waste Rock Dumps	1,249	450	67	1,249	450	67
Tailing Storage Facility	715,555	150,024	43,843	496,340	102,033	28,043
Low Grade Stockpile	2,509	903	135	2,509	903	135
Total	734,489	156,840	44,866	515,273	108,849	29,066
Annual Emissions (kg/annum)						
Northern Waste Rock Dumps	4,065,188	1,463,468	219,520	4,065,188	1,463,468	219,520
Southern Waste Rock Dumps	1,474,144	530,692	79,604	1,474,144	530,692	79,604
Tanjeel Waste Rock Dumps	455,794	164,086	24,613	455,794	164,086	24,613
Tailing Storage Facility	261,177,637	54,758,831	16,002,736	181,163,959	37,242,113	10,235,739
Low Grade Stockpile	915,694	329,650	49,447	915,694	329,650	49,447
Total	268,088,456	57,246,725	16,375,920	188,074,778	39,730,008	10,608,924

7.9.2 Scenario 2 – Year 2050

Exhibit 7.28 provides the inputs for estimation of emission rates due to wind erosion and **Exhibit 7.29** provides the factors used for estimation of emission factor estimations. **Exhibit 7.30** provides the estimated emission rates from wind erosion at TSF, waste rock dumps and stockpiles.

Exhibit 7.28: Input Parameters for Wind Erosion

<i>Parameter</i>	<i>Quantity</i>	<i>Units</i>
Northern Waste Rock Dump Area	9,145,058	m ²
Southern Waste Rock Dump Area	3,590,000	m ²
Tanjeel Waste Rock Dump Area	1,022,711	m ²
Rougher Tailings Facility (RTF1 + RTF2) Area	37,277,600	m ²

<i>Parameter</i>	<i>Quantity</i>	<i>Units</i>
Cleaner Tailings Facility (CTF1 + CTF2 + CF3)	3,879,830	m ²
Total TSF Area	41,157,430	m ²
Low Grade Stockpile	2,230,000	m ²
Waste Rock Dump Silt Content (s)	1%	%
Low Grade Stockpile Silt Content (s)	1%	%
Frequency of High Wind Speed Events	75%	%
Number of days with Rainfall > 0.254 mm (p)	1	days
Average Wind Speed	6.25	m/s

Exhibit 7.29: Emission Factors for Wind Erosion

<i>Parameter</i>	<i>Description</i>	<i>Rationale</i>
Emission Factors:	AP42 S13.2.5	TSF
	AP42 S11.2.3	WRD
Wind erosion TSP emission factor for dumps	11.25	kg/hectare x day
Threshold friction velocity	0.55	m/s
PM ₁₀ fraction	0.36	%
PM _{2.5} /PM ₁₀ ratio	0.15	%
Roughers Tailings Facility Dust Control Efficiency	25.0%	Based on water retained in the tailings (see water balance)
Cleaners Tailings Facility Dust Control Efficiency	60.0%	Based on water retained in the tailings (see water balance)

Exhibit 7.30: Estimated Emissions from Wind Erosion

<i>Source</i>	<i>Uncontrolled Emissions</i>			<i>Controlled Emissions</i>		
	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>	<i>TSP</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Daily Emissions (kg/day)						
Northern Waste Rock Dumps	10,288	3,704	556	10,288	3,704	556
Southern Waste Rock Dumps	4,039	1,454	218	4,039	1,454	218
Tanjeel Waste Rock Dumps	1,151	414	62	1,151	414	62
Tailing Storage Facility	455,536	93,684	25,783	326,622	66,355	17,534
Low Grade Stockpile	2,509	903	135	2,509	903	135
Total	473,522	100,159	26,754	344,608	72,830	18,505

Source	Uncontrolled Emissions			Controlled Emissions		
	TSP	PM ₁₀	PM _{2.5}	TSP	PM ₁₀	PM _{2.5}
Annual Emissions (kg/annum)						
Northern Waste Rock Dumps	3,755,189	1,351,868	202,780	3,755,189	1,351,868	202,780
Southern Waste Rock Dumps	1,474,144	530,692	79,604	1,474,144	530,692	79,604
Tanjeel Waste Rock Dumps	419,951	151,182	22,677	419,951	151,182	22,677
Tailing Storage Facility	166,270,695	34,194,580	9,410,716	119,217,117	24,219,600	6,399,728
Low Grade Stockpile	915,694	329,650	49,447	915,694	329,650	49,447
Total	172,835,673	36,557,972	9,765,224	125,782,094	26,582,992	6,754,237

7.10 Explosives Detonation

Exhibit 7.31 provides the inputs for estimation of emission rates from explosives detonation during open-pit mining. **Exhibit 7.32** provides the estimated emission rates from explosives detonation.

Exhibit 7.31: Inputs for Explosives Detonation

Description	Capacity	Unit
Working Days	365	days/year
Total Material Blasted	125,300,000	ESIA Mine Plan Summary
Material Blasted	343,288	tonne/day
Amount of ANFO	7,000	tonnes for 3 months
Daily used ANFO	77.78	tonnes/day
Amount of ANFO	0.23	kg/tonne
Percentage of use:	40%	%
Explosive usage:	77,778	kg/day
Emission Factors:	(AP42 S13.3)	
NO _x emission	8	kg/tonnes
SO ₂ emission	1	kg/tonnes

Exhibit 7.32: Estimated Emissions from Explosives Detonation

Uncontrolled Emission Rates	Daily (kg/day)	Annual (kg/yr.)
NO _x emission	622.22	90,844.44
SO ₂ emission	77.78	11,355.56

7.11 HFO Power Plant

Exhibit 7.33 provides the stack characteristics of HFO power plant and **Exhibit 7.34** provides the emission rates from HFO power plant.

Exhibit 7.33: Stack Characteristics of HFO Power Plant

<i>Item Description</i>	<i>Units</i>	<i>Cluster 1</i>	<i>Cluster 2</i>
Cluster type		1	2
Engine load	%	100	100
Number of clusters of each cluster type		1	1
Total number of stacks in cluster		5	4
Number of stacks per cluster without heat recovery		3	2
Number of stacks per cluster with heat recovery		2	2
Stack height above ground level	m	30	30
Equivalent stack diameter for cluster	m	3.58	3.2
Average exhaust gas temperature at cluster outlet	°C	301	297
Exhaust gas pressure at stack outlet	kPa	90.7	90.7
Exhaust gas volume flow per cluster (wet, at above temp. and pressure)	m ³ /s	309	245
Average exhaust gas velocity	m/s	30.7	30.5
Exhaust gas volume flow per cluster (dry, at 0 C and 101,325 kPa)	m ³ /s	121	97
Typical flue gas oxygen (O ₂) content, wet	% vol	11.2	11.2
Typical flue gas oxygen (O ₂) content, dry	% vol	12.1	12.1
Typical flue gas water (H ₂ O) content	% vol	7.55	7.55

Exhibit 7.34: Emission Rates from HFO Power Plant

<i>Source</i>	<i>Units</i>	<i>Uncontrolled Emissions</i>		<i>Controlled Emissions</i>	
		<i>Cluster 1</i>	<i>Cluster 2</i>	<i>Cluster 1</i>	<i>Cluster 2</i>
Daily Emissions (kg/day)					
Nitrogen oxides (NO _x)	g/s	362	290	242	194
Sulphur dioxide (SO ₂)	g/s	380	304	254.1	203.7
Particulate matter (TSP)	g/s	18.1	14.5	12.1	9.7
PM ₁₀	g/s	6.34	5.08	4.24	3.40
PM _{2.5}	g/s	0.95	0.76	0.64	0.51

7.12 Incinerator

Exhibit 7.35 provides the stack characteristics of incinerator and **Exhibit 7.36** provides the inputs for emission rates estimations. **Exhibit 7.37** provides the estimated emission rates from incinerator.

Exhibit 7.35: Stack Characteristics of Incinerator

<i>Stack and Flue Gas Details</i>	<i>Units</i>	<i>Stack 1</i>
Number of stacks		1 pc
Height of stack	m	15 m over ground level
Inside diameter of stack	m	0.635 m (635mm)
Flow rate of flue gas	m ³ /s or Nm ³ /s	Flue gas volume at 350 °C: 47,867 m ³ /h or 13.3 m ³ /s
Exit temperature of flue gas	°C or Kelvin	Max. 350 °C.
NO _x emissions	ppm	100
NO _x emissions	mg/m ³	188.181
Exit velocity of flue gas	m/s	42

Exhibit 7.36: Inputs for Emission Rates Estimates

<i>Parameter</i>	<i>Quantity</i>	<i>Units</i>	<i>Reference</i>
HFO Sludge incinerated	15,000	kg/day	
Combustion heat of HFO Sludge	20	MJ/kg	Chen, X., Zhang, Y., Xu, B., & Li, Y. (2022). A simple model for estimation of higher heating value of oily sludge. Energy, 239, 121921.
Total combustion heat required	300,000	MJ/day	
Uncontrolled NO _x emission Rate	257	mg/MJ @ 14% water content	NO _x measurement curve
Controlled NO _x emissions Rates	189	mg/MJ @ 60% water content	NO _x measurement curve
Annual Operational Days	365	days/year	Process Design Criteria by Lycopodium

Exhibit 7.37: Estimated Emissions from Incinerator

		<i>Uncontrolled Emissions</i>	<i>Controlled Emissions</i>
Daily Emissions			
NO _x	kg/day	77.1	56.7
Annual Emissions			
NO _x	kg/year	28,141.50	20,695.50
Emission Rates			
NO _x	g/s	0.89	0.66

Appendix B: PM₁₀ and PM_{2.5} Concentrations from Onsite Monitoring Station

See the following pages.

B.1 15 Minutes Data

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
Start Time	10/1/2023 5:30	
End Time	4/15/2024 15:00	
10/1/2023 5:30	14.2	3.1
10/1/2023 5:45	15.9	3.4
10/1/2023 6:00	16.1	3.3
10/1/2023 6:15	15	3.3
10/1/2023 6:30	17.2	3.5
10/1/2023 6:45	14.3	3.2
10/1/2023 7:00	14.8	3.3
10/1/2023 7:15	13.5	3.2
10/1/2023 7:30	12.1	3
10/1/2023 7:45	13.9	3.5
10/1/2023 8:00	23.3	4.8
10/1/2023 8:15	15.1	3.6
10/1/2023 8:30	12.9	3.3
10/1/2023 8:45	15.4	3.7
10/1/2023 9:00	27.6	5.8
10/1/2023 9:15	26.1	6.2
10/1/2023 9:30	85.3	14.1
10/1/2023 9:45	71	13.3
10/1/2023 10:00	86.6	15.4
10/1/2023 10:15	41.1	7.5
10/1/2023 10:30	26.8	5.4
10/1/2023 10:45	36.5	6.7
10/1/2023 11:00	47.1	8.4
10/1/2023 11:15	39.4	7.7
10/1/2023 11:30	47.7	9.2
10/1/2023 11:45	25.7	5.6
10/1/2023 12:00	29.5	6.1
10/1/2023 12:15	25.7	6
10/1/2023 12:30	24.5	5.3
10/1/2023 12:45	25.2	5.9
10/1/2023 13:00	23.2	5.3
10/1/2023 13:15	29	6.5
10/1/2023 13:30	25.4	5.5
10/1/2023 13:45	23.1	5.5
10/1/2023 14:00	18.5	4.5
10/1/2023 14:15	22.8	5.8
10/1/2023 14:30	23.7	6.1
10/1/2023 14:45	21.5	5.2
10/1/2023 15:00	31.4	8.3
10/1/2023 15:15	30.1	7.4
10/1/2023 15:30	28.7	6.4
10/1/2023 15:45	29.2	7
10/1/2023 16:00	35.9	8.2
10/1/2023 16:15	36	8.8
10/1/2023 16:30	36.9	9.5
10/1/2023 16:45	31.7	6.8
10/1/2023 17:00	34.9	8.4
10/1/2023 17:15	32.9	8.1
10/1/2023 17:30	26.4	6.2
10/1/2023 17:45	23.7	5.6
10/1/2023 18:00	23.7	5.5
10/1/2023 18:15	23.2	5.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/1/2023 18:30	31.4	7.6
10/1/2023 18:45	27	6
10/1/2023 19:00	23.2	5.4
10/1/2023 19:15	24.3	5.7
10/1/2023 19:30	23.6	5.5
10/1/2023 19:45	25.8	5.9
10/1/2023 20:00	34.8	7.9
10/1/2023 20:15	37.3	9.1
10/1/2023 20:30	25.5	5.5
10/1/2023 20:45	26.4	5.4
10/1/2023 21:00	26.7	5.7
10/1/2023 21:15	23.9	5.2
10/1/2023 21:30	25.8	5.5
10/1/2023 21:45	26.2	5.5
10/1/2023 22:00	26.1	5.4
10/1/2023 22:15	32.2	6.8
10/1/2023 22:30	27	5.7
10/1/2023 22:45	28.4	5.6
10/1/2023 23:00	22.1	4.7
10/1/2023 23:15	22.1	4.6
10/1/2023 23:30	20.1	4.6
10/1/2023 23:45	27.6	6.1
10/2/2023 0:00	20.4	4.8
10/2/2023 0:15	21.5	5
10/2/2023 0:30	25.1	5.3
10/2/2023 0:45	24.9	5.3
10/2/2023 1:00	26.5	5.8
10/2/2023 1:15	26.8	5.7
10/2/2023 1:30	26.5	5.7
10/2/2023 1:45	27.4	6
10/2/2023 2:00	23.1	5.3
10/2/2023 2:15	25.4	5.6
10/2/2023 2:30	21.2	5.1
10/2/2023 2:45	23	5.5
10/2/2023 3:00	23.5	5.4
10/2/2023 3:15	24.4	5.7
10/2/2023 3:30	23.3	5.4
10/2/2023 3:45	22.8	5.4
10/2/2023 4:00	22.8	5.3
10/2/2023 4:15	24	5.3
10/2/2023 4:30	27	6
10/2/2023 4:45	25.7	5.9
10/2/2023 5:00	32.3	6.5
10/2/2023 5:15	24.5	5.3
10/2/2023 5:30	21.7	5
10/2/2023 5:45	22.8	5.1
10/2/2023 6:00	18.5	4.6
10/2/2023 6:15	18.2	4.6
10/2/2023 6:30	16.3	4.1
10/2/2023 6:45	15.6	4.2
10/2/2023 7:00	17.6	4.4
10/2/2023 7:15	20.8	5.2
10/2/2023 7:30	22.3	5.2
10/2/2023 7:45	19.6	4.5
10/2/2023 8:00	36	8
10/2/2023 8:15	34.2	5.7
10/2/2023 8:30	83.8	16.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/2/2023 8:45	67.8	14.3
10/2/2023 9:00	40.1	8.9
10/2/2023 9:15	57.9	11.7
10/2/2023 9:30	25.2	5.1
10/2/2023 9:45	22.4	4.8
10/2/2023 10:00	35.8	6.2
10/2/2023 10:15	21.9	4.9
10/2/2023 10:30	18.7	4
10/2/2023 10:45	19.4	4.3
10/2/2023 11:00	30.5	6.2
10/2/2023 11:15	31.9	5.8
10/2/2023 11:30	26.3	5.9
10/2/2023 11:45	16.9	4
10/2/2023 12:00	16.6	4
10/2/2023 12:15	17.5	4.2
10/2/2023 12:30	21.2	4.8
10/2/2023 12:45	17.7	4.6
10/2/2023 13:00	18.6	4.8
10/2/2023 13:15	18.5	4.9
10/2/2023 13:30	17.6	4.8
10/2/2023 13:45	17.3	5
10/2/2023 14:00	18.2	5.2
10/2/2023 14:15	20.8	5.9
10/2/2023 14:30	18.7	5.7
10/2/2023 14:45	21.3	6.1
10/2/2023 15:00	29.5	6.9
10/2/2023 15:15	20.8	6.2
10/2/2023 15:30	22.6	6.7
10/2/2023 15:45	21.2	6.3
10/2/2023 16:00	22.1	6.5
10/2/2023 16:15	24	6.9
10/2/2023 16:30	20.1	6.2
10/2/2023 16:45	20.5	6.5
10/2/2023 17:00	23.5	6.9
10/2/2023 17:15	23.1	6.5
10/2/2023 17:30	22.5	7.2
10/2/2023 17:45	27.1	7.3
10/2/2023 18:00	25.7	7.1
10/2/2023 18:15	23.8	6.3
10/2/2023 18:30	31.8	7.9
10/2/2023 18:45	26.4	6.7
10/2/2023 19:00	30	7.7
10/2/2023 19:15	42.2	10.1
10/2/2023 19:30	69.1	15.4
10/2/2023 19:45	28.3	7.5
10/2/2023 20:00	40.8	10.6
10/2/2023 20:15	19.5	5.4
10/2/2023 20:30	18.5	5.3
10/2/2023 20:45	31.6	7.9
10/2/2023 21:00	21.7	5.5
10/2/2023 21:15	18.6	5.1
10/2/2023 21:30	22.1	5.4
10/2/2023 21:45	19.7	5.5
10/2/2023 22:00	20.8	5.2
10/2/2023 22:15	17.9	5.1
10/2/2023 22:30	20.8	5.5
10/2/2023 22:45	27.5	6.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/2/2023 23:00	hv28.4	6.4
10/2/2023 23:15	30	6.4
10/2/2023 23:30	27.1	6.1
10/2/2023 23:45	27.1	6.1
10/3/2023 0:00	26.3	6.1
10/3/2023 0:15	23.2	6
10/3/2023 0:30	26.3	6.3
10/3/2023 0:45	24.1	6.3
10/3/2023 1:00	26.4	6.3
10/3/2023 1:15	29.6	6.7
10/3/2023 1:30	28.5	6.8
10/3/2023 1:45	27.3	6.6
10/3/2023 2:00	31.3	6.7
10/3/2023 2:15	27.3	6.9
10/3/2023 2:30	31.7	7.4
10/3/2023 2:45	26.7	7.3
10/3/2023 3:00	30.1	7.4
10/3/2023 3:15	30	7.3
10/3/2023 3:30	28.1	7.3
10/3/2023 3:45	35.4	7.6
10/3/2023 4:00	35.9	8
10/3/2023 4:15	36	7.8
10/3/2023 4:30	40	8.3
10/3/2023 4:45	35.3	7.9
10/3/2023 5:00	32.5	7.4
10/3/2023 5:15	32.3	7.9
10/3/2023 5:30	33.4	7.7
10/3/2023 5:45	36.6	7.8
10/3/2023 6:00	36.7	8.4
10/3/2023 6:15	36.4	8
10/3/2023 6:30	39.5	8.2
10/3/2023 6:45	37.5	8
10/3/2023 7:00	35.9	8
10/3/2023 7:15	33.6	7.5
10/3/2023 7:30	31.5	7.5
10/3/2023 7:45	29.3	7.3
10/3/2023 8:00	25.6	6.9
10/3/2023 8:15	27.2	6.8
10/3/2023 8:30	26	6.7
10/3/2023 8:45	24.9	6.8
10/3/2023 9:00	26.6	7.1
10/3/2023 9:15	26.6	7
10/3/2023 9:30	24.8	7.2
10/3/2023 9:45	24.6	7.2
10/3/2023 10:00	25.1	7.5
10/3/2023 10:15	25.6	7.7
10/3/2023 10:30	26.1	8
10/3/2023 10:45	23.1	7.7
10/3/2023 11:00	24.8	7.9
10/3/2023 11:15	26.4	8.2
10/3/2023 11:30	26.1	8.2
10/3/2023 11:45	22.7	7.7
10/3/2023 12:00	26.1	8.3
10/3/2023 12:15	24.9	8.8
10/3/2023 12:30	23.1	8.9
10/3/2023 12:45	28.3	9.9
10/3/2023 13:00	24.5	9.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/3/2023 13:15	25.7	10.5
10/3/2023 13:30	27.9	10.9
10/3/2023 13:45	25.9	10.9
10/3/2023 14:00	24.4	10.9
10/3/2023 14:15	24.9	10.8
10/3/2023 14:30	26.3	11.3
10/3/2023 14:45	24.4	11
10/3/2023 15:00	29.7	11.6
10/3/2023 15:15	22.5	10.9
10/3/2023 15:30	24.8	10.9
10/3/2023 15:45	23.7	10.8
10/3/2023 16:00	22.5	10.8
10/3/2023 16:15	23	10.8
10/3/2023 16:30	26.4	11.2
10/3/2023 16:45	28.6	11.6
10/3/2023 17:00	24.5	11
10/3/2023 17:15	26.8	11.3
10/3/2023 17:30	23.5	11.1
10/3/2023 17:45	25	11.2
10/3/2023 18:00	26.2	11.4
10/3/2023 18:15	25.2	11.3
10/3/2023 18:30	24	11.3
10/3/2023 18:45	27	11.6
10/3/2023 19:00	26.3	11.5
10/3/2023 19:15	29	12.4
10/3/2023 19:30	34.2	13.8
10/3/2023 19:45	25.9	12.5
10/3/2023 20:00	24.7	12.6
10/3/2023 20:15	23.2	12.7
10/3/2023 20:30	24.1	13
10/3/2023 20:45	25.1	13.6
10/3/2023 21:00	29.7	14.4
10/3/2023 21:15	27.4	13.4
10/3/2023 21:30	23.2	12.8
10/3/2023 21:45	23.9	12.6
10/3/2023 22:00	24.4	12.5
10/3/2023 22:15	30.5	14.8
10/3/2023 22:30	34.3	14.9
10/3/2023 22:45	28.9	13.8
10/3/2023 23:00	35.5	14.6
10/3/2023 23:15	38.2	15
10/3/2023 23:30	40	14.6
10/3/2023 23:45	34.3	13.9
10/4/2023 0:00	30.2	13.3
10/4/2023 0:15	34.8	14
10/4/2023 0:30	41.9	13.1
10/4/2023 0:45	37.1	12.4
10/4/2023 1:00	36.4	12
10/4/2023 1:15	35.8	11.5
10/4/2023 1:30	32.4	11.5
10/4/2023 1:45	34.5	11.9
10/4/2023 2:00	29.7	11.7
10/4/2023 2:15	30	11.6
10/4/2023 2:30	27.5	11.8
10/4/2023 2:45	26.4	12.3
10/4/2023 3:00	26.1	12.1
10/4/2023 3:15	23.4	12.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/4/2023 3:30	22.7	12
10/4/2023 3:45	21.6	10.9
10/4/2023 4:00	20.9	10.3
10/4/2023 4:15	21.4	10
10/4/2023 4:30	25.1	11.5
10/4/2023 4:45	25.7	12.7
10/4/2023 5:00	22.4	12.6
10/4/2023 5:15	20.8	11.5
10/4/2023 5:30	23.4	10.9
10/4/2023 5:45	21.7	10.9
10/4/2023 6:00	21.6	10.8
10/4/2023 6:15	24.3	10.2
10/4/2023 6:30	24	10.5
10/4/2023 6:45	25.8	9.4
10/4/2023 7:00	24.6	9.4
10/4/2023 7:15	30.6	10.2
10/4/2023 7:30	34.5	10.8
10/4/2023 7:45	40.1	11.9
10/4/2023 8:00	64.9	17.7
10/4/2023 8:15	45.5	12.1
10/4/2023 8:30	66.6	16.7
10/4/2023 8:45	70.7	17
10/4/2023 9:00	54.3	15.2
10/4/2023 9:15	61	11
10/4/2023 9:30	80.6	15.2
10/4/2023 9:45	74.1	18.4
10/4/2023 10:00	63.1	17.4
10/4/2023 10:15	45.8	14.8
10/4/2023 10:30	38.7	13.7
10/4/2023 10:45	57.1	17.3
10/4/2023 11:00	48.6	15.6
10/4/2023 11:15	46.3	16.1
10/4/2023 11:30	43.3	15.7
10/4/2023 11:45	39.3	13.2
10/4/2023 12:00	41.8	14.7
10/4/2023 12:15	39.1	14
10/4/2023 12:30	42.1	14
10/4/2023 12:45	34.2	12.5
10/4/2023 13:00	39.9	14
10/4/2023 13:15	31.4	12.1
10/4/2023 13:30	28.3	11.3
10/4/2023 13:45	24.8	10.1
10/4/2023 14:00	25.4	10.4
10/4/2023 14:15	23.8	10.1
10/4/2023 14:30	26.3	9.6
10/4/2023 14:45	28.6	10.7
10/4/2023 15:00	25.7	9.9
10/4/2023 15:15	31.7	11.1
10/4/2023 15:30	25.9	9.8
10/4/2023 15:45	27	10.2
10/4/2023 16:00	27.5	10.2
10/4/2023 16:15	23.9	9.3
10/4/2023 16:30	24.9	9.9
10/4/2023 16:45	24.6	9.6
10/4/2023 17:00	24.5	9.4
10/4/2023 17:15	25.3	9.9
10/4/2023 17:30	24.8	9.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/4/2023 17:45	26.2	9.8
10/4/2023 18:00	24.8	9.6
10/4/2023 18:15	25.2	9.9
10/4/2023 18:30	24.6	9.6
10/4/2023 18:45	25.3	9.8
10/4/2023 19:00	30.4	10.5
10/4/2023 19:15	24.7	9.7
10/4/2023 19:30	26.9	10
10/4/2023 19:45	29.4	10.9
10/4/2023 20:00	30.4	11.1
10/4/2023 20:15	33.3	11.2
10/4/2023 20:30	28.6	10.3
10/4/2023 20:45	26.4	9.7
10/4/2023 21:00	26.8	10.2
10/4/2023 21:15	29.8	10.3
10/4/2023 21:30	29.7	10.7
10/4/2023 21:45	27.6	10.4
10/4/2023 22:00	25.6	10.2
10/4/2023 22:15	26.2	10.2
10/4/2023 22:30	27.4	10.3
10/4/2023 22:45	26.8	10.1
10/4/2023 23:00	26.3	10.1
10/4/2023 23:15	30.3	10.8
10/4/2023 23:30	28.2	10.3
10/4/2023 23:45	27.2	10.2
10/5/2023 0:00	28.5	10.2
10/5/2023 0:15	29.1	10.6
10/5/2023 0:30	26.5	10.1
10/5/2023 0:45	26	10.2
10/5/2023 1:00	24.6	9.6
10/5/2023 1:15	26.4	10
10/5/2023 1:30	27	10.2
10/5/2023 1:45	27.6	10
10/5/2023 2:00	27.8	10.4
10/5/2023 2:15	27.2	10.3
10/5/2023 2:30	28.2	10.3
10/5/2023 2:45	25.2	9.4
10/5/2023 3:00	23.1	9.3
10/5/2023 3:15	23.3	8.9
10/5/2023 3:30	21.8	8.6
10/5/2023 3:45	23.8	8.9
10/5/2023 4:00	23.8	9
10/5/2023 4:15	22.6	9
10/5/2023 4:30	26	8.9
10/5/2023 4:45	22.1	8.8
10/5/2023 5:00	23.1	9
10/5/2023 5:15	22.4	9.1
10/5/2023 5:30	24.5	9.1
10/5/2023 5:45	23.4	8.9
10/5/2023 6:00	21.3	8.9
10/5/2023 6:15	25.1	9.1
10/5/2023 6:30	22.8	9.1
10/5/2023 6:45	22.1	9.1
10/5/2023 7:00	24.4	9.4
10/5/2023 7:15	22.5	9.4
10/5/2023 7:30	43.2	12.9
10/5/2023 7:45	28.7	9.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/5/2023 8:00	31.7	10.1
10/5/2023 8:15	28.3	9.8
10/5/2023 8:30	25.1	9.1
10/5/2023 8:45	26.6	9.4
10/5/2023 9:00	25.9	9.7
10/5/2023 9:15	29.7	10.7
10/5/2023 9:30	27.4	10.3
10/5/2023 9:45	29.8	11.1
10/5/2023 10:00	34.9	12.1
10/5/2023 10:15	27.4	11.4
10/5/2023 10:30	29.8	11.4
10/5/2023 10:45	26.7	10.9
10/5/2023 11:00	26.7	10.5
10/5/2023 11:15	28.2	10.5
10/5/2023 11:30	26.3	10.1
10/5/2023 11:45	26.8	10
10/5/2023 12:00	30.5	10.5
10/5/2023 12:15	26.7	10.2
10/5/2023 12:30	25.7	9.8
10/5/2023 12:45	27.4	10.2
10/5/2023 13:00	30	10.7
10/5/2023 13:15	25.6	10.2
10/5/2023 13:30	25.5	10
10/5/2023 13:45	24.1	10.4
10/5/2023 14:00	22.2	9.4
10/5/2023 14:15	19.9	8.9
10/5/2023 14:30	22.5	9.3
10/5/2023 14:45	19.8	8.3
10/5/2023 15:00	24.1	9.3
10/5/2023 15:15	22.6	9.1
10/5/2023 15:30	21.5	9.1
10/5/2023 15:45	21	8.6
10/5/2023 16:00	20.3	8.5
10/5/2023 16:15	19.8	8.4
10/5/2023 16:30	22.6	8.9
10/5/2023 16:45	19.8	8.6
10/5/2023 17:00	23.5	9
10/5/2023 17:15	23.1	8.8
10/5/2023 17:30	25	9.3
10/5/2023 17:45	22.5	8.7
10/5/2023 18:00	27.3	9.9
10/5/2023 18:15	21.6	8.7
10/5/2023 18:30	23.3	9.2
10/5/2023 18:45	26.2	9.9
10/5/2023 19:00	31.3	11.2
10/5/2023 19:15	31.6	11
10/5/2023 19:30	29.7	11.3
10/5/2023 19:45	36.3	12.7
10/5/2023 20:00	34.2	12.5
10/5/2023 20:15	30.4	11.5
10/5/2023 20:30	31.1	12
10/5/2023 20:45	33.8	12.1
10/5/2023 21:00	30.3	11.7
10/5/2023 21:15	30.4	11.5
10/5/2023 21:30	31.3	11.2
10/5/2023 21:45	26.8	10.7
10/5/2023 22:00	26.4	10.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/5/2023 22:15	26.5	10.8
10/5/2023 22:30	26.4	10.7
10/5/2023 22:45	23.4	10
10/5/2023 23:00	27.9	10.8
10/5/2023 23:15	24.6	10.5
10/5/2023 23:30	23.4	10.3
10/5/2023 23:45	23.3	10.3
10/6/2023 0:00	24.5	10
10/6/2023 0:15	24.8	10.4
10/6/2023 0:30	23.4	10.1
10/6/2023 0:45	22.1	9.6
10/6/2023 1:00	23.1	9.4
10/6/2023 1:15	24.1	9.9
10/6/2023 1:30	24.9	10
10/6/2023 1:45	23.5	9.9
10/6/2023 2:00	24.9	10.4
10/6/2023 2:15	22.8	10.3
10/6/2023 2:30	23.3	10.5
10/6/2023 2:45	26	10.9
10/6/2023 3:00	26.1	11.1
10/6/2023 3:15	26.7	10.7
10/6/2023 3:30	26.9	10.8
10/6/2023 3:45	26.5	10.6
10/6/2023 4:00	25	10.4
10/6/2023 4:15	24.2	10.3
10/6/2023 4:30	28.5	10.4
10/6/2023 4:45	28.6	10.6
10/6/2023 5:00	26.7	10.6
10/6/2023 5:15	27.7	10.8
10/6/2023 5:30	25.3	10.5
10/6/2023 5:45	27.8	10.6
10/6/2023 6:00	24.1	10.1
10/6/2023 6:15	22.3	9.6
10/6/2023 6:30	71.3	18.3
10/6/2023 6:45	48.4	17
10/6/2023 7:00	93	23.1
10/6/2023 7:15	98.4	26.1
10/6/2023 7:30	83.4	24.5
10/6/2023 7:45	78.8	22.8
10/6/2023 8:00	86.7	23.8
10/6/2023 8:15	106.7	36.3
10/6/2023 8:30	115	47
10/6/2023 8:45	110.5	39.3
10/6/2023 9:00	113.5	52.6
10/6/2023 9:15	93.6	35.9
10/6/2023 9:30	95.2	32.2
10/6/2023 9:45	92.4	38.7
10/6/2023 10:00	93.3	41.2
10/6/2023 10:15	99.6	40.6
10/6/2023 10:30	98.1	40.1
10/6/2023 10:45	93.3	36.1
10/6/2023 11:00	94.1	36.7
10/6/2023 11:15	92.6	33.4
10/6/2023 11:30	93.7	33
10/6/2023 11:45	89.5	28.3
10/6/2023 12:00	85.7	28.3
10/6/2023 12:15	89.2	29.9

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/6/2023 12:30	91.4	30.2	10/7/2023 2:45	58.4	20.5	10/7/2023 17:00	37.7	12.3
10/6/2023 12:45	90.7	31.5	10/7/2023 3:00	54.4	20	10/7/2023 17:15	32	11.7
10/6/2023 13:00	93.8	33.3	10/7/2023 3:15	55.2	19.8	10/7/2023 17:30	31.4	11.7
10/6/2023 13:15	88.6	29.1	10/7/2023 3:30	59.6	20	10/7/2023 17:45	31.5	11.6
10/6/2023 13:30	88.7	28.2	10/7/2023 3:45	58.1	19.6	10/7/2023 18:00	31	11.4
10/6/2023 13:45	87.5	25.3	10/7/2023 4:00	61	19.5	10/7/2023 18:15	32.5	12.2
10/6/2023 14:00	99.3	32.2	10/7/2023 4:15	62.6	19.6	10/7/2023 18:30	33.4	12.2
10/6/2023 14:15	94.9	27.1	10/7/2023 4:30	63	19.4	10/7/2023 18:45	35	12.6
10/6/2023 14:30	99.6	30.4	10/7/2023 4:45	58.6	18.7	10/7/2023 19:00	37.8	14
10/6/2023 14:45	98.9	27.7	10/7/2023 5:00	58.3	18.7	10/7/2023 19:15	40.6	14.6
10/6/2023 15:00	100	29.2	10/7/2023 5:15	50.7	17.9	10/7/2023 19:30	44	16.3
10/6/2023 15:15	99.1	26	10/7/2023 5:30	58.7	18.3	10/7/2023 19:45	42.7	16.4
10/6/2023 15:30	94.5	28.8	10/7/2023 5:45	53	17.8	10/7/2023 20:00	41.4	16.8
10/6/2023 15:45	91.1	24.4	10/7/2023 6:00	52.8	17.8	10/7/2023 20:15	43.3	16.9
10/6/2023 16:00	87.3	26.1	10/7/2023 6:15	57.1	17.5	10/7/2023 20:30	49.9	18.4
10/6/2023 16:15	87.5	23.9	10/7/2023 6:30	60	17.7	10/7/2023 20:45	51.7	18.3
10/6/2023 16:30	82.7	22.7	10/7/2023 6:45	51	17.4	10/7/2023 21:00	53.8	19.1
10/6/2023 16:45	85.1	23.2	10/7/2023 7:00	50.3	16.9	10/7/2023 21:15	63.3	20.4
10/6/2023 17:00	85.5	22.9	10/7/2023 7:15	54.4	16.8	10/7/2023 21:30	62.7	20.2
10/6/2023 17:15	85.9	23.2	10/7/2023 7:30	48.9	16.3	10/7/2023 21:45	54.2	19.9
10/6/2023 17:30	82.9	23.4	10/7/2023 7:45	55.1	16.4	10/7/2023 22:00	60.6	20.9
10/6/2023 17:45	86.5	23.6	10/7/2023 8:00	52.6	16.3	10/7/2023 22:15	65.9	20.7
10/6/2023 18:00	88.9	23.8	10/7/2023 8:15	50.3	15.8	10/7/2023 22:30	64.6	20.8
10/6/2023 18:15	91.4	24.5	10/7/2023 8:30	50.4	14.8	10/7/2023 22:45	58.6	20.7
10/6/2023 18:30	89.9	24.2	10/7/2023 8:45	51.9	15.3	10/7/2023 23:00	70.8	20.8
10/6/2023 18:45	90.3	23.7	10/7/2023 9:00	44	14.4	10/7/2023 23:15	75.1	21.2
10/6/2023 19:00	96.4	24.1	10/7/2023 9:15	57.4	16.4	10/7/2023 23:30	65	20.9
10/6/2023 19:15	88.8	23.8	10/7/2023 9:30	42.2	14.3	10/7/2023 23:45	70	21.2
10/6/2023 19:30	92.8	24	10/7/2023 9:45	40.7	13.1	10/8/2023 0:00	71.5	21.3
10/6/2023 19:45	94	24.5	10/7/2023 10:00	39.6	12.2	10/8/2023 0:15	77.6	21.4
10/6/2023 20:00	97.6	24.7	10/7/2023 10:15	45.1	13.5	10/8/2023 0:30	63.1	20.6
10/6/2023 20:15	92.3	24.8	10/7/2023 10:30	41.2	13.7	10/8/2023 0:45	58.7	20.3
10/6/2023 20:30	94.2	24.6	10/7/2023 10:45	46.7	14.6	10/8/2023 1:00	61.4	20.4
10/6/2023 20:45	101.4	25.6	10/7/2023 11:00	69	18	10/8/2023 1:15	56.4	20.2
10/6/2023 21:00	97.6	25.4	10/7/2023 11:15	60.6	17.6	10/8/2023 1:30	58.2	20
10/6/2023 21:15	90.3	24.1	10/7/2023 11:30	68.3	18.5	10/8/2023 1:45	54.5	19.9
10/6/2023 21:30	89.4	23.4	10/7/2023 11:45	56.5	16.1	10/8/2023 2:00	59.4	20.2
10/6/2023 21:45	80.6	21.7	10/7/2023 12:00	44.5	14.6	10/8/2023 2:15	55.8	20.6
10/6/2023 22:00	73.3	20.7	10/7/2023 12:15	58.9	16.5	10/8/2023 2:30	52.5	19.7
10/6/2023 22:15	82.3	21.8	10/7/2023 12:30	40.9	14.3	10/8/2023 2:45	46.1	18.5
10/6/2023 22:30	82.9	21.5	10/7/2023 12:45	41	13.2	10/8/2023 3:00	45.3	16.9
10/6/2023 22:45	83.5	22.1	10/7/2023 13:00	37.6	11.7	10/8/2023 3:15	45.7	17.7
10/6/2023 23:00	84.4	24.1	10/7/2023 13:15	36	12.3	10/8/2023 3:30	60.1	19
10/6/2023 23:15	83.9	24.7	10/7/2023 13:30	32.5	11.5	10/8/2023 3:45	58	19.5
10/6/2023 23:30	92	25.1	10/7/2023 13:45	32.7	11.3	10/8/2023 4:00	49.2	17.3
10/6/2023 23:45	93	26.2	10/7/2023 14:00	32.9	11.2	10/8/2023 4:15	48.4	16
10/7/2023 0:00	88.8	26.2	10/7/2023 14:15	36.6	12.2	10/8/2023 4:30	43.6	14.8
10/7/2023 0:15	83.6	25.7	10/7/2023 14:30	33.4	11.2	10/8/2023 4:45	48.1	15.1
10/7/2023 0:30	84.1	25.8	10/7/2023 14:45	28.7	11.4	10/8/2023 5:00	36.4	12.3
10/7/2023 0:45	80.7	24.7	10/7/2023 15:00	31	10.8	10/8/2023 5:15	37.3	12.3
10/7/2023 1:00	80.5	24.2	10/7/2023 15:15	34	10.9	10/8/2023 5:30	37.4	12.6
10/7/2023 1:15	71.9	23.5	10/7/2023 15:30	33.5	11	10/8/2023 5:45	40.9	13
10/7/2023 1:30	67.6	23	10/7/2023 15:45	31.6	11.1	10/8/2023 6:00	41.6	12.8
10/7/2023 1:45	61.4	21.5	10/7/2023 16:00	32.3	11.2	10/8/2023 6:15	38.6	11.9
10/7/2023 2:00	55.6	20.4	10/7/2023 16:15	30.8	11	10/8/2023 6:30	36.7	11.7
10/7/2023 2:15	52.3	19.8	10/7/2023 16:30	33.1	11.5	10/8/2023 6:45	34.3	11.4
10/7/2023 2:30	54.6	20.1	10/7/2023 16:45	30.7	11.4	10/8/2023 7:00	33.9	10.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/8/2023 7:15	36.9	12
10/8/2023 7:30	37.2	11.8
10/8/2023 7:45	39.9	12.4
10/8/2023 8:00	32.7	11.1
10/8/2023 8:15	45.3	12.7
10/8/2023 8:30	32.5	10.7
10/8/2023 8:45	36.2	11.5
10/8/2023 9:00	37.4	12
10/8/2023 9:15	36.3	11.2
10/8/2023 9:30	32	10.7
10/8/2023 9:45	31.7	10.8
10/8/2023 10:00	32.3	10.8
10/8/2023 10:15	34.3	11
10/8/2023 10:30	32.1	10.9
10/8/2023 10:45	40.4	11.8
10/8/2023 11:00	42.4	12.5
10/8/2023 11:15	41.1	12.7
10/8/2023 11:30	42.1	12.8
10/8/2023 11:45	50.6	15.2
10/8/2023 12:00	54.4	14.7
10/8/2023 12:15	44.5	12.5
10/8/2023 12:30	41.7	13.1
10/8/2023 12:45	36.3	13
10/8/2023 13:00	39.3	13
10/8/2023 13:15	29.5	10.6
10/8/2023 13:30	38.6	11.9
10/8/2023 13:45	37.4	10.9
10/8/2023 14:00	31.1	9.7
10/8/2023 14:15	36.6	11.6
10/8/2023 14:30	30.6	10
10/8/2023 14:45	26.3	9.2
10/8/2023 15:00	30.9	10.1
10/8/2023 15:15	30	10
10/8/2023 15:30	28.7	9.6
10/8/2023 15:45	31.5	10.3
10/8/2023 16:00	26.6	8.5
10/8/2023 16:15	30.9	9.6
10/8/2023 16:30	31.7	9.9
10/8/2023 16:45	38.5	11.9
10/8/2023 17:00	26.7	8.7
10/8/2023 17:15	26.3	7.9
10/8/2023 17:30	24.7	7.4
10/8/2023 17:45	24	8
10/8/2023 18:00	23.3	7.5
10/8/2023 18:15	23.6	7.4
10/8/2023 18:30	21.4	7.5
10/8/2023 18:45	26.3	8.2
10/8/2023 19:00	31.5	9.8
10/8/2023 19:15	25.3	8.1
10/8/2023 19:30	25.9	8.9
10/8/2023 19:45	24.4	8.2
10/8/2023 20:00	25.9	8.7
10/8/2023 20:15	28.9	9.2
10/8/2023 20:30	27.3	9.1
10/8/2023 20:45	29.1	9.1
10/8/2023 21:00	49.5	13.2
10/8/2023 21:15	32	9.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/8/2023 21:30	32.3	9.6
10/8/2023 21:45	30	9.4
10/8/2023 22:00	33.1	10.4
10/8/2023 22:15	34	9.9
10/8/2023 22:30	37	10.4
10/8/2023 22:45	35.4	10.5
10/8/2023 23:00	33.6	10.4
10/8/2023 23:15	34.1	10.2
10/8/2023 23:30	32.3	10.2
10/8/2023 23:45	29.8	9.8
10/9/2023 0:00	29.8	9.9
10/9/2023 0:15	28.2	9.5
10/9/2023 0:30	27.3	9.3
10/9/2023 0:45	28.3	9.5
10/9/2023 1:00	29.4	10.3
10/9/2023 1:15	30	10.4
10/9/2023 1:30	32.4	10
10/9/2023 1:45	27	9.3
10/9/2023 2:00	26.6	9.1
10/9/2023 2:15	26.8	8.8
10/9/2023 2:30	28.3	8.8
10/9/2023 2:45	22.5	8.1
10/9/2023 3:00	28	9.3
10/9/2023 3:15	38.5	10.9
10/9/2023 3:30	33.9	9.9
10/9/2023 3:45	31	10.1
10/9/2023 4:00	31.3	10.2
10/9/2023 4:15	30.9	10
10/9/2023 4:30	30.9	10.2
10/9/2023 4:45	41	11.6
10/9/2023 5:00	35.2	10.6
10/9/2023 5:15	38.5	10.8
10/9/2023 5:30	33.1	10.7
10/9/2023 5:45	30.3	10
10/9/2023 6:00	31.6	10.4
10/9/2023 6:15	31	10.2
10/9/2023 6:30	31.1	10.3
10/9/2023 6:45	34.3	10.5
10/9/2023 7:00	38.3	11.6
10/9/2023 7:15	34.6	10.9
10/9/2023 7:30	33.1	11.1
10/9/2023 7:45	37.1	11.4
10/9/2023 8:00	36.6	11.3
10/9/2023 8:15	41.7	11.8
10/9/2023 8:30	35.6	11.4
10/9/2023 8:45	36.4	10.9
10/9/2023 9:00	36.1	11.5
10/9/2023 9:15	35	10.9
10/9/2023 9:30	33	10.8
10/9/2023 9:45	35.1	11.3
10/9/2023 10:00	33.5	11.2
10/9/2023 10:15	29.9	10.2
10/9/2023 10:30	26.1	10
10/9/2023 10:45	28.4	10.2
10/9/2023 11:00	29.7	10.3
10/9/2023 11:15	29.3	10.3
10/9/2023 11:30	29	10

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/9/2023 11:45	29.7	9.8
10/9/2023 12:00	28.3	9.8
10/9/2023 12:15	28.2	10.6
10/9/2023 12:30	29.5	11
10/9/2023 12:45	27.8	10.3
10/9/2023 13:00	28.4	10.5
10/9/2023 13:15	28.3	10.2
10/9/2023 13:30	27.7	10.1
10/9/2023 13:45	27.8	9.7
10/9/2023 14:00	25	9.6
10/9/2023 14:15	25.7	9.5
10/9/2023 14:30	26.1	9.8
10/9/2023 14:45	27.7	9.8
10/9/2023 15:00	27.9	9.6
10/9/2023 15:15	25.7	9.1
10/9/2023 15:30	24.9	8.9
10/9/2023 15:45	27.4	10
10/9/2023 16:00	25.8	9.2
10/9/2023 16:15	26	9.2
10/9/2023 16:30	25.8	9.6
10/9/2023 16:45	27.9	9.7
10/9/2023 17:00	26.9	10
10/9/2023 17:15	27.1	9.5
10/9/2023 17:30	28.2	9.7
10/9/2023 17:45	26.5	9.5
10/9/2023 18:00	26.7	9.5
10/9/2023 18:15	27.1	10
10/9/2023 18:30	27.3	9.7
10/9/2023 18:45	28.3	10.1
10/9/2023 19:00	28.5	10.2
10/9/2023 19:15	28.1	10.1
10/9/2023 19:30	27	9.5
10/9/2023 19:45	26.9	9.6
10/9/2023 20:00	27.9	9.8
10/9/2023 20:15	26.1	9.5
10/9/2023 20:30	25.5	9.5
10/9/2023 20:45	27	9
10/9/2023 21:00	26.8	9.2
10/9/2023 21:15	24.1	8.6
10/9/2023 21:30	24.7	8.8
10/9/2023 21:45	25.6	8.9
10/9/2023 22:00	26.6	9.1
10/9/2023 22:15	29	9.5
10/9/2023 22:30	27	9.1
10/9/2023 22:45	28.5	9.2
10/9/2023 23:00	32.4	10.1
10/9/2023 23:15	27.1	9
10/9/2023 23:30	29.5	9.3
10/9/2023 23:45	28	9.5
10/10/2023 0:00	27.2	9.1
10/10/2023 0:15	27.9	9.4
10/10/2023 0:30	25.9	9.2
10/10/2023 0:45	28.9	9.7
10/10/2023 1:00	28.4	9.9
10/10/2023 1:15	25.7	9.5
10/10/2023 1:30	25	9.1
10/10/2023 1:45	26.2	9.3

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/10/2023 2:00	25.5	9.5	10/10/2023 16:15	23.5	8.8	10/11/2023 6:30	20.9	8
10/10/2023 2:15	26.5	9.5	10/10/2023 16:30	20.9	8.8	10/11/2023 6:45	20.6	8.2
10/10/2023 2:30	24.6	9.2	10/10/2023 16:45	27.6	9.3	10/11/2023 7:00	24.1	9
10/10/2023 2:45	25.4	9.2	10/10/2023 17:00	19.6	8.1	10/11/2023 7:15	23.6	9.1
10/10/2023 3:00	26.2	9.3	10/10/2023 17:15	23.2	9.1	10/11/2023 7:30	22.2	9
10/10/2023 3:15	24.4	9.1	10/10/2023 17:30	22.7	8.8	10/11/2023 7:45	24	9.1
10/10/2023 3:30	23.8	9.1	10/10/2023 17:45	22.3	8.8	10/11/2023 8:00	25.4	8.6
10/10/2023 3:45	23.3	9.2	10/10/2023 18:00	24.2	8.9	10/11/2023 8:15	32.3	9.8
10/10/2023 4:00	26.1	9.6	10/10/2023 18:15	26.8	9.9	10/11/2023 8:30	38	11.2
10/10/2023 4:15	23.3	9.1	10/10/2023 18:30	25.8	9	10/11/2023 8:45	31.9	9.5
10/10/2023 4:30	24.3	8.8	10/10/2023 18:45	27.9	9.7	10/11/2023 9:00	34.9	10.5
10/10/2023 4:45	24	9.1	10/10/2023 19:00	25.5	9.9	10/11/2023 9:15	27.1	9.4
10/10/2023 5:00	24.7	9.2	10/10/2023 19:15	37.8	13.1	10/11/2023 9:30	25.5	9.2
10/10/2023 5:15	25	9.2	10/10/2023 19:30	32.4	11.2	10/11/2023 9:45	24.9	9.6
10/10/2023 5:30	24.4	8.6	10/10/2023 19:45	30.7	10.3	10/11/2023 10:00	22.3	9.2
10/10/2023 5:45	20.9	8.1	10/10/2023 20:00	28.3	10.7	10/11/2023 10:15	25.7	9.6
10/10/2023 6:00	24.2	9.1	10/10/2023 20:15	25.6	9.8	10/11/2023 10:30	24.5	9.6
10/10/2023 6:15	23.7	8.6	10/10/2023 20:30	25	9.7	10/11/2023 10:45	23.6	9.6
10/10/2023 6:30	21.4	8.3	10/10/2023 20:45	27.4	9.9	10/11/2023 11:00	23	9.7
10/10/2023 6:45	21.2	8	10/10/2023 21:00	28.3	9.9	10/11/2023 11:15	24.8	9.7
10/10/2023 7:00	22.9	8.3	10/10/2023 21:15	30.8	10.2	10/11/2023 11:30	21.7	8.9
10/10/2023 7:15	25.9	9.1	10/10/2023 21:30	28.9	10.4	10/11/2023 11:45	21.8	9.1
10/10/2023 7:30	23	8.3	10/10/2023 21:45	32.3	11.1	10/11/2023 12:00	21.3	8.8
10/10/2023 7:45	23	7.6	10/10/2023 22:00	25.6	9.5	10/11/2023 12:15	24.9	9.6
10/10/2023 8:00	22.1	7.8	10/10/2023 22:15	27.8	9.8	10/11/2023 12:30	21	8.5
10/10/2023 8:15	27	9.2	10/10/2023 22:30	43.7	13.8	10/11/2023 12:45	21.1	8.3
10/10/2023 8:30	30.6	9.3	10/10/2023 22:45	24.9	9.5	10/11/2023 13:00	21.1	8
10/10/2023 8:45	26.2	9.1	10/10/2023 23:00	27.2	9.8	10/11/2023 13:15	19.9	7.9
10/10/2023 9:00	31.8	9.7	10/10/2023 23:15	25.8	9.4	10/11/2023 13:30	19.4	8.1
10/10/2023 9:15	26.6	9.7	10/10/2023 23:30	24.7	9	10/11/2023 13:45	20.6	7.7
10/10/2023 9:30	22.8	9.6	10/10/2023 23:45	22.7	9.1	10/11/2023 14:00	19.7	8
10/10/2023 9:45	25.7	10.2	10/11/2023 0:00	21.8	8.9	10/11/2023 14:15	19.4	7.5
10/10/2023 10:00	24.8	10	10/11/2023 0:15	23.4	9.3	10/11/2023 14:30	21.1	8
10/10/2023 10:15	22.9	9.8	10/11/2023 0:30	21	8.8	10/11/2023 14:45	19.4	7.8
10/10/2023 10:30	24.5	9.8	10/11/2023 0:45	22.9	9	10/11/2023 15:00	16.9	7.4
10/10/2023 10:45	23.1	9.9	10/11/2023 1:00	22.1	8.7	10/11/2023 15:15	19	7.8
10/10/2023 11:00	24.9	9.8	10/11/2023 1:15	22.9	8.9	10/11/2023 15:30	21.5	8
10/10/2023 11:15	26	10	10/11/2023 1:30	21.9	8.4	10/11/2023 15:45	22.2	8.5
10/10/2023 11:30	23.2	9.9	10/11/2023 1:45	21.4	8.3	10/11/2023 16:00	22.9	8
10/10/2023 11:45	25.5	10.1	10/11/2023 2:00	23.8	8.9	10/11/2023 16:15	28.2	9.3
10/10/2023 12:00	26.4	10.1	10/11/2023 2:15	24	9	10/11/2023 16:30	31.6	10
10/10/2023 12:15	26	10.1	10/11/2023 2:30	23.4	9.1	10/11/2023 16:45	23.8	8.6
10/10/2023 12:30	25.3	10	10/11/2023 2:45	22.3	8.4	10/11/2023 17:00	30.6	9.7
10/10/2023 12:45	26.5	10	10/11/2023 3:00	23.2	8.6	10/11/2023 17:15	21.9	8.1
10/10/2023 13:00	27.8	10.1	10/11/2023 3:15	22.9	8.5	10/11/2023 17:30	23.1	8.2
10/10/2023 13:15	27.7	10.2	10/11/2023 3:30	24	9	10/11/2023 17:45	21.4	8
10/10/2023 13:30	25.5	9.7	10/11/2023 3:45	24.9	8.7	10/11/2023 18:00	21.9	8.2
10/10/2023 13:45	25	10.1	10/11/2023 4:00	22.1	8.6	10/11/2023 18:15	22.3	8.2
10/10/2023 14:00	23.5	9.7	10/11/2023 4:15	24.6	9	10/11/2023 18:30	22.6	8.9
10/10/2023 14:15	24.2	9.8	10/11/2023 4:30	25.9	9.2	10/11/2023 18:45	26.3	9.1
10/10/2023 14:30	25	9.8	10/11/2023 4:45	26.8	9.2	10/11/2023 19:00	27.6	10.8
10/10/2023 14:45	25.4	9.7	10/11/2023 5:00	26.9	9.2	10/11/2023 19:15	31.3	10.2
10/10/2023 15:00	23.2	9.9	10/11/2023 5:15	26.1	9.1	10/11/2023 19:30	31.4	12
10/10/2023 15:15	24.3	9.4	10/11/2023 5:30	25.2	9.1	10/11/2023 19:45	29.8	10.4
10/10/2023 15:30	24.6	9.5	10/11/2023 5:45	24.6	9.1	10/11/2023 20:00	29.2	9.7
10/10/2023 15:45	30.7	10.9	10/11/2023 6:00	21.6	8.3	10/11/2023 20:15	26.2	9.8
10/10/2023 16:00	24.1	9.5	10/11/2023 6:15	21.6	8.3	10/11/2023 20:30	30.9	10.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/11/2023 20:45	29	9.9
10/11/2023 21:00	23.9	9.5
10/11/2023 21:15	22.9	8.9
10/11/2023 21:30	27.6	9.6
10/11/2023 21:45	24.8	9.5
10/11/2023 22:00	28.6	10
10/11/2023 22:15	32	10.4
10/11/2023 22:30	23.4	8.9
10/11/2023 22:45	23.1	8.7
10/11/2023 23:00	24.1	8.8
10/11/2023 23:15	24.5	9.3
10/11/2023 23:30	27.4	9.3
10/11/2023 23:45	25.2	9.3
10/12/2023 0:00	24	8.9
10/12/2023 0:15	23.7	8.5
10/12/2023 0:30	27.9	9.6
10/12/2023 0:45	26.9	9.5
10/12/2023 1:00	23.8	8.8
10/12/2023 1:15	27.4	9.1
10/12/2023 1:30	32.3	9.5
10/12/2023 1:45	27.5	9
10/12/2023 2:00	24	8.8
10/12/2023 2:15	24.4	8.7
10/12/2023 2:30	23.5	8.3
10/12/2023 2:45	19	7.1
10/12/2023 3:00	18.7	7.1
10/12/2023 3:15	21	7.2
10/12/2023 3:30	17.6	7.1
10/12/2023 3:45	19.6	7
10/12/2023 4:00	18.4	6.8
10/12/2023 4:15	19.7	7.4
10/12/2023 4:30	22.3	9.1
10/12/2023 4:45	23.1	8.9
10/12/2023 5:00	22.2	8.7
10/12/2023 5:15	22.9	8.7
10/12/2023 5:30	23.2	8.6
10/12/2023 5:45	23.1	8.7
10/12/2023 6:00	23.7	8.4
10/12/2023 6:15	19	8
10/12/2023 6:30	20.5	8
10/12/2023 6:45	19.8	7.9
10/12/2023 7:00	21.3	7.8
10/12/2023 7:15	20.7	7.5
10/12/2023 7:30	21.9	7.9
10/12/2023 7:45	21.3	7.6
10/12/2023 8:00	24.3	8.3
10/12/2023 8:15	26.8	9.1
10/12/2023 8:30	23.7	9
10/12/2023 8:45	39.2	12.9
10/12/2023 9:00	30.8	10.9
10/12/2023 9:15	21	8.9
10/12/2023 9:30	31.1	10.2
10/12/2023 9:45	19.9	8.4
10/12/2023 10:00	20.1	8.1
10/12/2023 10:15	19.3	7.7
10/12/2023 10:30	18.5	7.5
10/12/2023 10:45	18.7	7.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/12/2023 11:00	18.3	7.6
10/12/2023 11:15	18	7.4
10/12/2023 11:30	19.1	7.6
10/12/2023 11:45	20.7	8.1
10/12/2023 12:00	18.4	7.7
10/12/2023 12:15	18.8	7.5
10/12/2023 12:30	21	7.9
10/12/2023 12:45	22	7.9
10/12/2023 13:00	20.8	7.8
10/12/2023 13:15	24.7	8.5
10/12/2023 13:30	20.3	8.4
10/12/2023 13:45	32.2	10.3
10/12/2023 14:00	23.7	8.7
10/12/2023 14:15	29.8	10.2
10/12/2023 14:30	25.5	9
10/12/2023 14:45	23.2	8.5
10/12/2023 15:00	21.8	8.2
10/12/2023 15:15	22.8	8.8
10/12/2023 15:30	20.3	7.9
10/12/2023 15:45	20.6	8.5
10/12/2023 16:00	21.8	8.8
10/12/2023 16:15	21.4	8.4
10/12/2023 16:30	20.5	8
10/12/2023 16:45	25.6	9.1
10/12/2023 17:00	21.9	8.6
10/12/2023 17:15	19.4	8.1
10/12/2023 17:30	21.4	8
10/12/2023 17:45	20.8	8.2
10/12/2023 18:00	18.8	7.9
10/12/2023 18:15	20.9	8.1
10/12/2023 18:30	23.6	9.2
10/12/2023 18:45	20.8	8.4
10/12/2023 19:00	22.6	8.6
10/12/2023 19:15	21.6	8.6
10/12/2023 19:30	30	10.8
10/12/2023 19:45	27.3	9.5
10/12/2023 20:00	27.1	10
10/12/2023 20:15	28	10.1
10/12/2023 20:30	28.8	10.1
10/12/2023 20:45	27.7	10
10/12/2023 21:00	27.6	10.8
10/12/2023 21:15	26.7	10.1
10/12/2023 21:30	27.2	10.1
10/12/2023 21:45	28.2	10.3
10/12/2023 22:00	27.9	10
10/12/2023 22:15	24.6	9.5
10/12/2023 22:30	24.9	9.3
10/12/2023 22:45	22.8	9
10/12/2023 23:00	22.9	8.9
10/12/2023 23:15	21.6	8.7
10/12/2023 23:30	23	8.6
10/12/2023 23:45	21.7	8.6
10/13/2023 0:00	22.5	8.7
10/13/2023 0:15	23.8	9.3
10/13/2023 0:30	24.6	9.4
10/13/2023 0:45	24	9.1
10/13/2023 1:00	21.5	8.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/13/2023 1:15	21.1	7.9
10/13/2023 1:30	52.2	16
10/13/2023 1:45	103.5	30
10/13/2023 2:00	116.3	33.1
10/13/2023 2:15	122.5	45
10/13/2023 2:30	170.3	87
10/13/2023 2:45	170.5	85.1
10/13/2023 3:00	174.5	64.1
10/13/2023 3:15	173.3	71.7
10/13/2023 3:30	174.8	79.4
10/13/2023 3:45	172.8	86.2
10/13/2023 4:00	166.9	85.1
10/13/2023 4:15	161.4	85.2
10/13/2023 4:30	165.5	85.3
10/13/2023 4:45	162.2	85.4
10/13/2023 5:00	172.6	85.6
10/13/2023 5:15	168.5	85
10/13/2023 5:30	179.4	84.5
10/13/2023 5:45	175	83.5
10/13/2023 6:00	171.1	82.6
10/13/2023 6:15	160.9	77.6
10/13/2023 6:30	150.9	76.1
10/13/2023 6:45	142.3	59.4
10/13/2023 7:00	144.5	43.3
10/13/2023 7:15	143.2	41.5
10/13/2023 7:30	142	45.4
10/13/2023 7:45	145	42.4
10/13/2023 8:00	140.4	40.1
10/13/2023 8:15	136.8	38.7
10/13/2023 8:30	139.2	38.6
10/13/2023 8:45	134.1	42.3
10/13/2023 9:00	126.4	42.5
10/13/2023 9:15	129	39.2
10/13/2023 9:30	117.9	39.8
10/13/2023 9:45	116.5	39
10/13/2023 10:00	144.7	40
10/13/2023 10:15	105.6	18.2
10/13/2023 10:30	167.7	32.1
10/13/2023 10:45	175.2	31.3
10/13/2023 11:00	167.2	30.4
10/13/2023 11:15	136	27
10/13/2023 11:30	107	29.5
10/13/2023 11:45	116.7	33.2
10/13/2023 12:00	107.3	30.7
10/13/2023 12:15	111.3	28.9
10/13/2023 12:30	98.9	27.9
10/13/2023 12:45	101.7	26.8
10/13/2023 13:00	106.8	28.2
10/13/2023 13:15	109.3	31
10/13/2023 13:30	97.3	27.2
10/13/2023 13:45	102.3	29.7
10/13/2023 14:00	104.9	28.4
10/13/2023 14:15	105.7	27.4
10/13/2023 14:30	90.4	25.8
10/13/2023 14:45	76	23.7
10/13/2023 15:00	63.1	21.9
10/13/2023 15:15	65.8	22.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/13/2023 15:30	76.8	23.2
10/13/2023 15:45	81.7	24.6
10/13/2023 16:00	93.2	24.7
10/13/2023 16:15	84.4	24.4
10/13/2023 16:30	85.2	24.7
10/13/2023 16:45	92.6	26
10/13/2023 17:00	83.2	23.9
10/13/2023 17:15	79.4	23.2
10/13/2023 17:30	80.6	23.8
10/13/2023 17:45	91.3	24.3
10/13/2023 18:00	97.9	25.5
10/13/2023 18:15	102.2	25.6
10/13/2023 18:30	107.3	26.3
10/13/2023 18:45	110.5	26.3
10/13/2023 19:00	110.5	25.8
10/13/2023 19:15	101.1	24.6
10/13/2023 19:30	88.9	23.3
10/13/2023 19:45	91.8	22.9
10/13/2023 20:00	87.4	23.1
10/13/2023 20:15	89.1	23.8
10/13/2023 20:30	90.9	24.6
10/13/2023 20:45	91.7	25.1
10/13/2023 21:00	102.9	26.2
10/13/2023 21:15	103.1	27
10/13/2023 21:30	93.5	24.4
10/13/2023 21:45	97.6	23.8
10/13/2023 22:00	95.4	23.2
10/13/2023 22:15	90.7	22.7
10/13/2023 22:30	94.9	22.7
10/13/2023 22:45	95.6	22.9
10/13/2023 23:00	97.7	22.1
10/13/2023 23:15	94.6	23.4
10/13/2023 23:30	90.5	22.6
10/13/2023 23:45	96.9	23.9
10/14/2023 0:00	93.8	23.4
10/14/2023 0:15	93.3	23.7
10/14/2023 0:30	86.4	22.7
10/14/2023 0:45	68.4	21.5
10/14/2023 1:00	73	21.4
10/14/2023 1:15	81.4	22.4
10/14/2023 1:30	96.9	23.3
10/14/2023 1:45	99.9	23
10/14/2023 2:00	93.5	21.8
10/14/2023 2:15	106.4	21
10/14/2023 2:30	105.4	20.5
10/14/2023 2:45	114.1	22
10/14/2023 3:00	110.6	22.2
10/14/2023 3:15	109.3	22.9
10/14/2023 3:30	104.2	22.1
10/14/2023 3:45	100.7	20.9
10/14/2023 4:00	104.6	21.4
10/14/2023 4:15	108.3	21.4
10/14/2023 4:30	113	20.3
10/14/2023 4:45	102	20.9
10/14/2023 5:00	99.9	21.2
10/14/2023 5:15	94.4	20.7
10/14/2023 5:30	93.1	20.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/14/2023 5:45	96.3	21
10/14/2023 6:00	77.1	20.5
10/14/2023 6:15	77.2	20.4
10/14/2023 6:30	65.9	19.9
10/14/2023 6:45	66.8	19.7
10/14/2023 7:00	80.2	20.8
10/14/2023 7:15	65	19.3
10/14/2023 7:30	62	18.7
10/14/2023 7:45	53.9	18.1
10/14/2023 8:00	49.6	18.3
10/14/2023 8:15	44.8	17.6
10/14/2023 8:30	57.1	18.6
10/14/2023 8:45	55.7	19.1
10/14/2023 9:00	53.4	17.8
10/14/2023 9:15	50.8	17.7
10/14/2023 9:30	52.5	17.3
10/14/2023 9:45	51.6	16.2
10/14/2023 10:00	56.8	16.4
10/14/2023 10:15	53.5	15.9
10/14/2023 10:30	48.9	15.2
10/14/2023 10:45	52.8	17.1
10/14/2023 11:00	62.5	19.1
10/14/2023 11:15	54	18.6
10/14/2023 11:30	68	20.6
10/14/2023 11:45	72.1	20.8
10/14/2023 12:00	72.6	21.8
10/14/2023 12:15	74.1	21.3
10/14/2023 12:30	72.1	20.9
10/14/2023 12:45	56.3	19.8
10/14/2023 13:00	60	20.2
10/14/2023 13:15	57.7	19.5
10/14/2023 13:30	69.2	20.3
10/14/2023 13:45	61.9	20.1
10/14/2023 14:00	57.6	19.4
10/14/2023 14:15	57.8	19.7
10/14/2023 14:30	57.2	19.7
10/14/2023 14:45	58.2	19.2
10/14/2023 15:00	54.3	19.2
10/14/2023 15:15	59.7	19.7
10/14/2023 15:30	56.2	19.5
10/14/2023 15:45	52.3	19.1
10/14/2023 16:00	57.7	19.2
10/14/2023 16:15	58.9	19.4
10/14/2023 16:30	52.7	19.1
10/14/2023 16:45	57.3	19.5
10/14/2023 17:00	67.7	20
10/14/2023 17:15	64.8	20.4
10/14/2023 17:30	60.2	20.1
10/14/2023 17:45	55.7	20
10/14/2023 18:00	45.8	19
10/14/2023 18:15	55.1	19.5
10/14/2023 18:30	52	19.6
10/14/2023 18:45	48.1	18.2
10/14/2023 19:00	48.6	17.6
10/14/2023 19:15	53.8	18.6
10/14/2023 19:30	50.6	18.3
10/14/2023 19:45	48.1	18.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/14/2023 20:00	50.8	19
10/14/2023 20:15	54.3	19.5
10/14/2023 20:30	62.9	19.9
10/14/2023 20:45	65.3	20.5
10/14/2023 21:00	60.7	20.5
10/14/2023 21:15	72.9	20.9
10/14/2023 21:30	61.1	20.3
10/14/2023 21:45	49.3	18.7
10/14/2023 22:00	58.8	20
10/14/2023 22:15	69.8	21
10/14/2023 22:30	60.7	20.9
10/14/2023 22:45	71.4	21.7
10/14/2023 23:00	74.4	21.7
10/14/2023 23:15	75.1	21.2
10/14/2023 23:30	83.8	21.9
10/14/2023 23:45	93.3	22.1
10/15/2023 0:00	89	22.1
10/15/2023 0:15	86.7	22.3
10/15/2023 0:30	67.3	20.5
10/15/2023 0:45	51.4	18.5
10/15/2023 1:00	56.2	20.1
10/15/2023 1:15	62.9	20.5
10/15/2023 1:30	47.9	19.6
10/15/2023 1:45	59.8	20.5
10/15/2023 2:00	56.4	19.8
10/15/2023 2:15	53.4	19.1
10/15/2023 2:30	55.7	19.5
10/15/2023 2:45	63.6	20.5
10/15/2023 3:00	65.5	20.8
10/15/2023 3:15	65.6	20.4
10/15/2023 3:30	70.2	20.2
10/15/2023 3:45	81.1	21
10/15/2023 4:00	103.2	21.6
10/15/2023 4:15	76.5	21.5
10/15/2023 4:30	82	21.6
10/15/2023 4:45	97.3	21.8
10/15/2023 5:00	93.4	22.4
10/15/2023 5:15	95.7	22.6
10/15/2023 5:30	92.8	22.8
10/15/2023 5:45	84.7	21.4
10/15/2023 6:00	83.5	21.4
10/15/2023 6:15	85.1	21.7
10/15/2023 6:30	87.7	21.5
10/15/2023 6:45	86.7	21.6
10/15/2023 7:00	90.8	22.1
10/15/2023 7:15	82.6	21.2
10/15/2023 7:30	92.5	22.5
10/15/2023 7:45	87.1	21.4
10/15/2023 8:00	85.3	20.9
10/15/2023 8:15	115.3	26.5
10/15/2023 8:30	100	26
10/15/2023 8:45	104.4	28.4
10/15/2023 9:00	70.4	21.5
10/15/2023 9:15	75	21.1
10/15/2023 9:30	86	20.8
10/15/2023 9:45	97	22.4
10/15/2023 10:00	107.2	24.5

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/15/2023 10:15	115.3	27.8	10/16/2023 0:30	101.8	24.6	10/16/2023 14:45	48.1	14.4
10/15/2023 10:30	113	27	10/16/2023 0:45	105.8	25.6	10/16/2023 15:00	40.2	13.6
10/15/2023 10:45	110.7	27	10/16/2023 1:00	101.5	24.1	10/16/2023 15:15	35.7	12.2
10/15/2023 11:00	107.5	24.9	10/16/2023 1:15	97.1	22.9	10/16/2023 15:30	41.4	12.9
10/15/2023 11:15	96.2	23	10/16/2023 1:30	102.2	22.8	10/16/2023 15:45	43.1	12.8
10/15/2023 11:30	94.6	23.2	10/16/2023 1:45	106.4	22.4	10/16/2023 16:00	32.8	11.2
10/15/2023 11:45	91.9	22	10/16/2023 2:00	83.6	21.8	10/16/2023 16:15	44.9	13.4
10/15/2023 12:00	90.6	21.7	10/16/2023 2:15	89.1	22.6	10/16/2023 16:30	36.1	12.6
10/15/2023 12:15	92.1	22	10/16/2023 2:30	68.6	20.8	10/16/2023 16:45	40.4	12
10/15/2023 12:30	95.4	22.8	10/16/2023 2:45	68.6	21.4	10/16/2023 17:00	37	11.6
10/15/2023 12:45	109.6	24.9	10/16/2023 3:00	58.3	19.9	10/16/2023 17:15	48.6	13.4
10/15/2023 13:00	123.7	30.3	10/16/2023 3:15	51.5	18.4	10/16/2023 17:30	38.4	12
10/15/2023 13:15	123.3	35.7	10/16/2023 3:30	38.8	16.6	10/16/2023 17:45	33.2	11.3
10/15/2023 13:30	113.6	32.8	10/16/2023 3:45	69.4	19.8	10/16/2023 18:00	29	11.1
10/15/2023 13:45	106.8	30	10/16/2023 4:00	66.9	20.2	10/16/2023 18:15	28.3	10.3
10/15/2023 14:00	101.7	27.4	10/16/2023 4:15	46.9	18.1	10/16/2023 18:30	27.4	11
10/15/2023 14:15	92.3	24.9	10/16/2023 4:30	52.8	19.6	10/16/2023 18:45	33.5	11.7
10/15/2023 14:30	91.7	24.3	10/16/2023 4:45	49.2	19.3	10/16/2023 19:00	27.8	10.4
10/15/2023 14:45	98.9	25	10/16/2023 5:00	52.9	19.1	10/16/2023 19:15	29.5	10.7
10/15/2023 15:00	102.2	25.1	10/16/2023 5:15	48.7	19.4	10/16/2023 19:30	36	12.2
10/15/2023 15:15	107.7	25.2	10/16/2023 5:30	49.6	19	10/16/2023 19:45	29.5	10.9
10/15/2023 15:30	103.7	24.3	10/16/2023 5:45	47.2	18.1	10/16/2023 20:00	28	10.3
10/15/2023 15:45	96.2	23.9	10/16/2023 6:00	46	18.2	10/16/2023 20:15	32.9	11.3
10/15/2023 16:00	97.6	24.2	10/16/2023 6:15	41	15.4	10/16/2023 20:30	30.7	11
10/15/2023 16:15	106.3	24.4	10/16/2023 6:30	33.5	14.5	10/16/2023 20:45	29.9	10.7
10/15/2023 16:30	108.5	24.4	10/16/2023 6:45	37.6	15	10/16/2023 21:00	30.4	10.9
10/15/2023 16:45	102.7	24.3	10/16/2023 7:00	39.3	15.3	10/16/2023 21:15	30.1	11.1
10/15/2023 17:00	105.5	24.7	10/16/2023 7:15	32.7	14	10/16/2023 21:30	32.1	11.2
10/15/2023 17:15	108.3	23.9	10/16/2023 7:30	39.4	15.2	10/16/2023 21:45	28.2	10.4
10/15/2023 17:30	113.6	24.8	10/16/2023 7:45	41.9	14.3	10/16/2023 22:00	28.2	10.4
10/15/2023 17:45	111.5	24.6	10/16/2023 8:00	42.1	15.2	10/16/2023 22:15	29.4	10.1
10/15/2023 18:00	111.8	24.7	10/16/2023 8:15	42.4	15.2	10/16/2023 22:30	30.4	10.6
10/15/2023 18:15	111.6	24.3	10/16/2023 8:30	65.7	19	10/16/2023 22:45	34.5	11.4
10/15/2023 18:30	110.6	24.1	10/16/2023 8:45	47.4	16.6	10/16/2023 23:00	39.1	11.7
10/15/2023 18:45	112.7	23.6	10/16/2023 9:00	55	16.8	10/16/2023 23:15	38.8	11.8
10/15/2023 19:00	107.8	23.4	10/16/2023 9:15	60.8	15.9	10/16/2023 23:30	44.6	12.8
10/15/2023 19:15	108.4	23.8	10/16/2023 9:30	52.2	15.1	10/16/2023 23:45	41.7	12.3
10/15/2023 19:30	98.3	22.5	10/16/2023 9:45	48.3	16	10/17/2023 0:00	39.5	12
10/15/2023 19:45	102.2	22.7	10/16/2023 10:00	46.2	15.6	10/17/2023 0:15	37.1	11.6
10/15/2023 20:00	107.9	22.4	10/16/2023 10:15	35.8	12.4	10/17/2023 0:30	40.7	11.8
10/15/2023 20:15	111.2	22.3	10/16/2023 10:30	38.7	12.1	10/17/2023 0:45	40.7	12.1
10/15/2023 20:30	119.8	25	10/16/2023 10:45	38.8	12.5	10/17/2023 1:00	41.1	12.2
10/15/2023 20:45	111.2	22.1	10/16/2023 11:00	43.6	13.4	10/17/2023 1:15	36.8	11.9
10/15/2023 21:00	112.9	22.8	10/16/2023 11:15	61.2	15.4	10/17/2023 1:30	38.3	11.9
10/15/2023 21:15	108.1	22.7	10/16/2023 11:30	51.8	13.1	10/17/2023 1:45	40.4	11.9
10/15/2023 21:30	109	23.5	10/16/2023 11:45	41.8	12.5	10/17/2023 2:00	38.4	11.6
10/15/2023 21:45	107.7	24.1	10/16/2023 12:00	44.5	12.4	10/17/2023 2:15	37.7	11.7
10/15/2023 22:00	105	25.3	10/16/2023 12:15	56.3	13.4	10/17/2023 2:30	36.8	11.3
10/15/2023 22:15	109.1	24.9	10/16/2023 12:30	50.2	13.1	10/17/2023 2:45	38.6	12.1
10/15/2023 22:30	99.4	22.9	10/16/2023 12:45	62.6	14.7	10/17/2023 3:00	45.5	12.1
10/15/2023 22:45	90.5	22.2	10/16/2023 13:00	55.2	13.6	10/17/2023 3:15	43	11.9
10/15/2023 23:00	96.7	22.5	10/16/2023 13:15	50.8	14.3	10/17/2023 3:30	41.5	11.7
10/15/2023 23:15	86.1	21.4	10/16/2023 13:30	45.2	16.3	10/17/2023 3:45	50.2	12.7
10/15/2023 23:30	91.7	22	10/16/2023 13:45	50.6	18.8	10/17/2023 4:00	50.3	12.7
10/15/2023 23:45	94.9	22.4	10/16/2023 14:00	43.7	17.4	10/17/2023 4:15	45.7	12.3
10/16/2023 0:00	100.5	22.4	10/16/2023 14:15	49.6	16.8	10/17/2023 4:30	46.6	12.4
10/16/2023 0:15	100.3	23.2	10/16/2023 14:30	39.7	14.5	10/17/2023 4:45	46.4	12.4

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/17/2023 5:00	44.4	12.3	10/17/2023 19:15	30.4	12.1	10/18/2023 9:30	36.1	13
10/17/2023 5:15	50.8	12.3	10/17/2023 19:30	34.2	11.9	10/18/2023 9:45	30.4	12.1
10/17/2023 5:30	49.4	12.5	10/17/2023 19:45	36.5	12.4	10/18/2023 10:00	33	13.3
10/17/2023 5:45	48.9	12.4	10/17/2023 20:00	33.4	13.3	10/18/2023 10:15	32.2	12.5
10/17/2023 6:00	45.2	12.5	10/17/2023 20:15	45.8	16.3	10/18/2023 10:30	31.9	11.5
10/17/2023 6:15	45.5	12.1	10/17/2023 20:30	51.3	17.7	10/18/2023 10:45	34.8	11.5
10/17/2023 6:30	48.6	12.5	10/17/2023 20:45	52.6	17.9	10/18/2023 11:00	31.9	10.3
10/17/2023 6:45	42.9	12.2	10/17/2023 21:00	57.1	18.5	10/18/2023 11:15	30.9	10.4
10/17/2023 7:00	40.1	11.4	10/17/2023 21:15	50.1	18.1	10/18/2023 11:30	33.7	11.2
10/17/2023 7:15	44.5	11.5	10/17/2023 21:30	54.4	18.1	10/18/2023 11:45	35.3	12.8
10/17/2023 7:30	43.7	11.4	10/17/2023 21:45	53.2	18	10/18/2023 12:00	36.1	13.8
10/17/2023 7:45	47.3	11.9	10/17/2023 22:00	64	18	10/18/2023 12:15	36.2	13.7
10/17/2023 8:00	42.8	12	10/17/2023 22:15	52.4	17.6	10/18/2023 12:30	32	13.4
10/17/2023 8:15	36.6	11.3	10/17/2023 22:30	38.6	15.6	10/18/2023 12:45	31.9	13.2
10/17/2023 8:30	35.9	11.2	10/17/2023 22:45	35.2	14.4	10/18/2023 13:00	31.4	13.6
10/17/2023 8:45	34.6	10.9	10/17/2023 23:00	34.5	12.5	10/18/2023 13:15	31.3	13.3
10/17/2023 9:00	31.9	10.2	10/17/2023 23:15	31.2	11.3	10/18/2023 13:30	35.2	14.6
10/17/2023 9:15	27.8	9.7	10/17/2023 23:30	35.7	11.4	10/18/2023 13:45	33.7	14
10/17/2023 9:30	28.9	9.5	10/17/2023 23:45	31.6	11.4	10/18/2023 14:00	31.6	13.8
10/17/2023 9:45	28.3	9.6	10/18/2023 0:00	33	11.1	10/18/2023 14:15	35.1	14.6
10/17/2023 10:00	31.3	9.3	10/18/2023 0:15	31.2	11.6	10/18/2023 14:30	39.7	15.2
10/17/2023 10:15	37.3	10.3	10/18/2023 0:30	33.5	12.3	10/18/2023 14:45	31.6	14.6
10/17/2023 10:30	42.4	11.1	10/18/2023 0:45	34.7	12.9	10/18/2023 15:00	35.9	15.3
10/17/2023 10:45	38.4	10.9	10/18/2023 1:00	33	12.9	10/18/2023 15:15	32.5	15.1
10/17/2023 11:00	39.2	11.6	10/18/2023 1:15	31	12.2	10/18/2023 15:30	29.2	14.8
10/17/2023 11:15	39.7	10.7	10/18/2023 1:30	32.2	11.3	10/18/2023 15:45	31.5	15.1
10/17/2023 11:30	39.4	10.5	10/18/2023 1:45	36.8	12.2	10/18/2023 16:00	35.3	15.5
10/17/2023 11:45	28.3	9.1	10/18/2023 2:00	51	14.9	10/18/2023 16:15	34.4	15.1
10/17/2023 12:00	27.7	8.7	10/18/2023 2:15	51.6	16.6	10/18/2023 16:30	40.6	15.9
10/17/2023 12:15	50.5	12.6	10/18/2023 2:30	82	19	10/18/2023 16:45	35	15.8
10/17/2023 12:30	27.7	9.2	10/18/2023 2:45	83.9	18.6	10/18/2023 17:00	37.5	15.7
10/17/2023 12:45	36.7	10.9	10/18/2023 3:00	38.2	14.9	10/18/2023 17:15	42.5	16.3
10/17/2023 13:00	40.1	11.6	10/18/2023 3:15	33.9	13.9	10/18/2023 17:30	42.6	16.3
10/17/2023 13:15	31.3	10.6	10/18/2023 3:30	32.1	13	10/18/2023 17:45	31.7	15.6
10/17/2023 13:30	30	10.3	10/18/2023 3:45	34.1	13.2	10/18/2023 18:00	67.8	18.2
10/17/2023 13:45	29.4	10.3	10/18/2023 4:00	39.2	14.4	10/18/2023 18:15	38	15.4
10/17/2023 14:00	28.9	10.3	10/18/2023 4:15	46.2	15.4	10/18/2023 18:30	37.4	15.4
10/17/2023 14:15	26.7	10.6	10/18/2023 4:30	42.8	16	10/18/2023 18:45	32.6	14.5
10/17/2023 14:30	29.9	10.7	10/18/2023 4:45	37.2	13.7	10/18/2023 19:00	42.4	15.4
10/17/2023 14:45	31.2	11.1	10/18/2023 5:00	32.5	12.1	10/18/2023 19:15	38.6	15.1
10/17/2023 15:00	28	10.9	10/18/2023 5:15	35.2	12.4	10/18/2023 19:30	33.5	14.3
10/17/2023 15:15	30.1	10.3	10/18/2023 5:30	34	11.8	10/18/2023 19:45	31	14
10/17/2023 15:30	28.8	10.7	10/18/2023 5:45	34.3	11.5	10/18/2023 20:00	33.4	13.5
10/17/2023 15:45	28.8	10.9	10/18/2023 6:00	37	12.9	10/18/2023 20:15	33.6	13.4
10/17/2023 16:00	25.4	10.5	10/18/2023 6:15	37.3	12.6	10/18/2023 20:30	36.2	14
10/17/2023 16:15	28	10.6	10/18/2023 6:30	40.6	12.5	10/18/2023 20:45	32.4	13
10/17/2023 16:30	27.3	10.7	10/18/2023 6:45	38.6	12.4	10/18/2023 21:00	41.1	14.3
10/17/2023 16:45	31.6	11.4	10/18/2023 7:00	37.6	12.6	10/18/2023 21:15	40.5	13.8
10/17/2023 17:00	26.9	11	10/18/2023 7:15	41.8	13	10/18/2023 21:30	37.6	13.7
10/17/2023 17:15	31.5	11.8	10/18/2023 7:30	41.4	13.1	10/18/2023 21:45	37.6	14.1
10/17/2023 17:30	25.7	10.9	10/18/2023 7:45	41.1	13	10/18/2023 22:00	36.3	13.8
10/17/2023 17:45	29.1	11.1	10/18/2023 8:00	43.7	13.5	10/18/2023 22:15	33.3	13.5
10/17/2023 18:00	29.5	11.5	10/18/2023 8:15	39.4	13.8	10/18/2023 22:30	37.2	14.2
10/17/2023 18:15	28.6	10.8	10/18/2023 8:30	39.9	15	10/18/2023 22:45	37	13.7
10/17/2023 18:30	30.6	11.2	10/18/2023 8:45	37.7	13.4	10/18/2023 23:00	34.1	12.9
10/17/2023 18:45	31.9	11.7	10/18/2023 9:00	42.8	13.7	10/18/2023 23:15	40.3	14.8
10/17/2023 19:00	33.8	11.8	10/18/2023 9:15	44.6	13.4	10/18/2023 23:30	43.5	14.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/18/2023 23:45	54.6	16.4
10/19/2023 0:00	110.4	22.2
10/19/2023 0:15	127	24.3
10/19/2023 0:30	155.3	29.1
10/19/2023 0:45	155.1	30.3
10/19/2023 1:00	156.7	31.4
10/19/2023 1:15	154.6	31.1
10/19/2023 1:30	161.1	30.5
10/19/2023 1:45	163.3	32.3
10/19/2023 2:00	169.7	31.9
10/19/2023 2:15	170.6	31.8
10/19/2023 2:30	153.9	32.7
10/19/2023 2:45	159.9	29.6
10/19/2023 3:00	143.3	29.1
10/19/2023 3:15	140.7	28.3
10/19/2023 3:30	111.7	23
10/19/2023 3:45	100.1	22.2
10/19/2023 4:00	123.2	25.7
10/19/2023 4:15	106.3	25.2
10/19/2023 4:30	74.6	19
10/19/2023 4:45	56.7	13.1
10/19/2023 5:00	35.5	11.7
10/19/2023 5:15	36.8	12.3
10/19/2023 5:30	44.9	13.1
10/19/2023 5:45	53.1	14.1
10/19/2023 6:00	48.4	14.1
10/19/2023 6:15	49.7	13.4
10/19/2023 6:30	38.1	11.8
10/19/2023 6:45	38.3	11.5
10/19/2023 7:00	36.4	11.6
10/19/2023 7:15	36.9	11.6
10/19/2023 7:30	48.6	12.8
10/19/2023 7:45	48.5	13
10/19/2023 8:00	52.5	12.9
10/19/2023 8:15	43.7	12.3
10/19/2023 8:30	33.6	11.7
10/19/2023 8:45	41.1	12.9
10/19/2023 9:00	46.2	12.8
10/19/2023 9:15	36.6	12.2
10/19/2023 9:30	54.5	16.6
10/19/2023 9:45	62.9	18.8
10/19/2023 10:00	58.1	18.1
10/19/2023 10:15	45.8	16.6
10/19/2023 10:30	49.5	17.4
10/19/2023 10:45	43.3	16.5
10/19/2023 11:00	49	17
10/19/2023 11:15	44.7	16.2
10/19/2023 11:30	42.3	16.4
10/19/2023 11:45	42.6	16.2
10/19/2023 12:00	40	16.7
10/19/2023 12:15	42	16.6
10/19/2023 12:30	37.5	16
10/19/2023 12:45	38.5	16.9
10/19/2023 13:00	38.2	16.5
10/19/2023 13:15	33.7	15.9
10/19/2023 13:30	30.4	15.6
10/19/2023 13:45	33	15.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/19/2023 14:00	32.4	15.4
10/19/2023 14:15	30.4	14.6
10/19/2023 14:30	28.4	12.8
10/19/2023 14:45	27.8	13.1
10/19/2023 15:00	29.3	13.5
10/19/2023 15:15	34.4	14.1
10/19/2023 15:30	33.5	14.1
10/19/2023 15:45	29.5	13.8
10/19/2023 16:00	29.1	13.8
10/19/2023 16:15	36.7	14.8
10/19/2023 16:30	30	14.1
10/19/2023 16:45	32.3	13.9
10/19/2023 17:00	32.2	14.8
10/19/2023 17:15	30.7	14.4
10/19/2023 17:30	26.7	14.4
10/19/2023 17:45	32.5	15.2
10/19/2023 18:00	30	13.8
10/19/2023 18:15	30.8	13.9
10/19/2023 18:30	29.1	14.2
10/19/2023 18:45	31.1	15
10/19/2023 19:00	30.4	14.7
10/19/2023 19:15	31.5	14.7
10/19/2023 19:30	32	14.8
10/19/2023 19:45	32.1	14.9
10/19/2023 20:00	36	15.3
10/19/2023 20:15	34.4	15.4
10/19/2023 20:30	33.3	15.3
10/19/2023 20:45	27.3	14.4
10/19/2023 21:00	33.8	15.1
10/19/2023 21:15	27.6	14.4
10/19/2023 21:30	29.9	14.6
10/19/2023 21:45	29.8	14.4
10/19/2023 22:00	30.2	14.1
10/19/2023 22:15	34	14.8
10/19/2023 22:30	31.8	14.7
10/19/2023 22:45	38.9	15.4
10/19/2023 23:00	36.7	15.2
10/19/2023 23:15	34.5	14.9
10/19/2023 23:30	39.7	15.6
10/19/2023 23:45	55.2	16.7
10/20/2023 0:00	47.2	16.9
10/20/2023 0:15	46.2	16.4
10/20/2023 0:30	39.5	16
10/20/2023 0:45	37.2	15.7
10/20/2023 1:00	33.6	15.1
10/20/2023 1:15	35.4	15.4
10/20/2023 1:30	35.7	15.4
10/20/2023 1:45	35.3	15.9
10/20/2023 2:00	45.1	16.6
10/20/2023 2:15	41	16.5
10/20/2023 2:30	44.3	16.7
10/20/2023 2:45	41.1	16.6
10/20/2023 3:00	32.3	15
10/20/2023 3:15	32.9	15.4
10/20/2023 3:30	36.5	16.2
10/20/2023 3:45	40.4	16.4
10/20/2023 4:00	40.3	16.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/20/2023 4:15	34.4	15.8
10/20/2023 4:30	41.9	16.5
10/20/2023 4:45	37.8	15.7
10/20/2023 5:00	45.1	16.7
10/20/2023 5:15	47.8	17.2
10/20/2023 5:30	39.3	16.3
10/20/2023 5:45	46.5	17.3
10/20/2023 6:00	52	17.9
10/20/2023 6:15	43.4	17.5
10/20/2023 6:30	41.8	17.3
10/20/2023 6:45	45.3	17.6
10/20/2023 7:00	50	17.7
10/20/2023 7:15	45.4	17.1
10/20/2023 7:30	40.4	16.5
10/20/2023 7:45	41.4	16.5
10/20/2023 8:00	33	15
10/20/2023 8:15	43.3	17.5
10/20/2023 8:30	40.3	16.9
10/20/2023 8:45	36.7	16.3
10/20/2023 9:00	34.1	16.4
10/20/2023 9:15	38.4	16.3
10/20/2023 9:30	40.6	16.7
10/20/2023 9:45	39	16.5
10/20/2023 10:00	34.1	15.7
10/20/2023 10:15	30.6	15.5
10/20/2023 10:30	30.1	15
10/20/2023 10:45	28.5	15.3
10/20/2023 11:00	28.9	14.9
10/20/2023 11:15	28	13.3
10/20/2023 11:30	28.8	11.7
10/20/2023 11:45	25.8	12.1
10/20/2023 12:00	25.8	12.1
10/20/2023 12:15	28.8	12.5
10/20/2023 12:30	30.2	11.8
10/20/2023 12:45	25.9	11
10/20/2023 13:00	24.2	10.7
10/20/2023 13:30	37.9	12.5
10/20/2023 13:45	33.9	11.2
10/20/2023 14:00	24.1	11.5
10/20/2023 14:15	40.7	12.6
10/20/2023 14:30	24.4	11.6
10/20/2023 14:45	24.7	11.7
10/20/2023 15:00	42.5	12.9
10/20/2023 15:15	34.9	12.8
10/20/2023 15:30	100	25.4
10/20/2023 15:45	23.1	11.5
10/20/2023 16:00	51.2	16.4
10/20/2023 16:15	48.1	16
10/20/2023 16:30	36.3	12.6
10/20/2023 16:45	29.8	12
10/20/2023 17:00	30.4	12.1
10/20/2023 17:15	74.1	20.8
10/20/2023 17:30	106.4	29.6
10/20/2023 17:45	81.5	24.1
10/20/2023 18:00	23.1	10.9
10/20/2023 18:15	22.9	10.1
10/20/2023 18:30	26.8	10.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/20/2023 18:45	36.3	11.9
10/20/2023 19:00	42.6	12.4
10/20/2023 19:15	37.4	11.6
10/20/2023 19:30	33.3	10.5
10/20/2023 19:45	29.5	10.4
10/20/2023 20:00	28.7	10.4
10/20/2023 20:15	28.3	10.9
10/20/2023 20:30	24.7	10.8
10/20/2023 20:45	24.5	11.1
10/20/2023 21:00	22.4	11
10/20/2023 21:15	20.7	10.3
10/20/2023 21:30	21.9	10.3
10/20/2023 21:45	19.2	9.8
10/20/2023 22:00	19	9.8
10/20/2023 22:15	21.2	10.8
10/20/2023 22:30	22	12.1
10/20/2023 22:45	22.1	12.9
10/20/2023 23:00	21.9	13.1
10/20/2023 23:15	23.9	13.5
10/20/2023 23:30	25	13.8
10/20/2023 23:45	24.6	13.7
10/21/2023 0:00	25	13.6
10/21/2023 0:15	23.6	13
10/21/2023 0:30	23.1	12.8
10/21/2023 0:45	32.8	15.2
10/21/2023 1:00	52.8	17
10/21/2023 1:15	100.9	28.6
10/21/2023 1:30	116.6	34.7
10/21/2023 1:45	121.4	43.1
10/21/2023 2:00	126.3	40.2
10/21/2023 2:15	130.2	35.4
10/21/2023 2:30	119.9	25.9
10/21/2023 2:45	113.9	25.2
10/21/2023 3:00	112.9	25.8
10/21/2023 3:15	115.4	25.5
10/21/2023 3:30	120.6	25.6
10/21/2023 3:45	132.9	26
10/21/2023 4:00	137.7	27.5
10/21/2023 4:15	139.6	32.3
10/21/2023 4:30	143.7	38.4
10/21/2023 4:45	140.8	35.6
10/21/2023 5:00	133.6	37.5
10/21/2023 5:15	132.5	32.5
10/21/2023 5:30	138.7	33.8
10/21/2023 5:45	148.5	36.8
10/21/2023 6:00	153.6	42.2
10/21/2023 6:15	149.3	32.3
10/21/2023 6:30	157.8	34.4
10/21/2023 6:45	152.6	35.1
10/21/2023 7:00	153.5	37.7
10/21/2023 7:15	147.2	38.3
10/21/2023 7:30	154.6	40.7
10/21/2023 7:45	153.1	35.8
10/21/2023 8:00	129.2	31.5
10/21/2023 8:15	129.2	31.4
10/21/2023 8:30	114	25.9
10/21/2023 8:45	117.8	28.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/21/2023 9:00	90.9	21.5
10/21/2023 9:15	104.5	22.3
10/21/2023 9:30	80.4	21
10/21/2023 9:45	87.6	21.7
10/21/2023 10:00	70.9	20.1
10/21/2023 10:15	57.4	18.5
10/21/2023 10:30	71	20.7
10/21/2023 10:45	77.5	21.6
10/21/2023 11:00	79.5	22.1
10/21/2023 11:15	76.7	21.6
10/21/2023 11:30	78.9	22.8
10/21/2023 11:45	78.1	23.3
10/21/2023 12:00	76.7	22.7
10/21/2023 12:15	69.6	22.1
10/21/2023 12:30	61.9	21.3
10/21/2023 12:45	53.8	20.4
10/21/2023 13:00	50.7	19.5
10/21/2023 13:15	45.5	18.8
10/21/2023 13:30	45.4	18.7
10/21/2023 13:45	49.5	19.6
10/21/2023 14:00	45.8	18.7
10/21/2023 14:15	45	18.9
10/21/2023 14:30	52.9	19.2
10/21/2023 14:45	44.9	18.5
10/21/2023 15:00	48.6	18.9
10/21/2023 15:15	44.6	17.7
10/21/2023 15:30	41	15.8
10/21/2023 15:45	38.6	15.3
10/21/2023 16:00	30.5	13.4
10/21/2023 16:15	37.1	15.8
10/21/2023 16:30	34.9	14.9
10/21/2023 16:45	36.8	16.1
10/21/2023 17:00	39.1	16
10/21/2023 17:15	36.3	15.5
10/21/2023 17:30	36.7	15.7
10/21/2023 17:45	37	15.8
10/21/2023 18:00	30.6	14.3
10/21/2023 18:15	33.5	14.4
10/21/2023 18:30	32.1	14.9
10/21/2023 18:45	35.1	16.1
10/21/2023 19:00	38.6	16.4
10/21/2023 19:15	42.2	18
10/21/2023 19:30	52.5	19.3
10/21/2023 19:45	50.9	19.2
10/21/2023 20:00	52.1	19.3
10/21/2023 20:15	48.1	18.1
10/21/2023 20:30	40.5	16.8
10/21/2023 20:45	37.4	15.6
10/21/2023 21:00	34.7	15.2
10/21/2023 21:15	41.8	16.2
10/21/2023 21:30	41.2	15.8
10/21/2023 21:45	46.4	16.5
10/21/2023 22:00	51.4	16.4
10/21/2023 22:15	59.5	17.8
10/21/2023 22:30	64.4	18.4
10/21/2023 22:45	50.3	16.5
10/21/2023 23:00	46.2	16.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/21/2023 23:15	45.6	16.3
10/21/2023 23:30	48.9	16.8
10/21/2023 23:45	42.5	16
10/22/2023 0:00	42.7	16.4
10/22/2023 0:15	52.2	18
10/22/2023 0:30	59.5	18.9
10/22/2023 0:45	59.8	18.9
10/22/2023 1:00	56.8	18.4
10/22/2023 1:15	42.2	16.9
10/22/2023 1:30	48.3	17.9
10/22/2023 1:45	41.7	17.6
10/22/2023 2:00	59.8	18.3
10/22/2023 2:15	44.3	17.4
10/22/2023 2:30	58.1	18
10/22/2023 2:45	60.2	18.3
10/22/2023 3:00	59.5	17.7
10/22/2023 3:15	52.7	17.1
10/22/2023 3:30	51.1	16.4
10/22/2023 3:45	50.7	16.4
10/22/2023 4:00	49.8	16.1
10/22/2023 4:15	50.7	15.7
10/22/2023 4:30	52.3	16.8
10/22/2023 4:45	51	16.9
10/22/2023 5:00	49.2	16.2
10/22/2023 5:15	58.4	18.1
10/22/2023 5:30	59.6	18.5
10/22/2023 5:45	60.2	18.5
10/22/2023 6:00	55.6	17.6
10/22/2023 6:15	60.5	18.4
10/22/2023 6:30	70.2	18.2
10/22/2023 6:45	48.9	17.4
10/22/2023 7:00	39.1	15.9
10/22/2023 7:15	53.7	19.4
10/22/2023 7:30	63	19.9
10/22/2023 7:45	60.7	19.6
10/22/2023 8:00	83.8	21.5
10/22/2023 8:15	55.4	19.6
10/22/2023 8:30	57.3	19.7
10/22/2023 8:45	55.1	19.7
10/22/2023 9:00	58.2	19.7
10/22/2023 9:15	71.5	20.4
10/22/2023 9:30	68.5	20
10/22/2023 9:45	71.8	20.6
10/22/2023 10:00	64.2	20.1
10/22/2023 10:15	58.2	19.1
10/22/2023 10:30	31.5	15.1
10/22/2023 10:45	30	14.4
10/22/2023 11:00	24.8	14
10/22/2023 11:15	36.5	14.7
10/22/2023 11:30	18.9	11.7
10/22/2023 11:45	20.9	8.5
10/22/2023 12:00	23.3	8.4
10/22/2023 12:15	36.1	10.1
10/22/2023 12:30	21.1	8
10/22/2023 12:45	21.3	8.1
10/22/2023 13:00	23.6	8.1
10/22/2023 13:15	33.4	9.2

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/22/2023 13:30	19.9	8.7	10/23/2023 3:45	27.8	10.9	10/26/2023 17:30	22.7	11.2
10/22/2023 13:45	20.8	9.9	10/23/2023 4:00	30.4	10.8	10/26/2023 17:45	22.7	11.2
10/22/2023 14:00	25.3	11.4	10/23/2023 4:15	30.8	10.6	10/26/2023 18:00	22.1	11.3
10/22/2023 14:15	27.4	12.2	10/23/2023 4:30	30.3	10.4	10/26/2023 18:15	23.9	11.2
10/22/2023 14:30	24.5	11.8	10/23/2023 4:45	27.1	10.2	10/26/2023 18:30	23.8	11.3
10/22/2023 14:45	26.2	12.3	10/23/2023 5:00	28.8	10.5	10/26/2023 18:45	28.7	11.6
10/22/2023 15:00	25	12.3	10/23/2023 5:15	27.3	9.8	10/26/2023 19:00	25.8	11.6
10/22/2023 15:15	46.6	14.8	10/23/2023 5:30	27.3	10	10/26/2023 19:15	25.4	11.6
10/22/2023 15:30	50.8	15.4	10/23/2023 5:45	29	10.5	10/26/2023 19:30	29.9	13.2
10/22/2023 15:45	39.8	14.7	10/23/2023 6:00	31.5	11.2	10/26/2023 19:45	24.8	12.2
10/22/2023 16:00	37.6	14.5	10/23/2023 6:15	34.8	11.8	10/26/2023 20:00	26.7	12.5
10/22/2023 16:15	26.4	12.8	10/23/2023 6:30	35.5	11.4	10/26/2023 20:15	27.4	13.1
10/22/2023 16:30	71.4	17.4	10/23/2023 6:45	31.5	11.1	10/26/2023 20:30	27.9	13.6
10/22/2023 16:45	54.4	15.6	10/23/2023 7:00	35.3	11.3	10/26/2023 20:45	28.2	13.7
10/22/2023 17:00	68.6	17.3	10/23/2023 7:15	32.1	10.8	10/26/2023 21:00	23.6	13.2
10/22/2023 17:15	54.7	13	10/23/2023 7:30	31.3	11.2	10/26/2023 21:15	24.2	13.2
10/22/2023 17:30	29	9.9	10/23/2023 7:45	27	10.6	10/26/2023 21:30	27.9	13.7
10/22/2023 17:45	29.1	11.6	10/23/2023 8:00	30.4	10.8	10/26/2023 21:45	27.3	13.5
10/22/2023 18:00	30.2	11.6	10/23/2023 8:15	28.9	10.9	10/26/2023 22:00	25.6	13.3
10/22/2023 18:15	32.7	11.9	10/23/2023 8:30	29.3	11.4	10/26/2023 22:15	29.1	13.7
10/22/2023 18:30	31.1	11	10/23/2023 8:45	32.8	12	10/26/2023 22:30	27	13.5
10/22/2023 18:45	27.9	9.7	10/23/2023 9:00	33.3	13.5	10/26/2023 22:45	25.6	13.2
10/22/2023 19:00	25	9.3	10/23/2023 9:15	33.1	14.1	10/26/2023 23:00	27.4	13.4
10/22/2023 19:15	27.3	10.1	10/23/2023 9:30	41.7	15.8	10/26/2023 23:15	28.9	13.4
10/22/2023 19:30	25.2	9.4	10/23/2023 9:45	43.8	16.3	10/26/2023 23:30	28.4	13.5
10/22/2023 19:45	26.5	9.5	10/23/2023 10:00	33.4	15	10/26/2023 23:45	28.5	13.7
10/22/2023 20:00	32.3	11.1	10/23/2023 10:15	52	17.9	10/27/2023 0:00	27.2	13.1
10/22/2023 20:15	39.1	11.9	10/23/2023 10:30	44.4	17.5	10/27/2023 0:15	23.6	12.3
10/22/2023 20:30	38.7	12.2	10/23/2023 10:45	50.5	17.7	10/27/2023 0:30	23.8	12.3
10/22/2023 20:45	39.8	12.1	10/23/2023 11:00	48.5	17.5	10/27/2023 0:45	23.7	12.9
10/22/2023 21:00	39.5	12.3	10/23/2023 11:15	45.5	17.4	10/27/2023 1:00	23.6	12.8
10/22/2023 21:15	35.8	11.8	10/23/2023 11:30	40.9	16.4	10/27/2023 1:15	25.3	12.8
10/22/2023 21:30	41.2	12.8	10/23/2023 11:45	52.4	17.4	10/27/2023 1:30	25.8	13.3
10/22/2023 21:45	34.2	12.3	10/23/2023 12:00	41	16	10/27/2023 1:45	25.9	12.4
10/22/2023 22:00	31.3	11.7	10/23/2023 12:15	39.2	15.6	10/27/2023 2:00	23.9	11.5
10/22/2023 22:15	30.7	11.7	10/23/2023 12:30	30.9	11	10/27/2023 2:15	22.4	11.3
10/22/2023 22:30	29.8	11.4	10/23/2023 12:45	28.9	10.8	10/27/2023 2:30	22.1	11.2
10/22/2023 22:45	30.6	12.3	10/23/2023 13:00	26.9	10.8	10/27/2023 2:45	22.1	11.2
10/22/2023 23:00	31	12.3	10/23/2023 13:15	24.1	11.1	10/27/2023 3:00	23.8	10.9
10/22/2023 23:15	28.3	12.1	10/23/2023 13:30	21.5	10.6	10/27/2023 3:15	26	11.5
10/22/2023 23:30	32.7	12.6	10/23/2023 13:45	20.5	9.2	10/27/2023 3:30	23.4	11
10/22/2023 23:45	31.4	12.8	10/23/2023 14:00	21.2	8.9	10/27/2023 3:45	23.5	11.4
10/23/2023 0:00	29.8	12.1	10/23/2023 14:15	21.7	9	10/27/2023 4:00	28.5	13
10/23/2023 0:15	30.4	11.4	10/23/2023 14:30	18.7	8.2	10/27/2023 4:15	26.1	11.7
10/23/2023 0:30	29	11.5	10/23/2023 14:45	21.1	8.3	10/27/2023 4:30	23.8	10.7
10/23/2023 0:45	29.3	11.4	10/23/2023 15:00	23.1	8.7	10/27/2023 4:45	24	10.7
10/23/2023 1:00	28.9	11.6	10/23/2023 15:15	19.6	9.2	10/27/2023 5:00	24.3	10.5
10/23/2023 1:15	28.4	12.1	10/23/2023 15:30	21.1	9.4	10/27/2023 5:15	25.2	10.6
10/23/2023 1:30	27.8	11.5	10/23/2023 15:45	22.6	9.4	10/27/2023 5:30	34.8	11.3
10/23/2023 1:45	30.2	11.8	10/23/2023 16:00	27.3	9.8	10/27/2023 5:45	43.4	12.5
10/23/2023 2:00	31.9	11.9	10/23/2023 16:15	25.9	9	10/27/2023 6:00	35.9	11.6
10/23/2023 2:15	29.9	11.5	10/23/2023 16:30	24.7	9.6	10/27/2023 6:15	37.7	11.8
10/23/2023 2:30	26	10.7	10/23/2023 16:45	36.8	12.3	10/27/2023 6:30	36	12.1
10/23/2023 2:45	24.4	10.4	10/26/2023 16:30	22.9	10.5	10/27/2023 6:45	31.8	10.8
10/23/2023 3:00	24.3	10.4	10/26/2023 16:45	24.3	10.6	10/27/2023 7:00	29.1	10.9
10/23/2023 3:15	27.1	10.9	10/26/2023 17:00	23.2	11.2	10/27/2023 7:15	28.5	10.7
10/23/2023 3:30	25.9	10.5	10/26/2023 17:15	21.2	11	10/27/2023 7:30	27.4	10.2

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
10/27/2023 7:45	30.8	10.3	11/3/2023 15:15	35.6	14.4	11/4/2023 5:30	68.9	21
10/27/2023 8:00	41.2	12.6	11/3/2023 15:30	42	15.2	11/4/2023 5:45	67.5	20.6
10/27/2023 8:15	35.1	11.6	11/3/2023 15:45	43.3	14.9	11/4/2023 6:00	65.2	20.5
10/27/2023 8:30	31.8	10.4	11/3/2023 16:00	35	14.4	11/4/2023 6:15	78.6	21.7
10/27/2023 8:45	30.2	10	11/3/2023 16:15	42.3	15.2	11/4/2023 6:30	60.7	20.2
10/27/2023 9:00	29.8	10.4	11/3/2023 16:30	35.4	14.3	11/4/2023 6:45	67.1	20.6
10/27/2023 9:15	24.5	9.9	11/3/2023 16:45	31.2	13.7	11/4/2023 7:00	59.1	20.4
10/27/2023 9:30	29.7	11.1	11/3/2023 17:00	42.4	15	11/4/2023 7:15	62.9	20.5
10/27/2023 9:45	29.3	11.2	11/3/2023 17:15	44.1	14.9	11/4/2023 7:30	59.5	20.8
10/27/2023 10:00	24.4	10.1	11/3/2023 17:30	39.4	14.2	11/4/2023 7:45	70.3	21
10/27/2023 10:15	26.2	10.4	11/3/2023 17:45	36	14	11/4/2023 8:00	78.4	22
10/27/2023 10:30	23.8	10.6	11/3/2023 18:00	33.8	15.1	11/4/2023 8:15	82.9	22.2
10/27/2023 10:45	27.6	13	11/3/2023 18:15	38.7	15.9	11/4/2023 8:30	110	23.4
10/27/2023 11:00	27.3	12.8	11/3/2023 18:30	41.2	16	11/4/2023 8:45	109.2	23.2
10/27/2023 11:15	30	14.5	11/3/2023 18:45	43.6	17.1	11/4/2023 9:00	117.6	24.3
10/27/2023 11:30	41.2	18.3	11/3/2023 19:00	48.5	18	11/4/2023 9:15	84.4	22
10/27/2023 11:45	58.6	20	11/3/2023 19:15	51.1	18.3	11/4/2023 9:30	77.1	21.9
10/27/2023 12:00	30.4	15	11/3/2023 19:30	44.9	17.5	11/4/2023 9:45	75.9	21.6
10/27/2023 12:15	36.5	15.6	11/3/2023 19:45	45.9	17	11/4/2023 10:00	75.4	21.5
10/27/2023 12:30	32.1	16.4	11/3/2023 20:00	51.4	17.4	11/4/2023 10:15	71.3	20.9
10/27/2023 12:45	28.8	14.9	11/3/2023 20:15	50.2	17.9	11/4/2023 10:30	59.7	19.7
10/27/2023 13:00	38.4	16.5	11/3/2023 20:30	47.3	17.1	11/4/2023 10:45	53.9	18.9
10/27/2023 13:15	37.6	17	11/3/2023 20:45	47	17.5	11/4/2023 11:00	56.7	18.9
10/27/2023 13:30	19.6	11.8	11/3/2023 21:00	49.4	18.2	11/4/2023 11:15	51	18.5
10/27/2023 13:45	12.5	9.7	11/3/2023 21:15	42	17.4	11/4/2023 11:30	53.6	18.1
10/27/2023 14:00	11.4	8.8	11/3/2023 21:30	42.9	17.7	11/4/2023 11:45	46.6	16.8
10/27/2023 14:15	17.3	8.9	11/3/2023 21:45	48.7	18.7	11/4/2023 12:00	49.1	16.6
10/27/2023 14:30	12.1	8.1	11/3/2023 22:00	47.5	19.1	11/4/2023 12:15	37.1	15.3
10/27/2023 14:45	15.3	8.3	11/3/2023 22:15	48.8	18.1	11/4/2023 12:30	35.2	14.5
10/27/2023 15:00	17	8.3	11/3/2023 22:30	50.8	19.1	11/4/2023 12:45	39.6	15
10/27/2023 15:15	21.9	8.3	11/3/2023 22:45	58.6	20.4	11/4/2023 13:00	35.6	15.2
10/27/2023 15:30	31	19.2	11/3/2023 23:00	53.8	17.5	11/4/2023 13:15	34.4	14.8
10/27/2023 15:45	64.9	46.4	11/3/2023 23:15	53.4	16.7	11/4/2023 13:30	32.8	14
10/27/2023 16:00	56.8	39.5	11/3/2023 23:30	61.6	17.9	11/4/2023 13:45	33	14.3
10/27/2023 16:15	50.1	31.9	11/3/2023 23:45	60.9	18	11/4/2023 14:00	33.3	14
11/3/2023 9:45	77.5	22.9	11/4/2023 0:00	56.6	16.4	11/4/2023 14:15	31.1	13.8
11/3/2023 10:00	56.5	20	11/4/2023 0:15	55.3	16.4	11/4/2023 14:30	31.7	13.8
11/3/2023 10:15	54.7	19.3	11/4/2023 0:30	51	16.5	11/4/2023 14:45	39.7	14.4
11/3/2023 10:30	46.2	18	11/4/2023 0:45	50	16.3	11/4/2023 15:00	30.3	13.2
11/3/2023 10:45	46.1	18.5	11/4/2023 1:00	45.7	15.7	11/4/2023 15:15	32.1	13.4
11/3/2023 11:00	43	17.6	11/4/2023 1:15	46.3	15.6	11/4/2023 15:30	33.5	13.4
11/3/2023 11:15	43.8	17.3	11/4/2023 1:30	49.1	16.8	11/4/2023 15:45	49.4	15
11/3/2023 11:30	42.2	16.6	11/4/2023 1:45	49.1	16.6	11/4/2023 16:00	42.4	13.8
11/3/2023 11:45	41.5	15.6	11/4/2023 2:00	42.8	15.8	11/4/2023 16:15	56	15.3
11/3/2023 12:00	40.2	15.9	11/4/2023 2:15	40.7	16.5	11/4/2023 16:30	28.3	11.6
11/3/2023 12:15	41.6	16.2	11/4/2023 2:30	52.3	17.5	11/4/2023 16:45	46	14.5
11/3/2023 12:30	35.2	14.8	11/4/2023 2:45	47.7	16.4	11/4/2023 17:00	46.7	16.1
11/3/2023 12:45	39.2	16.5	11/4/2023 3:00	44.2	15.9	11/4/2023 17:15	36.6	15.1
11/3/2023 13:00	42.7	16.9	11/4/2023 3:15	44.9	17	11/4/2023 17:30	40.1	15.6
11/3/2023 13:15	39.5	16.4	11/4/2023 3:30	42.2	17.3	11/4/2023 17:45	33.8	14.5
11/3/2023 13:30	42.2	16.6	11/4/2023 3:45	46.9	16.8	11/4/2023 18:00	36.2	14.6
11/3/2023 13:45	34.8	15.3	11/4/2023 4:00	42.2	17.8	11/4/2023 18:15	37.3	15.3
11/3/2023 14:00	34.9	15.4	11/4/2023 4:15	48.5	17.7	11/4/2023 18:30	42.7	16
11/3/2023 14:15	35.6	15.3	11/4/2023 4:30	68.1	20.3	11/4/2023 18:45	47.7	16.7
11/3/2023 14:30	34.4	15	11/4/2023 4:45	62.6	21.2	11/4/2023 19:00	47.6	16.5
11/3/2023 14:45	32.6	14.8	11/4/2023 5:00	60.2	20.2	11/4/2023 19:15	44.7	16.5
11/3/2023 15:00	37.6	15.2	11/4/2023 5:15	63.5	20.7	11/4/2023 19:30	42.7	15.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/4/2023 19:45	45.2	15.5
11/4/2023 20:00	43.3	15.5
11/4/2023 20:15	45.4	15.2
11/4/2023 20:30	46.5	15.6
11/4/2023 20:45	44.3	15.5
11/4/2023 21:00	46	15.4
11/4/2023 21:15	41.6	14.9
11/4/2023 21:30	40.8	15.1
11/4/2023 21:45	38.2	14.9
11/4/2023 22:00	41.1	15.1
11/4/2023 22:15	37.9	16
11/4/2023 22:30	42.4	16.8
11/4/2023 22:45	40.1	15.6
11/4/2023 23:00	44.2	17
11/4/2023 23:15	39.5	16.2
11/4/2023 23:30	39.8	16.1
11/4/2023 23:45	45.5	17.3
11/5/2023 0:00	38.1	15.9
11/5/2023 0:15	43.7	16.5
11/5/2023 0:30	36.9	15.9
11/5/2023 0:45	35.7	16.1
11/5/2023 1:00	35.3	15
11/5/2023 1:15	32.9	15.4
11/5/2023 1:30	38	16
11/5/2023 1:45	41.3	17.1
11/5/2023 2:00	48.4	19.1
11/5/2023 2:15	39.3	17.2
11/5/2023 2:30	37.8	15.3
11/5/2023 2:45	36.9	15.1
11/5/2023 3:00	43.4	15.9
11/5/2023 3:15	40.2	17.5
11/5/2023 3:30	45.1	17.6
11/5/2023 3:45	45.2	17.7
11/5/2023 4:00	48.9	18.7
11/5/2023 4:15	62.3	19.4
11/5/2023 4:30	60.9	19
11/5/2023 4:45	70.2	20
11/5/2023 5:00	70.7	19.9
11/5/2023 5:15	66.8	19.5
11/5/2023 5:30	59.4	18.9
11/5/2023 5:45	55.9	17.7
11/5/2023 6:00	60.7	17.4
11/5/2023 6:15	60	17.4
11/5/2023 6:30	57.4	16.5
11/5/2023 6:45	50.1	14.3
11/5/2023 7:00	49.2	14.1
11/5/2023 7:15	45.1	13.8
11/5/2023 7:30	49.4	13.9
11/5/2023 7:45	46.6	13.6
11/5/2023 8:00	50.6	14.3
11/5/2023 8:15	48.5	14
11/5/2023 8:30	55.5	14.7
11/5/2023 8:45	53.5	14.8
11/5/2023 9:00	53.2	15
11/5/2023 9:15	55.5	15.9
11/5/2023 9:30	52.3	15.8
11/5/2023 9:45	54	16.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/5/2023 10:00	59.9	17.2
11/5/2023 10:15	55.8	17.5
11/5/2023 10:30	53.4	17.1
11/5/2023 10:45	48	16.1
11/5/2023 11:00	50.4	16.2
11/5/2023 11:15	42.6	14.7
11/5/2023 11:30	37.1	14.3
11/5/2023 11:45	34.6	13.7
11/5/2023 12:00	38.8	14.7
11/5/2023 12:15	34.1	14.4
11/5/2023 12:30	30.4	13.5
11/5/2023 12:45	39.2	14.4
11/5/2023 13:00	34.1	13.8
11/5/2023 13:15	28	13
11/5/2023 13:30	31.8	13.6
11/5/2023 13:45	31.6	14.1
11/5/2023 14:00	27.1	13.1
11/5/2023 14:15	25.6	13
11/5/2023 14:30	26.1	12.9
11/5/2023 14:45	26.7	13
11/5/2023 15:00	27.5	13.2
11/5/2023 15:15	27.5	13.4
11/5/2023 15:30	28.5	13.3
11/5/2023 15:45	28.6	13.3
11/5/2023 16:00	30.2	13.5
11/5/2023 16:15	32.3	13.3
11/5/2023 16:30	31.4	13.5
11/5/2023 16:45	30	12.8
11/5/2023 17:00	29	12.5
11/5/2023 17:15	26.7	12.7
11/5/2023 17:30	27.8	12.3
11/5/2023 17:45	40.3	14.1
11/5/2023 18:00	36.8	13.5
11/5/2023 18:15	33.7	13.5
11/5/2023 18:30	32.7	13.3
11/5/2023 18:45	38.2	13.6
11/5/2023 19:00	43.2	13.5
11/5/2023 19:15	34.4	13.2
11/5/2023 19:30	36	10.1
11/5/2023 19:45	41.1	8.5
11/5/2023 20:00	53.5	10.6
11/5/2023 20:15	72.9	14
11/5/2023 20:30	76.6	14.3
11/5/2023 20:45	75.2	15.2
11/5/2023 21:00	45.4	14.9
11/5/2023 21:15	49	14.6
11/5/2023 21:30	43.5	14.4
11/5/2023 21:45	40	14.2
11/5/2023 22:00	43.7	13.5
11/5/2023 22:15	49.8	14.7
11/5/2023 22:30	58.2	15.2
11/5/2023 22:45	48.9	14.9
11/5/2023 23:00	43.6	13.9
11/5/2023 23:15	41.9	13.5
11/5/2023 23:30	48.2	14.4
11/5/2023 23:45	47.5	14.7
11/6/2023 0:00	47.8	14.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/6/2023 0:15	54	15.4
11/6/2023 0:30	57	16.2
11/6/2023 0:45	60.7	17.7
11/6/2023 1:00	70.1	19.3
11/6/2023 1:15	40.7	14.8
11/6/2023 1:30	39.2	14.4
11/6/2023 1:45	35.6	13.5
11/6/2023 2:00	43.4	14.4
11/6/2023 2:15	36.5	13.3
11/6/2023 2:30	41	13.7
11/6/2023 2:45	36.7	13.1
11/6/2023 3:00	37.1	13.2
11/6/2023 3:15	34.4	12.7
11/6/2023 3:30	39.1	13.2
11/6/2023 3:45	36.7	13.3
11/6/2023 4:00	38.7	13.6
11/6/2023 4:15	40.7	13
11/6/2023 4:30	48.7	13.9
11/6/2023 4:45	48.3	13.4
11/6/2023 5:00	69.6	17.8
11/6/2023 5:15	87.2	20.8
11/6/2023 5:30	78	19.8
11/6/2023 5:45	57.4	15.4
11/6/2023 6:00	43.3	12.1
11/6/2023 6:15	46.1	12.5
11/6/2023 6:30	44	11.8
11/6/2023 6:45	56.1	12.6
11/6/2023 7:00	136.2	18.7
11/6/2023 7:15	155.1	22.2
11/6/2023 7:30	155.9	22.9
11/6/2023 7:45	169.8	24.3
11/6/2023 8:00	190.5	26.3
11/6/2023 8:15	181.5	25.2
11/6/2023 8:30	185	25.3
11/6/2023 8:45	167	24.4
11/6/2023 9:00	158.4	23.9
11/6/2023 9:15	132.6	24
11/6/2023 9:30	124.2	23.4
11/6/2023 9:45	88.8	20.1
11/6/2023 10:00	41.5	17.4
11/6/2023 10:15	42.3	15.7
11/6/2023 10:30	52.7	14.7
11/6/2023 10:45	65.3	17.4
11/6/2023 11:00	58.5	15.3
11/6/2023 11:15	62.4	16.5
11/6/2023 11:30	59.9	16.1
11/6/2023 11:45	56.5	15.2
11/6/2023 12:00	56.9	15.4
11/6/2023 12:15	54.5	14.6
11/6/2023 12:30	42	12.2
11/6/2023 12:45	39.4	11.8
11/6/2023 13:00	42	12.3
11/6/2023 13:15	38.1	11.7
11/6/2023 13:30	41.9	12.4
11/6/2023 13:45	45.7	11.3
11/6/2023 14:00	77.4	15.2
11/6/2023 14:15	22.2	14.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/6/2023 14:30	25.9	14.2
11/6/2023 14:45	28.5	13.2
11/6/2023 15:00	31.8	12.6
11/6/2023 15:15	35.1	11.4
11/6/2023 15:30	38.2	11.6
11/6/2023 15:45	32.9	11.6
11/6/2023 16:00	52	12.8
11/6/2023 16:15	32.8	10.7
11/6/2023 16:30	31.3	10.9
11/6/2023 16:45	29.6	10.6
11/6/2023 17:00	31.9	11.1
11/6/2023 17:15	29.5	10.5
11/6/2023 17:30	30.4	10.9
11/6/2023 17:45	26.1	10
11/6/2023 18:00	33.5	11.3
11/6/2023 18:15	45.8	13.3
11/6/2023 18:30	58.2	14.6
11/6/2023 18:45	62.5	15.6
11/6/2023 19:00	60.4	16
11/6/2023 19:15	71.1	16.8
11/6/2023 19:30	62.8	16.2
11/6/2023 19:45	56.7	16.2
11/6/2023 20:00	53.3	15.6
11/6/2023 20:15	48.8	15.3
11/6/2023 20:30	43.1	14.3
11/6/2023 20:45	37.9	14.6
11/6/2023 21:00	42.1	15.1
11/6/2023 21:15	57.9	16.2
11/6/2023 21:30	59	17
11/6/2023 21:45	68.4	17.7
11/6/2023 22:00	45.9	15.5
11/6/2023 22:15	47.4	15.2
11/6/2023 22:30	32.8	15
11/6/2023 22:45	42.1	14.7
11/6/2023 23:00	42.9	13.5
11/6/2023 23:15	30	12.1
11/6/2023 23:30	34.2	12.8
11/6/2023 23:45	31.1	12.5
11/7/2023 0:00	29.8	11.1
11/7/2023 0:15	31.6	10.1
11/7/2023 0:30	31.9	10.1
11/7/2023 0:45	36.6	10.3
11/7/2023 1:00	39.4	10.5
11/7/2023 1:15	32.2	10.7
11/7/2023 1:30	36	11.7
11/7/2023 1:45	35.2	11.4
11/7/2023 2:00	33.4	11
11/7/2023 2:15	33.2	10.2
11/7/2023 2:30	29.4	9.6
11/7/2023 2:45	28.4	9.4
11/7/2023 3:00	42.8	12.6
11/7/2023 3:15	39.3	12.7
11/7/2023 3:30	59	15.3
11/7/2023 3:45	51.1	15.1
11/7/2023 4:00	44.1	13.3
11/7/2023 4:15	33.9	11.8
11/7/2023 4:30	26	10.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/7/2023 4:45	26.9	10.9
11/7/2023 5:00	29.1	10.9
11/7/2023 5:15	34.3	12.6
11/7/2023 5:30	34.3	13.1
11/7/2023 5:45	40.9	14.7
11/7/2023 6:00	50.7	16.2
11/7/2023 6:15	54.8	16.6
11/7/2023 6:30	55.8	17.2
11/7/2023 6:45	49.4	16.8
11/7/2023 7:00	59.1	17
11/7/2023 7:15	53.6	16.9
11/7/2023 7:30	45.3	16.4
11/7/2023 7:45	39.6	15.4
11/7/2023 8:00	40.6	15.5
11/7/2023 8:15	40.8	16.9
11/7/2023 8:30	45.2	16.7
11/7/2023 8:45	53.3	18
11/7/2023 9:00	60.3	17.3
11/7/2023 9:15	61.2	18
11/7/2023 9:30	37.2	15.6
11/7/2023 9:45	65.2	16.1
11/7/2023 10:00	57.3	16.6
11/7/2023 11:00	63.4	18.7
11/7/2023 11:15	59.2	18.7
11/7/2023 11:30	54.1	17.3
11/7/2023 11:45	50.8	16.2
11/11/2023 10:00	47.7	11.4
11/11/2023 10:15	24.9	7.7
11/11/2023 10:30	14.1	5.7
11/11/2023 10:45	11.5	5.2
11/11/2023 11:00	11.2	5
11/22/2023 9:15	84.75	0
11/22/2023 9:30	80.82	25.5
11/22/2023 9:45	58.427	25.9
11/22/2023 10:00	52.673	24.8
11/22/2023 10:15	48.427	23.9
11/22/2023 10:30	41.82	22.9
11/22/2023 10:45	40.2	21.5
11/22/2023 11:00	37.16	20.4
11/22/2023 11:15	29.087	19.9
11/22/2023 11:30	27.447	16.4
11/22/2023 11:45	28.12	16.1
11/22/2023 12:00	27.667	15.7
11/22/2023 12:15	27.625	15.2
11/22/2023 12:30	24.867	14.2
11/22/2023 12:45	23.993	12.9
11/22/2023 13:00	27.813	12.2
11/22/2023 13:15	25.127	13.2
11/22/2023 13:30	22.32	13.1
11/22/2023 13:45	30.74	12.5
11/22/2023 14:00	45.293	13.4
11/22/2023 14:15	45.553	14.4
11/22/2023 14:30	38.827	16.7
11/22/2023 14:45	36.473	16.3
11/22/2023 15:00	35.607	16
11/22/2023 15:15	34.473	16
11/22/2023 15:30	40.253	14.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/22/2023 15:45	36.127	15.9
11/22/2023 16:00	29.56	14.3
11/22/2023 16:15	29.713	13
11/22/2023 16:30	25.967	12.2
11/22/2023 16:45	26.253	11.4
11/22/2023 17:00	36.287	11.5
11/22/2023 17:15	37.193	13
11/22/2023 17:30	32.513	13.2
11/22/2023 17:45	28.66	12.8
11/22/2023 18:00	34.253	11.9
11/22/2023 18:15	29.073	12.8
11/22/2023 18:30	30.24	12.2
11/22/2023 18:45	30.687	12
11/22/2023 19:00	30.273	12.3
11/22/2023 19:15	29.393	12.7
11/22/2023 19:30	31.073	12.4
11/22/2023 19:45	30.853	12.4
11/22/2023 20:00	40.52	12.7
11/22/2023 20:15	43.16	14.8
11/22/2023 20:30	46.067	16.3
11/22/2023 20:45	44.32	18.1
11/22/2023 21:00	55.087	18.2
11/22/2023 21:15	54.307	18.9
11/22/2023 21:30	56.553	18.8
11/22/2023 21:45	57.82	19
11/22/2023 22:00	53.147	18.7
11/22/2023 22:15	51.447	18.4
11/22/2023 22:30	52.313	18.1
11/22/2023 22:45	60.613	17.9
11/22/2023 23:00	60.853	18.9
11/22/2023 23:15	60.3	18.9
11/22/2023 23:30	46.66	19.6
11/22/2023 23:45	38.327	17.9
11/23/2023 0:00	35.26	15.6
11/23/2023 0:15	33.893	13.8
11/23/2023 0:30	32.007	12.7
11/23/2023 0:45	33.293	11.9
11/23/2023 1:00	31.5	12
11/23/2023 1:15	31.64	11.2
11/23/2023 1:30	29.92	11.5
11/23/2023 1:45	31.26	10.7
11/23/2023 2:00	29.867	11.3
11/23/2023 2:15	28.86	10.2
11/23/2023 2:30	33.287	10.4
11/23/2023 2:45	31.507	11.5
11/23/2023 3:00	35.133	11.3
11/23/2023 3:15	36.34	11.8
11/23/2023 3:30	40.06	14.3
11/23/2023 3:45	39.44	16
11/23/2023 4:00	36.687	15.9
11/23/2023 4:15	39.44	15.1
11/23/2023 4:30	37.787	15.5
11/23/2023 4:45	34.14	15.4
11/23/2023 5:00	30.04	13.4
11/23/2023 5:15	29.833	10.6
11/23/2023 5:30	26.547	9.4
11/23/2023 5:45	26.02	7.8

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/23/2023 6:00	26.153	7.3	11/23/2023 20:15	15.167	3.3	11/24/2023 10:30	61.8	23.6
11/23/2023 6:15	25.567	6.7	11/23/2023 20:30	13.947	3.3	11/24/2023 10:45	84.96	19.6
11/23/2023 6:30	24.233	6.6	11/23/2023 20:45	18.973	3.1	11/24/2023 11:00	73.627	21.2
11/23/2023 6:45	22.653	6.2	11/23/2023 21:00	16.187	3.4	11/24/2023 11:15	50.107	19.6
11/23/2023 7:00	152.133	6.2	11/23/2023 21:15	12.647	3.4	11/24/2023 11:30	49.22	15.9
11/23/2023 7:15	99.193	22.6	11/23/2023 21:30	11.747	2.7	11/24/2023 11:45	52.407	14.4
11/23/2023 7:30	51.593	21.2	11/23/2023 21:45	10.593	2.6	11/24/2023 12:00	39.033	13.6
11/23/2023 7:45	58.513	14.7	11/23/2023 22:00	9.667	2.5	11/24/2023 12:15	41.407	10.8
11/23/2023 8:00	30.62	20.3	11/23/2023 22:15	8.9	2.3	11/24/2023 12:30	42.873	10.5
11/23/2023 8:15	42.933	10.6	11/23/2023 22:30	10.107	2.3	11/24/2023 12:45	45.273	10.5
11/23/2023 8:30	37.533	10.8	11/23/2023 22:45	9.953	2.4	11/24/2023 13:00	36.193	10.5
11/23/2023 8:45	41.78	7.6	11/23/2023 23:00	9.553	2.6	11/24/2023 13:15	37.96	9.4
11/23/2023 9:00	42.207	10.3	11/23/2023 23:15	9.533	2.4	11/24/2023 13:30	37.04	9.9
11/23/2023 9:15	35.453	11.8	11/23/2023 23:30	9.48	2.6	11/24/2023 13:45	35.573	10.6
11/23/2023 9:30	42.32	11.4	11/23/2023 23:45	8.56	2.4	11/24/2023 14:00	42.793	11.4
11/23/2023 9:45	41.3	13.5	11/24/2023 0:00	8.413	2.4	11/24/2023 14:15	39.613	13.8
11/23/2023 10:00	41.487	10.9	11/24/2023 0:15	7.44	2.2	11/24/2023 14:30	42.673	11.6
11/23/2023 10:15	45.86	13.4	11/24/2023 0:30	6.9	2.2	11/24/2023 14:45	42.267	13.5
11/23/2023 10:30	41.94	15	11/24/2023 0:45	8.26	2.3	11/24/2023 15:00	42.84	14.3
11/23/2023 10:45	54.433	13.5	11/24/2023 1:00	7.673	2.6	11/24/2023 15:15	39.833	14.2
11/23/2023 11:00	53.1	15	11/24/2023 1:15	6.82	2.3	11/24/2023 15:30	35.727	15.3
11/23/2023 11:15	50.793	15	11/24/2023 1:30	6.707	2.2	11/24/2023 15:45	37.267	13.9
11/23/2023 11:30	50.093	14.7	11/24/2023 1:45	5.973	2	11/24/2023 16:00	35.473	14
11/23/2023 11:45	38.56	14.2	11/24/2023 2:00	5.133	1.7	11/24/2023 16:15	36.167	12.9
11/23/2023 12:00	33.867	12.1	11/24/2023 2:15	5.48	1.4	11/24/2023 16:30	45.167	13.3
11/23/2023 12:15	38.407	11.2	11/24/2023 2:30	6.4	1.5	11/24/2023 16:45	67.593	13.9
11/23/2023 12:30	31.92	10.4	11/24/2023 2:45	6.267	1.6	11/24/2023 17:00	50.287	15.8
11/23/2023 12:45	54.78	9	11/24/2023 3:00	6.853	1.5	11/24/2023 17:15	37.353	13.8
11/23/2023 13:00	76.087	11.8	11/24/2023 3:15	7.3	1.5	11/24/2023 17:30	37.867	12.6
11/23/2023 13:15	45.227	13.9	11/24/2023 3:30	9.727	1.7	11/24/2023 17:45	37.373	12.9
11/23/2023 13:30	30.853	10.4	11/24/2023 3:45	10.947	2.2	11/24/2023 18:00	35.98	12
11/23/2023 13:45	53.253	7.8	11/24/2023 4:00	12.013	2.7	11/24/2023 18:15	34.613	12
11/23/2023 14:00	44.753	10.1	11/24/2023 4:15	12.26	3.1	11/24/2023 18:30	35.9	12.1
11/23/2023 14:15	44.567	11.9	11/24/2023 4:30	13.627	3.2	11/24/2023 18:45	31.773	11.7
11/23/2023 14:30	39.107	9.9	11/24/2023 4:45	15.4	3.6	11/24/2023 19:00	32.327	11.1
11/23/2023 14:45	32.347	8.3	11/24/2023 5:00	14.833	4.4	11/24/2023 19:15	30.6	11
11/23/2023 15:00	23.48	7.6	11/24/2023 5:15	16.7	4.2	11/24/2023 19:30	28.467	10.5
11/23/2023 15:15	20.54	5.8	11/24/2023 5:30	19.607	4.7	11/24/2023 19:45	27.607	9.2
11/23/2023 15:30	31.127	5.4	11/24/2023 5:45	19.627	5.2	11/24/2023 20:00	28.5	9.1
11/23/2023 15:45	33.887	6.4	11/24/2023 6:00	21.613	5.4	11/24/2023 20:15	28.773	10
11/23/2023 16:00	39.807	7.6	11/24/2023 6:15	22.3	6	11/24/2023 20:30	28.507	9.4
11/23/2023 16:15	31.493	9.2	11/24/2023 6:30	26.293	6.6	11/24/2023 20:45	25.733	8.5
11/23/2023 16:30	31.393	7.9	11/24/2023 6:45	32.733	7.6	11/24/2023 21:00	26.347	7.9
11/23/2023 16:45	35.967	6.3	11/24/2023 7:00	155.66	8.7	11/24/2023 21:15	25.593	7.7
11/23/2023 17:00	27.573	6.9	11/24/2023 7:15	125.84	23.4	11/24/2023 21:30	23.327	7.5
11/23/2023 17:15	22.867	5.2	11/24/2023 7:30	80.86	23.8	11/24/2023 21:45	23.307	6.8
11/23/2023 17:30	18.64	4.6	11/24/2023 7:45	47.053	21.8	11/24/2023 22:00	22.747	6.9
11/23/2023 17:45	24.227	4.2	11/24/2023 8:00	32.873	17.3	11/24/2023 22:15	22.1	6.8
11/23/2023 18:00	19.6	7	11/24/2023 8:15	39.513	13.1	11/24/2023 22:30	21.473	6.7
11/23/2023 18:15	19.493	4.4	11/24/2023 8:30	39.22	12	11/24/2023 22:45	20.127	6.4
11/23/2023 18:30	18.847	4.5	11/24/2023 8:45	46.56	9.6	11/24/2023 23:00	20.513	6.4
11/23/2023 18:45	17.373	4.3	11/24/2023 9:00	36.913	11.3	11/24/2023 23:15	18.633	6.2
11/23/2023 19:00	15.44	3.9	11/24/2023 9:15	46.48	12.9	11/24/2023 23:30	20.387	5.8
11/23/2023 19:15	17.893	3.3	11/24/2023 9:30	105.74	14.5	11/24/2023 23:45	21.12	6
11/23/2023 19:30	23.927	3.5	11/24/2023 9:45	118.2	23	11/25/2023 0:00	23.66	6.1
11/23/2023 19:45	18.967	4.2	11/24/2023 10:00	128.967	25.7	11/25/2023 0:15	22.767	6.4
11/23/2023 20:00	15.6	3.8	11/24/2023 10:15	101.153	28.2	11/25/2023 0:30	24.593	6.4

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/25/2023 0:45	22.693	6.9	11/25/2023 15:00	20.74	8.5	11/26/2023 5:15	16.48	11.8
11/25/2023 1:00	26.213	6.9	11/25/2023 15:15	29.093	8.5	11/26/2023 5:30	17.747	11.9
11/25/2023 1:15	26.86	7.6	11/25/2023 15:30	30.733	9.7	11/26/2023 5:45	18.62	12.1
11/25/2023 1:30	26.333	7.3	11/25/2023 15:45	29.193	9.4	11/26/2023 6:00	18.813	12.2
11/25/2023 1:45	29.42	7.5	11/25/2023 16:00	26.407	9.6	11/26/2023 6:15	19.033	12.4
11/25/2023 2:00	32.92	8.8	11/25/2023 16:15	22.56	8.8	11/26/2023 6:30	18.26	12.3
11/25/2023 2:15	31.507	9.8	11/25/2023 16:30	23.513	8.6	11/26/2023 6:45	19.653	12.1
11/25/2023 2:30	31.273	9.9	11/25/2023 16:45	25.067	8.9	11/26/2023 7:00	132.013	12.1
11/25/2023 2:45	28.593	9.7	11/25/2023 17:00	24.573	9.3	11/26/2023 7:15	127.713	23.6
11/25/2023 3:00	36.633	8.9	11/25/2023 17:15	24.713	9.4	11/26/2023 7:30	91.153	23.9
11/25/2023 3:15	40.327	10	11/25/2023 17:30	21.513	9.4	11/26/2023 7:45	79.193	21.2
11/25/2023 3:30	30.027	11.1	11/25/2023 17:45	19.173	9	11/26/2023 8:00	41.673	19.2
11/25/2023 3:45	26.153	8.9	11/25/2023 18:00	20.653	8.5	11/26/2023 8:15	32.827	15.7
11/25/2023 4:00	20.847	7.9	11/25/2023 18:15	22.493	9	11/26/2023 8:30	53.787	13.6
11/25/2023 4:15	20.733	7.1	11/25/2023 18:30	23.48	9.3	11/26/2023 8:45	47.033	14.2
11/25/2023 4:30	17.52	7	11/25/2023 18:45	22.66	9.8	11/26/2023 9:00	34.513	13.8
11/25/2023 4:45	17.393	6.6	11/25/2023 19:00	17.633	9.3	11/26/2023 9:15	25.407	13.4
11/25/2023 5:00	18.68	6.5	11/25/2023 19:15	17.667	7.8	11/26/2023 9:30	19.853	11.9
11/25/2023 5:15	17.907	6.5	11/25/2023 19:30	16.46	8	11/26/2023 9:45	20.027	11.5
11/25/2023 5:30	14.507	6.3	11/25/2023 19:45	14.78	7.6	11/26/2023 10:00	22.5	10.9
11/25/2023 5:45	15.867	5.4	11/25/2023 20:00	15.113	7.6	11/26/2023 10:15	18.247	10.3
11/25/2023 6:00	16.3	6	11/25/2023 20:15	14.867	7.8	11/26/2023 10:30	26.973	9.8
11/25/2023 6:15	16.18	5.6	11/25/2023 20:30	14.8	7.8	11/26/2023 10:45	28.44	10.7
11/25/2023 6:30	17.127	5.6	11/25/2023 20:45	14.713	8.1	11/26/2023 11:00	35.06	10.5
11/25/2023 6:45	22.22	5.9	11/25/2023 21:00	13.9	8.1	11/26/2023 11:15	33.307	16.8
11/25/2023 7:00	141.54	6.8	11/25/2023 21:15	14.36	8	11/26/2023 11:30	26.14	19.2
11/25/2023 7:15	104.44	29.4	11/25/2023 21:30	13.8	8.3	11/26/2023 11:45	29.507	15
11/25/2023 7:30	60.547	25.2	11/25/2023 21:45	13.127	7.8	11/26/2023 12:00	23.633	12.5
11/25/2023 7:45	28.467	18.2	11/25/2023 22:00	13.053	8	11/26/2023 12:15	24.267	10.8
11/25/2023 8:00	27.413	9.4	11/25/2023 22:15	13.64	8.2	11/26/2023 12:30	22.867	9.6
11/25/2023 8:15	43.953	8	11/25/2023 22:30	13.28	8.2	11/26/2023 12:45	55.487	10.2
11/25/2023 8:30	35.627	23.2	11/25/2023 22:45	13.133	8.3	11/26/2023 13:00	44.34	12.7
11/25/2023 8:45	27.12	19.3	11/25/2023 23:00	13.893	8.4	11/26/2023 13:15	30.913	13
11/25/2023 9:00	18.713	10.9	11/25/2023 23:15	13.42	8.4	11/26/2023 13:30	23.373	10.8
11/25/2023 9:15	20.193	8.6	11/25/2023 23:30	13.94	8.3	11/26/2023 13:45	19.92	9.6
11/25/2023 9:30	20.04	8.7	11/25/2023 23:45	13.753	8.6	11/26/2023 14:00	15.933	8.8
11/25/2023 9:45	20.053	7.9	11/26/2023 0:00	13.547	8.4	11/26/2023 14:15	21.453	8
11/25/2023 10:00	16.42	7.8	11/26/2023 0:15	14.113	8.7	11/26/2023 14:30	19.893	8.4
11/25/2023 10:15	16.413	7.3	11/26/2023 0:30	13.613	9	11/26/2023 14:45	24	8.1
11/25/2023 10:30	18.487	7.1	11/26/2023 0:45	13.793	8.8	11/26/2023 15:00	35.053	8
11/25/2023 10:45	17.78	7.6	11/26/2023 1:00	14.78	8.9	11/26/2023 15:15	22.787	9.9
11/25/2023 11:00	18.473	7.1	11/26/2023 1:15	14.627	9.4	11/26/2023 15:30	17.013	9.3
11/25/2023 11:15	20.367	7.4	11/26/2023 1:30	14.427	9.7	11/26/2023 15:45	15.16	9
11/25/2023 11:30	25.787	7.7	11/26/2023 1:45	14.047	9.8	11/26/2023 16:00	17.787	8.9
11/25/2023 11:45	19.72	8.3	11/26/2023 2:00	14.353	9.8	11/26/2023 16:15	16.887	9.6
11/25/2023 12:00	17.3	7.9	11/26/2023 2:15	14.887	10	11/26/2023 16:30	16.953	9.7
11/25/2023 12:15	16.3	7.4	11/26/2023 2:30	14.78	10.4	11/26/2023 16:45	18.253	9.7
11/25/2023 12:30	16.3	7.3	11/26/2023 2:45	15.293	10.6	11/26/2023 17:00	16.833	9.9
11/25/2023 12:45	16.5	7.3	11/26/2023 3:00	15.033	10.9	11/26/2023 17:15	18.82	10.3
11/25/2023 13:00	17.8	7.2	11/26/2023 3:15	14.753	10.7	11/26/2023 17:30	97.453	10.6
11/25/2023 13:15	18.26	7.5	11/26/2023 3:30	14.653	10.4	11/26/2023 17:45	63.973	19.5
11/25/2023 13:30	18.76	7.4	11/26/2023 3:45	14.647	10.8	11/26/2023 18:00	45.953	16.1
11/25/2023 13:45	18.873	7.4	11/26/2023 4:00	15.24	10.9	11/26/2023 18:15	34.393	14.4
11/25/2023 14:00	20.027	7.8	11/26/2023 4:15	15.227	11.2	11/26/2023 18:30	29.533	13.7
11/25/2023 14:15	21.76	7.9	11/26/2023 4:30	15.48	11.3	11/26/2023 18:45	26.147	13.7
11/25/2023 14:30	24.66	8.3	11/26/2023 4:45	15.793	11.4	11/26/2023 19:00	25.227	13.2
11/25/2023 14:45	22.213	9.3	11/26/2023 5:00	16.62	11.6	11/26/2023 19:15	23.553	13.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/26/2023 19:30	21.7	13.3
11/26/2023 19:45	21.667	12.6
11/26/2023 20:00	20.867	12.7
11/26/2023 20:15	20.747	12.7
11/26/2023 20:30	19.707	12.8
11/26/2023 20:45	20.58	12.3
11/26/2023 21:00	20.727	12.7
11/26/2023 21:15	20.673	12.7
11/26/2023 21:30	21.02	12.6
11/26/2023 21:45	20.673	12.6
11/26/2023 22:00	21.613	12.7
11/26/2023 22:15	21.06	12.7
11/26/2023 22:30	20.833	12.6
11/26/2023 22:45	20.58	12.7
11/26/2023 23:00	21.647	12.8
11/26/2023 23:15	22.747	13.5
11/26/2023 23:30	24.553	14.3
11/26/2023 23:45	26.987	15.4
11/27/2023 0:00	28.267	17.5
11/27/2023 0:15	28.409	18.6
11/27/2023 0:30	29.073	19.2
11/27/2023 0:45	29.967	19.9
11/27/2023 1:00	30.42	20.3
11/27/2023 1:15	31.067	20.4
11/27/2023 1:30	31.007	20.7
11/27/2023 1:45	31.533	20.5
11/27/2023 2:00	31.373	20.6
11/27/2023 2:15	31.087	21.1
11/27/2023 2:30	29.813	21.4
11/27/2023 2:45	29.813	20.3
11/27/2023 3:00	28.973	20.3
11/27/2023 3:15	28.247	20
11/27/2023 3:30	27.927	19.9
11/27/2023 3:45	27.933	19.6
11/27/2023 4:00	27.62	19.6
11/27/2023 4:15	27.753	19.3
11/27/2023 4:30	28.927	19.3
11/27/2023 4:45	28.26	19.5
11/27/2023 5:00	28.253	19.1
11/27/2023 5:15	27.96	18.8
11/27/2023 5:30	27.52	18.5
11/27/2023 5:45	28.2	18.3
11/27/2023 6:00	28.287	18.6
11/27/2023 6:15	27.947	18.7
11/27/2023 6:30	28.08	18.4
11/27/2023 6:45	30.487	18.2
11/27/2023 7:00	119.753	19.2
11/27/2023 7:15	117.16	35.6
11/27/2023 7:30	95.193	36.2
11/27/2023 7:45	48.333	32
11/27/2023 8:00	39.127	24.6
11/27/2023 8:15	36.68	22.4
11/27/2023 8:30	42.633	19.9
11/27/2023 8:45	33.747	21.7
11/27/2023 9:00	30.273	19.1
11/27/2023 9:15	36.453	18
11/27/2023 9:30	33.573	18.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/27/2023 9:45	42.993	19.2
11/27/2023 10:00	42.513	23.2
11/27/2023 10:15	54.907	21.4
11/27/2023 10:30	41.12	22.8
11/27/2023 10:45	50.447	21.8
11/27/2023 11:00	47.787	24.2
11/27/2023 11:15	49.7	25.6
11/27/2023 11:30	51.073	28
11/27/2023 11:45	49.52	28.1
11/27/2023 12:00	47.107	28.2
11/27/2023 12:15	42.933	28.3
11/27/2023 12:30	47.253	26.4
11/27/2023 12:45	46.64	26.7
11/27/2023 13:00	45.427	26.1
11/27/2023 13:15	44.313	25.3
11/27/2023 13:30	40.147	24.6
11/27/2023 13:45	37.087	23.5
11/27/2023 14:00	35.647	22.9
11/27/2023 14:15	39.68	23
11/27/2023 14:30	35	22.9
11/27/2023 14:45	33.547	22
11/27/2023 15:00	39.28	21.2
11/27/2023 15:15	32.16	21.4
11/27/2023 15:30	32.407	19.8
11/27/2023 15:45	35.96	19.2
11/27/2023 16:00	30.167	20.3
11/27/2023 16:15	30.68	18.9
11/27/2023 16:30	30.28	19.2
11/27/2023 16:45	43.287	19.1
11/27/2023 17:00	39.72	32.6
11/27/2023 17:15	49.487	27.1
11/27/2023 17:30	36.073	24.2
11/27/2023 17:45	38.147	22.1
11/27/2023 18:00	33.847	21.1
11/27/2023 18:15	31.853	19.9
11/27/2023 18:30	30.393	19
11/27/2023 18:45	29.267	18.5
11/27/2023 19:00	28.167	17.6
11/27/2023 19:15	27.373	16.9
11/27/2023 19:30	26.567	16.5
11/27/2023 19:45	25.173	16.2
11/27/2023 20:00	24.5	15.7
11/27/2023 20:15	25.073	15.5
11/27/2023 20:30	23.993	15.3
11/27/2023 20:45	23.767	15
11/27/2023 21:00	23.207	15.2
11/27/2023 21:15	23.587	15.1
11/27/2023 21:30	23.413	14.9
11/27/2023 21:45	23.46	15
11/27/2023 22:00	23.287	14.9
11/27/2023 22:15	24.127	15.1
11/27/2023 22:30	24.447	15.3
11/27/2023 22:45	26.313	15.7
11/27/2023 23:00	26.44	16.1
11/27/2023 23:15	27.6	15.9
11/27/2023 23:30	28.713	16.8
11/27/2023 23:45	28.687	17.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/28/2023 0:00	29.093	18.8
11/28/2023 0:15	29.113	19.2
11/28/2023 0:30	28.8	19.3
11/28/2023 0:45	29.16	19.4
11/28/2023 1:00	29.427	19.5
11/28/2023 1:15	29.92	19.8
11/28/2023 1:30	30.107	20
11/28/2023 1:45	30.933	20
11/28/2023 2:00	31.353	20.5
11/28/2023 2:15	31.933	20.7
11/28/2023 2:30	32.033	20.7
11/28/2023 2:45	32.82	20.7
11/28/2023 3:00	32.513	20.9
11/28/2023 3:15	32.307	20.7
11/28/2023 3:30	31.853	20.7
11/28/2023 3:45	31.467	20.7
11/28/2023 4:00	31.753	20.9
11/28/2023 4:15	31.32	20.9
11/28/2023 4:30	31.24	20.6
11/28/2023 4:45	30.873	20.7
11/28/2023 5:00	31.173	20.4
11/28/2023 5:15	31.62	21.6
11/28/2023 5:30	31.827	21.1
11/28/2023 5:45	32.107	20.7
11/28/2023 6:00	31.08	20.1
11/28/2023 6:15	32.34	21.2
11/28/2023 6:30	32.02	20.6
11/28/2023 6:45	53.96	21
11/28/2023 7:00	110.76	26.2
11/28/2023 7:15	108.44	33.6
11/28/2023 7:30	97.44	33.9
11/28/2023 7:45	74.98	32.7
11/28/2023 8:00	55.687	29.5
11/28/2023 8:15	45.467	28.4
11/28/2023 8:30	44.773	26.2
11/28/2023 8:45	44.787	27.5
11/28/2023 9:00	40.807	24.7
11/28/2023 9:15	38.627	25.1
11/28/2023 9:30	39.027	24.4
11/28/2023 9:45	41.913	22.8
11/28/2023 10:00	53.167	24.8
11/28/2023 10:15	45.92	24.6
11/28/2023 10:30	41.733	21.9
11/28/2023 10:45	41.267	22.4
11/28/2023 11:00	39.567	22.4
11/28/2023 11:15	50.093	25
11/28/2023 11:30	39.4	21.4
11/28/2023 11:45	38.68	20.5
11/28/2023 12:00	33.52	19.4
11/28/2023 12:15	36.307	20.3
11/28/2023 12:30	34.44	17.9
11/28/2023 12:45	39.593	19
11/28/2023 13:00	34.487	20.2
11/28/2023 13:15	32.44	17.7
11/28/2023 13:30	26.013	16.5
11/28/2023 13:45	25.307	16.3
11/28/2023 14:00	24.307	15.7

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/28/2023 14:15	24.32	15.3	11/29/2023 4:30	19.22	12.7	11/29/2023 18:45	33.6	19.6
11/28/2023 14:30	23.347	14.5	11/29/2023 4:45	19.267	11.1	11/29/2023 19:00	33.6	19.3
11/28/2023 14:45	28.82	13.2	11/29/2023 5:00	18.893	12.2	11/29/2023 19:15	41.2	20.6
11/28/2023 15:00	25.473	14.4	11/29/2023 5:15	18.233	11.4	11/29/2023 19:30	34.6	19.6
11/28/2023 15:15	22.62	13	11/29/2023 5:30	17.8	11.8	11/29/2023 19:45	36.6	19.6
11/28/2023 15:30	26.347	13.6	11/29/2023 5:45	18.247	11.4	11/29/2023 20:00	34.1	19.2
11/28/2023 15:45	20.713	12.8	11/29/2023 6:00	19.58	11.5	11/29/2023 20:15	33.6	19.4
11/28/2023 16:00	18.94	12.4	11/29/2023 6:15	20.707	12	11/29/2023 20:30	33.9	19.5
11/28/2023 16:15	22.793	11.9	11/29/2023 6:30	21.02	12.5	11/29/2023 20:45	30.5	18.6
11/28/2023 16:30	21.267	12.4	11/29/2023 6:45	74.64	12.9	11/29/2023 21:00	30.1	18.4
11/28/2023 16:45	18.58	11.5	11/29/2023 7:00	118.917	23.3	11/29/2023 21:15	30.7	18.7
11/28/2023 17:00	20.68	12.4	11/29/2023 7:15	111.2	36.2	11/29/2023 21:30	32.4	19
11/28/2023 17:15	23.267	11.2	11/29/2023 7:30	69.463	32.2	11/29/2023 21:45	34.1	19.1
11/28/2023 17:30	19.907	11.8	11/29/2023 7:45	54.267	26.6	11/29/2023 22:00	31.9	18.5
11/28/2023 17:45	23.773	11.2	11/29/2023 8:00	52.3	23.1	11/29/2023 22:15	33.4	18.5
11/28/2023 18:00	20.34	11.3	11/29/2023 8:15	43.727	20.8	11/29/2023 22:30	34.8	19.2
11/28/2023 18:15	20.453	12.4	11/29/2023 8:30	45.94	19.5	11/29/2023 22:45	33.7	19.1
11/28/2023 18:30	20.407	12.3	11/29/2023 8:45	40.32	20.7	11/29/2023 23:00	32.9	19.2
11/28/2023 18:45	19.193	11.8	11/29/2023 9:00	39.913	19.3	11/29/2023 23:15	34.6	19
11/28/2023 19:00	19.093	12.3	11/29/2023 9:15	37.587	18.6	11/29/2023 23:30	30.2	18.8
11/28/2023 19:15	19.827	13.1	11/29/2023 9:30	36.453	18.3	11/29/2023 23:45	32.1	19
11/28/2023 19:30	18.9	11.6	11/29/2023 9:45	36.28	18.2	11/30/2023 0:00	32.3	18.6
11/28/2023 19:45	18.427	12.8	11/29/2023 10:00	28.513	17.2	11/30/2023 0:15	33.6	18.2
11/28/2023 20:00	19.607	11.6	11/29/2023 10:15	28.687	16.8	11/30/2023 0:30	34.6	18.1
11/28/2023 20:15	19.367	12.5	11/29/2023 10:30	47.447	16.3	11/30/2023 0:45	80.8	18.9
11/28/2023 20:30	20.173	12.3	11/29/2023 10:45	45.913	17.6	11/30/2023 1:00	64.4	18
11/28/2023 20:45	19.633	11.3	11/29/2023 11:00	44.487	19.3	11/30/2023 1:15	39.3	16.1
11/28/2023 21:00	20.18	13.2	11/29/2023 11:15	40.927	30	11/30/2023 1:30	38	15.4
11/28/2023 21:15	18	11	11/29/2023 11:30	39.353	26.9	11/30/2023 1:45	38.7	16.4
11/28/2023 21:30	17.473	11.2	11/29/2023 11:45	37.02	24.8	11/30/2023 2:00	33.8	15.3
11/28/2023 21:45	18.26	11.6	11/29/2023 12:00	34.74	21.9	11/30/2023 2:15	33.8	14.3
11/28/2023 22:00	18.093	12	11/29/2023 12:15	30.347	20.4	11/30/2023 2:30	34.7	13.5
11/28/2023 22:15	17.38	10.9	11/29/2023 12:30	35.46	18.4	11/30/2023 2:45	30.9	13.2
11/28/2023 22:30	16.927	12.2	11/29/2023 12:45	32.12	17.5	11/30/2023 3:00	29.7	12.8
11/28/2023 22:45	17.093	12.8	11/29/2023 13:00	36.727	16.8	11/30/2023 3:15	26.5	12.2
11/28/2023 23:00	19.087	11.2	11/29/2023 13:15	25.66	16.2	11/30/2023 3:30	27.1	12.3
11/28/2023 23:15	18.86	10.9	11/29/2023 13:30	24.267	14.8	11/30/2023 3:45	30.5	12.5
11/28/2023 23:30	19.827	11.7	11/29/2023 13:45	21.947	14.6	11/30/2023 4:00	29.5	12.3
11/28/2023 23:45	20.82	11.9	11/29/2023 14:00	22.68	13.9	11/30/2023 4:15	29.6	12.9
11/29/2023 0:00	19.967	12.2	11/29/2023 14:15	31.05	14	11/30/2023 4:30	27.8	12.6
11/29/2023 0:15	20.773	12.7	11/29/2023 14:30	36.8	16.2	11/30/2023 4:45	31.9	13.3
11/29/2023 0:30	20.207	12.4	11/29/2023 14:45	30.4	15.9	11/30/2023 5:00	28.6	14
11/29/2023 0:45	20.653	12	11/29/2023 15:00	33.5	16.4	11/30/2023 5:15	28.1	13.5
11/29/2023 1:00	20.747	13.4	11/29/2023 15:15	30.1	15.5	11/30/2023 5:30	25.1	13.7
11/29/2023 1:15	20.553	11.7	11/29/2023 15:30	27.7	15.5	11/30/2023 5:45	25.3	12.7
11/29/2023 1:30	19.687	12.5	11/29/2023 15:45	25.5	14.6	11/30/2023 6:00	23.5	12.4
11/29/2023 1:45	20.047	11.4	11/29/2023 16:00	25.8	14.7	11/30/2023 6:15	21.2	11.4
11/29/2023 2:00	19.487	11.1	11/29/2023 16:15	56.3	19.8	11/30/2023 6:30	22.5	11.4
11/29/2023 2:15	19.04	11.2	11/29/2023 16:30	37.8	18.6	11/30/2023 6:45	20.9	11.3
11/29/2023 2:30	19.313	11.1	11/29/2023 16:45	34.4	18.3	11/30/2023 7:00	25.2	11.9
11/29/2023 2:45	19.72	13.1	11/29/2023 17:00	40.4	19.1	11/30/2023 7:15	23.1	11.5
11/29/2023 3:00	19.847	12.3	11/29/2023 17:15	30.7	17.7	11/30/2023 7:30	25.2	11.4
11/29/2023 3:15	19.453	12.5	11/29/2023 17:30	31	17.6	11/30/2023 7:45	22.1	10.8
11/29/2023 3:30	20.153	12.2	11/29/2023 17:45	35.5	18.9	11/30/2023 8:00	25.1	11.8
11/29/2023 3:45	19.927	11.9	11/29/2023 18:00	31.4	18	11/30/2023 8:15	27.4	11.7
11/29/2023 4:00	19.327	11.8	11/29/2023 18:15	29.4	18.3	11/30/2023 8:30	21.7	9.1
11/29/2023 4:15	19.967	11.3	11/29/2023 18:30	30.8	18.6	11/30/2023 8:45	20.2	8.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/30/2023 9:00	27.4	9.4
11/30/2023 9:15	25.1	8.8
11/30/2023 9:30	26.6	9
11/30/2023 9:45	28.6	9.6
11/30/2023 10:00	32.5	9.4
11/30/2023 10:15	54.9	10.4
11/30/2023 10:30	33.7	9.1
11/30/2023 10:45	39	9.5
11/30/2023 11:00	25.7	8.9
11/30/2023 11:15	28	9.2
11/30/2023 11:30	26.6	9.9
11/30/2023 11:45	31.1	10.9
11/30/2023 12:00	33	13.1
11/30/2023 12:15	33	13.9
11/30/2023 12:30	34.9	14.1
11/30/2023 12:45	32.3	15
11/30/2023 13:00	33.4	16.3
11/30/2023 13:15	29.4	13.5
11/30/2023 13:30	31.3	13.7
11/30/2023 13:45	32.1	14.3
11/30/2023 14:00	30.7	13.5
11/30/2023 14:15	27.4	13.4
11/30/2023 14:30	28.8	13.5
11/30/2023 14:45	27.2	13.4
11/30/2023 15:00	25.2	12.8
11/30/2023 15:15	26.2	13
11/30/2023 15:30	27	13.7
11/30/2023 15:45	26.4	13.3
11/30/2023 16:00	25.4	13
11/30/2023 16:15	24.7	12.8
11/30/2023 16:30	27	13.1
11/30/2023 16:45	27.3	12.7
11/30/2023 17:00	28.6	12.9
11/30/2023 17:15	24.3	11.7
11/30/2023 17:30	31.3	12.4
11/30/2023 17:45	30.7	11.8
11/30/2023 18:00	26.3	11.1
11/30/2023 18:15	24.6	10.4
11/30/2023 18:30	31.8	11.5
11/30/2023 18:45	34.4	11
11/30/2023 19:00	32.8	10.8
11/30/2023 19:15	33.5	11
11/30/2023 19:30	33	11.5
11/30/2023 19:45	36.3	12.2
11/30/2023 20:00	37.5	12.4
11/30/2023 20:15	42	12.8
11/30/2023 20:30	37.1	12.3
11/30/2023 20:45	36.2	12.1
11/30/2023 21:00	35.5	12
11/30/2023 21:15	38.4	12.2
11/30/2023 21:30	39.7	13.3
11/30/2023 21:45	42.5	13.4
11/30/2023 22:00	38.2	12.7
11/30/2023 22:15	35.8	12.6
11/30/2023 22:30	36.7	13.2
11/30/2023 22:45	34.5	12.6
11/30/2023 23:00	39.3	13.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
11/30/2023 23:15	38.7	13.8
11/30/2023 23:30	38.9	13.4
11/30/2023 23:45	42.6	14.2
12/1/2023 0:00	43.7	14.2
12/1/2023 0:15	43.2	14.8
12/1/2023 0:30	48.6	15.6
12/1/2023 0:45	51.4	16.3
12/1/2023 1:00	51	16.1
12/1/2023 1:15	57	16.6
12/1/2023 1:30	50.4	16
12/1/2023 1:45	55	16.1
12/1/2023 2:00	53.3	16.1
12/1/2023 2:15	45.9	15.2
12/1/2023 2:30	40.4	14.8
12/1/2023 2:45	35	14.3
12/1/2023 3:00	34.6	14.4
12/1/2023 3:15	37.1	14.4
12/1/2023 3:30	37.3	14.7
12/1/2023 3:45	38	14.8
12/1/2023 4:00	35.1	14.6
12/1/2023 4:15	32.5	14
12/1/2023 4:30	28.6	13.4
12/1/2023 4:45	27.3	12.6
12/1/2023 5:00	27.8	12.4
12/1/2023 5:15	30	12.4
12/1/2023 5:30	32.1	12.9
12/1/2023 5:45	28.4	11.7
12/1/2023 6:00	35.7	13.3
12/1/2023 6:15	41.1	14.2
12/1/2023 6:30	48.9	15.7
12/1/2023 6:45	37.6	14.5
12/1/2023 7:00	37.4	14
12/1/2023 7:15	37.6	13.9
12/1/2023 7:30	31.5	12.9
12/1/2023 7:45	30.9	13
12/1/2023 8:00	32.1	12.9
12/1/2023 8:15	42	14.5
12/1/2023 8:30	35.2	13.5
12/1/2023 8:45	41.1	14
12/1/2023 9:00	35.4	13.9
12/1/2023 9:15	36.2	13.6
12/1/2023 9:30	39.1	14.2
12/1/2023 9:45	36.4	13.8
12/1/2023 10:00	34.1	13.2
12/1/2023 10:15	38.1	14.4
12/1/2023 10:30	37.7	14.7
12/1/2023 10:45	46.6	17.5
12/1/2023 11:00	37.3	14.8
12/1/2023 11:15	33.9	13.5
12/1/2023 11:30	32.9	13.5
12/1/2023 11:45	31.3	13.4
12/1/2023 12:00	31.8	13.5
12/1/2023 12:15	27.4	13.4
12/1/2023 12:30	29.6	13.6
12/1/2023 12:45	27.3	13.1
12/1/2023 13:00	29.1	13.7
12/1/2023 13:15	27.7	13.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/1/2023 13:30	26.2	13
12/1/2023 13:45	26.4	13.3
12/1/2023 14:00	25.7	12.8
12/1/2023 14:15	28.1	13.6
12/1/2023 14:30	26.4	12.7
12/1/2023 14:45	28.3	13.2
12/1/2023 15:00	27	12.8
12/1/2023 15:15	24.9	12.2
12/1/2023 15:30	25.9	12.1
12/1/2023 15:45	27.8	12.2
12/1/2023 16:00	25.9	12.3
12/1/2023 16:15	25	12
12/1/2023 16:30	25.2	11.7
12/1/2023 16:45	26.7	11.9
12/1/2023 17:00	28.2	11.7
12/1/2023 17:15	27.9	11.4
12/1/2023 17:30	25.9	11.1
12/1/2023 17:45	28.4	11.5
12/1/2023 18:00	27.5	11.1
12/1/2023 18:15	28.6	11.2
12/1/2023 18:30	37.8	12.4
12/1/2023 18:45	26.9	10.4
12/1/2023 19:00	29.8	10.7
12/1/2023 19:15	32.1	11.2
12/1/2023 19:30	33.1	11.2
12/1/2023 19:45	33.4	12.1
12/1/2023 20:00	32.5	11.8
12/1/2023 20:15	32	11.9
12/1/2023 20:30	30.6	11.9
12/1/2023 20:45	28.4	11.9
12/1/2023 21:00	30.3	11.8
12/1/2023 21:15	30.9	12.4
12/1/2023 21:30	29.3	12
12/1/2023 21:45	31.7	12
12/1/2023 22:00	29.8	12.3
12/1/2023 22:15	29	11.8
12/1/2023 22:30	30.9	11.9
12/1/2023 22:45	30	11.7
12/1/2023 23:00	33.2	12.3
12/1/2023 23:15	35	13.1
12/1/2023 23:30	31	11.6
12/1/2023 23:45	29.9	11.9
12/2/2023 0:00	27.9	11.7
12/2/2023 0:15	33.8	12.7
12/2/2023 0:30	34.1	12.9
12/2/2023 0:45	29.3	12.4
12/2/2023 1:00	28.7	12.1
12/2/2023 1:15	28.3	11.7
12/2/2023 1:30	28.1	11.6
12/2/2023 1:45	25.5	11
12/2/2023 2:00	28.4	11.5
12/2/2023 2:15	27.9	11.4
12/2/2023 2:30	26.6	11.2
12/2/2023 2:45	27.8	11.3
12/2/2023 3:00	26.7	10.7
12/2/2023 3:15	28.5	11.1
12/2/2023 3:30	27.3	11.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/2/2023 3:45	28.7	11.4
12/2/2023 4:00	28.6	11.2
12/2/2023 4:15	26.5	11.3
12/2/2023 4:30	29.9	11.6
12/2/2023 4:45	29.4	11.3
12/2/2023 5:00	29.7	11.2
12/2/2023 5:15	29.4	11.1
12/2/2023 5:30	24.9	10.4
12/2/2023 5:45	23	10.3
12/2/2023 6:00	26.1	10.2
12/2/2023 6:15	24.3	10.4
12/2/2023 6:30	40	12.6
12/2/2023 6:45	27.1	10.7
12/2/2023 7:00	26	10.6
12/2/2023 7:15	26.7	10.5
12/2/2023 7:30	25.9	11
12/2/2023 7:45	26.7	11
12/2/2023 8:00	27.8	10.8
12/2/2023 8:15	26.5	10.5
12/2/2023 8:30	20.8	9.7
12/2/2023 8:45	34.7	11.2
12/2/2023 9:00	26.3	9.8
12/2/2023 9:15	24.2	9.8
12/2/2023 9:30	23.9	9.7
12/2/2023 9:45	25.5	9.8
12/2/2023 10:00	22.1	9.7
12/2/2023 10:15	26	10.3
12/2/2023 10:30	25.1	10
12/2/2023 10:45	29.9	12.9
12/2/2023 11:00	33.7	16.4
12/2/2023 11:15	28.7	11.6
12/2/2023 11:30	27.3	12.7
12/2/2023 11:45	24.6	10.9
12/2/2023 12:00	24.7	10.9
12/2/2023 12:15	24.9	10.2
12/2/2023 12:30	25.5	12.2
12/2/2023 12:45	25.7	12.1
12/2/2023 13:00	25.8	11.2
12/2/2023 13:15	27	11.4
12/2/2023 13:30	25.6	11.5
12/2/2023 13:45	26.3	11.4
12/2/2023 14:00	25.1	11.1
12/2/2023 14:15	25.6	11.2
12/2/2023 14:30	25.9	11.3
12/2/2023 14:45	23.2	11
12/2/2023 15:00	23.8	11.1
12/2/2023 15:15	23.9	10.8
12/2/2023 15:30	23.4	10.7
12/2/2023 15:45	23.9	10.9
12/2/2023 16:00	25.7	10.9
12/2/2023 16:15	21.7	10.2
12/2/2023 16:30	22.3	10.1
12/2/2023 16:45	23.7	10.4
12/2/2023 17:00	24.9	10.4
12/2/2023 17:15	26.1	10.8
12/2/2023 17:30	24.8	10.1
12/2/2023 17:45	34	11.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/2/2023 18:00	24.9	9.8
12/2/2023 18:15	23.2	9.8
12/2/2023 18:30	27.8	10.6
12/2/2023 18:45	24.1	9.7
12/2/2023 19:00	26.8	10.1
12/2/2023 19:15	24.8	9.8
12/2/2023 19:30	22.1	9.8
12/2/2023 19:45	22.3	9.8
12/2/2023 20:00	28.9	10.3
12/2/2023 20:15	24	9.6
12/2/2023 20:30	20.9	9.2
12/2/2023 20:45	25.3	9.5
12/2/2023 21:00	24	9
12/2/2023 21:15	23.8	9.1
12/2/2023 21:30	30	10.2
12/2/2023 21:45	21.7	8.7
12/2/2023 22:00	19.9	8.3
12/2/2023 22:15	21.5	8.5
12/2/2023 22:30	21.5	8.7
12/2/2023 22:45	22.3	8.5
12/2/2023 23:00	21	8.9
12/2/2023 23:15	22.1	9
12/2/2023 23:30	20.5	8.4
12/2/2023 23:45	19.6	8.7
12/3/2023 0:00	21.7	8.8
12/3/2023 0:15	22	8.9
12/3/2023 0:30	20.2	8.8
12/3/2023 0:45	21.6	8.9
12/3/2023 1:00	21.8	8.9
12/3/2023 1:15	23.3	9.6
12/3/2023 1:30	20.7	9
12/3/2023 1:45	21	8.9
12/3/2023 2:00	24	9.4
12/3/2023 2:15	20	8.6
12/3/2023 2:30	22.6	8.7
12/3/2023 2:45	18.8	8.1
12/3/2023 3:00	19.5	8.3
12/3/2023 3:15	18.4	7.9
12/3/2023 3:30	18.2	8
12/3/2023 3:45	19.1	8.3
12/3/2023 4:00	19	8.2
12/3/2023 4:15	18.3	8.1
12/3/2023 4:30	19.2	8.2
12/3/2023 4:45	24.3	9
12/3/2023 5:00	18.6	8.7
12/3/2023 5:15	21	8.9
12/3/2023 5:30	17.8	8.4
12/3/2023 5:45	18.5	8.2
12/3/2023 6:00	18.2	8.4
12/3/2023 6:15	28.3	10.2
12/3/2023 6:30	19.6	9.3
12/3/2023 6:45	19.1	9.1
12/3/2023 7:00	25.1	9.6
12/3/2023 7:15	19.9	8.5
12/3/2023 7:30	19.7	8.6
12/3/2023 7:45	20.1	8.6
12/3/2023 8:00	20.1	8.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/3/2023 8:15	19.5	8.4
12/3/2023 8:30	19.7	8.6
12/3/2023 8:45	22.2	9.2
12/3/2023 9:00	35.2	10.3
12/3/2023 9:15	22.7	9.1
12/3/2023 9:30	24.5	9.8
12/3/2023 9:45	56.8	12.8
12/3/2023 10:00	29.7	11
12/3/2023 10:15	21.6	9.3
12/3/2023 10:30	20.2	9.3
12/3/2023 10:45	18.5	9
12/3/2023 11:00	16.7	8.6
12/3/2023 11:15	15.2	8
12/3/2023 11:30	19.6	8.7
12/3/2023 11:45	20.6	9.1
12/3/2023 12:00	21.3	9.2
12/3/2023 12:15	21.6	9.6
12/3/2023 12:30	23.7	10.1
12/3/2023 12:45	25.9	10.6
12/3/2023 13:00	23.5	10.6
12/3/2023 13:15	21.7	10.6
12/3/2023 13:30	21.4	10.5
12/3/2023 13:45	20.7	10.4
12/6/2023 11:00	18.7	4.4
12/6/2023 11:15	24	5.4
12/6/2023 11:30	29.9	6.2
12/6/2023 11:45	31.7	7
12/6/2023 12:00	24.6	5.9
12/6/2023 12:15	34.2	7.4
12/6/2023 12:30	38	8
12/6/2023 12:45	35.6	7.5
12/6/2023 13:00	35.9	7.7
12/6/2023 13:15	35.6	8
12/6/2023 13:30	36.4	8.1
12/6/2023 13:45	33.9	7.5
12/6/2023 14:00	21.7	5.8
12/6/2023 14:15	31.7	6.9
12/6/2023 14:30	43.8	8.7
12/6/2023 14:45	28.4	6.6
12/6/2023 15:00	26.3	6.2
12/6/2023 15:15	37.1	9.4
12/6/2023 15:30	30.1	7.1
12/6/2023 15:45	23.1	5.5
12/6/2023 16:00	24.2	6.1
12/6/2023 16:15	19.2	5
12/6/2023 16:30	20.1	5.2
12/6/2023 16:45	24	6.5
12/6/2023 17:00	31.6	8.2
12/6/2023 17:15	18	5
12/6/2023 17:30	28.4	6.8
12/6/2023 17:45	26	6.8
12/6/2023 18:00	12.4	4
12/6/2023 18:15	11.3	4
12/6/2023 18:30	41.7	9.2
12/6/2023 18:45	13.1	3.9
12/6/2023 19:00	21.2	5.2
12/6/2023 19:15	14	4.5

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/6/2023 19:30	17.2	4.7	12/7/2023 9:45	28.84	5.3	12/8/2023 0:00	22.827	5.4
12/6/2023 19:45	17.4	4.6	12/7/2023 10:00	24.6	5.8	12/8/2023 0:15	30.327	4.6
12/6/2023 20:00	16.8	5.1	12/7/2023 10:15	25.207	5	12/8/2023 0:30	24.133	6.7
12/6/2023 20:15	22.1	5.4	12/7/2023 10:30	30.753	5.7	12/8/2023 0:45	23.653	4.9
12/6/2023 20:30	19.7	5.3	12/7/2023 10:45	41.393	6.3	12/8/2023 1:00	21.14	3.7
12/6/2023 20:45	14.9	4.3	12/7/2023 11:00	36.667	8.6	12/8/2023 1:15	24.513	6.8
12/6/2023 21:00	14.1	4.6	12/7/2023 11:15	30.287	7.8	12/8/2023 1:30	16.327	3.8
12/6/2023 21:15	13.2	4.1	12/7/2023 11:30	26.133	6.4	12/8/2023 1:45	18.553	4
12/6/2023 21:30	25	6.1	12/7/2023 11:45	23.013	5.7	12/8/2023 2:00	22.673	4.6
12/6/2023 21:45	13.1	4.1	12/7/2023 12:00	21.073	5	12/8/2023 2:15	23.46	5.7
12/6/2023 22:00	13	4.2	12/7/2023 12:15	17.213	4.8	12/8/2023 2:30	23.187	5
12/6/2023 22:15	13.2	4.1	12/7/2023 12:30	18.42	4.5	12/8/2023 2:45	23.98	5.8
12/6/2023 22:30	14.4	4.3	12/7/2023 12:45	17.533	4.5	12/8/2023 3:00	24.54	5.7
12/6/2023 22:45	13.9	4.2	12/7/2023 13:00	19.847	4.7	12/8/2023 3:15	19.867	5.3
12/6/2023 23:00	17.6	5.3	12/7/2023 13:15	17.953	5	12/8/2023 3:30	24.26	5.8
12/6/2023 23:15	35.4	8.4	12/7/2023 13:30	17.427	4.6	12/8/2023 3:45	21.713	4.7
12/6/2023 23:30	15.3	4.4	12/7/2023 13:45	16.56	4.5	12/8/2023 7:00	43.169	0
12/6/2023 23:45	13.5	4.4	12/7/2023 14:00	21.64	4.3	12/8/2023 7:15	45.893	13.5
12/7/2023 0:00	14.8	4.2	12/7/2023 14:15	22.52	5.2	12/8/2023 7:30	92.86	15.2
12/7/2023 0:15	14.5	4.2	12/7/2023 14:30	19.5	5.3	12/8/2023 7:45	44.967	12
12/7/2023 0:30	14.3	4.2	12/7/2023 14:45	19.42	4.8	12/8/2023 8:00	28.6	11.1
12/7/2023 0:45	12.8	3.8	12/7/2023 15:00	22.913	4.9	12/8/2023 8:15	24.173	3.9
12/7/2023 1:00	14.3	4.4	12/7/2023 15:15	18.9	5.1	12/8/2023 8:30	41.1	4.4
12/7/2023 1:15	18.4	5.1	12/7/2023 15:30	22.167	4.3	12/8/2023 8:45	39.007	26.5
12/7/2023 1:30	16.7	4.8	12/7/2023 15:45	28.24	5	12/8/2023 9:00	36.48	5
12/7/2023 1:45	17.5	5	12/7/2023 16:00	25.427	5.9	12/8/2023 9:15	25.887	7.1
12/7/2023 2:00	15.3	4.5	12/7/2023 16:15	23.06	5.4	12/8/2023 9:30	26.793	5.2
12/7/2023 2:15	13.7	4	12/7/2023 16:30	26.26	5.5	12/8/2023 9:45	23.66	6.1
12/7/2023 2:30	14.4	3.9	12/7/2023 16:45	24.453	5.5	12/8/2023 10:00	22.52	5.2
12/7/2023 2:45	13	3.9	12/7/2023 17:00	28.8	5.1	12/8/2023 10:15	21.873	5.2
12/7/2023 3:00	11.7	3.7	12/7/2023 17:15	29.72	5.2	12/8/2023 10:30	29.693	5.4
12/7/2023 3:15	22.2	4.7	12/7/2023 17:30	27.207	5.5	12/8/2023 10:45	28.373	5.8
12/7/2023 3:30	11.7	3.7	12/7/2023 17:45	21.42	5	12/8/2023 11:00	22.313	6.9
12/7/2023 3:45	12.6	3.7	12/7/2023 18:00	22.407	4.5	12/8/2023 11:15	22.327	5.4
12/7/2023 4:00	10.9	3.7	12/7/2023 18:15	21.12	5.7	12/8/2023 11:30	22.28	5.3
12/7/2023 4:15	12.2	3.7	12/7/2023 18:30	20.773	4.1	12/8/2023 11:45	26.973	5.8
12/7/2023 4:30	32.8	5.8	12/7/2023 18:45	25.253	3.9	12/8/2023 12:00	22.267	7.2
12/7/2023 4:45	11.5	3.4	12/7/2023 19:00	32.473	7.2	12/8/2023 12:15	30.833	6.9
12/7/2023 5:00	11.8	3.5	12/7/2023 19:15	29.04	6.5	12/8/2023 12:30	23.993	7.4
12/7/2023 5:15	10.3	3.5	12/7/2023 19:30	29.607	7.5	12/8/2023 12:45	30.567	10.9
12/7/2023 5:30	11.2	3.6	12/7/2023 19:45	36.253	7.1	12/8/2023 13:00	27.413	6.8
12/7/2023 5:45	12.7	3.5	12/7/2023 20:00	33.793	10	12/8/2023 13:15	26.433	5.5
12/7/2023 6:00	14.4	4	12/7/2023 20:15	28.807	8.1	12/8/2023 13:30	20.093	5.1
12/7/2023 6:15	27.858	6.6	12/7/2023 20:30	29.46	6	12/8/2023 13:45	25.667	5.1
12/7/2023 6:30	28.067	5	12/7/2023 20:45	32.227	5.8	12/8/2023 14:00	36.293	13.4
12/7/2023 6:45	38.453	5	12/7/2023 21:00	29.327	6.2	12/8/2023 14:15	20.9	6.7
12/7/2023 7:00	30.307	6.5	12/7/2023 21:15	27.527	6	12/8/2023 17:15	32.45	0
12/7/2023 7:15	33.133	5.3	12/7/2023 21:30	29.36	6.9	12/8/2023 17:30	26.493	7
12/7/2023 7:30	42.813	5.9	12/7/2023 21:45	29.993	6.1	12/8/2023 17:45	27.273	5.9
12/7/2023 7:45	24.1	7.3	12/7/2023 22:00	27.8	4.7	12/8/2023 18:00	34.933	5.9
12/7/2023 8:00	94.693	5.3	12/7/2023 22:15	30.407	6.6	12/8/2023 18:15	38.893	4.7
12/7/2023 8:15	23.7	13.8	12/7/2023 22:30	37.52	6.6	12/8/2023 18:30	27.173	9.2
12/7/2023 8:30	23.733	4.3	12/7/2023 22:45	29.487	6.8	12/8/2023 18:45	19.9	4.4
12/7/2023 8:45	24.687	4.9	12/7/2023 23:00	30.413	6.9	12/8/2023 19:00	22.193	4.9
12/7/2023 9:00	22.547	5	12/7/2023 23:15	29.327	5	12/8/2023 19:15	22.22	6
12/7/2023 9:15	22.053	4.7	12/7/2023 23:30	24.853	6.7	12/8/2023 19:30	26.233	6.1
12/7/2023 9:30	23.947	4.8	12/7/2023 23:45	23.753	5.9	12/8/2023 19:45	20.047	6.9

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/8/2023 20:00	20.213	4.6	12/9/2023 10:15	35.313	8.9	12/10/2023 1:00	43.527	14.1
12/8/2023 20:15	19.187	4.8	12/9/2023 10:30	45.707	11.8	12/10/2023 1:15	40.613	14.6
12/8/2023 20:30	34.607	6.1	12/9/2023 10:45	40.307	11.1	12/10/2023 1:30	44.513	12.4
12/8/2023 20:45	30.1	6.8	12/9/2023 11:00	42.287	10.3	12/10/2023 1:45	44.28	12.2
12/8/2023 21:00	36.513	7.4	12/9/2023 11:15	40.127	9.7	12/10/2023 2:00	51.413	13.7
12/8/2023 21:15	30.653	9.2	12/9/2023 11:30	42.507	10.9	12/10/2023 2:15	48.127	13
12/8/2023 21:30	22.287	5.5	12/9/2023 11:45	38.347	14.3	12/10/2023 2:30	42.173	11.8
12/8/2023 21:45	24.24	6.2	12/9/2023 12:00	24.18	9.7	12/10/2023 2:45	40.173	10.8
12/8/2023 22:00	20.233	4.2	12/9/2023 12:15	29.193	7.4	12/10/2023 3:00	35.913	9.8
12/8/2023 22:15	22.907	6.4	12/9/2023 12:30	29.66	7.6	12/10/2023 3:15	35.12	11.9
12/8/2023 22:30	21.913	5.5	12/9/2023 12:45	28.187	8.3	12/10/2023 3:30	39.327	10.3
12/8/2023 22:45	21.447	5.8	12/9/2023 13:00	23.373	9.6	12/10/2023 3:45	36.98	11.1
12/8/2023 23:00	21.307	5.5	12/9/2023 13:15	28.52	7.3	12/10/2023 4:00	39.707	10.6
12/8/2023 23:15	19.4	4.5	12/9/2023 13:30	21.4	7.3	12/10/2023 4:15	37.853	11
12/8/2023 23:30	19.207	4.2	12/9/2023 14:15	82.067	0	12/10/2023 4:30	48.12	13.5
12/8/2023 23:45	19.547	4.8	12/9/2023 14:30	32.547	10.1	12/10/2023 4:45	40.9	9.7
12/9/2023 0:00	20.293	5.2	12/9/2023 14:45	33.44	9.6	12/10/2023 5:00	41.773	11.2
12/9/2023 0:15	18.48	5.5	12/9/2023 15:00	25.54	6.2	12/10/2023 5:15	42.74	12.6
12/9/2023 0:30	18.707	5	12/9/2023 15:15	40.733	13.8	12/10/2023 5:30	45.347	11
12/9/2023 0:45	18.527	4.5	12/9/2023 15:30	31.4	8	12/10/2023 5:45	43.407	12.5
12/9/2023 1:00	19.227	5.8	12/9/2023 15:45	24.8	8.7	12/10/2023 6:00	50.1	10.2
12/9/2023 1:15	19.96	4.8	12/9/2023 16:00	26.04	7.3	12/10/2023 6:15	77.293	14
12/9/2023 1:30	19.253	5.8	12/9/2023 16:15	38.54	8.9	12/10/2023 6:30	58.233	12.1
12/9/2023 1:45	19.473	5.2	12/9/2023 16:30	40.567	9	12/10/2023 6:45	41.78	10.6
12/9/2023 2:00	21.14	5.9	12/9/2023 16:45	36.953	8.7	12/10/2023 7:00	51.993	13.7
12/9/2023 2:15	18.96	5.7	12/9/2023 17:00	41.627	8.3	12/10/2023 7:15	64.5	12.6
12/9/2023 2:30	18.987	5.6	12/9/2023 17:15	38.72	7.3	12/10/2023 7:30	59.993	14.9
12/9/2023 2:45	18.893	4.7	12/9/2023 17:30	28.353	6.4	12/10/2023 7:45	45.007	10.5
12/9/2023 3:00	18.047	5.3	12/9/2023 17:45	22.987	8.3	12/10/2023 8:00	42.613	11.2
12/9/2023 3:15	16.96	4.7	12/9/2023 18:00	34.34	8.5	12/10/2023 8:15	100.233	12.8
12/9/2023 3:30	17.133	5.1	12/9/2023 18:15	49.9	12.3	12/10/2023 8:30	61.607	20.5
12/9/2023 3:45	17.8	5.7	12/9/2023 18:30	31.52	9.8	12/10/2023 8:45	48.193	12.2
12/9/2023 4:00	16.047	5.4	12/9/2023 18:45	27.427	8	12/10/2023 9:00	81.22	11.4
12/9/2023 4:15	19.2	5	12/9/2023 19:00	30.773	10	12/10/2023 9:15	93.247	26.2
12/9/2023 4:30	21.173	4.9	12/9/2023 19:15	29.693	10.7	12/10/2023 9:30	57.333	12
12/9/2023 4:45	19.573	5.7	12/9/2023 19:30	32.287	9.2	12/10/2023 9:45	50.38	13.5
12/9/2023 5:00	21.273	5.1	12/9/2023 19:45	26.82	10	12/10/2023 10:00	36.6	13.1
12/9/2023 5:15	23.16	5.5	12/9/2023 20:00	28.907	9.7	12/10/2023 10:15	47.787	13
12/9/2023 5:30	19.467	5.7	12/9/2023 20:15	35.36	11.6	12/10/2023 10:30	34.727	11.8
12/9/2023 5:45	22.973	6.1	12/9/2023 20:30	30.273	9.9	12/10/2023 10:45	32.22	10.8
12/9/2023 6:00	20.527	6.9	12/9/2023 20:45	31.773	10.2	12/10/2023 11:00	30.887	10.5
12/9/2023 6:15	27.787	5.5	12/9/2023 21:00	33.433	11.5	12/10/2023 11:15	26.72	8.8
12/9/2023 6:30	20.56	7.2	12/9/2023 21:15	34.393	10.2	12/10/2023 11:30	22.173	6.7
12/9/2023 6:45	28.547	7.5	12/9/2023 21:30	31.02	11.1	12/10/2023 11:45	21.213	5.4
12/9/2023 7:00	31.427	9.6	12/9/2023 21:45	25.993	9.8	12/10/2023 12:00	30.593	5.5
12/9/2023 7:15	20.247	6.8	12/9/2023 22:00	28.593	10.9	12/10/2023 12:15	21.933	6.2
12/9/2023 7:30	20.56	6	12/9/2023 22:15	34.887	11.7	12/10/2023 12:30	22.72	6.2
12/9/2023 7:45	22.2	6.7	12/9/2023 22:30	35.587	11.8	12/10/2023 12:45	21.08	6.7
12/9/2023 8:00	25.633	6.5	12/9/2023 22:45	35.8	12.1	12/10/2023 13:00	25.053	5.9
12/9/2023 8:15	34.587	6.6	12/9/2023 23:00	52.98	12.5	12/10/2023 13:15	19.353	5
12/9/2023 8:30	21.467	6.3	12/9/2023 23:15	49.887	15	12/10/2023 13:30	20.227	6.4
12/9/2023 8:45	27.187	15.2	12/9/2023 23:30	49.833	13.9	12/10/2023 13:45	18.753	5
12/9/2023 9:00	23.92	6.8	12/9/2023 23:45	41.5	10.7	12/10/2023 14:00	19.94	5.1
12/9/2023 9:15	30.98	7.4	12/10/2023 0:00	40.293	12.1	12/10/2023 14:15	19.473	4.9
12/9/2023 9:30	34.687	9.1	12/10/2023 0:15	41.353	12.5	12/10/2023 14:30	20.087	4.7
12/9/2023 9:45	26.2	6.5	12/10/2023 0:30	40.213	13.6	12/10/2023 14:45	19.307	5.4
12/9/2023 10:00	31.84	8.6	12/10/2023 0:45	38.827	10	12/10/2023 15:00	20.58	5.7

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/10/2023 15:15	21.207	4.8	12/11/2023 5:30	21.153	6.5	12/12/2023 23:00	85.253	22.9
12/10/2023 15:30	25.013	6.8	12/11/2023 5:45	19.327	7.1	12/12/2023 23:15	81.393	22.4
12/10/2023 15:45	28.113	8.4	12/11/2023 6:00	17.98	7.4	12/12/2023 23:30	61.073	20
12/10/2023 16:00	20.787	5.9	12/11/2023 6:15	31.913	6.9	12/12/2023 23:45	68.187	20.3
12/10/2023 16:15	22.36	5	12/11/2023 6:30	21.067	6.3	12/13/2023 0:00	67.72	22.1
12/10/2023 16:30	20.093	6.3	12/11/2023 6:45	19.813	6.9	12/13/2023 0:15	60.64	21.7
12/10/2023 16:45	19.887	7.2	12/11/2023 7:00	32.833	7.1	12/13/2023 0:30	56.98	21.3
12/10/2023 17:00	38.787	6	12/11/2023 7:15	34.96	6.5	12/13/2023 0:45	53.807	18.1
12/10/2023 17:15	30.8	5.9	12/11/2023 7:30	24.387	7.5	12/13/2023 1:00	55.3	21.7
12/10/2023 17:30	30.327	5.9	12/11/2023 7:45	28.733	6.8	12/13/2023 1:15	56.253	17.4
12/10/2023 17:45	44.213	6	12/11/2023 8:00	26.357	7.9	12/13/2023 1:30	60.967	19.2
12/10/2023 18:00	29.407	6.5	12/12/2023 11:30	63.4	0	12/13/2023 1:45	52.427	23.3
12/10/2023 18:15	48.8	7	12/12/2023 11:45	74.933	20	12/13/2023 2:00	52.447	19.7
12/10/2023 18:30	33.387	8.9	12/12/2023 12:00	80.273	19.4	12/13/2023 2:15	52.107	19.5
12/10/2023 18:45	39.313	9.3	12/12/2023 12:15	80.407	17.6	12/13/2023 2:30	66.16	21.9
12/10/2023 19:00	53.273	8.4	12/12/2023 12:30	82.68	22.3	12/13/2023 2:45	69.34	23.2
12/10/2023 19:15	47.14	12.1	12/12/2023 12:45	73.993	21.3	12/13/2023 3:00	64.787	23.4
12/10/2023 19:30	43.813	12	12/12/2023 13:00	77.287	22	12/13/2023 3:15	65.587	19.8
12/10/2023 19:45	55.407	15	12/12/2023 13:15	75.507	22	12/13/2023 3:30	70.007	23.4
12/10/2023 20:00	45.387	12.1	12/12/2023 13:30	64.033	20	12/13/2023 3:45	75.54	24.6
12/10/2023 20:15	44.2	10.7	12/12/2023 13:45	54.22	17.4	12/13/2023 4:00	87.48	25.3
12/10/2023 20:30	42.087	9.8	12/12/2023 14:00	42.98	16.5	12/13/2023 4:15	85.007	20.6
12/10/2023 20:45	48.76	8.4	12/12/2023 14:15	47.42	14.9	12/13/2023 4:30	72.627	22.4
12/10/2023 21:00	55.853	12.3	12/12/2023 14:30	41.367	12.1	12/13/2023 4:45	83.613	23.3
12/10/2023 21:15	38.08	10	12/12/2023 14:45	43.74	13.2	12/13/2023 5:00	83.087	23.9
12/10/2023 21:30	39.953	8.9	12/12/2023 15:00	38.7	15.6	12/13/2023 5:15	82.753	24.6
12/10/2023 21:45	35.367	7.4	12/12/2023 15:15	45.987	15.2	12/13/2023 5:30	86.013	25.4
12/10/2023 22:00	57	9	12/12/2023 15:30	48.727	18.3	12/13/2023 5:45	77.84	23.6
12/10/2023 22:15	37.58	9	12/12/2023 15:45	48.573	18.5	12/13/2023 6:00	87.66	26.6
12/10/2023 22:30	33.46	8.4	12/12/2023 16:00	47.873	19.8	12/13/2023 6:15	108.987	27.9
12/10/2023 22:45	32.9	7.5	12/12/2023 16:15	58.093	17	12/13/2023 6:30	97.007	25
12/10/2023 23:00	32.467	7.6	12/12/2023 16:30	48.073	16	12/13/2023 6:45	94.347	26.4
12/10/2023 23:15	34.147	8.1	12/12/2023 16:45	53.48	15	12/13/2023 7:00	122.073	27.8
12/10/2023 23:30	33.02	6.6	12/12/2023 17:00	65.66	20.6	12/13/2023 7:15	103.773	28.9
12/10/2023 23:45	29.547	6.8	12/12/2023 17:15	64.473	19.6	12/13/2023 7:30	115.82	24.8
12/11/2023 0:00	31.42	7.3	12/12/2023 17:30	74.54	20.2	12/13/2023 7:45	118.507	30.6
12/11/2023 0:15	28.267	8.3	12/12/2023 17:45	74.313	20.8	12/13/2023 8:00	103.08	28.5
12/11/2023 0:30	27.46	6	12/12/2023 18:00	71.767	20.1	12/13/2023 8:15	122.093	30.5
12/11/2023 0:45	26.853	5.8	12/12/2023 18:15	81.467	24.3	12/13/2023 8:30	106.793	29.2
12/11/2023 1:00	23.153	5.4	12/12/2023 18:30	88.447	22.4	12/13/2023 8:45	136.967	29
12/11/2023 1:15	24.373	5.5	12/12/2023 18:45	94.407	20.8	12/13/2023 9:00	112.433	27.1
12/11/2023 1:30	25.02	7	12/12/2023 19:00	88.833	21.3	12/13/2023 9:15	114.427	29.2
12/11/2023 1:45	26.26	7.3	12/12/2023 19:15	95.913	23.6	12/13/2023 9:30	112.08	28.2
12/11/2023 2:00	23.367	6.2	12/12/2023 19:30	92.747	21.1	12/13/2023 9:45	59.693	15.7
12/11/2023 2:15	24.093	7.5	12/12/2023 19:45	99.507	25	12/13/2023 10:00	43.8	14.8
12/11/2023 2:30	23.647	7.4	12/12/2023 20:00	96.287	26	12/13/2023 10:15	43.453	9.1
12/11/2023 2:45	24.88	6.9	12/12/2023 20:15	99.18	24.4	12/13/2023 10:30	42.32	11.2
12/11/2023 3:00	23.253	7.4	12/12/2023 20:30	82.647	24.5	12/13/2023 10:45	47.4	10
12/11/2023 3:15	22.08	6.3	12/12/2023 20:45	84.367	25.2	12/13/2023 11:00	79.827	15.7
12/11/2023 3:30	19.167	7.4	12/12/2023 21:00	99.333	23.8	12/13/2023 11:15	94.147	12.4
12/11/2023 3:45	19.887	4.3	12/12/2023 21:15	93.973	25.1	12/13/2023 11:30	77.467	11.5
12/11/2023 4:00	20.593	7.6	12/12/2023 21:30	73.48	23.1	12/13/2023 11:45	75.687	23
12/11/2023 4:15	23.807	5.8	12/12/2023 21:45	78.173	23.2	12/13/2023 12:00	50.027	12
12/11/2023 4:30	18.113	7.1	12/12/2023 22:00	92.393	21.6	12/13/2023 12:15	55.58	10.7
12/11/2023 4:45	19.7	5.8	12/12/2023 22:15	85.547	26.3	12/13/2023 12:30	59.16	20
12/11/2023 5:00	20.787	7.5	12/12/2023 22:30	91.933	23.6	12/13/2023 12:45	58.847	10.3
12/11/2023 5:15	20.653	7.1	12/12/2023 22:45	82.053	26.2	12/13/2023 13:00	49	10

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/13/2023 13:15	66.84	18.9	12/14/2023 3:30	34.673	9.9	12/14/2023 17:45	76.96	21.4
12/13/2023 13:30	70.76	15.1	12/14/2023 3:45	47.747	8.2	12/14/2023 18:00	65.953	12.9
12/13/2023 13:45	66.913	20.3	12/14/2023 4:00	31.167	8.3	12/14/2023 18:15	74.513	10.9
12/13/2023 14:00	76.593	14	12/14/2023 4:15	39.32	9.7	12/14/2023 18:30	63.607	14.9
12/13/2023 14:15	68.633	22.4	12/14/2023 4:30	35.687	7.6	12/14/2023 18:45	55.18	10
12/13/2023 14:30	81.867	19.2	12/14/2023 4:45	72.3	8.2	12/14/2023 19:00	63.967	9.4
12/13/2023 14:45	82.98	23.7	12/14/2023 5:00	80.267	17.5	12/14/2023 19:15	53.473	9.9
12/13/2023 15:00	79.273	14.3	12/14/2023 5:15	55.127	9.1	12/14/2023 19:30	42.58	9.1
12/13/2023 15:15	74.687	12.5	12/14/2023 5:30	70.76	9.7	12/14/2023 19:45	33.313	7.7
12/13/2023 15:30	75.953	21.3	12/14/2023 5:45	66.347	18.8	12/14/2023 20:00	33.4	6.2
12/13/2023 15:45	78.287	21.4	12/14/2023 6:00	67.187	11.2	12/14/2023 20:15	33.913	8
12/13/2023 16:00	84.147	23.1	12/14/2023 6:15	72.233	15.3	12/14/2023 20:30	30.713	8.1
12/13/2023 16:15	74.433	10.4	12/14/2023 6:30	73.353	11.7	12/14/2023 20:45	29.827	8.3
12/13/2023 16:30	71.407	19.7	12/14/2023 6:45	93.9	14.4	12/14/2023 21:00	26.747	9.2
12/13/2023 16:45	84.727	23.7	12/14/2023 7:00	137.333	20.7	12/14/2023 21:15	31.753	9.3
12/13/2023 17:00	82.6	21.5	12/14/2023 7:15	155.587	23.8	12/14/2023 21:30	50.107	17.9
12/13/2023 17:15	62.46	21.5	12/14/2023 7:30	159.227	24.2	12/14/2023 21:45	43.713	10.1
12/13/2023 17:30	54.347	18.8	12/14/2023 7:45	167.187	23.1	12/14/2023 22:00	22.747	12.6
12/13/2023 17:45	46.987	11	12/14/2023 8:00	153.387	23.5	12/14/2023 22:15	20.493	9.4
12/13/2023 18:00	43.513	16.3	12/14/2023 8:15	159.247	24.1	12/14/2023 22:30	22.173	10.7
12/13/2023 18:15	42.707	11.2	12/14/2023 8:30	152.247	23.6	12/14/2023 22:45	20.08	9.6
12/13/2023 18:30	37.073	9.7	12/14/2023 8:45	142.033	22.9	12/14/2023 23:00	18.52	9.2
12/13/2023 18:45	38.093	13.5	12/14/2023 9:00	138.8	24.2	12/14/2023 23:15	22.56	9.9
12/13/2023 19:00	33.44	9.4	12/14/2023 9:15	137.66	24.2	12/14/2023 23:30	22.427	9.4
12/13/2023 19:15	38.26	9	12/14/2023 9:30	119.207	21.9	12/14/2023 23:45	23.74	10.1
12/13/2023 19:30	33.56	8.6	12/14/2023 9:45	116.013	22.3	12/15/2023 0:00	26.733	10.8
12/13/2023 19:45	35.3	9	12/14/2023 10:00	97.093	19.9	12/15/2023 0:15	19.467	10.1
12/13/2023 20:00	33.913	9.8	12/14/2023 10:15	85.467	17.7	12/15/2023 0:30	18.833	8.2
12/13/2023 20:15	34.08	10.5	12/14/2023 10:30	95.333	16.2	12/15/2023 0:45	22.913	12.1
12/13/2023 20:30	36.507	8.3	12/14/2023 10:45	83.593	20.5	12/15/2023 1:00	19.793	8.6
12/13/2023 20:45	44.347	11.3	12/14/2023 11:00	81.033	18.4	12/15/2023 1:15	29.133	8
12/13/2023 21:00	39.213	10.2	12/14/2023 11:15	76.647	17.5	12/15/2023 1:30	47.187	10.8
12/13/2023 21:15	39.62	10.2	12/14/2023 11:30	77.127	18.8	12/15/2023 1:45	78.74	16.4
12/13/2023 21:30	35.447	10.4	12/14/2023 11:45	70.86	14	12/15/2023 2:00	62.16	13.1
12/13/2023 21:45	39.56	10.1	12/14/2023 12:00	66.493	12.2	12/15/2023 2:15	122.733	22.4
12/13/2023 22:00	41.26	11	12/14/2023 12:15	63.007	11.8	12/15/2023 2:30	70.3	17.1
12/13/2023 22:15	51.78	10.9	12/14/2023 12:30	61.58	12	12/15/2023 2:45	36.693	10.9
12/13/2023 22:30	45.9	11.7	12/14/2023 12:45	62.16	13.4	12/15/2023 3:00	39.347	13.2
12/13/2023 22:45	46.053	12.8	12/14/2023 13:00	57.753	14.4	12/15/2023 3:15	30.833	12.6
12/13/2023 23:00	43.7	12.3	12/14/2023 13:15	62.453	12.2	12/15/2023 3:30	61.333	12.5
12/13/2023 23:15	42.447	10.6	12/14/2023 13:30	65.527	12.2	12/15/2023 3:45	90.66	11.9
12/13/2023 23:30	33.647	10.4	12/14/2023 13:45	62.707	14.5	12/15/2023 4:00	75.98	17.1
12/13/2023 23:45	27.4	7.5	12/14/2023 14:00	64.527	11.4	12/15/2023 4:15	21.027	11
12/14/2023 0:00	24.84	8.3	12/14/2023 14:15	67.267	15.3	12/15/2023 4:30	42.167	13.4
12/14/2023 0:15	27.12	7.5	12/14/2023 14:30	63.173	11.7	12/15/2023 4:45	57.853	27.4
12/14/2023 0:30	32.367	10.1	12/14/2023 14:45	69.687	15.8	12/15/2023 5:00	48.247	23.8
12/14/2023 0:45	28.28	7.6	12/14/2023 15:00	59.64	12.4	12/15/2023 5:15	38.12	23.2
12/14/2023 1:00	25.893	8.9	12/14/2023 15:15	60.033	11.2	12/15/2023 5:30	40.88	21.3
12/14/2023 1:15	28.493	7.8	12/14/2023 15:30	56.633	12.4	12/15/2023 5:45	47.467	22.6
12/14/2023 1:30	43.427	9.7	12/14/2023 15:45	50.953	10.9	12/15/2023 6:00	50.047	27.7
12/14/2023 1:45	35.587	8.3	12/14/2023 16:00	56.933	11.3	12/15/2023 6:15	50.607	25.9
12/14/2023 2:00	104.707	17.8	12/14/2023 16:15	62.233	12.5	12/15/2023 6:30	37.64	23
12/14/2023 2:15	84.713	21	12/14/2023 16:30	64.6	10.8	12/15/2023 6:45	37.993	20.9
12/14/2023 2:30	90.527	14.3	12/14/2023 16:45	71.373	17.9	12/15/2023 7:00	46.193	23.1
12/14/2023 2:45	47.007	21.8	12/14/2023 17:00	74.787	14.3	12/15/2023 7:15	51.1	22.5
12/14/2023 3:00	35.093	9.5	12/14/2023 17:15	77.1	14.7	12/15/2023 7:30	58.193	22.1
12/14/2023 3:15	32.04	7.7	12/14/2023 17:30	82.113	13.6	12/15/2023 7:45	60.96	28.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/15/2023 8:00	59.6	28.9
12/15/2023 8:15	53.613	27.9
12/15/2023 8:30	46.233	27.2
12/15/2023 8:45	59.907	25.9
12/15/2023 9:00	60.013	24.6
12/15/2023 9:15	65.393	22.9
12/15/2023 9:30	72.567	21.2
12/15/2023 9:45	74.64	15.5
12/15/2023 10:00	83.58	20.2
12/15/2023 10:15	69.12	17.4
12/15/2023 10:30	52.387	15.8
12/15/2023 10:45	50.06	14.8
12/15/2023 11:00	42.067	11.1
12/15/2023 11:15	42.007	10.8
12/15/2023 11:30	56.82	9.1
12/15/2023 11:45	68.18	13.2
12/15/2023 12:00	55.167	11.9
12/15/2023 12:15	56.733	13.6
12/15/2023 12:30	67.573	9.2
12/15/2023 12:45	36.967	10.9
12/15/2023 13:00	27.387	8.5
12/15/2023 13:15	27.873	8.7
12/15/2023 13:30	26.393	8.9
12/15/2023 13:45	24.753	8.1
12/15/2023 14:00	30.127	8.2
12/15/2023 14:15	37.627	10.1
12/15/2023 14:30	31.293	7
12/15/2023 14:45	51.933	12.1
12/15/2023 15:00	62.027	10
12/15/2023 15:15	39.787	8.8
12/15/2023 15:30	63.567	9.6
12/15/2023 15:45	39.967	12.5
12/15/2023 16:00	39.28	10.7
12/15/2023 16:15	35.547	11.4
12/15/2023 16:30	38.507	11.5
12/15/2023 16:45	35.753	9.5
12/15/2023 17:00	33.867	9.2
12/15/2023 17:15	33.053	10
12/15/2023 17:30	33.36	10.2
12/15/2023 17:45	27.233	9.2
12/15/2023 18:00	32.24	9.7
12/15/2023 18:15	37.693	20
12/15/2023 18:30	26.807	9.1
12/15/2023 18:45	23.893	9.2
12/15/2023 19:00	29.047	9
12/15/2023 19:15	29.847	13
12/15/2023 19:30	26.52	10.8
12/15/2023 19:45	31.62	11.2
12/15/2023 20:00	25.633	10.9
12/15/2023 20:15	27.447	10.4
12/15/2023 20:30	27.94	10
12/15/2023 20:45	28.927	10.8
12/15/2023 21:00	28.473	11.1
12/15/2023 21:15	37.18	12.2
12/15/2023 21:30	28.727	8.5
12/15/2023 21:45	67.307	9.7
12/15/2023 22:00	25.833	9.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/15/2023 22:15	26.413	10.2
12/15/2023 22:30	28.54	10.7
12/15/2023 22:45	39.547	10.1
12/15/2023 23:00	69.327	12.8
12/15/2023 23:15	78.26	11.5
12/15/2023 23:30	70.56	12.2
12/15/2023 23:45	39.56	7.5
12/16/2023 0:00	43.987	8.2
12/16/2023 0:15	52.453	11.2
12/16/2023 0:30	42.84	14.2
12/16/2023 0:45	43.913	10.9
12/16/2023 1:00	50.527	14.1
12/16/2023 1:15	48.743	14.5
12/16/2023 3:45	9.28	0
12/16/2023 4:00	10.42	5
12/16/2023 4:15	11.38	5
12/16/2023 4:30	12.38	6.4
12/16/2023 4:45	12.267	5.7
12/16/2023 5:00	13.187	5.3
12/16/2023 5:15	12.753	5.1
12/16/2023 5:30	13.647	5.6
12/16/2023 5:45	14.113	6.5
12/16/2023 6:00	15.907	5
12/16/2023 6:15	11.853	5.6
12/16/2023 6:30	10.68	3.4
12/16/2023 6:45	15.033	5.1
12/16/2023 7:00	13.953	4
12/16/2023 7:15	15.747	5.3
12/16/2023 7:30	17.653	7.9
12/16/2023 7:45	17.9	8.6
12/16/2023 8:00	16.007	8.7
12/16/2023 8:15	15.707	7.7
12/16/2023 8:30	12.48	5.9
12/16/2023 8:45	13.247	5.4
12/16/2023 9:00	24.3	4.2
12/16/2023 9:15	40.72	5.3
12/16/2023 9:30	16.313	5.6
12/16/2023 9:45	32.827	4.7
12/16/2023 10:00	21.76	6.7
12/16/2023 10:15	20.56	5.1
12/16/2023 10:30	21.747	5
12/16/2023 10:45	28.793	6.8
12/16/2023 11:00	41.073	5.8
12/16/2023 11:15	47.033	8.8
12/16/2023 11:30	35.58	8.5
12/16/2023 11:45	46.567	7.8
12/16/2023 12:00	63.26	13.7
12/16/2023 12:15	80.24	11.3
12/16/2023 12:30	131.713	10.6
12/16/2023 12:45	125.94	18.1
12/16/2023 13:00	141.113	20.2
12/16/2023 13:15	89.833	9
12/16/2023 13:30	103.347	17.8
12/16/2023 13:45	87.027	7.4
12/16/2023 14:00	59.62	6.9
12/16/2023 14:15	66.14	10.5
12/16/2023 14:30	54.233	11.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/16/2023 14:45	73.7	7.4
12/16/2023 15:00	68.7	19.8
12/16/2023 15:15	72.013	6.5
12/16/2023 15:30	55.807	12.4
12/16/2023 15:45	65.687	9
12/16/2023 16:00	71.267	11.7
12/16/2023 16:15	43.013	10.6
12/16/2023 16:30	49.227	4.1
12/16/2023 16:45	53.9	9.4
12/16/2023 17:00	29.16	5.1
12/16/2023 17:15	18.693	4.7
12/16/2023 17:30	15.873	5.6
12/16/2023 17:45	27.62	3.5
12/16/2023 18:00	9.92	4.1
12/16/2023 18:15	28.407	3.6
12/16/2023 18:30	10.887	3.4
12/16/2023 18:45	9.76	3.7
12/16/2023 19:00	10.46	3.2
12/16/2023 19:15	8.36	3
12/16/2023 19:30	14.053	3.1
12/16/2023 19:45	7.533	3.4
12/16/2023 20:00	7.66	4
12/16/2023 20:15	8.253	3.3
12/16/2023 20:30	8.993	3.4
12/16/2023 20:45	9.5	3.4
12/16/2023 21:00	8.893	3.8
12/16/2023 21:15	15.067	3.6
12/16/2023 21:30	15.067	3.1
12/16/2023 21:45	19.033	3.9
12/16/2023 22:00	21.587	5.1
12/16/2023 22:15	25.78	4.5
12/16/2023 22:30	23.973	4.8
12/16/2023 22:45	22.98	4.3
12/16/2023 23:00	18.167	4.3
12/16/2023 23:15	13.66	4
12/16/2023 23:30	14.22	3.8
12/16/2023 23:45	15.293	3.8
12/17/2023 0:00	19.167	3.8
12/17/2023 0:15	14.773	3.2
12/17/2023 0:30	14.187	3.2
12/17/2023 0:45	15.113	4.1
12/17/2023 1:00	12.893	3.8
12/17/2023 1:15	16.4	2.5
12/18/2023 11:30	33.4	0
12/18/2023 11:45	22.42	4.1
12/18/2023 12:00	21.873	5
12/18/2023 12:15	26.133	7.8
12/18/2023 12:30	31.02	9.6
12/18/2023 12:45	28.44	3.5
12/18/2023 13:00	29.967	5.7
12/18/2023 13:15	19.973	3.2
12/18/2023 13:30	21.56	4.5
12/18/2023 13:45	22.88	5
12/18/2023 14:00	24.153	5
12/18/2023 14:15	24.907	3.7
12/18/2023 14:30	26.307	5.6
12/18/2023 14:45	26.34	5

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/18/2023 15:00	25.087	4.6	12/19/2023 5:15	16.04	3.7	12/19/2023 19:30	16.807	4.6
12/18/2023 15:15	24.227	5.3	12/19/2023 5:30	17.813	4.1	12/19/2023 19:45	19.693	4.4
12/18/2023 15:30	26.293	4.2	12/19/2023 5:45	18.107	4.2	12/19/2023 20:00	22.527	5.2
12/18/2023 15:45	35.233	5	12/19/2023 6:00	20.96	4.3	12/19/2023 20:15	24.387	4.8
12/18/2023 16:00	29.207	4.3	12/19/2023 6:15	22.287	4.8	12/19/2023 20:30	19.76	5
12/18/2023 16:15	27.32	5.5	12/19/2023 6:30	16.213	3.7	12/19/2023 20:45	20.367	4.9
12/18/2023 16:30	21.973	4.5	12/19/2023 6:45	20.813	4.6	12/19/2023 21:00	19.333	4.7
12/18/2023 16:45	22.833	4	12/19/2023 7:00	19.173	4.3	12/19/2023 21:15	22.207	4.1
12/18/2023 17:00	22.693	4.5	12/19/2023 7:15	18.64	4.4	12/19/2023 21:30	21.327	5.7
12/18/2023 17:15	14.307	2.8	12/19/2023 7:30	20.933	4.8	12/19/2023 21:45	23.94	5.7
12/18/2023 17:30	20.78	3.7	12/19/2023 7:45	30.747	7	12/19/2023 22:00	21.107	5.3
12/18/2023 17:45	18.16	3.9	12/19/2023 8:00	26.56	5.6	12/19/2023 22:15	20.907	5.7
12/18/2023 18:00	20.287	4.3	12/19/2023 8:15	21.14	4.2	12/19/2023 22:30	23.127	6.5
12/18/2023 18:15	22.027	4.5	12/19/2023 8:30	21.527	5.8	12/19/2023 22:45	22.14	5.4
12/18/2023 18:30	22.187	3.9	12/19/2023 8:45	21.42	3.8	12/19/2023 23:00	22.993	5.2
12/18/2023 18:45	22.067	4	12/19/2023 9:00	23.847	4.2	12/19/2023 23:15	30.3	6.4
12/18/2023 19:00	21.393	3.9	12/19/2023 9:15	24.113	6.6	12/19/2023 23:30	23.287	6.7
12/18/2023 19:15	26.573	5.3	12/19/2023 9:30	19.94	4	12/19/2023 23:45	20.78	5.3
12/18/2023 19:30	22.073	4.5	12/19/2023 9:45	18.747	3.7	12/20/2023 0:00	16.66	5.4
12/18/2023 19:45	22.533	5.4	12/19/2023 10:00	23.333	6.4	12/20/2023 0:15	17.827	5.3
12/18/2023 20:00	18.96	4.1	12/19/2023 10:15	18.72	3.3	12/20/2023 0:30	17.56	4.7
12/18/2023 20:15	20.02	4.9	12/19/2023 10:30	18.913	5.2	12/20/2023 0:45	17.66	4.9
12/18/2023 20:30	20.693	3.2	12/19/2023 10:45	14.047	3.2	12/20/2023 1:00	22.833	5
12/18/2023 20:45	27.26	5	12/19/2023 11:00	14.493	3.6	12/20/2023 1:15	30.6	5.9
12/18/2023 21:00	30.153	5.8	12/19/2023 11:15	14.733	3.5	12/20/2023 1:30	29.713	7.8
12/18/2023 21:15	32.387	7.6	12/19/2023 11:30	18.627	3.9	12/20/2023 1:45	34.507	7.5
12/18/2023 21:30	32.227	6	12/19/2023 11:45	19.187	5.5	12/20/2023 2:00	35.947	7.6
12/18/2023 21:45	30.873	5.7	12/19/2023 12:00	21.273	4.4	12/20/2023 2:15	34.06	7.2
12/18/2023 22:00	29.547	6.6	12/19/2023 12:15	21.807	4.1	12/20/2023 2:30	33.433	9.1
12/18/2023 22:15	30.44	5.5	12/19/2023 12:30	21.273	4.1	12/20/2023 2:45	29.893	8.9
12/18/2023 22:30	25.793	5	12/19/2023 12:45	22.82	3.7	12/20/2023 3:00	28.353	6.9
12/18/2023 22:45	22.78	5.1	12/19/2023 13:00	20.78	5.3	12/20/2023 3:15	34.28	10.1
12/18/2023 23:00	24.06	4.6	12/19/2023 13:15	19.08	3.3	12/20/2023 3:30	31.727	9.5
12/18/2023 23:15	24.707	4.8	12/19/2023 13:30	22.44	4.2	12/20/2023 3:45	32.673	9.8
12/18/2023 23:30	26.227	5	12/19/2023 13:45	21.907	4.2	12/20/2023 4:00	33.067	10.6
12/18/2023 23:45	26.58	4.9	12/19/2023 14:00	26.833	5.7	12/20/2023 4:15	27.673	9.8
12/19/2023 0:00	24.94	5.4	12/19/2023 14:15	24.493	5.5	12/20/2023 4:30	28.587	8.2
12/19/2023 0:15	31.7	5.5	12/19/2023 14:30	19.707	3.7	12/20/2023 4:45	28.48	16.3
12/19/2023 0:30	25.72	8	12/19/2023 14:45	18.853	3.5	12/20/2023 5:00	25	8.3
12/19/2023 0:45	27.853	4.9	12/19/2023 15:00	18.82	4.6	12/20/2023 5:15	21.38	8.1
12/19/2023 1:00	20.853	4.6	12/19/2023 15:15	22.553	4.9	12/20/2023 5:30	21.067	7.6
12/19/2023 1:15	19.48	3.7	12/19/2023 15:30	22.473	4.8	12/20/2023 5:45	20.74	7.3
12/19/2023 1:30	18.693	5	12/19/2023 15:45	18.767	4.9	12/20/2023 6:00	28.973	8
12/19/2023 1:45	18.113	4	12/19/2023 16:00	26.007	4.7	12/20/2023 6:15	22.533	7.2
12/19/2023 2:00	19.473	4.4	12/19/2023 16:15	22.42	4.2	12/20/2023 6:30	35.227	8
12/19/2023 2:15	19.107	4.7	12/19/2023 16:30	24.747	5	12/20/2023 6:45	24.347	7.7
12/19/2023 2:30	18.24	3.4	12/19/2023 16:45	27.253	5.1	12/20/2023 7:00	21.08	7.8
12/19/2023 2:45	18.947	4.6	12/19/2023 17:00	22.027	5.2	12/20/2023 7:15	23.567	7.1
12/19/2023 3:00	19.127	4.5	12/19/2023 17:15	28.593	3.9	12/20/2023 7:30	21.427	8.5
12/19/2023 3:15	14.98	4.9	12/19/2023 17:30	36.32	9.7	12/20/2023 7:45	22.587	9.9
12/19/2023 3:30	18.947	4.7	12/19/2023 17:45	17.92	3.3	12/20/2023 8:00	23.293	9.2
12/19/2023 3:45	16.753	4.8	12/19/2023 18:00	26.2	2.9	12/20/2023 8:15	21.813	9.2
12/19/2023 4:00	15.82	3.7	12/19/2023 18:15	15.133	3.7	12/20/2023 8:30	25.207	9.9
12/19/2023 4:15	16.653	4.9	12/19/2023 18:30	25.527	4.1	12/20/2023 8:45	18.907	10.3
12/19/2023 4:30	17.293	4	12/19/2023 18:45	14.98	4.2	12/20/2023 9:00	19.073	10.9
12/19/2023 4:45	17.853	4.2	12/19/2023 19:00	24.953	3.4	12/20/2023 9:15	24.847	10.3
12/19/2023 5:00	16.66	4.8	12/19/2023 19:15	19.653	6.6	12/20/2023 9:30	19.5	10.1

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/20/2023 9:45	20.707	9.5	12/21/2023 0:00	26.387	15.3	12/21/2023 14:15	29.98	16.2
12/20/2023 10:00	26.72	9.9	12/21/2023 0:15	21.513	11	12/21/2023 14:30	33.007	13.5
12/20/2023 10:15	21.713	9.4	12/21/2023 0:30	21.513	10.6	12/21/2023 14:45	29.947	14.2
12/20/2023 10:30	38.127	9.8	12/21/2023 0:45	19.56	9.9	12/21/2023 15:00	29.807	13.8
12/20/2023 10:45	32.26	10.9	12/21/2023 1:00	18.927	9.4	12/21/2023 15:15	29.107	14.5
12/20/2023 11:00	22.893	10.8	12/21/2023 1:15	21.673	10.6	12/21/2023 15:30	30.873	13.5
12/20/2023 11:15	22.993	10	12/21/2023 1:30	21.987	10.2	12/21/2023 15:45	32.68	14.6
12/20/2023 11:30	23.387	10.6	12/21/2023 1:45	19.467	10.3	12/21/2023 16:00	29.807	13.5
12/20/2023 11:45	20.273	7.9	12/21/2023 2:00	18.913	10.2	12/21/2023 16:15	29.367	14.8
12/20/2023 12:00	26.367	8.5	12/21/2023 2:15	17.707	9.6	12/21/2023 16:30	35.973	15.6
12/20/2023 12:15	24.207	9.5	12/21/2023 2:30	17.707	9.4	12/21/2023 16:45	36.013	15.1
12/20/2023 12:30	27.533	8.4	12/21/2023 2:45	17.86	10	12/21/2023 17:00	29.867	15.1
12/20/2023 12:45	23.98	6.6	12/21/2023 3:00	16.727	9.8	12/21/2023 17:15	35.94	14.2
12/20/2023 13:00	24.2	7.9	12/21/2023 3:15	19.153	10.5	12/21/2023 17:30	49.68	21.7
12/20/2023 13:15	26.8	10.6	12/21/2023 3:30	21.947	13.7	12/21/2023 17:45	34.06	15.1
12/20/2023 13:30	22.207	9.9	12/21/2023 3:45	23.493	11.8	12/21/2023 18:00	31.827	14.9
12/20/2023 13:45	24.667	10.6	12/21/2023 4:00	26.3	12.3	12/21/2023 18:15	47.767	14.5
12/20/2023 14:00	22.76	9.7	12/21/2023 4:15	26.2	12.6	12/21/2023 18:30	29	13.5
12/20/2023 14:15	27.14	9.9	12/21/2023 4:30	25.667	13.8	12/21/2023 18:45	44.693	16
12/20/2023 14:30	24.547	9.7	12/21/2023 4:45	30.647	15.1	12/21/2023 19:00	32.667	16.8
12/20/2023 14:45	29.173	12.8	12/21/2023 5:00	28.433	15.5	12/21/2023 19:15	42.493	15.2
12/20/2023 15:00	29.873	10.3	12/21/2023 5:15	34.52	15.8	12/21/2023 19:30	47.907	18.3
12/20/2023 15:15	31.873	9.6	12/21/2023 5:30	34.96	16.7	12/21/2023 19:45	46.78	20.9
12/20/2023 15:30	24.933	10.3	12/21/2023 5:45	28.06	16.6	12/21/2023 20:00	38.093	17.8
12/20/2023 15:45	29.24	9.8	12/21/2023 6:00	36.3	16.8	12/21/2023 20:15	45.713	16.3
12/20/2023 16:00	32.447	9.6	12/21/2023 6:15	34.58	16.6	12/21/2023 20:30	35.907	16
12/20/2023 16:15	25.967	11.2	12/21/2023 6:30	42.787	15.9	12/21/2023 20:45	34.713	16.6
12/20/2023 16:30	28.66	12.1	12/21/2023 6:45	36.607	17.4	12/21/2023 21:00	36.393	15.3
12/20/2023 16:45	28.607	10.5	12/21/2023 7:00	37.473	19.2	12/21/2023 21:15	30.42	15.1
12/20/2023 17:00	30.913	11.8	12/21/2023 7:15	31.187	18	12/21/2023 21:30	30.7	15.2
12/20/2023 17:15	24.633	10	12/21/2023 7:30	36.38	16.4	12/21/2023 21:45	28.167	15.9
12/20/2023 17:30	32.633	11.3	12/21/2023 7:45	33.507	17.4	12/21/2023 22:00	31.827	15.9
12/20/2023 17:45	28.453	10.7	12/21/2023 8:00	38.133	19.8	12/21/2023 22:15	28.54	14.4
12/20/2023 18:00	22.12	9.7	12/21/2023 8:15	42.873	18.7	12/21/2023 22:30	34.16	14.7
12/20/2023 18:15	44.093	10.8	12/21/2023 8:30	38.767	21.8	12/21/2023 22:45	30.093	14.8
12/20/2023 18:30	25.553	13.3	12/21/2023 8:45	36.1	22.1	12/21/2023 23:00	31.02	15.2
12/20/2023 18:45	25.587	10.5	12/21/2023 9:00	36.207	21.4	12/21/2023 23:15	30.56	15.1
12/20/2023 19:00	25.093	11.3	12/21/2023 9:15	33.967	20.3	12/21/2023 23:30	30.06	14.9
12/20/2023 19:15	25.747	11	12/21/2023 9:30	32.32	17.3	12/21/2023 23:45	31.08	15
12/20/2023 19:30	27.807	11.4	12/21/2023 9:45	32.94	20	12/22/2023 0:00	30.32	13.6
12/20/2023 19:45	29.307	11.1	12/21/2023 10:00	33.393	18.6	12/22/2023 0:15	29.547	14.3
12/20/2023 20:00	25.147	11.4	12/21/2023 10:15	33.693	16.9	12/22/2023 0:30	27.5	14.2
12/20/2023 20:15	27.82	11.7	12/21/2023 10:30	36.193	18.8	12/22/2023 0:45	26.853	13.4
12/20/2023 20:30	28.713	12.3	12/21/2023 10:45	36.573	17.9	12/22/2023 1:00	27.747	14.4
12/20/2023 20:45	31.72	12.1	12/21/2023 11:00	39.84	17.3	12/22/2023 1:15	27.033	13.7
12/20/2023 21:00	21.987	10.7	12/21/2023 11:15	36.547	18.9	12/22/2023 1:30	26.94	13.8
12/20/2023 21:15	24.653	13.8	12/21/2023 11:30	39.507	16.9	12/22/2023 1:45	25.327	15.4
12/20/2023 21:30	26.687	11.6	12/21/2023 11:45	35.86	17.1	12/22/2023 2:00	28.06	13.3
12/20/2023 21:45	22.72	11.8	12/21/2023 12:00	42.667	17.7	12/22/2023 2:15	26.847	14.9
12/20/2023 22:00	23.707	11.1	12/21/2023 12:15	38.227	14.6	12/22/2023 2:30	30.073	14.4
12/20/2023 22:15	25.813	11.1	12/21/2023 12:30	39.307	16.5	12/22/2023 2:45	31.953	15.8
12/20/2023 22:30	21.333	11.8	12/21/2023 12:45	31.293	14.4	12/22/2023 3:00	34.553	14.8
12/20/2023 22:45	23.047	12	12/21/2023 13:00	30.727	14.6	12/22/2023 3:15	35.527	16.1
12/20/2023 23:00	21.36	11.1	12/21/2023 13:15	29.013	16.6	12/22/2023 3:30	33.12	15.3
12/20/2023 23:15	24.647	10.8	12/21/2023 13:30	27.553	13.1	12/22/2023 3:45	28.56	15
12/20/2023 23:30	21.193	11.6	12/21/2023 13:45	36.913	13.8	12/22/2023 4:00	28.853	14.7
12/20/2023 23:45	25.627	10.3	12/21/2023 14:00	33.507	13.2	12/22/2023 4:15	31.587	14.8

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/22/2023 4:30	31.933	14	12/23/2023 21:30	50.253	18.4	12/24/2023 11:45	73.673	18.9
12/22/2023 4:45	29.467	14	12/23/2023 21:45	37.96	10	12/24/2023 12:00	70.813	18.4
12/22/2023 5:00	29.84	15.1	12/23/2023 22:00	31.713	7.7	12/24/2023 12:15	60.227	17.4
12/22/2023 5:15	28.2	15.4	12/23/2023 22:15	57.027	13.3	12/24/2023 12:30	55.047	16.2
12/22/2023 5:30	27.267	15	12/23/2023 22:30	53.073	9.7	12/24/2023 12:45	53.567	16.2
12/22/2023 5:45	27.473	14.7	12/23/2023 22:45	47.973	12.5	12/24/2023 13:00	54.94	16.4
12/22/2023 6:00	47.887	14.7	12/23/2023 23:00	39.033	9.8	12/24/2023 13:15	56.933	16.9
12/22/2023 6:15	30.733	15.6	12/23/2023 23:15	58.42	18.3	12/24/2023 13:30	53.22	16.3
12/22/2023 6:30	39.127	15.1	12/23/2023 23:30	53.2	17.6	12/24/2023 13:45	55.913	15.9
12/22/2023 6:45	40.06	24.5	12/23/2023 23:45	32.127	9.4	12/24/2023 14:00	60.747	17.1
12/22/2023 7:00	27.633	13.5	12/24/2023 0:00	35.113	11.4	12/24/2023 14:15	61.34	17
12/22/2023 7:15	32.173	17	12/24/2023 0:15	48.093	11.7	12/24/2023 14:30	60.133	17.2
12/22/2023 7:30	26.86	14.7	12/24/2023 0:30	91.927	22.3	12/24/2023 14:45	65.813	15.4
12/22/2023 7:45	32.993	15	12/24/2023 0:45	139.02	25.5	12/24/2023 15:00	79.687	16
12/22/2023 8:00	28.027	14.5	12/24/2023 1:00	163.26	30	12/24/2023 15:15	85.72	19.8
12/22/2023 8:15	26.913	14.4	12/24/2023 1:15	172.053	28.8	12/24/2023 15:30	92.073	18.2
12/22/2023 8:30	33.953	14.7	12/24/2023 1:30	149.987	26.8	12/24/2023 15:45	94.26	20.6
12/22/2023 8:45	33.96	15.1	12/24/2023 1:45	151.167	26.8	12/24/2023 16:00	97.24	20.5
12/22/2023 9:00	35.873	16	12/24/2023 2:00	165.067	28	12/24/2023 16:15	90.8	19.6
12/22/2023 9:15	40.68	15.4	12/24/2023 2:15	147.08	26.6	12/24/2023 16:30	103.087	20.8
12/22/2023 9:30	48.433	16.4	12/24/2023 2:30	99.347	26.6	12/24/2023 16:45	98.727	20.3
12/22/2023 9:45	40.133	17.7	12/24/2023 2:45	78.293	21.8	12/24/2023 17:00	101.293	19.4
12/22/2023 10:00	39.88	20.2	12/24/2023 3:00	93.88	18.8	12/24/2023 17:15	102.627	19.6
12/22/2023 10:15	37.313	14.9	12/24/2023 3:15	67.46	20.7	12/24/2023 17:30	104.92	21.6
12/22/2023 10:30	36.18	18.1	12/24/2023 3:30	64.6	16.6	12/24/2023 17:45	101.967	20.4
12/22/2023 10:45	39.873	16.5	12/24/2023 3:45	55.493	15	12/24/2023 18:00	100.473	20.5
12/22/2023 11:00	28.973	14.7	12/24/2023 4:00	44.733	14.8	12/24/2023 18:15	106.08	20.9
12/22/2023 11:15	30.933	14.6	12/24/2023 4:15	46.173	14.8	12/24/2023 18:30	112.073	22.9
12/22/2023 11:30	34.427	13.6	12/24/2023 4:30	49.033	17.8	12/24/2023 18:45	103.273	23.3
12/22/2023 11:45	29.614	13.9	12/24/2023 4:45	44.753	13.5	12/24/2023 19:00	95.507	20.4
12/23/2023 14:45	90.3	0	12/24/2023 5:00	49.393	13.8	12/24/2023 19:15	84.113	22.9
12/23/2023 15:00	86.7	27.4	12/24/2023 5:15	55.807	13.7	12/24/2023 19:30	67.913	23.2
12/23/2023 15:15	70.407	10.6	12/24/2023 5:30	71.933	15.6	12/24/2023 19:45	65.2	19.4
12/23/2023 15:30	80.32	21.1	12/24/2023 5:45	96.607	18	12/24/2023 20:00	72.507	21.3
12/23/2023 15:45	84.833	15	12/24/2023 6:00	123.187	22.4	12/24/2023 20:15	65.267	20.8
12/23/2023 16:00	91.18	21.1	12/24/2023 6:15	147.533	23.3	12/24/2023 20:30	63.793	21.7
12/23/2023 16:15	100.067	24.5	12/24/2023 6:30	126.613	20.9	12/24/2023 20:45	67.687	22.6
12/23/2023 16:30	89.88	21	12/24/2023 6:45	127.72	23	12/24/2023 21:00	59.867	22.6
12/23/2023 16:45	85.547	20.4	12/24/2023 7:00	129.847	23.9	12/24/2023 21:15	55.353	19.4
12/23/2023 17:00	69.153	11.5	12/24/2023 7:15	128.993	23.3	12/24/2023 21:30	53.913	20.5
12/23/2023 17:15	95.133	23.9	12/24/2023 7:30	117.74	23	12/24/2023 21:45	63.473	19.7
12/23/2023 17:30	56.46	19.5	12/24/2023 7:45	122.093	23.3	12/24/2023 22:00	56.66	18.3
12/23/2023 17:45	52.62	10.9	12/24/2023 8:00	127.9	23.6	12/24/2023 22:15	53.747	19.5
12/23/2023 18:00	37.367	14.5	12/24/2023 8:15	126.24	24.2	12/24/2023 22:30	52.34	18.3
12/23/2023 18:15	40.84	8.8	12/24/2023 8:30	135.127	22.9	12/24/2023 22:45	46.213	17.5
12/23/2023 18:30	32.947	10.4	12/24/2023 8:45	120.507	21.9	12/24/2023 23:00	49.26	17.7
12/23/2023 18:45	40.4	12.7	12/24/2023 9:00	118.267	23.6	12/24/2023 23:15	42.98	17.4
12/23/2023 19:00	45.24	10.1	12/24/2023 9:15	107.513	21.9	12/24/2023 23:30	43.993	17.1
12/23/2023 19:15	50.973	16.9	12/24/2023 9:30	114.793	21.9	12/24/2023 23:45	45.52	15.7
12/23/2023 19:30	42.647	11.4	12/24/2023 9:45	111.78	23.3	12/25/2023 0:00	55.547	14.8
12/23/2023 19:45	64.473	14.5	12/24/2023 10:00	106.153	23.3	12/25/2023 0:15	42.793	14.9
12/23/2023 20:00	60.633	18.3	12/24/2023 10:15	99.8	24.3	12/25/2023 0:30	37.353	15.7
12/23/2023 20:15	61.373	17.1	12/24/2023 10:30	88.307	22.7	12/25/2023 0:45	40.493	18.1
12/23/2023 20:30	59.607	12.4	12/24/2023 10:45	84.14	20.3	12/25/2023 1:00	43.473	15.6
12/23/2023 20:45	44.06	18.4	12/24/2023 11:00	78.007	19.6	12/25/2023 1:15	38.56	15.1
12/23/2023 21:00	60.12	10.5	12/24/2023 11:15	95.067	19.2	12/25/2023 1:30	37.98	14.6
12/23/2023 21:15	61.02	21.6	12/24/2023 11:30	90.08	20.8	12/25/2023 1:45	38.02	13.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/25/2023 2:00	37.373	15
12/25/2023 2:15	38.38	15.7
12/25/2023 2:30	36.16	14.5
12/25/2023 2:45	34.573	15.9
12/25/2023 3:00	36.987	15.6
12/25/2023 3:15	36.787	15.5
12/25/2023 3:30	37.08	15.7
12/25/2023 3:45	38.167	14.7
12/25/2023 4:00	43.2	16.1
12/25/2023 4:15	32.527	13.7
12/25/2023 4:30	31.56	14
12/25/2023 4:45	31.307	13.8
12/25/2023 5:00	33.067	15.8
12/25/2023 5:15	34.927	14.4
12/25/2023 5:30	31.093	13
12/25/2023 5:45	31.393	13.9
12/25/2023 6:00	38.593	14.2
12/25/2023 6:15	28.647	15.2
12/25/2023 6:30	29.847	14.3
12/25/2023 6:45	28.647	14
12/25/2023 7:00	34.22	15.4
12/25/2023 7:15	36.273	15.8
12/25/2023 7:30	35.66	16.2
12/25/2023 7:45	40.287	16.4
12/25/2023 8:00	42.687	17
12/25/2023 8:15	41.627	17.8
12/25/2023 8:30	36.633	15.9
12/25/2023 8:45	33.827	15.7
12/25/2023 9:00	36.093	15
12/25/2023 9:15	34.667	16.5
12/25/2023 9:30	35.853	18
12/25/2023 9:45	35.253	16.2
12/25/2023 10:00	32.66	15
12/25/2023 10:15	32.967	15.4
12/25/2023 10:30	30.493	16.3
12/25/2023 10:45	36.967	13.4
12/25/2023 11:00	38.853	13.8
12/25/2023 11:15	39.86	15.7
12/25/2023 11:30	32.727	13.6
12/25/2023 11:45	33.887	13.7
12/25/2023 12:00	29.58	12.2
12/25/2023 12:15	29.993	13.2
12/25/2023 12:30	31.087	14.1
12/25/2023 12:45	33.027	13.7
12/25/2023 13:00	33.447	13.4
12/25/2023 13:15	31.693	12.5
12/25/2023 13:30	29.867	11.9
12/25/2023 13:45	27.793	12.6
12/25/2023 14:00	28.66	12.5
12/25/2023 14:15	28.713	16.4
12/25/2023 14:30	27.973	11.6
12/25/2023 14:45	30.307	11.8
12/25/2023 15:00	26.593	12.9
12/25/2023 15:15	25.753	13.3
12/25/2023 15:30	30.76	12.6
12/25/2023 15:45	26.767	13.8
12/25/2023 16:00	30.213	12.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/25/2023 16:15	27.267	11.9
12/25/2023 16:30	38.913	12.7
12/25/2023 16:45	25.453	11.2
12/25/2023 17:00	25.467	12
12/25/2023 17:15	25.747	11.8
12/25/2023 17:30	25	10.7
12/25/2023 17:45	27.033	11.5
12/25/2023 18:00	29.42	11.3
12/25/2023 18:15	32.767	12.4
12/25/2023 18:30	37.84	12
12/25/2023 18:45	44.247	13.2
12/25/2023 19:00	40.873	13.1
12/25/2023 19:15	42.547	11.8
12/25/2023 19:30	40.86	13.5
12/25/2023 19:45	48.133	14.6
12/25/2023 20:00	40.953	16
12/25/2023 20:15	34.72	11.7
12/25/2023 20:30	46.2	12.4
12/25/2023 20:45	40.567	12.1
12/25/2023 21:00	56.62	15
12/25/2023 21:15	57.627	18.1
12/25/2023 21:30	52.233	16.2
12/25/2023 21:45	53.893	18.4
12/25/2023 22:00	50.9	17.3
12/25/2023 22:15	51.26	19.8
12/25/2023 22:30	54.167	18.7
12/25/2023 22:45	49.087	18.5
12/25/2023 23:00	52.547	19.4
12/25/2023 23:15	51.153	18.9
12/25/2023 23:30	51.96	20.6
12/25/2023 23:45	64.073	20.5
12/26/2023 0:00	60.813	21.7
12/26/2023 0:15	62.247	21.3
12/26/2023 0:30	54.473	20.4
12/26/2023 0:45	54.473	22.2
12/26/2023 1:00	48.26	16.3
12/26/2023 1:15	47.407	17.6
12/26/2023 1:30	55.967	18.2
12/26/2023 1:45	64.18	17.2
12/26/2023 2:00	63.007	17.9
12/26/2023 2:15	58.847	18
12/26/2023 2:30	61.613	19.1
12/26/2023 2:45	60.107	17.7
12/26/2023 3:00	64.267	17.2
12/26/2023 3:15	65.093	15.6
12/26/2023 3:30	64.967	16.8
12/26/2023 3:45	62.273	16.3
12/26/2023 4:00	65.473	16.6
12/26/2023 4:15	52.647	14.8
12/26/2023 4:30	50.533	14.3
12/26/2023 4:45	58.26	14.9
12/26/2023 5:00	43.62	13.3
12/26/2023 5:15	39.9	14.1
12/26/2023 5:30	40.02	14
12/26/2023 5:45	45.64	10.8
12/26/2023 6:00	60.64	15.3
12/26/2023 6:15	62.273	22.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/26/2023 6:30	66.387	14.5
12/26/2023 6:45	86.767	14.7
12/26/2023 7:00	61.253	19
12/26/2023 7:15	63.467	16
12/26/2023 7:30	63.887	16.8
12/26/2023 7:45	47.693	14.9
12/26/2023 8:00	50.973	16.7
12/26/2023 8:15	78.18	20
12/26/2023 8:30	78.167	21.6
12/26/2023 8:45	58.72	19.7
12/26/2023 9:00	53.307	14.5
12/26/2023 9:15	67.553	22.8
12/26/2023 9:30	61.287	14.3
12/26/2023 9:45	47.027	17.7
12/26/2023 10:00	46.8	15.5
12/26/2023 10:15	49.16	13.8
12/26/2023 10:30	44.853	13.5
12/26/2023 10:45	43.827	17.2
12/26/2023 11:00	56.667	13.6
12/26/2023 11:15	34.7	14.1
12/26/2023 11:30	34.547	12.7
12/26/2023 11:45	35.733	13.2
12/26/2023 12:00	42.62	16.3
12/26/2023 12:15	43.8	15.1
12/26/2023 12:30	43.067	16.5
12/26/2023 12:45	36.22	14.5
12/26/2023 13:00	36.54	15
12/26/2023 13:15	38.02	13.6
12/26/2023 13:30	33.56	15.6
12/26/2023 13:45	32.807	15.7
12/26/2023 14:00	33.54	15
12/26/2023 14:15	39.7	13.4
12/26/2023 14:30	32.84	13.5
12/26/2023 14:45	42.547	13.9
12/26/2023 15:00	33.193	13
12/26/2023 15:15	29.367	10.8
12/26/2023 15:30	28.127	12.4
12/26/2023 15:45	30.753	12.4
12/26/2023 16:00	33.173	11.7
12/26/2023 16:15	30.173	11.1
12/26/2023 16:30	38.133	11.1
12/26/2023 16:45	34.767	12.1
12/26/2023 17:00	38.2	14.1
12/26/2023 17:15	33.307	12.5
12/26/2023 17:30	39.1	12.2
12/26/2023 17:45	29.24	11.8
12/26/2023 18:00	43.787	13
12/26/2023 18:15	36.633	17.3
12/26/2023 18:30	33.887	14
12/26/2023 18:45	33.593	13.2
12/26/2023 19:00	51.6	14.8
12/26/2023 19:15	38.467	15.2
12/26/2023 19:30	33.56	15.3
12/26/2023 19:45	35.847	15
12/26/2023 20:00	38.613	14.9
12/26/2023 20:15	39.58	14.4
12/26/2023 20:30	38.153	15.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/26/2023 20:45	35.9	16.4
12/26/2023 21:00	38.187	15.7
12/26/2023 21:15	41.713	15.4
12/26/2023 21:30	44.2	17.2
12/26/2023 21:45	40.853	17.2
12/26/2023 22:00	37.24	16.2
12/26/2023 22:15	40.74	15
12/26/2023 22:30	40.14	14.8
12/26/2023 22:45	39.2	14
12/26/2023 23:00	37.74	14.5
12/26/2023 23:15	42.193	15.9
12/26/2023 23:30	36.6	15
12/26/2023 23:45	34.033	12.9
12/27/2023 0:00	35.38	14.2
12/27/2023 0:15	37.08	13.2
12/27/2023 0:30	37.367	13.8
12/27/2023 0:45	40.773	14.7
12/27/2023 1:00	34.1	15.3
12/27/2023 1:15	37.507	14.8
12/27/2023 1:30	34.987	15.5
12/27/2023 1:45	42.967	13.5
12/27/2023 2:00	40.26	14.8
12/27/2023 2:15	38.713	14.1
12/27/2023 2:30	38.967	15.8
12/27/2023 2:45	41.187	14.9
12/27/2023 3:00	40.207	15.7
12/27/2023 3:15	37.793	15.4
12/27/2023 3:30	40.24	15.7
12/27/2023 3:45	41.047	14.4
12/27/2023 4:00	41.68	15.7
12/27/2023 4:15	43.753	13.8
12/27/2023 4:30	40.487	15
12/27/2023 4:45	42.88	15.3
12/27/2023 5:00	40.807	14.1
12/27/2023 5:15	40.14	14.3
12/27/2023 5:30	41.76	14.5
12/27/2023 5:45	47.88	14.3
12/27/2023 6:00	55.893	15
12/27/2023 6:15	39.793	14.6
12/27/2023 6:30	47.18	15.2
12/27/2023 6:45	41.307	14.7
12/27/2023 7:00	32.14	12.4
12/27/2023 7:15	37.953	14.1
12/27/2023 7:30	38.26	14.5
12/27/2023 7:45	36.193	14.6
12/27/2023 8:00	48.98	20
12/27/2023 8:15	42.853	14.9
12/27/2023 8:30	43.567	14.2
12/27/2023 8:45	41.82	15.1
12/27/2023 9:00	55.807	16.1
12/27/2023 9:15	50.613	16.6
12/27/2023 9:30	45.54	14.3
12/27/2023 9:45	39.213	14
12/27/2023 10:00	34.42	14.9
12/27/2023 10:15	32.047	13.3
12/27/2023 10:30	34.44	14.7
12/27/2023 10:45	36.547	14.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/27/2023 11:00	33.947	12.8
12/27/2023 11:15	32.82	13.5
12/27/2023 11:30	34.887	13.3
12/27/2023 11:45	36.993	14.3
12/27/2023 12:00	43.667	19
12/27/2023 12:15	40.38	14
12/27/2023 12:30	40.16	14.5
12/27/2023 12:45	43.053	15.4
12/27/2023 13:00	37.7	17
12/27/2023 13:15	41.947	14.7
12/27/2023 13:30	37.733	15.8
12/27/2023 13:45	39.06	17.1
12/27/2023 14:00	34.233	15.7
12/27/2023 14:15	54.3	18.2
12/27/2023 14:30	49.54	18.2
12/27/2023 14:45	62.053	15
12/27/2023 15:00	62.553	16.8
12/27/2023 15:15	62.753	22.1
12/27/2023 15:30	51.46	16.8
12/27/2023 15:45	57.993	18.5
12/27/2023 16:00	40.9	14.2
12/27/2023 16:15	44.233	15.1
12/27/2023 16:30	47.32	15.8
12/27/2023 16:45	41.933	15.6
12/27/2023 17:00	60.84	18
12/27/2023 17:15	60.093	18
12/27/2023 17:30	62.067	17.2
12/27/2023 17:45	70.013	19.5
12/27/2023 18:00	68.793	20.1
12/27/2023 18:15	70.627	18.4
12/27/2023 18:30	77.94	19.6
12/27/2023 18:45	75.6	18.5
12/27/2023 19:00	79.22	19.6
12/27/2023 19:15	79.153	19.6
12/27/2023 19:30	75.9	18.8
12/27/2023 19:45	74.767	19.7
12/27/2023 20:00	73.94	19.6
12/27/2023 20:15	70.9	19.6
12/27/2023 20:30	69.993	19.5
12/27/2023 20:45	70.187	18.1
12/27/2023 21:00	59.647	16.5
12/27/2023 21:15	60.96	15.9
12/27/2023 21:30	56.427	17
12/27/2023 21:45	50.813	17.1
12/27/2023 22:00	53.673	15.9
12/27/2023 22:15	55.32	15.2
12/27/2023 22:30	51.02	17.1
12/27/2023 22:45	50.013	16.4
12/27/2023 23:00	49.486	16.1
12/27/2023 23:15	51.887	16
12/27/2023 23:30	43.764	16.1
12/27/2023 23:45	27.9	0
12/29/2023 11:30	26.2	0
12/29/2023 11:45	30.373	12.3
12/29/2023 12:00	28.053	9.5
12/29/2023 12:15	26.14	11.2
12/29/2023 12:30	27.387	11.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/29/2023 12:45	30.573	11.3
12/29/2023 13:00	24.327	10.7
12/29/2023 13:15	27.54	10.1
12/29/2023 13:30	26.327	12.2
12/29/2023 13:45	26.36	11.4
12/29/2023 14:00	26.247	11.7
12/29/2023 14:15	29.12	11.8
12/29/2023 14:30	26.787	11.2
12/29/2023 14:45	26.427	11.9
12/29/2023 15:00	25.907	11.3
12/29/2023 15:15	38.1	10.1
12/29/2023 15:30	35.687	13.2
12/29/2023 15:45	33.447	11.9
12/29/2023 16:00	32.42	10.7
12/29/2023 16:15	38.147	11.7
12/29/2023 16:30	34.92	13.3
12/29/2023 16:45	43.407	13.9
12/29/2023 17:00	44.34	16.7
12/29/2023 17:15	48.613	13.4
12/29/2023 17:30	49.367	16.1
12/29/2023 17:45	37.5	13.1
12/29/2023 18:00	34.12	12.5
12/29/2023 18:15	39.847	16.5
12/29/2023 18:30	38.54	13.8
12/29/2023 18:45	32.627	13
12/29/2023 19:00	28.28	12.1
12/29/2023 19:15	28.1	12.3
12/29/2023 19:30	31.407	11.5
12/29/2023 19:45	31.867	11.6
12/29/2023 20:00	36.853	14
12/29/2023 20:15	31.94	12.6
12/29/2023 20:30	31.913	12
12/29/2023 20:45	30.007	10.8
12/29/2023 21:00	32.453	11.9
12/29/2023 21:15	31.833	10.3
12/29/2023 21:30	31.147	9.8
12/29/2023 21:45	34.647	10
12/29/2023 22:00	39.367	16.5
12/29/2023 22:15	27.96	9.8
12/29/2023 22:30	33.46	12.4
12/29/2023 22:45	65.953	12
12/29/2023 23:00	148.953	28.1
12/29/2023 23:15	122.2	22.5
12/29/2023 23:30	117.327	21.5
12/29/2023 23:45	119.353	21.7
12/30/2023 0:00	117.633	21.9
12/30/2023 0:15	137.593	22.6
12/30/2023 0:30	140.14	24.2
12/30/2023 0:45	144.613	29.1
12/30/2023 1:00	136.02	25
12/30/2023 1:15	137.92	26.5
12/30/2023 1:30	146.013	26.8
12/30/2023 1:45	129.427	24.3
12/30/2023 2:00	135.34	24.1
12/30/2023 2:15	128.647	22.5
12/30/2023 2:30	119.947	24.1
12/30/2023 2:45	136.973	24.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/30/2023 3:00	143.727	24.4
12/30/2023 3:15	143.86	24.9
12/30/2023 3:30	139.827	26.7
12/30/2023 3:45	121.327	22.5
12/30/2023 4:00	118.92	22.8
12/30/2023 4:15	127.647	22.8
12/30/2023 4:30	128.887	23.3
12/30/2023 4:45	131.2	21.5
12/30/2023 5:00	123.487	22.5
12/30/2023 5:15	133.247	20.4
12/30/2023 5:30	132.207	21.4
12/30/2023 5:45	127.053	20.7
12/30/2023 6:00	124.96	21.5
12/30/2023 6:15	122.209	20.5
12/30/2023 8:30	126.5	0
12/30/2023 8:45	134.3	18.1
12/30/2023 9:00	135.113	18.9
12/30/2023 9:15	130.387	21.2
12/30/2023 9:30	135.173	19.7
12/30/2023 9:45	127.253	20.8
12/30/2023 10:00	139.38	19.9
12/30/2023 10:15	129.133	20.6
12/30/2023 10:30	121.087	21.5
12/30/2023 10:45	124.98	21.8
12/30/2023 11:00	115.24	21.3
12/30/2023 11:15	114.633	22.8
12/30/2023 11:30	107.38	21.3
12/30/2023 11:45	100.967	21.4
12/30/2023 12:00	102.567	23.5
12/30/2023 12:15	96.58	23
12/30/2023 12:30	94.633	21.1
12/30/2023 12:45	111.753	21.7
12/30/2023 13:00	117.28	22.2
12/30/2023 13:15	103.547	22.6
12/30/2023 13:30	110.527	23.1
12/30/2023 13:45	119.433	23.1
12/30/2023 14:00	105.673	23.3
12/30/2023 14:15	116.973	22.6
12/30/2023 14:30	113.553	23
12/30/2023 14:45	115.333	21.4
12/30/2023 15:45	104.912	0
12/30/2023 16:00	100.26	21.1
12/30/2023 16:15	100.167	23.6
12/30/2023 16:30	109.467	22.3
12/30/2023 16:45	117.907	22.1
12/30/2023 17:00	108.233	22.7
12/30/2023 17:15	116.013	22.3
12/30/2023 17:30	113.047	22.3
12/30/2023 17:45	114.593	21.5
12/30/2023 18:00	125.98	23.1
12/30/2023 18:15	125.38	21.9
12/30/2023 18:30	131.927	22.5
12/30/2023 18:45	129.647	21.9
12/30/2023 19:00	130.74	23.4
12/30/2023 19:15	126.527	22
12/30/2023 19:30	119.127	22.9
12/30/2023 19:45	116.747	22

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/30/2023 20:00	118.747	24.9
12/30/2023 20:15	117.307	22.2
12/30/2023 20:30	105.36	21.9
12/30/2023 20:45	104.833	21.1
12/30/2023 21:00	100.087	20.8
12/30/2023 21:15	100.907	21.6
12/30/2023 21:30	92.787	20
12/30/2023 21:45	96.42	20.8
12/30/2023 22:00	100.6	21.5
12/30/2023 22:15	96.273	21.9
12/30/2023 22:30	86.007	22.1
12/30/2023 22:45	91.247	22.9
12/30/2023 23:00	92.627	21.4
12/30/2023 23:15	90.187	22.4
12/30/2023 23:30	93.82	23.3
12/30/2023 23:45	96.62	22
12/31/2023 0:00	93	21.5
12/31/2023 0:15	97.713	22.9
12/31/2023 0:30	110.527	22.4
12/31/2023 0:45	100.447	21.6
12/31/2023 1:00	112.547	22.1
12/31/2023 1:15	96.04	21.1
12/31/2023 1:30	98.307	23
12/31/2023 1:45	102.033	21.7
12/31/2023 2:00	105.74	22.9
12/31/2023 2:15	97.9	23
12/31/2023 2:30	96.693	22.9
12/31/2023 2:45	98.573	22.6
12/31/2023 3:00	106.667	23.1
12/31/2023 3:15	102.747	24.1
12/31/2023 3:30	103.493	22.9
12/31/2023 3:45	103.347	23.7
12/31/2023 4:00	102.1	21.6
12/31/2023 4:15	92.133	22.8
12/31/2023 4:30	98.12	21
12/31/2023 4:45	107.147	26.2
12/31/2023 5:00	107.327	21.8
12/31/2023 5:15	105.407	22.7
12/31/2023 5:30	116.64	24.3
12/31/2023 5:45	129.353	24.8
12/31/2023 6:00	131.18	24.2
12/31/2023 6:15	138.633	25.4
12/31/2023 6:30	148.367	23.5
12/31/2023 6:45	120.373	25
12/31/2023 7:00	121.327	24.9
12/31/2023 7:15	147.427	23
12/31/2023 7:30	146.227	22.4
12/31/2023 7:45	128.307	26.1
12/31/2023 8:00	114.413	21.4
12/31/2023 8:15	107.773	21.6
12/31/2023 8:30	115.22	25.3
12/31/2023 8:45	104.293	23.6
12/31/2023 9:00	115.687	23.7
12/31/2023 9:15	101.68	22.8
12/31/2023 9:30	110.98	21.2
12/31/2023 9:45	114.007	23.5
12/31/2023 10:00	108.773	22.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/31/2023 10:15	107.24	22.8
12/31/2023 10:30	104.66	21.3
12/31/2023 10:45	105.6	21.3
12/31/2023 11:00	104.32	22.9
12/31/2023 11:15	103.213	20.7
12/31/2023 11:30	84.533	22.5
12/31/2023 11:45	84.953	22
12/31/2023 12:00	77.727	20.9
12/31/2023 12:15	77.36	17.8
12/31/2023 12:30	72.927	19.4
12/31/2023 12:45	61.733	21.1
12/31/2023 13:00	61.42	17.5
12/31/2023 13:15	55.187	20.1
12/31/2023 13:30	55.687	18.7
12/31/2023 13:45	53.02	17.1
12/31/2023 14:00	55.6	17.4
12/31/2023 14:15	54.94	17
12/31/2023 14:30	60.38	17.8
12/31/2023 14:45	54.347	18.4
12/31/2023 15:00	52.04	17.4
12/31/2023 15:15	53.887	19.1
12/31/2023 15:30	51.593	19
12/31/2023 15:45	47.213	17.7
12/31/2023 16:00	54.893	18.7
12/31/2023 16:15	47	17.9
12/31/2023 16:30	53.213	16
12/31/2023 16:45	47.94	16.3
12/31/2023 17:00	47.773	13.7
12/31/2023 17:15	51.367	16.5
12/31/2023 17:30	70.36	17
12/31/2023 17:45	61.84	17.1
12/31/2023 18:00	60.133	16.6
12/31/2023 18:15	76.133	17.1
12/31/2023 18:30	76.707	18
12/31/2023 18:45	72.06	19.1
12/31/2023 19:00	59.5	15.2
12/31/2023 19:15	61.1	17.5
12/31/2023 19:30	66.393	16.5
12/31/2023 19:45	68.78	18.4
12/31/2023 20:00	75.073	17.6
12/31/2023 20:15	63.467	16.7
12/31/2023 20:30	61.08	15.1
12/31/2023 20:45	55.913	17.4
12/31/2023 21:00	57.04	15.7
12/31/2023 21:15	45.093	13.6
12/31/2023 21:30	46.267	14
12/31/2023 21:45	45.533	14
12/31/2023 22:00	47.473	14
12/31/2023 22:15	42.173	13.5
12/31/2023 22:30	47.76	15
12/31/2023 22:45	51.26	18
12/31/2023 23:00	50.447	14.6
12/31/2023 23:15	46.167	13.7
12/31/2023 23:30	49.44	12.6
12/31/2023 23:45	56.407	13.9
1/1/2024 0:00	57.387	14.4
1/1/2024 0:15	52.767	14.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/1/2024 0:30	57.007	15.9
1/1/2024 0:45	56.607	13.6
1/1/2024 1:00	49.273	11.7
1/1/2024 1:15	59.38	15.5
1/1/2024 1:30	67.42	15.9
1/1/2024 1:45	71.967	17.3
1/1/2024 2:00	74.033	22.3
1/1/2024 2:15	78.627	19.7
1/1/2024 2:30	89.393	24
1/1/2024 2:45	102.74	21.8
1/1/2024 3:00	97.607	22.5
1/1/2024 3:15	88.287	23.5
1/1/2024 3:30	86.793	24.3
1/1/2024 3:45	93.133	22.6
1/1/2024 4:00	104.927	23
1/1/2024 4:15	111.28	25.7
1/1/2024 4:30	107.627	27.6
1/1/2024 4:45	115.233	28.7
1/1/2024 5:00	115.52	29.8
1/1/2024 5:15	91.9	24.5
1/1/2024 5:30	116.147	24.2
1/1/2024 5:45	108.42	23.1
1/1/2024 6:00	124.027	28.1
1/1/2024 6:15	129.827	29
1/1/2024 6:30	117.333	27.5
1/1/2024 6:45	113.193	27.6
1/1/2024 7:00	115.44	28
1/1/2024 7:15	114.067	28.5
1/1/2024 7:30	116.193	27.9
1/1/2024 7:45	111.767	28.2
1/1/2024 8:00	125.08	28.8
1/1/2024 8:15	161.093	27.8
1/1/2024 8:30	160.76	32.5
1/1/2024 8:45	171.647	30
1/1/2024 9:00	141.587	29.1
1/1/2024 9:15	132.807	26.7
1/1/2024 9:30	115.793	28.2
1/1/2024 9:45	104.08	23.9
1/1/2024 10:00	99.747	27.7
1/1/2024 10:15	90.58	23.6
1/1/2024 10:30	98.95	23
1/1/2024 11:15	78.05	0
1/1/2024 11:30	65.673	21.6
1/1/2024 11:45	73.187	24.3
1/1/2024 12:00	76.793	20.4
1/1/2024 12:15	73.533	22.7
1/1/2024 12:30	74.82	23.1
1/1/2024 12:45	64.18	22.1
1/1/2024 13:00	63.133	19.7
1/1/2024 13:15	57.8	18.2
1/1/2024 13:30	59.527	18.1
1/1/2024 13:45	53.553	16.2
1/1/2024 14:00	54.413	18.5
1/1/2024 14:15	59.893	15.9
1/1/2024 14:30	51.967	20.7
1/1/2024 14:45	55.24	16.3
1/1/2024 15:00	52.673	14.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/1/2024 15:15	56.767	19
1/1/2024 15:30	50.053	12.8
1/1/2024 15:45	44.813	13.9
1/1/2024 16:00	59.76	16.8
1/1/2024 16:15	45.227	16.3
1/1/2024 16:30	45.407	14.2
1/1/2024 16:45	52.7	15.4
1/1/2024 17:00	56.727	15.1
1/1/2024 17:15	49.7	16.3
1/1/2024 17:30	65.547	14.1
1/1/2024 17:45	51.853	18.3
1/1/2024 18:00	48.933	15.4
1/1/2024 18:15	66.147	13.6
1/1/2024 18:30	52.94	13.8
1/1/2024 18:45	55.893	14.1
1/1/2024 19:00	47.633	12.8
1/1/2024 19:15	42.58	10
1/1/2024 19:30	44.747	12.5
1/1/2024 19:45	54.193	13.4
1/1/2024 20:00	55.133	13
1/1/2024 20:15	53.813	16.6
1/1/2024 20:30	47.973	13.1
1/1/2024 20:45	49.727	15
1/1/2024 21:00	49.5	16.8
1/1/2024 21:15	49.747	11
1/1/2024 21:30	43.5	10.7
1/1/2024 21:45	41.74	11
1/1/2024 22:00	43.133	10.2
1/1/2024 22:15	37.693	11.3
1/1/2024 22:30	44.953	11
1/1/2024 22:45	42.373	10
1/1/2024 23:00	50.187	15.5
1/1/2024 23:15	46.407	13.1
1/1/2024 23:30	42.347	11.6
1/1/2024 23:45	53.313	11.1
1/2/2024 0:00	64.667	13
1/2/2024 0:15	55.92	13.9
1/2/2024 0:30	54.693	14.3
1/2/2024 0:45	54.547	14.4
1/2/2024 1:00	63.013	15.8
1/2/2024 1:15	59.247	14.2
1/2/2024 1:30	53.313	13.7
1/2/2024 1:45	58.253	15.5
1/2/2024 2:00	50.84	15.5
1/2/2024 2:15	45.493	15.2
1/2/2024 2:30	41.9	13.1
1/2/2024 2:45	45.007	12.4
1/2/2024 3:00	42.993	10.3
1/2/2024 3:15	39.593	13
1/2/2024 3:30	46.133	10.4
1/2/2024 3:45	61.02	15.9
1/2/2024 4:00	40.387	13.3
1/2/2024 4:15	31.4	8.1
1/2/2024 4:30	38.64	9.4
1/2/2024 4:45	43.6	12.8
1/2/2024 5:00	9.227	8.7
1/2/2024 5:15	9.767	3.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/2/2024 5:30	9.913	3.6
1/2/2024 5:45	9.773	3.6
1/2/2024 6:00	9.847	3.6
1/2/2024 6:15	9.967	3.9
1/2/2024 6:30	10.04	3.8
1/2/2024 6:45	10.373	4
1/2/2024 7:00	10.247	4
1/2/2024 7:15	8.387	3.8
1/2/2024 7:30	8.187	4
1/2/2024 7:45	6.573	3.4
1/2/2024 8:00	7.06	3.8
1/2/2024 8:15	7.963	4
1/3/2024 11:30	39.2	0
1/3/2024 11:45	48.28	16.6
1/3/2024 12:00	43.113	11.6
1/3/2024 12:15	40.18	10.8
1/3/2024 12:30	35.407	8.7
1/3/2024 12:45	46.527	9.3
1/3/2024 13:00	38.393	10.1
1/3/2024 13:15	35.247	10
1/3/2024 13:30	37.7	9.9
1/3/2024 13:45	40.12	9.7
1/3/2024 14:00	35.373	11
1/3/2024 14:15	48.853	14.4
1/3/2024 14:30	35.073	10.4
1/3/2024 14:45	34.373	11
1/3/2024 15:00	29.173	9.9
1/3/2024 15:15	30.92	8.9
1/3/2024 15:30	40.147	9.7
1/3/2024 15:45	76.14	14.4
1/3/2024 16:00	63.767	13.9
1/3/2024 16:15	42.427	10.6
1/3/2024 16:30	39.56	11.8
1/3/2024 16:45	43.453	11.2
1/3/2024 17:00	44.087	9.5
1/3/2024 17:15	32.927	8.9
1/3/2024 17:30	32.067	10.8
1/3/2024 17:45	32.507	8.9
1/3/2024 18:00	32.48	10.5
1/3/2024 18:15	30.56	8.4
1/3/2024 18:30	37.167	9.5
1/3/2024 18:45	26.507	9.5
1/3/2024 19:00	23.753	7.5
1/3/2024 19:15	27.74	8.2
1/3/2024 19:30	27.607	8.9
1/3/2024 19:45	23.82	7.7
1/3/2024 20:00	22.633	7.1
1/3/2024 20:15	25.587	8.2
1/3/2024 20:30	31.013	8.8
1/3/2024 20:45	25.093	8.1
1/3/2024 21:00	27.84	10.6
1/3/2024 21:15	27.493	8.8
1/3/2024 21:30	30.26	7.8
1/3/2024 21:45	37.973	10.9
1/3/2024 22:00	28.107	7.8
1/3/2024 22:15	28.187	8.6
1/3/2024 22:30	73.44	9.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/3/2024 22:45	42.407	22.1
1/3/2024 23:00	36.753	9.2
1/3/2024 23:15	34.273	11
1/3/2024 23:30	41.953	9.1
1/3/2024 23:45	31.247	9.5
1/4/2024 0:00	30.673	8.9
1/4/2024 0:15	35.813	8.2
1/4/2024 0:30	26.833	8.6
1/4/2024 0:45	25.987	9.5
1/4/2024 1:00	26.347	8.6
1/4/2024 1:15	27.493	7.6
1/4/2024 1:30	26.587	8.8
1/4/2024 1:45	22.733	8.5
1/4/2024 2:00	21.667	7.7
1/4/2024 2:15	20.56	8.4
1/4/2024 2:30	24.4	8.5
1/4/2024 2:45	23.267	8.5
1/4/2024 3:00	25.827	8.7
1/4/2024 3:15	25.267	9
1/4/2024 3:30	26.22	8.9
1/4/2024 3:45	24.633	8.1
1/4/2024 4:00	23.74	9.2
1/4/2024 4:15	26.12	9.8
1/4/2024 4:30	26.693	9.3
1/4/2024 4:45	24.2	9
1/4/2024 5:00	21.887	8.6
1/4/2024 5:15	23.287	7.7
1/4/2024 5:30	21.933	8.9
1/4/2024 5:45	24.64	8.4
1/4/2024 6:00	24.387	9.1
1/4/2024 6:15	24.007	7.8
1/4/2024 6:30	23.013	7.9
1/4/2024 6:45	22.893	9
1/4/2024 7:00	25.773	9.1
1/4/2024 7:15	23.387	8.3
1/4/2024 7:30	22.14	8.8
1/4/2024 7:45	34.78	8.6
1/4/2024 8:00	30.427	8.6
1/4/2024 8:15	25.833	9.4
1/4/2024 8:30	27.747	8
1/4/2024 8:45	23.493	8.3
1/4/2024 9:00	25.713	9.2
1/4/2024 9:15	26.833	7.9
1/4/2024 9:30	40.427	19.4
1/4/2024 9:45	31.58	11.5
1/4/2024 10:00	28.593	9.6
1/4/2024 10:15	27.18	10
1/4/2024 10:30	32.28	9.7
1/4/2024 10:45	47.667	10.5
1/4/2024 11:00	36.5	11.5
1/4/2024 11:15	39.88	10.9
1/4/2024 11:30	36.447	10.7
1/4/2024 11:45	33	11.7
1/4/2024 12:00	31.613	10.5
1/4/2024 12:15	26.12	11.3
1/4/2024 12:30	29.613	10.3
1/4/2024 12:45	30.48	8.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/4/2024 13:00	26.167	10.5
1/4/2024 13:15	25.193	10.5
1/4/2024 13:30	21.547	8.3
1/4/2024 13:45	29.313	9.3
1/4/2024 14:00	34.82	9.4
1/4/2024 14:15	33.467	8.8
1/4/2024 14:30	24.607	9.9
1/4/2024 14:45	26.507	11.9
1/4/2024 15:00	30.807	10.1
1/4/2024 15:15	32.76	9.8
1/4/2024 15:30	21.247	8.7
1/4/2024 15:45	24.793	9.3
1/4/2024 16:00	26.793	8.6
1/4/2024 16:15	46.653	14.5
1/4/2024 16:30	56.52	12.7
1/4/2024 16:45	42.527	11.3
1/4/2024 17:00	35.887	13.3
1/4/2024 17:15	33.56	9.6
1/4/2024 17:30	63.033	10.4
1/4/2024 17:45	166.387	19
1/4/2024 18:00	126.06	23.8
1/4/2024 18:15	35.573	9.8
1/4/2024 18:30	30.493	9.8
1/4/2024 18:45	31.327	10
1/4/2024 19:00	26.313	10.4
1/4/2024 19:15	17.373	9.8
1/4/2024 19:30	20.6	10.2
1/4/2024 19:45	20.36	7.9
1/4/2024 20:00	24.053	11.1
1/4/2024 20:15	25.26	15.6
1/4/2024 20:30	22.38	15.5
1/4/2024 20:45	26.653	18.3
1/4/2024 21:00	23.887	19.6
1/4/2024 21:15	23.947	20.4
1/4/2024 21:30	25.273	20.2
1/4/2024 21:45	23.913	20.2
1/4/2024 22:00	13.66	17.8
1/4/2024 22:15	8.273	4.2
1/4/2024 22:30	13.653	6.6
1/4/2024 22:45	16.673	12.1
1/4/2024 23:00	23.413	16.8
1/4/2024 23:15	24.32	18.6
1/4/2024 23:30	23.587	18.5
1/4/2024 23:45	23.5	18.3
1/5/2024 0:00	23.98	19.8
1/5/2024 0:15	25.12	20.3
1/5/2024 0:30	24.267	20.2
1/5/2024 0:45	19.6	21.7
1/5/2024 1:00	22.8	23.5
1/5/2024 1:15	20.18	20.8
1/5/2024 1:30	24.053	17.4
1/5/2024 1:45	23.867	27.5
1/5/2024 2:00	22.073	20
1/5/2024 2:15	22.3	19
1/5/2024 2:30	20.853	22.6
1/5/2024 2:45	20.16	16.3
1/5/2024 3:00	21.013	17.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/5/2024 3:15	22	17.7
1/5/2024 3:30	19.28	17.6
1/5/2024 3:45	17.073	11.1
1/5/2024 4:00	16.14	10.9
1/5/2024 4:15	15.433	11.1
1/5/2024 4:30	16.213	9.7
1/5/2024 4:45	16.747	8.8
1/5/2024 5:00	22.1	10.7
1/5/2024 5:15	18.793	12
1/5/2024 5:30	18.84	10.1
1/5/2024 5:45	22.173	10.7
1/5/2024 6:00	22.32	12
1/5/2024 6:15	23.193	11.9
1/5/2024 6:30	24.067	11.5
1/5/2024 6:45	25.86	10.8
1/5/2024 7:00	24.913	11.2
1/5/2024 7:15	25.007	10.5
1/5/2024 7:30	25.42	12.1
1/5/2024 7:45	27.133	11.7
1/5/2024 8:00	24.813	12.5
1/5/2024 8:15	25.633	13
1/5/2024 8:30	24.793	11.9
1/5/2024 8:45	23.293	12.7
1/5/2024 9:00	23.893	9.7
1/5/2024 9:15	22.053	13.5
1/5/2024 9:30	19.28	10.4
1/5/2024 9:45	18.347	8.6
1/5/2024 10:00	17.58	8.3
1/5/2024 10:15	14.667	10.2
1/5/2024 10:30	14.78	9.5
1/5/2024 10:45	16.053	9.8
1/5/2024 11:00	15.073	9.2
1/5/2024 11:15	16.42	8.2
1/5/2024 11:30	16.58	9.7
1/5/2024 11:45	18.087	8.7
1/5/2024 12:00	26.293	7.7
1/5/2024 12:15	20.893	9.1
1/5/2024 12:30	17.253	9.1
1/5/2024 12:45	16.14	8.5
1/5/2024 13:00	14.82	8.7
1/5/2024 13:15	13.953	6.9
1/5/2024 13:30	14.407	7.3
1/5/2024 13:45	13.667	8.3
1/5/2024 14:00	19.12	6.5
1/5/2024 14:15	18.187	6.7
1/5/2024 14:30	18.013	5.6
1/5/2024 14:45	15.673	6.4
1/5/2024 15:00	15.653	5.8
1/5/2024 15:15	17.647	6.3
1/5/2024 15:30	19.447	6.2
1/5/2024 15:45	18.193	6.3
1/5/2024 16:00	19.02	5.6
1/5/2024 16:15	16.467	5.3
1/5/2024 16:30	16.787	5.3
1/5/2024 16:45	19.247	6.2
1/5/2024 17:00	16.24	5.6
1/5/2024 17:15	19.893	5.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/5/2024 17:30	17.54	5.8
1/5/2024 17:45	17.84	5.3
1/5/2024 18:00	17.233	6.5
1/5/2024 18:15	17.587	5.4
1/5/2024 18:30	26.033	10.1
1/5/2024 18:45	16.127	6.7
1/5/2024 19:00	16.687	6.2
1/5/2024 19:15	11.973	7.3
1/5/2024 19:30	13.547	7.7
1/5/2024 19:45	13.487	8.5
1/5/2024 20:00	12.713	9.4
1/5/2024 20:15	15.767	8.9
1/5/2024 20:30	19.993	9.7
1/5/2024 20:45	15.253	10.6
1/5/2024 21:00	14.587	10
1/5/2024 21:15	15.127	8.8
1/5/2024 21:30	15.613	9.4
1/5/2024 21:45	20.007	8.4
1/5/2024 22:00	16.293	8.3
1/5/2024 22:15	12.767	7.9
1/5/2024 22:30	13.593	7
1/5/2024 22:45	13.367	6
1/5/2024 23:00	15.867	7
1/5/2024 23:15	15.953	5.6
1/5/2024 23:30	15.34	5.8
1/5/2024 23:45	13.993	5.6
1/6/2024 0:00	14.12	6
1/6/2024 0:15	11.92	6.3
1/6/2024 0:30	17.173	5.3
1/6/2024 0:45	15.667	5.4
1/6/2024 1:00	15.18	5.5
1/6/2024 1:15	15.227	6.1
1/6/2024 1:30	19.067	6.3
1/6/2024 1:45	18.12	5.2
1/6/2024 2:00	18.66	5.9
1/6/2024 2:15	18.147	6.6
1/6/2024 2:30	17.24	5.5
1/6/2024 2:45	18.407	5.8
1/6/2024 3:00	14.107	7.5
1/6/2024 3:15	13.553	9
1/6/2024 3:30	14.707	8.1
1/6/2024 3:45	13.293	7.6
1/6/2024 4:00	17.013	7.6
1/6/2024 4:15	17.773	7.8
1/6/2024 4:30	18.427	7.8
1/6/2024 4:45	21.08	9.3
1/6/2024 5:00	24.653	8.9
1/6/2024 5:15	28.8	10.9
1/6/2024 5:30	32.027	11.8
1/6/2024 5:45	33.153	13.5
1/6/2024 6:00	31.093	11.6
1/6/2024 6:15	30.587	13.4
1/6/2024 6:30	28.553	13.5
1/6/2024 6:45	33.553	14.7
1/6/2024 7:00	37.447	15.1
1/6/2024 7:15	33.713	15.2
1/6/2024 7:30	33.673	13.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/6/2024 7:45	32.747	14.2
1/6/2024 8:00	37.553	15.6
1/6/2024 8:15	35.867	15.3
1/6/2024 8:30	47.087	13.9
1/6/2024 8:45	39.18	14
1/6/2024 9:00	47.867	13.9
1/6/2024 9:15	51.493	15.3
1/6/2024 9:30	53.933	15
1/6/2024 9:45	79.6	16.1
1/6/2024 10:00	83.687	24.2
1/6/2024 10:15	80.273	18.7
1/6/2024 10:30	107.74	21.7
1/6/2024 10:45	104.233	24.2
1/6/2024 11:00	88.447	15
1/6/2024 11:15	103.787	22
1/6/2024 11:30	89.02	15.5
1/6/2024 11:45	136.673	23.8
1/6/2024 12:00	109.887	25.3
1/6/2024 12:15	110.4	17.8
1/6/2024 12:30	99.953	17.4
1/6/2024 12:45	96.993	24.8
1/6/2024 13:00	65.587	16.9
1/6/2024 13:15	67.347	13.5
1/6/2024 13:30	63.287	22.2
1/6/2024 13:45	50.5	14
1/6/2024 14:00	48.513	10.1
1/6/2024 14:15	43.087	9.8
1/6/2024 14:30	42.153	10
1/6/2024 14:45	38.353	12
1/6/2024 15:00	34.587	12.5
1/6/2024 15:15	37.02	13
1/6/2024 15:30	36.267	11.6
1/6/2024 15:45	39.827	10.5
1/6/2024 16:00	31.947	10.2
1/6/2024 16:15	34.333	11.5
1/6/2024 16:30	31.047	11.1
1/6/2024 16:45	31.32	11.8
1/6/2024 17:00	29.013	8.5
1/6/2024 17:15	34.233	10.6
1/6/2024 17:30	30.98	10.6
1/6/2024 17:45	26.273	9
1/6/2024 18:00	22.34	9.2
1/6/2024 18:15	24.893	10.3
1/6/2024 18:30	30.78	10.3
1/6/2024 18:45	32.84	11
1/6/2024 19:00	33.54	12.2
1/6/2024 19:15	32.5	12.3
1/6/2024 19:30	25.94	12.1
1/6/2024 19:45	26.86	11
1/6/2024 20:00	27.9	10.8
1/6/2024 20:15	32.507	11.3
1/6/2024 20:30	32.94	12.8
1/6/2024 20:45	26.42	11.5
1/6/2024 21:00	24.36	10.2
1/6/2024 21:15	31.393	13.4
1/6/2024 21:30	33.507	12.2
1/6/2024 21:45	30.913	12.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/6/2024 22:00	32.947	12.1
1/6/2024 22:15	32.12	10.4
1/6/2024 22:30	28.927	12.3
1/6/2024 22:45	27.64	9.9
1/6/2024 23:00	29.64	10.7
1/6/2024 23:15	27.12	9.6
1/6/2024 23:30	26.813	11.7
1/6/2024 23:45	25.68	10.8
1/7/2024 0:00	21.387	9.5
1/7/2024 0:15	28.887	9.8
1/7/2024 0:30	39.047	9.9
1/7/2024 0:45	49.633	9.3
1/7/2024 1:00	38.727	10.9
1/7/2024 1:15	45.853	14.6
1/7/2024 1:30	21.72	8.5
1/7/2024 1:45	20.96	7.8
1/7/2024 2:00	23.72	7.8
1/7/2024 2:15	22.447	8
1/7/2024 2:30	26.793	9.2
1/7/2024 2:45	24.44	9.6
1/7/2024 3:00	25.007	9.6
1/7/2024 3:15	21.867	8.9
1/7/2024 3:30	23.667	9.1
1/7/2024 3:45	22.84	9.1
1/7/2024 4:00	23.113	10.8
1/7/2024 4:15	23.267	9.3
1/7/2024 4:30	23.22	10.5
1/7/2024 4:45	24.32	9.2
1/7/2024 5:00	24.9	9.3
1/7/2024 5:15	23.1	10.2
1/7/2024 5:30	25.853	9.6
1/7/2024 5:45	24.307	11.6
1/7/2024 6:00	26.7	10
1/7/2024 6:15	23.1	10.2
1/7/2024 6:30	24.373	9.8
1/7/2024 6:45	22.793	11
1/7/2024 7:00	22.54	11.2
1/7/2024 7:15	25.213	12.6
1/7/2024 7:30	25.333	11.7
1/7/2024 7:45	24.433	10.4
1/7/2024 8:00	22.007	11.4
1/7/2024 8:15	23.86	11.9
1/7/2024 8:30	22.833	10
1/7/2024 8:45	24.807	9.8
1/7/2024 9:00	26.853	9.8
1/7/2024 9:15	25.447	11.5
1/7/2024 9:30	26.947	11.5
1/7/2024 9:45	34.247	11.2
1/7/2024 10:00	24.52	10.5
1/7/2024 10:15	24.087	12.3
1/7/2024 10:30	27.007	10.2
1/7/2024 10:45	30.247	12.3
1/7/2024 11:00	35.307	10.8
1/7/2024 11:15	31.787	12.1
1/7/2024 11:30	29.353	10.2
1/7/2024 11:45	28.107	13.6
1/7/2024 12:00	23.693	9.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/7/2024 12:15	23.033	10.4
1/7/2024 12:30	24.773	12.6
1/7/2024 12:45	25.133	9.4
1/7/2024 13:00	23.707	10.2
1/7/2024 13:15	25.413	10.1
1/7/2024 13:30	25.387	8.7
1/7/2024 13:45	22.353	10
1/7/2024 14:00	21.16	8.8
1/7/2024 14:15	29.747	8
1/7/2024 14:30	28.693	10.3
1/7/2024 14:45	27.667	11
1/7/2024 15:00	38.207	8.6
1/7/2024 15:15	44.473	11.5
1/7/2024 15:30	44.14	11.1
1/7/2024 15:45	51.06	9.7
1/7/2024 16:00	85.247	15
1/7/2024 16:15	102.38	19.8
1/7/2024 16:30	58.34	12.2
1/7/2024 16:45	78.527	13.1
1/7/2024 17:00	92.34	10.9
1/7/2024 17:15	73.96	13.4
1/7/2024 17:30	80.633	21.5
1/7/2024 17:45	69.567	10.4
1/7/2024 18:00	84.8	19.9
1/7/2024 18:15	59.233	13.6
1/7/2024 18:30	62.627	12.8
1/7/2024 18:45	70.267	13.3
1/7/2024 19:00	96.913	18
1/7/2024 19:15	126.02	18.4
1/7/2024 19:30	179.853	24.4
1/7/2024 19:45	182.52	29.2
1/7/2024 20:00	174.48	25.1
1/7/2024 20:15	164.033	28.3
1/7/2024 20:30	128.08	23.2
1/7/2024 20:45	158.147	23
1/7/2024 21:00	150.733	22.3
1/7/2024 21:15	130.96	22.2
1/7/2024 21:30	102.987	20.4
1/7/2024 21:45	92.66	18.6
1/7/2024 22:00	47.113	9.8
1/7/2024 22:15	41.787	8.8
1/7/2024 22:30	46.173	9.2
1/7/2024 22:45	57.025	10.9
1/10/2024 11:30	30.2	0
1/10/2024 11:45	28.753	5
1/10/2024 12:00	28.247	5.8
1/10/2024 12:15	57.107	8.3
1/10/2024 12:30	46.513	16.4
1/10/2024 12:45	42.14	5.7
1/10/2024 13:00	52.94	12.1
1/10/2024 13:15	35.08	12.3
1/10/2024 13:30	38.107	5.4
1/10/2024 13:45	53.947	15
1/10/2024 14:00	36.607	9.3
1/10/2024 14:15	39.127	10.7
1/10/2024 14:30	46.833	12.6
1/10/2024 14:45	77.907	6.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/10/2024 15:00	51.4	12.3
1/10/2024 15:15	39.053	4
1/10/2024 15:30	45.42	6.1
1/10/2024 15:45	39.12	7.2
1/10/2024 16:00	33.78	5.4
1/10/2024 16:15	44.867	3.7
1/10/2024 16:30	46.033	5.9
1/10/2024 16:45	48	17.3
1/10/2024 17:00	47.536	9.1
1/11/2024 0:45	20.883	0
1/11/2024 1:00	20.72	3.6
1/11/2024 1:15	18.98	4.8
1/11/2024 1:30	17.853	2.9
1/11/2024 1:45	18.02	3.9
1/11/2024 2:00	18.853	4.1
1/11/2024 2:15	17.667	3.8
1/11/2024 2:30	18.767	5.1
1/11/2024 2:45	18.86	4.1
1/11/2024 3:00	16.887	4.8
1/11/2024 3:15	18.78	3.2
1/11/2024 3:30	19.1	3.3
1/11/2024 3:45	17.313	3.7
1/11/2024 4:00	17.8	4
1/11/2024 4:15	17.767	3.8
1/11/2024 4:30	18.127	3
1/11/2024 4:45	34.293	5.5
1/11/2024 5:00	21.967	5.2
1/11/2024 5:15	24.413	3.3
1/11/2024 5:30	26.533	4.7
1/11/2024 5:45	22.08	5
1/11/2024 6:00	13.287	3.1
1/11/2024 6:15	12.573	3.6
1/11/2024 6:30	13.067	3.6
1/11/2024 6:45	13.493	2.6
1/11/2024 7:00	13.32	3.7
1/11/2024 7:15	26.847	4.2
1/11/2024 7:30	16.673	3.7
1/11/2024 7:45	15.913	4.2
1/11/2024 8:00	16.367	3.6
1/11/2024 8:15	17.707	2.9
1/11/2024 8:30	14.64	2.8
1/11/2024 8:45	18.12	4.6
1/11/2024 9:00	16.567	3.1
1/11/2024 9:15	17.447	2.3
1/11/2024 9:30	17.007	3
1/11/2024 9:45	18.527	4.8
1/11/2024 10:00	18.88	5.2
1/11/2024 10:15	17.9	4.7
1/11/2024 10:30	25.627	5
1/11/2024 10:45	23.493	5.5
1/11/2024 11:00	39.967	8.8
1/11/2024 11:15	22.86	5.3
1/11/2024 11:30	33.167	5.5
1/11/2024 11:45	22	4
1/11/2024 12:00	21.293	6.9
1/11/2024 12:15	27.393	4.3
1/11/2024 12:30	25.2	2.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/11/2024 12:45	27.113	6.1
1/11/2024 13:00	27.767	5.6
1/11/2024 13:15	26.473	5.2
1/11/2024 13:30	25.4	4.8
1/11/2024 13:45	21.853	4.2
1/11/2024 14:00	20.847	4.1
1/11/2024 14:15	36.947	3.7
1/11/2024 14:30	43.707	5
1/11/2024 14:45	27.58	3.8
1/11/2024 15:00	27.653	3.9
1/11/2024 15:15	20.927	3.6
1/11/2024 15:30	27.7	3.7
1/11/2024 15:45	28.707	3.5
1/11/2024 16:00	60.347	6.6
1/11/2024 16:15	66.547	4.8
1/11/2024 16:30	27.687	5.7
1/11/2024 16:45	27.887	11.5
1/11/2024 17:00	30.173	16.3
1/11/2024 17:15	23.28	5.2
1/11/2024 17:30	24.467	5
1/11/2024 17:45	44.367	5
1/11/2024 18:00	44.647	6.6
1/11/2024 18:15	46.247	5.4
1/11/2024 18:30	35.307	21.2
1/11/2024 18:45	30.593	5.7
1/11/2024 19:00	27.847	6.4
1/11/2024 19:15	38.42	6.7
1/11/2024 19:30	27.5	6.3
1/11/2024 19:45	32.707	5.3
1/11/2024 20:00	26.233	6
1/11/2024 20:15	25.793	6.7
1/11/2024 20:30	25.04	5.5
1/11/2024 20:45	32.793	4.9
1/11/2024 21:00	30.12	5.3
1/11/2024 21:15	31.393	6.6
1/11/2024 21:30	32.22	6.5
1/11/2024 21:45	32.52	5.5
1/11/2024 22:00	32.393	6.5
1/11/2024 22:15	36.88	5.8
1/11/2024 22:30	73.04	13.7
1/11/2024 22:45	30.707	6.3
1/11/2024 23:00	31.54	5.8
1/11/2024 23:15	34.827	7.2
1/11/2024 23:30	31.753	6.4
1/11/2024 23:45	30.053	7.5
1/12/2024 0:00	43.02	5
1/12/2024 0:15	53.267	27.9
1/12/2024 0:30	33.967	6
1/12/2024 0:45	34.74	6.4
1/12/2024 1:00	35.867	7.2
1/12/2024 1:15	30.42	5.3
1/12/2024 1:30	29.047	5.7
1/12/2024 1:45	32.34	6.4
1/12/2024 2:00	31.747	5.9
1/12/2024 2:15	32.24	5.8
1/12/2024 2:30	33.727	6.1
1/12/2024 2:45	39.493	4.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/12/2024 3:00	31.907	6.2
1/12/2024 3:15	36.393	5.3
1/12/2024 3:30	37.107	6.4
1/12/2024 3:45	30.62	5.8
1/12/2024 4:00	34.127	8.1
1/12/2024 4:15	33.24	7
1/12/2024 4:30	29.14	5.1
1/12/2024 4:45	29.533	4
1/12/2024 5:00	30.5	5.7
1/12/2024 5:15	28.66	5.7
1/12/2024 5:30	30.053	5.7
1/12/2024 5:45	30.66	6.3
1/12/2024 6:00	31.187	6.7
1/12/2024 6:15	31.173	6.6
1/12/2024 6:30	28.173	5.5
1/12/2024 6:45	31.767	5.8
1/12/2024 7:00	35.593	6.6
1/12/2024 7:15	54.62	14
1/12/2024 7:30	99.133	12.7
1/12/2024 7:45	98.607	17.8
1/12/2024 8:00	68.34	12.8
1/12/2024 8:15	60.593	12.4
1/12/2024 8:30	100.727	9.6
1/12/2024 8:45	116.187	22.5
1/12/2024 9:00	63.133	11.4
1/12/2024 9:15	49.913	11.2
1/12/2024 9:30	54.16	7.3
1/12/2024 9:45	54.58	16
1/12/2024 10:00	45.507	9.7
1/12/2024 10:15	45.293	17.7
1/12/2024 10:30	53.96	13.8
1/12/2024 10:45	54.093	12
1/12/2024 11:00	55.167	10.6
1/12/2024 11:15	65.533	12.9
1/12/2024 11:30	96.367	18
1/12/2024 11:45	76.593	15.9
1/12/2024 12:00	90.56	11.8
1/12/2024 12:15	104.193	19.9
1/12/2024 12:30	71.76	21.2
1/12/2024 12:45	55.68	15.1
1/12/2024 13:00	69.98	11.4
1/12/2024 13:15	52.527	15.7
1/12/2024 13:30	76.133	14.3
1/12/2024 13:45	75.447	14.3
1/12/2024 14:00	62.28	17
1/12/2024 14:15	85.447	10.8
1/12/2024 14:30	79.413	21.2
1/12/2024 14:45	98.453	26.2
1/12/2024 15:00	61.453	19.8
1/12/2024 15:15	60.327	13.9
1/12/2024 15:30	53.58	12
1/12/2024 15:45	61.127	11.8
1/12/2024 16:00	60.713	19.5
1/12/2024 16:15	64.5	13.1
1/12/2024 16:30	66.987	18.6
1/12/2024 16:45	63.74	19.8
1/12/2024 17:00	63.267	18.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/12/2024 17:15	63.067	16.9
1/12/2024 17:30	58.88	19.3
1/12/2024 17:45	49.08	16.4
1/12/2024 18:00	41.62	11
1/12/2024 18:15	46.927	9.8
1/12/2024 18:30	50.073	11.5
1/12/2024 18:45	47.653	9.3
1/12/2024 19:00	51.867	10.8
1/12/2024 19:15	45.427	12.8
1/12/2024 19:30	48.98	12
1/12/2024 19:45	47.713	12.7
1/12/2024 20:00	50.633	10.9
1/12/2024 20:15	50.993	13.9
1/12/2024 20:30	67.04	13.7
1/12/2024 20:45	90.82	20.5
1/12/2024 21:00	94.307	18.6
1/12/2024 21:15	101.767	18.1
1/12/2024 21:30	103.88	19.2
1/12/2024 21:45	108.753	18.8
1/12/2024 22:00	114.627	21.5
1/12/2024 22:15	129.107	24
1/12/2024 22:30	97.447	24.4
1/12/2024 22:45	78.467	20.7
1/12/2024 23:00	66.727	17.7
1/12/2024 23:15	86.54	21.8
1/12/2024 23:30	76.213	17.3
1/12/2024 23:45	44.793	11
1/13/2024 0:00	106.513	16.5
1/13/2024 0:15	72.2	16.7
1/13/2024 0:30	86.393	14.4
1/13/2024 0:45	81.54	16.5
1/13/2024 1:00	83	15.9
1/13/2024 1:15	60.58	13.9
1/13/2024 1:30	37.013	8.4
1/13/2024 1:45	28.22	5.9
1/13/2024 2:00	30.267	4.2
1/13/2024 2:15	28.74	5.3
1/13/2024 2:30	46.4	7.4
1/13/2024 2:45	74.04	11.8
1/13/2024 3:00	88.673	20.8
1/13/2024 3:15	85.34	21.2
1/13/2024 3:30	63.993	19.2
1/13/2024 3:45	41.033	12.7
1/13/2024 4:00	37.147	7.8
1/13/2024 4:15	40.14	9.2
1/13/2024 4:30	35.32	7.9
1/13/2024 4:45	33.747	6.7
1/13/2024 5:00	34.827	7.6
1/13/2024 5:15	32.193	6.4
1/13/2024 5:30	27.367	5.8
1/13/2024 5:45	27.713	7.1
1/13/2024 6:00	48.24	10.7
1/13/2024 6:15	23.687	6.4
1/13/2024 6:30	33.853	4.6
1/13/2024 6:45	36.8	8.7
1/13/2024 7:00	26.667	8.8
1/13/2024 7:15	39.467	9.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/13/2024 7:30	43.407	8.7
1/13/2024 7:45	62.873	12.6
1/13/2024 8:00	57.047	12.6
1/13/2024 8:15	58.2	13.4
1/13/2024 8:30	58.033	11
1/13/2024 8:45	59.387	9.2
1/13/2024 9:00	63.827	9.1
1/13/2024 9:15	63.307	10.3
1/13/2024 9:30	70.367	15.7
1/13/2024 9:45	78.94	14.4
1/13/2024 10:00	118.607	19.9
1/13/2024 10:15	94.393	21.7
1/13/2024 10:30	75.827	21.3
1/13/2024 10:45	76.647	19.6
1/13/2024 11:00	81.613	19.4
1/13/2024 11:15	78.04	19.6
1/13/2024 11:30	80.94	19.1
1/13/2024 11:45	109.52	23.1
1/13/2024 12:00	63.74	18.1
1/13/2024 12:15	58.767	15.9
1/13/2024 12:30	52	13.5
1/13/2024 12:45	46.26	15.2
1/13/2024 13:00	47.52	13.4
1/13/2024 13:15	43.587	14.3
1/13/2024 13:30	45.947	14.8
1/13/2024 13:45	43.707	13.1
1/13/2024 14:00	49.147	13.1
1/13/2024 14:15	48.667	12.8
1/13/2024 14:30	43.447	12.6
1/13/2024 14:45	41.12	11.8
1/13/2024 15:00	41.207	12.7
1/13/2024 15:15	40.393	12.3
1/13/2024 15:30	45.84	12.8
1/13/2024 15:45	40.253	12.6
1/13/2024 16:00	37.893	10.7
1/13/2024 16:15	41.08	10.3
1/13/2024 16:30	45.593	10.2
1/13/2024 16:45	42.387	10.7
1/13/2024 17:00	39.147	10.1
1/13/2024 17:15	38.86	11.3
1/13/2024 17:30	36.78	12
1/13/2024 17:45	44.527	12.2
1/13/2024 18:00	40.36	9.6
1/13/2024 18:15	37.993	9
1/13/2024 18:30	38.893	9.7
1/13/2024 18:45	41.06	10
1/13/2024 19:00	32.86	9.6
1/13/2024 19:15	37.94	9.1
1/13/2024 19:30	36.187	7.9
1/13/2024 19:45	35.8	8.1
1/13/2024 20:00	36.487	7.5
1/13/2024 20:15	40.26	7.3
1/13/2024 20:30	38.18	7.4
1/13/2024 20:45	45.147	9.8
1/13/2024 21:00	50.553	12.3
1/13/2024 21:15	54.013	11.6
1/13/2024 21:30	51.153	11.4

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/13/2024 21:45	48.067	10.4	1/17/2024 4:00	17.153	6.7	1/17/2024 18:15	40.347	9.1
1/13/2024 22:00	45.153	11.1	1/17/2024 4:15	17.48	7.2	1/17/2024 18:30	50.887	20.4
1/13/2024 22:15	51.467	10.6	1/17/2024 4:30	18.653	6.6	1/17/2024 18:45	49.047	6.7
1/13/2024 22:30	43.753	10	1/17/2024 4:45	17.86	7.3	1/17/2024 19:00	43.633	7.9
1/13/2024 22:45	41.52	10.2	1/17/2024 5:00	19.413	6.9	1/17/2024 19:15	25.367	8
1/13/2024 23:00	40.867	10.4	1/17/2024 5:15	17.513	6.6	1/17/2024 19:30	23.313	6.4
1/13/2024 23:15	42.96	9.2	1/17/2024 5:30	18.173	7	1/17/2024 19:45	22.167	6.7
1/13/2024 23:30	43.38	10.9	1/17/2024 5:45	23.147	7.6	1/17/2024 20:00	19.587	8.2
1/13/2024 23:45	38.54	8.5	1/17/2024 6:00	18.82	5.9	1/17/2024 20:15	18.66	8.1
1/14/2024 0:00	40.187	8.2	1/17/2024 6:15	15.227	5.3	1/17/2024 20:30	20.4	7.1
1/14/2024 0:15	41.247	11.2	1/17/2024 6:30	13.44	5.8	1/17/2024 20:45	18.287	7.9
1/14/2024 0:30	39.787	11.2	1/17/2024 6:45	24.8	5.6	1/17/2024 21:00	23.9	6.9
1/14/2024 0:45	38.767	9.8	1/17/2024 7:00	13.727	5.4	1/17/2024 21:15	21.02	6.6
1/14/2024 1:00	33.047	8.2	1/17/2024 7:15	11.78	4.6	1/17/2024 21:30	21.72	6.4
1/14/2024 1:15	33.153	7.9	1/17/2024 7:30	13.5	4.8	1/17/2024 21:45	20.753	6.6
1/14/2024 1:30	35.207	8.6	1/17/2024 7:45	13.373	5	1/17/2024 22:00	20.707	6.9
1/14/2024 1:45	35.993	6.9	1/17/2024 8:00	15.18	5.8	1/17/2024 22:15	19.147	5.9
1/14/2024 2:00	35.127	8.8	1/17/2024 8:15	22.753	7.1	1/17/2024 22:30	31.987	6.1
1/14/2024 2:15	35.447	7.1	1/17/2024 8:30	23.207	6.2	1/17/2024 22:45	20.087	6.6
1/14/2024 2:30	36.253	8.3	1/17/2024 8:45	17.953	5.9	1/17/2024 23:00	17.433	5.8
1/14/2024 2:45	32.973	7.4	1/17/2024 9:00	14.667	6	1/17/2024 23:15	18.08	5.4
1/14/2024 3:00	33.787	8.8	1/17/2024 9:15	93.327	5.8	1/17/2024 23:30	19.893	5.8
1/14/2024 3:15	34.147	6.3	1/17/2024 9:30	52.14	16.9	1/17/2024 23:45	17.22	5.8
1/14/2024 3:30	32.613	7	1/17/2024 9:45	81.127	6.8	1/18/2024 0:00	19.12	6.8
1/14/2024 3:45	35.233	8.7	1/17/2024 10:00	29.453	7	1/18/2024 0:15	28.647	5.8
1/14/2024 4:00	33.147	8.3	1/17/2024 10:15	18.34	7	1/18/2024 0:30	20.413	6.2
1/14/2024 4:15	36.493	8.6	1/17/2024 10:30	29.093	5.7	1/18/2024 0:45	19.98	6.1
1/14/2024 4:30	38.68	9.6	1/17/2024 10:45	51.54	6.4	1/18/2024 1:00	19.56	5.4
1/14/2024 4:45	41.487	12.8	1/17/2024 11:00	37.527	9	1/18/2024 1:15	19	6.3
1/14/2024 5:00	46.207	11	1/17/2024 11:15	37.513	8.1	1/18/2024 1:30	19.1	6.6
1/14/2024 5:15	45.12	11.4	1/17/2024 11:30	38.547	7.3	1/18/2024 1:45	19.353	6.4
1/14/2024 5:30	44.547	13.3	1/17/2024 11:45	56.12	6.8	1/18/2024 2:00	18.747	6.3
1/14/2024 5:45	45.04	11.8	1/17/2024 12:00	51.473	12.5	1/18/2024 2:15	19.073	6.4
1/14/2024 6:00	42.353	9.7	1/17/2024 12:15	48.767	6.6	1/18/2024 2:30	19.88	5.6
1/14/2024 6:15	43.553	10.1	1/17/2024 12:30	31.753	7.6	1/18/2024 2:45	19.88	8.3
1/14/2024 6:30	37.127	8.5	1/17/2024 12:45	40.067	8.1	1/18/2024 3:00	19.287	6.3
1/14/2024 6:45	37.247	10	1/17/2024 13:00	28.487	7.3	1/18/2024 3:15	18.907	6
1/14/2024 7:00	36.687	9.9	1/17/2024 13:15	35.833	6.7	1/18/2024 3:30	19.367	6.8
1/14/2024 7:15	43.873	10.4	1/17/2024 13:30	29.907	7.3	1/18/2024 3:45	18.573	5.9
1/14/2024 7:30	38.72	15.9	1/17/2024 13:45	30.58	8.4	1/18/2024 4:00	21.08	7.5
1/14/2024 7:45	11.133	8.4	1/17/2024 14:00	39.267	7	1/18/2024 4:15	18.667	7
1/14/2024 8:00	7.547	3.4	1/17/2024 14:15	30.213	9.4	1/18/2024 4:30	17.76	6.4
1/14/2024 8:15	7.26	3.3	1/17/2024 14:30	28.847	12.4	1/18/2024 4:45	18.347	5.8
1/14/2024 8:30	7.327	3.5	1/17/2024 14:45	54.333	8.5	1/18/2024 5:00	19.853	5.9
1/14/2024 8:45	7.507	3.5	1/17/2024 15:00	40.54	6.9	1/18/2024 5:15	22.98	10.5
1/14/2024 9:00	7.46	3.6	1/17/2024 15:15	49.287	10.5	1/18/2024 5:30	21.107	5.7
1/14/2024 9:15	7.5	3.6	1/17/2024 15:30	49.66	12.6	1/18/2024 5:45	30.4	5.7
1/14/2024 9:30	7.34	3.6	1/17/2024 15:45	39.953	10.4	1/18/2024 6:00	21.573	7.4
1/14/2024 9:45	6.76	3.6	1/17/2024 16:00	38.78	8.6	1/18/2024 6:15	18.34	6
1/14/2024 10:00	5.58	3.5	1/17/2024 16:15	55.96	10.8	1/18/2024 6:30	23.74	6.2
1/14/2024 10:15	5.42	3.2	1/17/2024 16:30	43.633	10.4	1/18/2024 6:45	20.52	6.1
1/14/2024 10:30	5.22	3.3	1/17/2024 16:45	33.687	12.8	1/18/2024 7:00	31.56	9.2
1/14/2024 10:45	5.32	3.3	1/17/2024 17:00	37.553	9.8	1/18/2024 7:15	21.567	5.7
1/14/2024 11:00	7.34	2.9	1/17/2024 17:15	42.48	17	1/18/2024 7:30	22.527	7.4
1/14/2024 11:15	8.2	2.6	1/17/2024 17:30	38.153	11.3	1/18/2024 7:45	17.3	6.9
1/17/2024 3:30	18.087	5	1/17/2024 17:45	35.02	8.1	1/18/2024 8:00	65.573	7.4
1/17/2024 3:45	22.06	6.4	1/17/2024 18:00	38.607	23.9	1/18/2024 8:15	81.2	17.8

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/18/2024 8:30	37.413	7.1	1/18/2024 22:45	18.587	6.6	1/19/2024 13:00	58.48	16.3
1/18/2024 8:45	37.627	9	1/18/2024 23:00	20.74	7.8	1/19/2024 13:15	40.24	15.4
1/18/2024 9:00	23.773	6.7	1/18/2024 23:15	19.253	7.1	1/19/2024 13:30	39.907	10.9
1/18/2024 9:15	35.813	7.1	1/18/2024 23:30	20.307	6.9	1/19/2024 13:45	69.76	8.1
1/18/2024 9:30	22.973	6.2	1/18/2024 23:45	19.333	6.1	1/19/2024 14:00	55.233	9.7
1/18/2024 9:45	22.473	5.2	1/19/2024 0:00	19.4	6.2	1/19/2024 14:15	88.68	12.7
1/18/2024 10:00	17.28	5.6	1/19/2024 0:15	18.187	6	1/19/2024 14:30	90.207	14.3
1/18/2024 10:15	23.367	5.8	1/19/2024 0:30	18.62	6.8	1/19/2024 14:45	86.92	17.6
1/18/2024 10:30	34.313	6.6	1/19/2024 0:45	16.393	5.6	1/19/2024 15:00	101.16	22.8
1/18/2024 10:45	53.367	9.5	1/19/2024 1:00	18.14	6.3	1/19/2024 15:15	71.733	20.6
1/18/2024 11:00	43.1	8.2	1/19/2024 1:15	18.867	5.9	1/19/2024 15:30	53.84	20.2
1/18/2024 11:15	25.153	6.5	1/19/2024 1:30	20.38	7.3	1/19/2024 15:45	56.147	11
1/18/2024 11:30	25.373	5.6	1/19/2024 1:45	20.213	6.5	1/19/2024 16:00	70.933	12.6
1/18/2024 11:45	36.613	16.4	1/19/2024 2:00	21.127	9.5	1/19/2024 16:15	103.42	17.8
1/18/2024 12:00	33.127	5	1/19/2024 2:15	18.6	6.5	1/19/2024 16:30	117.253	21.3
1/18/2024 12:15	29.28	7.8	1/19/2024 2:30	17.693	6.6	1/19/2024 16:45	119.973	17.6
1/18/2024 12:30	35.753	13.9	1/19/2024 2:45	19.607	6.3	1/19/2024 17:00	138.4	25.6
1/18/2024 12:45	42.42	6.9	1/19/2024 3:00	19.347	6.6	1/19/2024 17:15	95.093	23.9
1/18/2024 13:00	22.687	7.1	1/19/2024 3:15	20.513	5.7	1/19/2024 17:30	42.773	17.5
1/18/2024 13:15	20.613	7.5	1/19/2024 3:30	19.92	6.5	1/19/2024 17:45	37.547	14
1/18/2024 13:30	27.407	6.8	1/19/2024 3:45	20.293	6	1/19/2024 18:00	37.453	10.8
1/18/2024 13:45	23.633	6.2	1/19/2024 4:00	20.787	6.9	1/19/2024 18:15	39.487	10.3
1/18/2024 14:00	30.513	7.6	1/19/2024 4:15	19.827	6.2	1/19/2024 18:30	31.707	11.9
1/18/2024 14:15	31.4	13.3	1/19/2024 4:30	17.927	6.5	1/19/2024 18:45	30.613	9.5
1/18/2024 14:30	31.68	7.8	1/19/2024 4:45	19.68	6.2	1/19/2024 19:00	36.433	10.1
1/18/2024 14:45	40.187	5.8	1/19/2024 5:00	17.027	5.6	1/19/2024 19:15	47.553	12.1
1/18/2024 15:00	34.227	7.1	1/19/2024 5:15	15.807	6.2	1/19/2024 19:30	51.673	11.3
1/18/2024 15:15	34.14	8.2	1/19/2024 5:30	17.34	5.6	1/19/2024 19:45	54.42	13.4
1/18/2024 15:30	30.667	6	1/19/2024 5:45	30.093	5.3	1/19/2024 20:00	67.867	15.7
1/18/2024 15:45	32.667	6.8	1/19/2024 6:00	20.273	5	1/19/2024 20:15	60.42	15.4
1/18/2024 16:00	33.827	6.9	1/19/2024 6:15	26.807	5.1	1/19/2024 20:30	57.293	12.5
1/18/2024 16:15	31.007	6.8	1/19/2024 6:30	28.6	5.7	1/19/2024 20:45	62.86	16.2
1/18/2024 16:30	45.573	23.5	1/19/2024 6:45	25.727	17.1	1/19/2024 21:00	71.48	16.7
1/18/2024 16:45	37.8	7.9	1/19/2024 7:00	20.22	6	1/19/2024 21:15	68.773	16.3
1/18/2024 17:00	45.327	7.4	1/19/2024 7:15	23.32	5	1/19/2024 21:30	56.687	14.3
1/18/2024 17:15	37.333	11.2	1/19/2024 7:30	27.927	5.4	1/19/2024 21:45	48.567	12.9
1/18/2024 17:30	24.867	6.9	1/19/2024 7:45	18.4	5.9	1/19/2024 22:00	61.22	13.5
1/18/2024 17:45	31.5	6.7	1/19/2024 8:00	72.267	5.4	1/19/2024 22:15	63.207	16.3
1/18/2024 18:00	56.58	9.5	1/19/2024 8:15	57.947	20.4	1/19/2024 22:30	49.067	12.8
1/18/2024 18:15	28.807	11	1/19/2024 8:30	26.527	5.5	1/19/2024 22:45	38.7	11.3
1/18/2024 18:30	47.693	7	1/19/2024 8:45	31.127	6.2	1/19/2024 23:00	42.483	10
1/18/2024 18:45	45.82	5.9	1/19/2024 9:00	28.467	6.6	1/21/2024 11:30	26.35	0
1/18/2024 19:00	22.673	6.8	1/19/2024 9:15	25.533	6.2	1/21/2024 11:45	39.893	7.6
1/18/2024 19:15	37.967	7.3	1/19/2024 9:30	26.62	6.5	1/21/2024 12:00	39.087	10.5
1/18/2024 19:30	23.933	6.5	1/19/2024 9:45	34.7	10.5	1/21/2024 12:15	35.567	9.5
1/18/2024 19:45	23.767	7.1	1/19/2024 10:00	25.3	6	1/21/2024 12:30	33.247	6
1/18/2024 20:00	22.853	6.8	1/19/2024 10:15	21.573	6.9	1/21/2024 12:45	35.347	7.4
1/18/2024 20:15	24.453	6.5	1/19/2024 10:30	17.073	5.8	1/21/2024 13:00	33.867	9.2
1/18/2024 20:30	24.327	8.1	1/19/2024 10:45	24.493	12.7	1/21/2024 13:15	31.453	7.9
1/18/2024 20:45	26.413	6.4	1/19/2024 11:00	33.307	11.7	1/21/2024 13:30	31.673	7.2
1/18/2024 21:00	24.693	7.6	1/19/2024 11:15	31.22	6.8	1/21/2024 13:45	26.593	9.5
1/18/2024 21:15	27.24	6.2	1/19/2024 11:30	34.567	9.3	1/21/2024 14:00	26.8	8.6
1/18/2024 21:30	21.353	7.7	1/19/2024 11:45	29.087	12	1/21/2024 14:15	24.293	6.9
1/18/2024 21:45	21.453	5.8	1/19/2024 12:00	34.98	6.9	1/21/2024 14:30	26.993	6.3
1/18/2024 22:00	20.373	6.7	1/19/2024 12:15	45.047	8.6	1/21/2024 14:45	29.453	7
1/18/2024 22:15	19.793	7	1/19/2024 12:30	43.22	11.8	1/21/2024 15:00	32.2	7.4
1/18/2024 22:30	18.393	6.2	1/19/2024 12:45	74.373	13.1	1/21/2024 15:15	31.42	8.1

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/21/2024 15:30	24.32	6.2	1/22/2024 8:30	37.087	7.6	1/22/2024 22:45	19.86	5.8
1/21/2024 15:45	41.02	15	1/22/2024 8:45	29.187	10.3	1/22/2024 23:00	18.853	5.1
1/21/2024 16:00	35.54	12.1	1/22/2024 9:00	44.3	8.1	1/22/2024 23:15	16.687	4.2
1/21/2024 16:15	43.667	10.3	1/22/2024 9:15	28.193	6.9	1/22/2024 23:30	15.82	5
1/21/2024 16:30	30.08	9.2	1/22/2024 9:30	22.007	7.9	1/22/2024 23:45	15.58	5.1
1/21/2024 16:45	26.507	6.7	1/22/2024 9:45	22.927	7.6	1/23/2024 0:00	17.687	4.4
1/21/2024 17:00	26.42	5.2	1/22/2024 10:00	21.74	7.6	1/23/2024 0:15	14.553	3.8
1/21/2024 17:15	28.173	7.6	1/22/2024 10:15	22.96	8.2	1/23/2024 0:30	13.48	4.1
1/21/2024 17:30	24.007	6.7	1/22/2024 10:30	38.513	7.6	1/23/2024 0:45	12.513	2.4
1/21/2024 17:45	25.993	6.2	1/22/2024 10:45	42.607	8.4	1/23/2024 1:00	12.487	4.6
1/21/2024 18:00	29.02	7.8	1/22/2024 11:00	26.353	8	1/23/2024 1:15	12.28	3.2
1/21/2024 18:15	43.827	6.2	1/22/2024 11:15	24.933	6.7	1/23/2024 1:30	24.273	4.5
1/21/2024 18:30	29.373	6.9	1/22/2024 11:30	27.727	6.7	1/23/2024 1:45	21.513	14.6
1/21/2024 18:45	43.687	6.2	1/22/2024 11:45	27.293	8.3	1/23/2024 2:00	13.36	4.2
1/21/2024 19:00	24.487	5.7	1/22/2024 12:00	28.973	8.7	1/23/2024 2:15	13.38	4.3
1/21/2024 19:15	34.813	7.9	1/22/2024 12:15	34.847	7.2	1/23/2024 2:30	12.713	4.9
1/21/2024 19:30	26.9	8.1	1/22/2024 12:30	32.84	7.3	1/23/2024 2:45	12.253	3.1
1/21/2024 19:45	38.167	8.6	1/22/2024 12:45	24.427	8.3	1/23/2024 3:00	28.667	5.2
1/21/2024 22:45	18.95	0	1/22/2024 13:00	24.94	6.8	1/23/2024 3:15	17.867	5.1
1/21/2024 23:00	24.167	7.5	1/22/2024 13:15	21.273	6.6	1/23/2024 3:30	14.507	4.4
1/21/2024 23:15	31.887	8.8	1/22/2024 13:30	28.447	14.4	1/23/2024 3:45	20.08	4
1/21/2024 23:30	28.413	8.5	1/22/2024 13:45	23.147	5.8	1/23/2024 4:00	16.427	5
1/21/2024 23:45	29.607	8.7	1/22/2024 14:00	28.04	8	1/23/2024 4:15	14.473	4.5
1/22/2024 0:00	27.113	8.7	1/22/2024 14:15	26.46	5.6	1/23/2024 4:30	16.967	3.9
1/22/2024 0:15	30.8	8.5	1/22/2024 14:30	25.927	7.6	1/23/2024 4:45	15.027	5.2
1/22/2024 0:30	31.927	8.7	1/22/2024 14:45	29.527	4.8	1/23/2024 5:00	19.893	5
1/22/2024 0:45	28.547	8.8	1/22/2024 15:00	24.08	7.1	1/23/2024 5:15	16.393	5.3
1/22/2024 1:00	32.193	8.8	1/22/2024 15:15	38.053	5.1	1/23/2024 5:30	20.567	4.7
1/22/2024 1:15	25.833	8.3	1/22/2024 15:30	38.02	4.9	1/23/2024 5:45	24.247	3.9
1/22/2024 1:30	25.68	7.3	1/22/2024 15:45	29.153	7.1	1/23/2024 6:00	21.167	4.7
1/22/2024 1:45	34.913	7	1/22/2024 16:00	32	8.1	1/23/2024 6:15	20.207	5.4
1/22/2024 2:00	25.22	7.8	1/22/2024 16:15	34.44	13.9	1/23/2024 6:30	17.28	4.8
1/22/2024 2:15	26.487	7.7	1/22/2024 16:30	35.3	20.6	1/23/2024 6:45	16.92	4.9
1/22/2024 2:30	23.907	8.2	1/22/2024 16:45	51.24	11.4	1/23/2024 7:00	21.42	5.4
1/22/2024 2:45	25.253	7.7	1/22/2024 17:00	51.733	5.9	1/23/2024 7:15	19	5.8
1/22/2024 3:00	43.813	8.1	1/22/2024 17:15	28.5	6.2	1/23/2024 7:30	22.96	5.3
1/22/2024 3:15	33.64	11.8	1/22/2024 17:30	18.433	5.6	1/23/2024 7:45	20.207	5.8
1/22/2024 3:30	23.567	8.9	1/22/2024 17:45	24.667	6.1	1/23/2024 8:00	25.367	6.3
1/22/2024 3:45	25.567	8.2	1/22/2024 18:00	31.38	5.5	1/23/2024 8:15	21.433	7.1
1/22/2024 4:00	24.193	6.8	1/22/2024 18:15	24.52	6.4	1/23/2024 8:30	30.847	7.7
1/22/2024 4:15	23.98	7.1	1/22/2024 18:30	21.187	4.5	1/23/2024 8:45	23.613	7.3
1/22/2024 4:30	22.12	6.5	1/22/2024 18:45	39.32	5.8	1/23/2024 9:00	28.247	6.9
1/22/2024 4:45	21.793	5.7	1/22/2024 19:00	41.42	27.9	1/23/2024 9:15	23.733	9.8
1/22/2024 5:00	22.347	6.8	1/22/2024 19:15	21.093	6.8	1/23/2024 9:30	23.967	7
1/22/2024 5:15	21.953	6.8	1/22/2024 19:30	27.353	6	1/23/2024 9:45	27.887	6.7
1/22/2024 5:30	23.38	6.3	1/22/2024 19:45	24.973	7.9	1/23/2024 10:00	30.84	8.8
1/22/2024 5:45	22.92	6.4	1/22/2024 20:00	35.613	6.9	1/23/2024 10:15	25.44	7.7
1/22/2024 6:00	46.633	16.4	1/22/2024 20:15	98.073	11.8	1/23/2024 10:30	22.313	7.2
1/22/2024 6:15	31.68	5.8	1/22/2024 20:30	70.053	10.6	1/23/2024 10:45	22.747	6.7
1/22/2024 6:30	22.16	7.4	1/22/2024 20:45	62.733	17.7	1/23/2024 11:00	29.893	13.5
1/22/2024 6:45	23.707	6.5	1/22/2024 21:00	40.08	8.7	1/23/2024 11:15	19.72	6.9
1/22/2024 7:00	23.587	6.6	1/22/2024 21:15	38.173	9.4	1/23/2024 11:30	19.653	7
1/22/2024 7:15	38.36	7.5	1/22/2024 21:30	25.073	8.3	1/23/2024 11:45	24.76	5.8
1/22/2024 7:30	35.407	8.4	1/22/2024 21:45	25.073	6.8	1/23/2024 12:00	23.173	5.9
1/22/2024 7:45	23.687	8.1	1/22/2024 22:00	21.973	6.1	1/23/2024 12:15	20.953	5.6
1/22/2024 8:00	24.773	9.9	1/22/2024 22:15	24.147	6.6	1/23/2024 12:30	30.507	7
1/22/2024 8:15	29.627	8.8	1/22/2024 22:30	20.707	7	1/23/2024 12:45	30.12	10.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/23/2024 13:00	21.373	5.8
1/23/2024 13:15	28.9	6
1/23/2024 13:30	30.813	14
1/23/2024 13:45	23.773	6.3
1/23/2024 14:00	19.227	5.4
1/23/2024 14:15	19.847	5.1
1/23/2024 14:30	22.527	5.1
1/23/2024 14:45	30.593	6.9
1/23/2024 15:00	30.593	4.3
1/23/2024 15:15	23.787	9.8
1/23/2024 15:30	25.927	10.3
1/23/2024 15:45	41.82	7.5
1/23/2024 16:00	24.94	4
1/23/2024 16:15	36.16	5.1
1/23/2024 16:30	22.133	5.3
1/23/2024 16:45	27.213	6.3
1/23/2024 17:00	27.42	5.9
1/23/2024 17:15	27.26	8.1
1/23/2024 17:30	22.393	5.1
1/23/2024 17:45	30.873	5.4
1/23/2024 18:00	38.893	19.8
1/23/2024 18:15	21.9	11.2
1/23/2024 18:30	27.513	20.4
1/23/2024 18:45	30.08	5.8
1/23/2024 19:00	59.087	7.6
1/23/2024 19:15	26.713	6.8
1/23/2024 19:30	61.52	5.9
1/23/2024 19:45	49.36	25.5
1/23/2024 20:00	27.533	7
1/23/2024 20:15	42.107	6.5
1/23/2024 20:30	38.533	5.3
1/23/2024 20:45	26.747	7.2
1/23/2024 21:00	24.173	7.8
1/23/2024 21:15	26.987	7.1
1/23/2024 21:30	25.127	6.2
1/23/2024 21:45	25.893	7.6
1/23/2024 22:00	24.333	6.7
1/23/2024 22:15	23.073	6.4
1/23/2024 22:30	26.467	7.8
1/23/2024 22:45	19.933	6.1
1/23/2024 23:00	19.26	5.6
1/23/2024 23:15	18.02	5.9
1/23/2024 23:30	18.893	6.1
1/23/2024 23:45	19.567	5.4
1/24/2024 0:00	16.427	3.8
1/24/2024 0:15	18.613	4.2
1/24/2024 0:30	33.753	17.9
1/24/2024 0:45	29.86	5.8
1/24/2024 1:00	24.047	8.6
1/24/2024 1:15	16.66	4.4
1/24/2024 1:30	15.547	4.5
1/24/2024 1:45	14.933	4.3
1/24/2024 2:00	15.6	4.4
1/24/2024 2:15	12.267	3.7
1/24/2024 2:30	11.767	4.1
1/24/2024 2:45	10.78	4.1
1/24/2024 3:00	8.5	3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/24/2024 3:15	9.287	2.9
1/24/2024 3:30	9.56	2.6
1/24/2024 3:45	10.627	2.5
1/24/2024 4:00	9.013	2.8
1/24/2024 4:15	13.213	3.1
1/24/2024 4:30	11.993	2.9
1/24/2024 4:45	13.613	3.4
1/24/2024 5:00	13.6	2.8
1/24/2024 5:15	14.96	3.8
1/24/2024 5:30	16.173	4.3
1/24/2024 5:45	16.647	4.3
1/24/2024 6:00	22.873	5.3
1/24/2024 6:15	22.48	4.8
1/24/2024 6:30	20.26	5.5
1/24/2024 6:45	19.847	5.4
1/24/2024 7:00	22.073	5
1/24/2024 7:15	24.46	4.5
1/24/2024 7:30	31.367	6.3
1/24/2024 7:45	26.56	4
1/24/2024 8:00	24.04	5.2
1/24/2024 8:15	29.427	7.1
1/24/2024 8:30	32.773	7
1/24/2024 8:45	36.28	4.4
1/24/2024 9:00	55.053	7.4
1/24/2024 9:15	33.133	8.5
1/24/2024 9:30	29.613	6.2
1/24/2024 9:45	23.933	5.3
1/24/2024 10:00	32	5.2
1/24/2024 10:15	33.473	6.6
1/24/2024 10:30	33.547	6.2
1/24/2024 10:45	39.32	6.8
1/24/2024 11:00	66.473	9.8
1/24/2024 11:15	73.273	12.6
1/24/2024 11:30	79.973	20.9
1/24/2024 11:45	75.54	15.6
1/24/2024 12:00	102.34	20.5
1/24/2024 12:15	83.827	20.2
1/24/2024 12:30	83.147	20.3
1/24/2024 12:45	78.847	23.2
1/24/2024 13:00	64.113	21.8
1/24/2024 13:15	57.5	12.7
1/24/2024 13:30	80.993	13.2
1/24/2024 13:45	51.387	19
1/24/2024 14:00	60.487	16.7
1/24/2024 14:15	59.587	17
1/24/2024 14:30	67.4	15.9
1/24/2024 14:45	46.66	10.3
1/24/2024 15:00	61.693	10.8
1/24/2024 15:15	44.027	9.6
1/24/2024 15:30	59.887	9.7
1/24/2024 15:45	62.347	9.7
1/24/2024 16:00	45.747	7.9
1/24/2024 16:15	36.687	7.6
1/24/2024 16:30	43.74	7.5
1/24/2024 16:45	44.533	8
1/24/2024 17:00	35.14	6.3
1/24/2024 17:15	36.853	20

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/24/2024 17:30	33.853	6.3
1/24/2024 17:45	26.227	6.2
1/24/2024 18:00	29.86	6.4
1/24/2024 18:15	34.66	7.3
1/24/2024 18:30	33.187	7
1/24/2024 18:45	30.82	5.4
1/24/2024 19:00	31.82	7
1/24/2024 19:15	44.08	8.5
1/24/2024 19:30	35.253	8.9
1/24/2024 19:45	31.887	7.7
1/24/2024 20:00	29.953	5.8
1/24/2024 20:15	34.433	6.7
1/24/2024 20:30	27	5.1
1/24/2024 20:45	23.813	6.4
1/24/2024 21:00	22.58	5.8
1/24/2024 21:15	25.907	6.1
1/24/2024 21:30	24.947	6.4
1/24/2024 21:45	28.84	7.1
1/24/2024 22:00	33.46	8.2
1/24/2024 22:15	28.667	8.9
1/24/2024 22:30	30.967	7.3
1/24/2024 22:45	32.473	8.3
1/24/2024 23:00	34.453	9.3
1/24/2024 23:15	37.84	10.4
1/24/2024 23:30	33.98	8.7
1/24/2024 23:45	36.527	8.6
1/25/2024 0:00	35.54	8.4
1/25/2024 0:15	38.267	7.6
1/25/2024 0:30	32.34	10
1/25/2024 0:45	28.987	9.9
1/25/2024 1:00	28.487	8.2
1/25/2024 1:15	27.707	8.2
1/25/2024 1:30	26.747	7.3
1/25/2024 1:45	25.707	6
1/25/2024 2:00	26.673	5.8
1/25/2024 2:15	24.947	7.3
1/25/2024 2:30	21.713	7.5
1/25/2024 2:45	25.167	8
1/25/2024 3:00	22.24	8.1
1/25/2024 3:15	24.207	7.3
1/25/2024 3:30	18.3	5.3
1/25/2024 3:45	20.613	6
1/25/2024 4:00	20.76	5.7
1/25/2024 4:15	22.667	6.2
1/25/2024 4:30	19.027	5.7
1/25/2024 4:45	19.267	6.3
1/25/2024 5:00	19.153	5.7
1/25/2024 5:15	19.627	5.1
1/25/2024 5:30	20.167	5.4
1/25/2024 5:45	22.307	4.2
1/25/2024 6:00	32.107	5.6
1/25/2024 6:15	24.233	5.9
1/25/2024 6:30	29.947	6.2
1/25/2024 6:45	28.213	8.7
1/25/2024 7:00	26.107	5.2
1/25/2024 7:15	30	6.4
1/25/2024 7:30	35.253	8.7

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/25/2024 7:45	33.527	13	1/25/2024 22:00	22.067	6.5	1/26/2024 12:15	43.967	13.2
1/25/2024 8:00	30.58	6.3	1/25/2024 22:15	33.427	6.8	1/26/2024 12:30	46	15
1/25/2024 8:15	28.56	6.9	1/25/2024 22:30	30.2	7.6	1/26/2024 12:45	41.353	15.1
1/25/2024 8:30	26.94	6.7	1/25/2024 22:45	25.187	6.9	1/26/2024 13:00	37.44	13.4
1/25/2024 8:45	27.253	6.6	1/25/2024 23:00	25.993	7.5	1/26/2024 13:15	37.713	13.7
1/25/2024 9:00	30.807	7	1/25/2024 23:15	24.607	7.7	1/26/2024 13:30	35.393	13.2
1/25/2024 9:15	30.06	5	1/25/2024 23:30	24.567	6.5	1/26/2024 13:45	34.107	10.9
1/25/2024 9:30	23.827	6.3	1/25/2024 23:45	25.76	6.3	1/26/2024 14:00	36.287	12.7
1/25/2024 9:45	27.967	7.2	1/26/2024 0:00	26.113	7.1	1/26/2024 14:15	39.36	11.3
1/25/2024 10:00	30.553	7.7	1/26/2024 0:15	27.893	8	1/26/2024 14:30	32.347	10.7
1/25/2024 10:15	27.507	7.4	1/26/2024 0:30	29.113	7.3	1/26/2024 14:45	36.66	11
1/25/2024 10:30	30.88	8.6	1/26/2024 0:45	30.02	8.1	1/26/2024 15:00	39.58	10.5
1/25/2024 10:45	28.213	7.1	1/26/2024 1:00	29.04	7.1	1/26/2024 15:15	34.587	11.8
1/25/2024 11:00	32.433	8.6	1/26/2024 1:15	25.747	8.5	1/26/2024 15:30	35.867	10.7
1/25/2024 11:15	33.033	8.8	1/26/2024 1:30	31.027	7.2	1/26/2024 15:45	41.487	10
1/25/2024 11:30	30.8	7.5	1/26/2024 1:45	27.633	8.1	1/26/2024 16:00	34.24	12.7
1/25/2024 11:45	27.22	7.8	1/26/2024 2:00	27.473	7.7	1/26/2024 16:15	31.533	13.3
1/25/2024 12:00	31.28	7.6	1/26/2024 2:15	28.307	5.7	1/26/2024 16:30	41.82	10.5
1/25/2024 12:15	27.573	8.4	1/26/2024 2:30	31.607	7.8	1/26/2024 16:45	36.373	12.2
1/25/2024 12:30	28.52	8.2	1/26/2024 2:45	28.953	8.6	1/26/2024 17:00	38.987	11.3
1/25/2024 12:45	30.073	7.8	1/26/2024 3:00	28.338	8.1	1/26/2024 17:15	41.12	13.6
1/25/2024 13:00	27.953	7.8	1/26/2024 3:15	28.74	6.7	1/26/2024 17:30	35.94	11.4
1/25/2024 13:15	28.153	8.5	1/26/2024 3:30	35.753	7.5	1/26/2024 17:45	36.687	9.6
1/25/2024 13:30	30.693	8.7	1/26/2024 3:45	34.68	7.9	1/26/2024 18:00	38.447	10.9
1/25/2024 13:45	31.853	8.2	1/26/2024 4:00	30.68	8.7	1/26/2024 18:15	37.04	11.1
1/25/2024 14:00	29.26	8	1/26/2024 4:15	26.42	7.9	1/26/2024 18:30	41.107	11
1/25/2024 14:15	33.16	7.7	1/26/2024 4:30	50.86	7.2	1/26/2024 18:45	40.847	10.5
1/25/2024 14:30	29.94	9.6	1/26/2024 4:45	33.033	8.2	1/26/2024 19:00	48.567	11.1
1/25/2024 14:45	33.307	9.6	1/26/2024 5:00	26.52	5.6	1/26/2024 19:15	37.527	11.5
1/25/2024 15:00	35.1	10.2	1/26/2024 5:15	25.313	7.1	1/26/2024 19:30	33.027	9.9
1/25/2024 15:15	32.613	10.7	1/26/2024 5:30	28.407	7	1/26/2024 19:45	53.687	11.2
1/25/2024 15:30	29.707	14.3	1/26/2024 5:45	33.807	7.6	1/26/2024 20:00	47.633	13.6
1/25/2024 15:45	26.033	9	1/26/2024 6:00	79.267	14.9	1/26/2024 20:15	61.227	13.2
1/25/2024 16:00	28.247	10.8	1/26/2024 6:15	54.287	12.9	1/26/2024 20:30	44.347	16.3
1/25/2024 16:15	30.213	9.9	1/26/2024 6:30	78.853	23.2	1/26/2024 20:45	36.313	12.6
1/25/2024 16:30	29.68	8.8	1/26/2024 6:45	79.8	8.1	1/26/2024 21:00	29.527	10.1
1/25/2024 16:45	52.6	8.8	1/26/2024 7:00	59.72	20.1	1/26/2024 21:15	34.027	9.7
1/25/2024 17:00	24.467	7.7	1/26/2024 7:15	50.78	10.3	1/26/2024 21:30	66.72	10.2
1/25/2024 17:15	26.173	7.7	1/26/2024 7:30	48.92	12.5	1/26/2024 21:45	72.42	14.9
1/25/2024 17:30	29.433	8.1	1/26/2024 7:45	36.08	9	1/26/2024 22:00	52.813	16.2
1/25/2024 17:45	25.32	6.9	1/26/2024 8:00	56.933	8.8	1/26/2024 22:15	56.4	22.6
1/25/2024 18:00	42.84	7.5	1/26/2024 8:15	43.947	9.4	1/26/2024 22:30	58.293	20.2
1/25/2024 18:15	37.073	10.6	1/26/2024 8:30	37.367	11.4	1/26/2024 22:45	50.267	20.2
1/25/2024 18:30	32.473	7.9	1/26/2024 8:45	37.32	8.8	1/26/2024 23:00	49.16	21.9
1/25/2024 18:45	31.627	10.6	1/26/2024 9:00	40.06	9.8	1/26/2024 23:15	54.233	21.3
1/25/2024 19:00	30.52	7.2	1/26/2024 9:15	38.26	10.4	1/26/2024 23:30	53.18	22.6
1/25/2024 19:15	28.573	7.1	1/26/2024 9:30	42.467	10.3	1/26/2024 23:45	55.593	21
1/25/2024 19:30	32.58	7.3	1/26/2024 9:45	38.067	9.1	1/27/2024 0:00	62.193	23.4
1/25/2024 19:45	35.02	10.9	1/26/2024 10:00	43.893	12.3	1/27/2024 0:15	52.58	20.8
1/25/2024 20:00	30.927	9.8	1/26/2024 10:15	47.233	11	1/27/2024 0:30	52.753	21
1/25/2024 20:15	30.573	8.5	1/26/2024 10:30	45.287	11.7	1/27/2024 0:45	48.82	21.6
1/25/2024 20:30	28.493	8.2	1/26/2024 10:45	49.753	12	1/27/2024 1:00	46.98	21
1/25/2024 20:45	27.12	6.6	1/26/2024 11:00	41.793	12.7	1/27/2024 1:15	50.007	20.5
1/25/2024 21:00	25.547	6.7	1/26/2024 11:15	40.487	10.9	1/27/2024 1:30	54.947	21.2
1/25/2024 21:15	28.94	7.2	1/26/2024 11:30	47.707	12	1/27/2024 1:45	58.093	21.8
1/25/2024 21:30	21.827	6.8	1/26/2024 11:45	52.24	16.6	1/27/2024 2:00	46.58	20.9
1/25/2024 21:45	22.487	6.8	1/26/2024 12:00	43.927	14.5	1/27/2024 2:15	43.22	18.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/27/2024 2:30	50.273	19.2
1/27/2024 2:45	48.607	18.4
1/27/2024 3:00	46.76	20.5
1/27/2024 3:15	47.647	18.3
1/27/2024 3:30	48.087	17.5
1/27/2024 3:45	47.973	17.2
1/27/2024 4:00	42.413	17.2
1/27/2024 4:15	47.473	15.8
1/27/2024 4:30	54.347	18
1/27/2024 4:45	54.16	19
1/27/2024 5:00	68.193	20.8
1/27/2024 5:15	71.987	20.6
1/27/2024 5:30	75.647	20.3
1/27/2024 5:45	85.767	23
1/27/2024 6:00	95.333	25
1/27/2024 6:15	98.26	25.1
1/27/2024 6:30	104.127	25.6
1/27/2024 6:45	104.427	25.1
1/27/2024 7:00	103.187	24.7
1/27/2024 7:15	107.533	27
1/27/2024 7:30	105.9	24.7
1/27/2024 7:45	103.393	25.8
1/27/2024 8:00	99.607	26.3
1/27/2024 8:15	89.26	24.2
1/27/2024 8:30	89.133	23.2
1/27/2024 8:45	98.56	23.5
1/27/2024 9:00	103.68	23.8
1/27/2024 9:15	106.093	27.2
1/27/2024 9:30	103.667	24.2
1/27/2024 9:45	88.107	21
1/27/2024 10:00	81.74	21.7
1/27/2024 10:15	79.24	19.7
1/27/2024 10:30	65.62	17.7
1/27/2024 10:45	70.153	18.9
1/27/2024 11:00	55.313	17.4
1/27/2024 11:15	59.213	15.9
1/27/2024 11:30	59.533	16
1/27/2024 11:45	63.047	14.4
1/27/2024 12:00	57.6	16
1/27/2024 12:15	63.547	18
1/27/2024 12:30	61.64	18.6
1/27/2024 12:45	69.487	16.4
1/27/2024 13:00	48.78	14.3
1/27/2024 13:15	46.24	13.1
1/27/2024 13:30	49.42	14.4
1/27/2024 13:45	58.1	13.1
1/27/2024 14:00	56.44	13.7
1/27/2024 14:15	57.533	11.9
1/27/2024 14:30	49.313	12.4
1/27/2024 14:45	81.913	19.9
1/27/2024 15:00	69.187	17.7
1/27/2024 15:15	69.607	14.2
1/27/2024 15:30	74.107	11.1
1/27/2024 15:45	62.673	14.7
1/27/2024 16:00	57.82	15.5
1/27/2024 16:15	40.8	11.8
1/27/2024 16:30	91.9	16.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/27/2024 16:45	94.267	24
1/27/2024 17:00	111.893	20.9
1/27/2024 17:15	84.247	20.9
1/27/2024 17:30	105.007	24.4
1/27/2024 17:45	86.66	21.6
1/27/2024 18:00	87.84	24.3
1/27/2024 18:15	73.253	21.9
1/27/2024 18:30	57.3	15
1/27/2024 18:45	35.08	16.1
1/27/2024 19:00	27.98	8.4
1/27/2024 19:15	28.627	8.5
1/27/2024 19:30	31.287	9.7
1/27/2024 19:45	29.547	8
1/27/2024 20:00	24.847	9.3
1/27/2024 20:15	29.52	7.7
1/27/2024 20:30	28.64	10.2
1/27/2024 20:45	24.8	10.1
1/27/2024 21:00	25.033	9
1/27/2024 21:15	28.68	8.4
1/27/2024 21:30	29.66	9.9
1/27/2024 21:45	33.227	8.6
1/27/2024 22:00	35.4	10.1
1/27/2024 22:15	44.2	11.3
1/27/2024 22:30	42.467	10.4
1/27/2024 22:45	48.74	11.1
1/27/2024 23:00	46.293	12.2
1/27/2024 23:15	36.067	11.3
1/27/2024 23:30	37.287	10.2
1/27/2024 23:45	38.633	8.7
1/28/2024 0:00	40.92	11.2
1/28/2024 0:15	43.653	13.2
1/28/2024 0:30	33.1	10.2
1/28/2024 0:45	32.193	10.2
1/28/2024 1:00	30.333	9.5
1/28/2024 1:15	30.953	9.8
1/28/2024 1:30	27.82	7.7
1/28/2024 1:45	25.273	8.5
1/28/2024 2:00	32.887	8.8
1/28/2024 2:15	31.207	8.8
1/28/2024 2:30	32.107	10.5
1/28/2024 2:45	31.813	8.2
1/28/2024 3:00	35.607	10.2
1/28/2024 3:15	35.027	8.6
1/28/2024 3:30	41.873	10.3
1/28/2024 3:45	39.527	10.4
1/28/2024 4:00	35.633	10.4
1/28/2024 4:15	32.073	9.6
1/28/2024 4:30	40.027	11
1/28/2024 4:45	35.273	9.6
1/28/2024 5:00	31.633	8.9
1/28/2024 5:15	25.58	8.3
1/28/2024 5:30	21.78	8.7
1/28/2024 5:45	30.833	9.2
1/28/2024 6:00	32.153	9.2
1/28/2024 6:15	31.36	12.4
1/28/2024 6:30	27.467	8.6
1/28/2024 6:45	29.767	8.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/28/2024 7:00	31.34	8.7
1/28/2024 7:15	41.6	9.4
1/28/2024 7:30	32.593	11.5
1/28/2024 7:45	31.613	10.1
1/28/2024 8:00	41.307	10.2
1/28/2024 8:15	42.047	10.6
1/28/2024 8:30	42.387	10.5
1/28/2024 8:45	31.533	9.7
1/28/2024 9:00	31.78	8.8
1/28/2024 9:15	29.58	9
1/28/2024 9:30	38.587	7.2
1/28/2024 9:45	34.88	9
1/28/2024 10:00	39.493	9.9
1/28/2024 10:15	38.613	9
1/28/2024 10:30	40.213	8.7
1/28/2024 10:45	57.853	10.4
1/28/2024 11:00	37.887	9.4
1/28/2024 11:15	64.78	7.8
1/28/2024 11:30	50.193	12.9
1/28/2024 11:45	50.013	13.6
1/28/2024 12:00	42.66	8.5
1/28/2024 12:15	65.327	15.3
1/28/2024 12:30	65.227	21.3
1/28/2024 12:45	56.913	16
1/28/2024 13:00	35.733	14.3
1/28/2024 13:15	44.96	12.9
1/28/2024 13:30	58.573	13.3
1/28/2024 13:45	67.193	11.9
1/28/2024 14:00	91.2	19.8
1/28/2024 14:15	82.467	18.4
1/28/2024 14:30	88.787	15.3
1/28/2024 14:45	70.92	16.7
1/28/2024 15:00	68.86	21.1
1/28/2024 15:15	55.533	16.9
1/28/2024 15:30	55.32	18.6
1/28/2024 15:45	84.22	18.4
1/28/2024 16:00	59.54	20.3
1/28/2024 16:15	54.46	20.6
1/28/2024 16:30	54.427	16.6
1/28/2024 16:45	56.5	11.1
1/28/2024 17:00	50.52	11.1
1/28/2024 17:15	64.793	11.4
1/28/2024 17:30	59.673	10.9
1/28/2024 17:45	38.627	10.3
1/28/2024 18:00	44.333	8.4
1/28/2024 18:15	48.173	11.1
1/28/2024 18:30	57.807	12.6
1/28/2024 18:45	56.66	12
1/28/2024 19:00	57.007	21.7
1/28/2024 19:15	56.18	14.3
1/28/2024 19:30	45.933	11
1/28/2024 19:45	40.907	10.6
1/28/2024 20:00	38.133	12
1/30/2024 11:30	37.45	0
1/30/2024 11:45	56.72	20.1
1/30/2024 12:00	45.113	12.4
1/30/2024 12:15	37.6	10.6

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
1/30/2024 12:30	44.613	9.8	2/7/2024 18:15	21.253	4.7	2/8/2024 8:30	47.06	9.7
1/30/2024 12:45	58.747	13.7	2/7/2024 18:30	21.72	3.8	2/8/2024 8:45	59.113	9.6
1/30/2024 13:00	55.587	13.4	2/7/2024 18:45	26.66	4.1	2/8/2024 9:00	51.673	10.5
1/30/2024 13:15	37.42	12.2	2/7/2024 19:00	21.113	5.5	2/8/2024 9:15	52.547	12.7
1/30/2024 13:30	37.607	10.9	2/7/2024 19:15	20.947	4.6	2/8/2024 9:30	53.353	9.5
1/30/2024 13:45	50.227	9.2	2/7/2024 19:30	27.067	4.7	2/8/2024 9:45	56.073	10.2
1/30/2024 14:00	35.053	9.5	2/7/2024 19:45	30.08	7.3	2/8/2024 10:00	54.007	15.8
1/30/2024 14:15	35.927	11.3	2/7/2024 20:00	25.953	6.2	2/8/2024 10:15	43.807	10.8
1/30/2024 14:30	54.627	18.9	2/7/2024 20:15	26.953	5.2	2/8/2024 10:30	45.273	10
1/30/2024 14:45	65.893	11.4	2/7/2024 20:30	31.433	5.6	2/8/2024 10:45	46.82	12.4
1/30/2024 15:00	48.22	10.6	2/7/2024 20:45	33.54	7.2	2/8/2024 11:00	41.207	10.2
1/30/2024 15:15	41.633	10.4	2/7/2024 21:00	25.747	6.1	2/8/2024 11:15	39.567	11
1/30/2024 15:30	36.307	12.2	2/7/2024 21:15	23.9	5.6	2/8/2024 11:30	53.993	10.5
1/30/2024 15:45	33.873	8.5	2/7/2024 21:30	22.953	4.4	2/8/2024 11:45	62.44	14.4
1/30/2024 16:00	40.947	13.4	2/7/2024 21:45	28.847	5.3	2/8/2024 12:00	57.193	15.1
1/30/2024 16:15	45.26	10.4	2/7/2024 22:00	28.827	6	2/8/2024 12:15	51.987	10.4
1/30/2024 16:30	58.313	14.5	2/7/2024 22:15	27.027	5.2	2/8/2024 12:30	62.653	21
1/30/2024 16:45	36.633	11	2/7/2024 22:30	28.407	5	2/8/2024 12:45	44.993	9.1
1/30/2024 17:00	53.5	9.9	2/7/2024 22:45	29.047	4.9	2/8/2024 13:00	42.533	12.2
1/30/2024 17:15	46.66	21	2/7/2024 23:00	31.967	4.8	2/8/2024 13:15	43.027	11.1
1/30/2024 17:30	47.38	11.6	2/7/2024 23:15	27.96	4.5	2/8/2024 13:30	38.413	6.9
1/30/2024 17:45	62.967	19.6	2/7/2024 23:30	27.987	5.8	2/8/2024 13:45	36.293	7.2
1/30/2024 18:00	47.327	12.6	2/7/2024 23:45	28.947	5	2/8/2024 14:00	33.16	9
1/30/2024 18:15	49.293	17.6	2/8/2024 0:00	33.767	4	2/8/2024 14:15	41.62	5.6
1/30/2024 18:30	53.86	12.4	2/8/2024 0:15	28.387	5.5	2/8/2024 14:30	32.307	7.7
1/30/2024 18:45	52.127	12.3	2/8/2024 0:30	26.193	4.7	2/8/2024 14:45	33.613	10.1
1/30/2024 19:00	55.693	15.5	2/8/2024 0:45	28.133	6.4	2/8/2024 15:00	32.88	8.2
1/30/2024 19:15	65.973	16.6	2/8/2024 1:00	26.52	4.3	2/8/2024 15:15	35.333	7.1
1/30/2024 19:30	56.087	13.2	2/8/2024 1:15	27.913	4.8	2/8/2024 15:30	27.84	4.2
1/30/2024 19:45	59.627	15.8	2/8/2024 1:30	23.973	5	2/8/2024 15:45	29.567	8.1
1/30/2024 20:00	56.9	15.5	2/8/2024 1:45	25.933	4.6	2/8/2024 16:00	22.187	5.1
2/7/2024 11:45	28.733	0	2/8/2024 2:00	25.213	5.2	2/8/2024 16:15	22.967	4.1
2/7/2024 12:00	46.107	5.4	2/8/2024 2:15	25.987	4.6	2/8/2024 16:30	25.92	4.1
2/7/2024 12:15	25.113	4.4	2/8/2024 2:30	24.96	5.2	2/8/2024 16:45	32.94	3.8
2/7/2024 12:30	24.24	5.4	2/8/2024 2:45	25.667	5.3	2/8/2024 17:00	25.573	4.7
2/7/2024 12:45	34.707	3.8	2/8/2024 3:00	24.38	4.1	2/8/2024 17:15	25.173	5.3
2/7/2024 13:00	18.627	5.6	2/8/2024 3:15	26.747	4.8	2/8/2024 17:30	24.787	4.7
2/7/2024 13:15	22.953	4.3	2/8/2024 3:30	26.127	4.9	2/8/2024 17:45	25.287	4.8
2/7/2024 13:30	18.333	3.4	2/8/2024 3:45	30.14	5.2	2/8/2024 18:00	27.08	5
2/7/2024 13:45	21.82	3.5	2/8/2024 4:00	23.707	3.5	2/8/2024 18:15	34.227	8.1
2/7/2024 14:00	20.28	3.3	2/8/2024 4:15	24.033	6.2	2/8/2024 18:30	35.627	4.7
2/7/2024 14:15	26.547	2.9	2/8/2024 4:30	23.893	4.1	2/8/2024 18:45	28.593	6.4
2/7/2024 14:30	34.133	16.3	2/8/2024 4:45	24.42	5	2/8/2024 19:00	51.307	23.1
2/7/2024 14:45	21.407	8.3	2/8/2024 5:00	25.693	3.9	2/8/2024 19:15	28.907	5.7
2/7/2024 15:00	26.047	6.2	2/8/2024 5:15	38.747	12.4	2/8/2024 19:30	51.74	9.2
2/7/2024 15:15	19.467	4.2	2/8/2024 5:30	29.813	6.5	2/8/2024 19:45	29.327	4.1
2/7/2024 15:30	22.227	3.7	2/8/2024 5:45	29.08	5.2	2/8/2024 20:00	27.947	6.4
2/7/2024 15:45	17.553	4.7	2/8/2024 6:00	29.887	5.7	2/8/2024 20:15	35.64	6.5
2/7/2024 16:00	28.073	3.8	2/8/2024 6:15	31.68	7.6	2/8/2024 20:30	38.747	10
2/7/2024 16:15	23.88	7.7	2/8/2024 6:30	30.92	5.8	2/8/2024 20:45	51.44	8.9
2/7/2024 16:30	26.187	4.8	2/8/2024 6:45	31.787	7.5	2/8/2024 21:00	42.887	8.8
2/7/2024 16:45	20.1	6.6	2/8/2024 7:00	30.74	5.4	2/8/2024 21:15	46.193	9.5
2/7/2024 17:00	17.78	3.3	2/8/2024 7:15	31.613	5.2	2/8/2024 21:30	43.847	10.4
2/7/2024 17:15	18.96	3.2	2/8/2024 7:30	32.507	8.9	2/8/2024 21:45	54.3	9.6
2/7/2024 17:30	24.44	5	2/8/2024 7:45	35.52	5.9	2/8/2024 22:00	30.98	14.8
2/7/2024 17:45	21.78	3.7	2/8/2024 8:00	39.607	7.6	2/8/2024 22:15	27.5	5.1
2/7/2024 18:00	26.86	4	2/8/2024 8:15	44.007	7.4	2/8/2024 22:30	48.193	6.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/8/2024 22:45	25.213	6.4
2/8/2024 23:00	27.007	5
2/8/2024 23:15	35.147	6.2
2/8/2024 23:30	29.527	7
2/8/2024 23:45	30.32	6.8
2/9/2024 0:00	27.92	5.8
2/9/2024 0:15	25.573	6.9
2/9/2024 0:30	28.46	6.6
2/9/2024 0:45	27.287	6
2/9/2024 1:00	27.733	7.1
2/9/2024 1:15	28.207	5.6
2/9/2024 1:30	28.553	6.8
2/9/2024 1:45	28.187	8.1
2/9/2024 2:00	31.12	6
2/9/2024 2:15	30.247	6.6
2/9/2024 2:30	30.98	6.9
2/9/2024 2:45	34.007	7.5
2/9/2024 3:00	32.413	6.6
2/9/2024 3:15	31.74	6
2/9/2024 3:30	29.233	5.1
2/9/2024 3:45	29.633	5.7
2/9/2024 4:00	26.247	5.6
2/9/2024 4:15	31.273	7.4
2/9/2024 4:30	28.507	6.6
2/9/2024 4:45	31.3	6.1
2/9/2024 5:00	25.32	5.4
2/9/2024 5:15	29.627	5.3
2/9/2024 5:30	46.587	5.6
2/9/2024 5:45	56.987	22
2/9/2024 6:00	25.227	5.6
2/9/2024 6:15	47.507	4.3
2/9/2024 6:30	27.68	16.8
2/9/2024 6:45	23.033	5.2
2/9/2024 7:00	24.513	7
2/9/2024 7:15	23.02	5.4
2/9/2024 7:30	26.32	8.2
2/9/2024 7:45	28.767	6.2
2/9/2024 8:00	28.373	4
2/9/2024 8:15	58.853	7.4
2/9/2024 8:30	64.487	20.4
2/9/2024 8:45	62.8	7.6
2/9/2024 9:00	32.32	8
2/9/2024 9:15	33.347	5.5
2/9/2024 9:30	29.087	5.9
2/9/2024 9:45	26.54	5.5
2/9/2024 10:00	36.747	6
2/9/2024 10:15	28.747	5.3
2/9/2024 10:30	27.767	4.9
2/9/2024 10:45	28.133	5.7
2/9/2024 11:00	25.08	5.5
2/9/2024 11:15	23.467	6.7
2/9/2024 11:30	19.953	4.6
2/9/2024 11:45	36.227	4.9
2/9/2024 12:00	28.78	6.3
2/9/2024 12:15	33.3	11.9
2/9/2024 12:30	38.667	13.2
2/9/2024 12:45	27.7	9.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/9/2024 13:00	25.38	6
2/9/2024 13:15	21.293	4.5
2/9/2024 13:30	23.247	5.8
2/9/2024 13:45	24.2	7.2
2/9/2024 14:00	26.553	5.9
2/9/2024 14:15	27.473	13.1
2/9/2024 14:30	36.073	7.5
2/9/2024 14:45	24.573	7.5
2/9/2024 15:00	32.46	4.1
2/9/2024 15:15	25.127	6
2/9/2024 15:30	23.853	4.7
2/9/2024 15:45	21.28	4.2
2/9/2024 16:00	30.96	4.9
2/9/2024 16:15	22.327	4.9
2/9/2024 16:30	25.853	4.9
2/9/2024 16:45	30.013	4.9
2/9/2024 17:00	47.007	12.1
2/9/2024 17:15	40.313	11.9
2/9/2024 17:30	27.22	11
2/9/2024 17:45	34.033	5.9
2/9/2024 18:00	34.247	12.4
2/9/2024 18:15	32.533	5.5
2/9/2024 18:30	26.96	4.7
2/9/2024 18:45	50.927	15.7
2/9/2024 19:00	22.72	5.5
2/9/2024 19:15	27.287	5.4
2/9/2024 19:30	32.48	15.5
2/9/2024 19:45	38.56	6.7
2/9/2024 20:00	30.513	8.1
2/9/2024 20:15	32.28	6.4
2/9/2024 20:30	34.687	6.3
2/9/2024 20:45	35.82	8
2/9/2024 21:00	36.98	6.8
2/9/2024 21:15	34.113	10.4
2/9/2024 21:30	28.853	6.7
2/9/2024 21:45	27.367	4.9
2/9/2024 22:00	25.46	5.6
2/9/2024 22:15	29.56	6.8
2/9/2024 22:30	28.853	5.6
2/9/2024 22:45	30.627	7.4
2/9/2024 23:00	30.887	6.2
2/9/2024 23:15	26.46	6.4
2/9/2024 23:30	28.107	5.3
2/9/2024 23:45	31.793	5.7
2/10/2024 0:00	33.06	6.9
2/10/2024 0:15	32.727	7.4
2/10/2024 0:30	32.093	7.2
2/10/2024 0:45	33.247	6.5
2/10/2024 1:00	33.38	7.5
2/10/2024 1:15	30.533	6.9
2/10/2024 1:30	28.687	7
2/10/2024 1:45	29.747	5.6
2/10/2024 2:00	29.207	7
2/10/2024 2:15	28.653	8.3
2/10/2024 2:30	25.773	5.1
2/10/2024 2:45	28.953	6.6
2/10/2024 3:00	28.113	7.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/10/2024 3:15	28.4	7.9
2/10/2024 3:30	25.907	6.3
2/10/2024 3:45	29.473	5.9
2/10/2024 4:00	25.8	5.9
2/10/2024 4:15	25.16	6.5
2/10/2024 4:30	27.147	5.1
2/10/2024 4:45	24.087	6.6
2/10/2024 5:00	22.753	4.2
2/10/2024 5:15	53.007	4.3
2/10/2024 5:30	33.393	5.4
2/10/2024 5:45	31.3	5.9
2/10/2024 6:00	64.947	11.6
2/10/2024 6:15	83.887	15.4
2/10/2024 6:30	34.633	13.6
2/10/2024 6:45	25.847	5.9
2/10/2024 7:00	27.607	6.4
2/10/2024 7:15	33.34	4.8
2/10/2024 7:30	43.9	5.7
2/10/2024 7:45	64.247	11.1
2/10/2024 8:00	39.927	8.5
2/10/2024 8:15	33.473	6.7
2/10/2024 8:30	40.233	16.1
2/10/2024 8:45	39.36	9.1
2/10/2024 9:00	23.907	5.6
2/10/2024 9:15	37.213	5.4
2/10/2024 9:30	33.92	6.8
2/10/2024 9:45	29.58	5.9
2/10/2024 10:00	27.133	5.5
2/10/2024 10:15	28.94	7.2
2/10/2024 10:30	36.98	8.7
2/10/2024 10:45	39.2	6.4
2/10/2024 11:00	32.973	10.3
2/10/2024 11:15	26.633	7.1
2/10/2024 11:30	32.98	7.8
2/10/2024 11:45	26.767	6.7
2/10/2024 12:00	28.487	6.4
2/10/2024 12:15	31.793	5.8
2/10/2024 12:30	27.067	6.4
2/10/2024 12:45	28.567	6.4
2/10/2024 13:00	27.347	4.8
2/10/2024 13:15	19.64	4.9
2/10/2024 13:30	23.853	5
2/10/2024 13:45	21.613	4.9
2/10/2024 14:00	26.727	5
2/10/2024 14:15	32.353	7.4
2/10/2024 14:30	41.88	6.7
2/10/2024 14:45	32.52	10.9
2/10/2024 15:00	40.873	8.5
2/10/2024 15:15	29.587	5.8
2/10/2024 15:30	23.827	5.6
2/10/2024 15:45	26.74	5.4
2/10/2024 16:00	21.587	5.2
2/10/2024 16:15	39.393	4.7
2/10/2024 16:30	23.493	5.7
2/10/2024 16:45	25.213	5.3
2/10/2024 17:00	22.36	5.9
2/10/2024 17:15	21.413	5.9

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/10/2024 17:30	20.233	4.2	2/11/2024 7:45	33.8	6	2/15/2024 1:30	26.66	6.3
2/10/2024 17:45	22.373	5.7	2/11/2024 8:00	30	6.8	2/15/2024 1:45	28.673	5.9
2/10/2024 18:00	22.373	6.5	2/11/2024 8:15	29.08	7.2	2/15/2024 2:00	26.493	5
2/10/2024 18:15	26.773	5.3	2/11/2024 8:30	49.893	5.4	2/15/2024 2:15	24.953	4.2
2/10/2024 18:30	24.093	6.6	2/11/2024 8:45	27	5.1	2/15/2024 2:30	29.887	5.6
2/10/2024 18:45	22.02	5.9	2/11/2024 9:00	31.58	7.7	2/15/2024 2:45	25.26	5.8
2/10/2024 19:00	20.433	5.1	2/11/2024 9:15	25.913	5.4	2/15/2024 3:00	22.827	6.6
2/10/2024 19:15	21.44	4.2	2/11/2024 9:30	25.027	4.8	2/15/2024 3:15	24.533	5.6
2/10/2024 19:30	22.96	4.6	2/11/2024 9:45	20.013	3.7	2/15/2024 3:30	25.513	5.4
2/10/2024 19:45	24.76	6.5	2/11/2024 10:00	24.38	6.2	2/15/2024 3:45	22.687	6
2/10/2024 20:00	28.44	6.8	2/11/2024 10:15	23.207	5.2	2/15/2024 4:00	25.413	6.7
2/10/2024 20:15	23.853	6.7	2/11/2024 10:30	27.293	5.7	2/15/2024 4:15	25.1	5.4
2/10/2024 20:30	37.553	12.5	2/11/2024 10:45	26.267	6.7	2/15/2024 4:30	24.693	5.3
2/10/2024 20:45	34.96	7	2/11/2024 11:00	45.093	7.7	2/15/2024 4:45	22.927	5.8
2/10/2024 21:00	40.56	11.4	2/11/2024 11:15	29.707	6.9	2/15/2024 5:00	22.953	6
2/10/2024 21:15	32.04	6	2/11/2024 11:30	26.627	5.9	2/15/2024 5:15	30.007	5.7
2/10/2024 21:30	49.013	9.2	2/11/2024 11:45	23.493	5.6	2/15/2024 5:30	23.28	6.6
2/10/2024 21:45	30.487	6.4	2/11/2024 12:00	24.3	6.6	2/15/2024 5:45	24.14	6.1
2/10/2024 22:00	40.027	8.3	2/11/2024 12:15	24.76	5.7	2/15/2024 6:00	21.147	5.6
2/10/2024 22:15	30.707	6.3	2/11/2024 12:30	24.44	5.6	2/15/2024 6:15	21.7	5.1
2/10/2024 22:30	23.793	7.2	2/11/2024 12:45	33.327	6.3	2/15/2024 6:30	20.773	6.3
2/10/2024 22:45	20.28	5.1	2/11/2024 13:00	24.48	5.8	2/15/2024 6:45	24.413	6.9
2/10/2024 23:00	21.753	5.3	2/11/2024 13:15	27.18	4.8	2/15/2024 7:00	21.26	6.2
2/10/2024 23:15	19.487	5.3	2/11/2024 13:30	26.813	4.8	2/15/2024 7:15	25.06	6.9
2/10/2024 23:30	20	4.8	2/11/2024 13:45	27.873	4.4	2/15/2024 7:30	27.22	7.7
2/10/2024 23:45	20.98	4.5	2/11/2024 14:00	27.987	6.2	2/15/2024 7:45	26.807	6.7
2/11/2024 0:00	22.92	5.6	2/11/2024 14:15	23.607	4.4	2/15/2024 8:00	27.153	7
2/11/2024 0:15	83.34	12.3	2/11/2024 14:30	35.027	18.2	2/15/2024 8:15	24.62	5.8
2/11/2024 0:30	54.527	20	2/11/2024 14:45	31.347	8.3	2/15/2024 8:30	24.587	5.2
2/11/2024 0:45	22.74	8.4	2/11/2024 15:00	28.3	5.7	2/15/2024 8:45	25.06	5.8
2/11/2024 1:00	23.847	5.7	2/11/2024 15:15	22.9	5.8	2/15/2024 9:00	29.3	5.2
2/11/2024 1:15	23.933	5.4	2/11/2024 15:30	26.327	7.6	2/15/2024 9:15	33.98	8.9
2/11/2024 1:30	20.127	5.5	2/11/2024 15:45	25.36	4.9	2/15/2024 9:30	28.693	5.3
2/11/2024 1:45	22.547	5.7	2/11/2024 16:00	22.8	5.5	2/15/2024 9:45	30.687	7.2
2/11/2024 2:00	21.08	4.5	2/14/2024 19:45	35	0	2/15/2024 10:00	33.893	7.1
2/11/2024 2:15	18.427	4.1	2/14/2024 20:00	34.367	8.5	2/15/2024 10:15	29.567	6.7
2/11/2024 2:30	21.087	5.2	2/14/2024 20:15	33.033	6.4	2/15/2024 10:30	35.973	7.2
2/11/2024 2:45	21.68	5.4	2/14/2024 20:30	29.7	4.4	2/15/2024 10:45	27.747	6
2/11/2024 3:00	21.02	4.5	2/14/2024 20:45	25.133	5.1	2/15/2024 11:00	30.08	7.4
2/11/2024 3:15	20.587	5.6	2/14/2024 21:00	22.42	5.3	2/15/2024 11:15	26.58	6.1
2/11/2024 3:30	20.347	4.6	2/14/2024 21:15	18.813	5.6	2/15/2024 11:30	28.787	11.2
2/11/2024 3:45	18.753	4.4	2/14/2024 21:30	17.553	4.5	2/15/2024 11:45	33.64	5.7
2/11/2024 4:00	18.207	3.3	2/14/2024 21:45	16.433	5.7	2/15/2024 12:00	30.207	6.8
2/11/2024 4:15	18.467	5.4	2/14/2024 22:00	16.26	3.6	2/15/2024 12:15	26.833	5.5
2/11/2024 4:30	20.507	5.2	2/14/2024 22:15	16.48	3.7	2/15/2024 12:30	30.747	5.5
2/11/2024 4:45	18.153	4.1	2/14/2024 22:30	40.86	2.6	2/15/2024 12:45	28.407	8.2
2/11/2024 5:00	18.433	4.9	2/14/2024 22:45	18.073	3.7	2/15/2024 13:00	20.34	7.3
2/11/2024 5:15	37.247	6.1	2/14/2024 23:00	17.513	3.8	2/15/2024 13:15	19.533	5.2
2/11/2024 5:30	17.193	4.4	2/14/2024 23:15	17.847	4	2/15/2024 13:30	21.32	6.2
2/11/2024 5:45	50.38	4.7	2/14/2024 23:30	20.973	4.6	2/15/2024 13:45	21.187	5.6
2/11/2024 6:00	104.18	24.6	2/14/2024 23:45	18.907	3.8	2/15/2024 14:00	27.78	6.1
2/11/2024 6:15	82.927	26.3	2/15/2024 0:00	23.74	5.2	2/15/2024 14:15	37.68	8.1
2/11/2024 6:30	43.387	12.1	2/15/2024 0:15	23.707	4.4	2/15/2024 14:30	34.02	7.8
2/11/2024 6:45	66.433	9.9	2/15/2024 0:30	22.313	5.9	2/15/2024 14:45	27.787	10.4
2/11/2024 7:00	111.427	25.5	2/15/2024 0:45	27.367	7.5	2/15/2024 15:00	25.793	5.4
2/11/2024 7:15	69.1	22.9	2/15/2024 1:00	27.687	6.2	2/15/2024 15:15	18.46	5.9
2/11/2024 7:30	26.787	6.9	2/15/2024 1:15	27.407	4.9	2/15/2024 15:30	27.12	5.8

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/15/2024 15:45	18.267	6.6	2/16/2024 6:00	18.847	3.1	2/16/2024 20:15	41.247	7.6
2/15/2024 16:00	21.22	5.4	2/16/2024 6:15	19.187	4.2	2/16/2024 20:30	26.233	8
2/15/2024 16:15	18.78	4.8	2/16/2024 6:30	19.927	4.2	2/16/2024 20:45	23.607	4.8
2/15/2024 16:30	22.847	5.7	2/16/2024 6:45	20.88	3.2	2/16/2024 21:00	24.133	5.2
2/15/2024 16:45	20.453	7.1	2/16/2024 7:00	20.96	4.5	2/16/2024 21:15	25.947	5.5
2/15/2024 17:00	20.127	6.8	2/16/2024 7:15	26.447	6.1	2/16/2024 21:30	25.027	4.6
2/15/2024 17:15	27.167	5.5	2/16/2024 7:30	32.7	5.8	2/16/2024 21:45	24.76	5.2
2/15/2024 17:30	22.86	6.9	2/16/2024 7:45	52.267	5.4	2/16/2024 22:00	22.92	5.1
2/15/2024 17:45	22.28	5.8	2/16/2024 8:00	73.853	7.4	2/16/2024 22:15	22.98	6.7
2/15/2024 18:00	21.427	5.8	2/16/2024 8:15	28.467	8.5	2/16/2024 22:30	25.027	5.9
2/15/2024 18:15	34.927	4.8	2/16/2024 8:30	74.667	6.5	2/16/2024 22:45	28.353	6.4
2/15/2024 18:30	21.453	4.6	2/16/2024 8:45	24.3	6.8	2/16/2024 23:00	28.02	6.3
2/15/2024 18:45	41.193	16.5	2/16/2024 9:00	22.847	3.9	2/16/2024 23:15	31.527	7.6
2/15/2024 19:00	24.24	5.9	2/16/2024 9:15	36.753	7.4	2/16/2024 23:30	30.28	9
2/15/2024 19:15	23.947	6.1	2/16/2024 9:30	22.14	3.9	2/16/2024 23:45	33.593	8.2
2/15/2024 19:30	26.387	5.5	2/16/2024 9:45	25.007	5.1	2/17/2024 0:00	25.627	6.8
2/15/2024 19:45	29.133	7	2/16/2024 10:00	28.12	6.8	2/17/2024 0:15	26.467	6.1
2/15/2024 20:00	25.247	6.4	2/16/2024 10:15	26.047	5.4	2/17/2024 0:30	23.427	4.6
2/15/2024 20:15	25.427	6.3	2/16/2024 10:30	27.84	6	2/17/2024 0:45	21.9	7
2/15/2024 20:30	20.413	5.4	2/16/2024 10:45	28.873	6.2	2/17/2024 1:00	22.693	6
2/15/2024 20:45	21.427	4.9	2/16/2024 11:00	26.733	6.2	2/17/2024 1:15	20.66	5
2/15/2024 21:00	22.8	5.6	2/16/2024 11:15	41.193	8	2/17/2024 1:30	22.173	6.3
2/15/2024 21:15	27.52	4.6	2/16/2024 11:30	28.86	10.8	2/17/2024 1:45	20.933	5.2
2/15/2024 21:30	26.513	5.8	2/16/2024 11:45	27.673	6.2	2/17/2024 2:00	20.32	4.8
2/15/2024 21:45	26.64	6.1	2/16/2024 12:00	20.44	7.1	2/17/2024 2:15	17.887	4.7
2/15/2024 22:00	25.807	6.9	2/16/2024 12:15	24.6	6.8	2/17/2024 2:30	21.133	4.9
2/15/2024 22:15	22.747	6.5	2/16/2024 12:30	21.013	5.1	2/17/2024 2:45	22.487	5
2/15/2024 22:30	20.18	5.9	2/16/2024 12:45	23.567	5.4	2/17/2024 3:00	23.367	4.9
2/15/2024 22:45	22.4	4.7	2/16/2024 13:00	20.167	4.8	2/17/2024 3:15	22.113	5.8
2/15/2024 23:00	18.773	4.2	2/16/2024 13:15	17.86	5.7	2/17/2024 3:30	21.94	5.9
2/15/2024 23:15	19.787	4.7	2/16/2024 13:30	44.793	4.9	2/17/2024 3:45	18.28	5.6
2/15/2024 23:30	18.367	4.7	2/16/2024 13:45	44.3	13.8	2/17/2024 4:00	19.34	5.1
2/15/2024 23:45	18.213	4.2	2/16/2024 14:00	52.7	21	2/17/2024 4:15	19.993	5.7
2/16/2024 0:00	18.213	5	2/16/2024 14:15	46.387	17	2/17/2024 4:30	18.06	6
2/16/2024 0:15	16.747	4.4	2/16/2024 14:30	38.873	7.8	2/17/2024 4:45	21.187	5.5
2/16/2024 0:30	18.447	4.8	2/16/2024 14:45	25.927	7.8	2/17/2024 5:00	18.873	7.1
2/16/2024 0:45	17.033	4.8	2/16/2024 15:00	33.533	10.4	2/17/2024 5:15	15.933	4.4
2/16/2024 1:00	15.347	5.6	2/16/2024 15:15	35.18	23.1	2/17/2024 5:30	23.08	5
2/16/2024 1:15	16.793	3.3	2/16/2024 15:30	41.487	16.8	2/17/2024 5:45	20.22	5.8
2/16/2024 1:30	15.393	4.6	2/16/2024 15:45	26.053	4.4	2/17/2024 6:00	21.94	5.5
2/16/2024 1:45	16.293	3.8	2/16/2024 16:00	24.027	6.1	2/17/2024 6:15	24.5	6.2
2/16/2024 2:00	14.42	4.1	2/16/2024 16:15	25.187	3.8	2/17/2024 6:30	47.86	12.4
2/16/2024 2:15	17.5	5.4	2/16/2024 16:30	22.027	5.9	2/17/2024 6:45	29.387	5.9
2/16/2024 2:30	14.7	4.3	2/16/2024 16:45	26.38	3.8	2/17/2024 7:00	20.333	5.6
2/16/2024 2:45	15.687	4.2	2/16/2024 17:00	17.933	7.7	2/17/2024 7:15	20.82	5.4
2/16/2024 3:00	17.18	5.7	2/16/2024 17:15	18.5	4.2	2/17/2024 7:30	23.393	6.2
2/16/2024 3:15	15.887	4.1	2/16/2024 17:30	16.533	4.2	2/17/2024 7:45	21.253	5.3
2/16/2024 3:30	15.9	4.1	2/16/2024 17:45	16.46	4.3	2/17/2024 8:00	22.68	4.8
2/16/2024 3:45	16.467	3.5	2/16/2024 18:00	14.9	4.2	2/17/2024 8:15	32.627	6.7
2/16/2024 4:00	15.82	4.5	2/16/2024 18:15	19.693	3.8	2/17/2024 8:30	31.647	6.3
2/16/2024 4:15	16.793	3.5	2/16/2024 18:30	13.367	4.8	2/17/2024 8:45	27.52	6.3
2/16/2024 4:30	16.407	4.2	2/16/2024 18:45	27.627	3.3	2/17/2024 9:00	48.12	6.5
2/16/2024 4:45	17.113	3.8	2/16/2024 19:00	17.353	3.4	2/17/2024 9:15	30.053	7
2/16/2024 5:00	16.827	4.3	2/16/2024 19:15	33.973	4	2/17/2024 9:30	30.227	7.3
2/16/2024 5:15	18.447	4	2/16/2024 19:30	25.653	4.9	2/17/2024 9:45	37.507	8.5
2/16/2024 5:30	15.447	2.8	2/16/2024 19:45	24.313	6	2/17/2024 10:00	57.48	11.1
2/16/2024 5:45	17.253	4.4	2/16/2024 20:00	35.313	6.3	2/17/2024 10:15	53.567	10.8

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/17/2024 10:30	57.24	16.4	2/18/2024 0:45	56.56	19.2	2/18/2024 15:00	61.633	17
2/17/2024 10:45	49.067	16.6	2/18/2024 1:00	52.093	19.2	2/18/2024 15:15	49.713	16
2/17/2024 11:00	49.907	14.6	2/18/2024 1:15	52.107	18.7	2/18/2024 15:30	52.12	14.5
2/17/2024 11:15	36.86	9.5	2/18/2024 1:30	57.96	19.2	2/18/2024 15:45	50.093	18.8
2/17/2024 11:30	38.02	9.1	2/18/2024 1:45	68.86	21.6	2/18/2024 16:00	49.66	15.1
2/17/2024 11:45	38.333	6.7	2/18/2024 2:00	56.647	19.1	2/18/2024 16:15	40.307	13.7
2/17/2024 12:00	47.46	14.6	2/18/2024 2:15	60.313	17.2	2/18/2024 16:30	37.433	14.7
2/17/2024 12:15	33.773	11.6	2/18/2024 2:30	46.52	14	2/18/2024 16:45	31.56	12.1
2/17/2024 12:30	39.573	8.7	2/18/2024 2:45	46.667	14.5	2/18/2024 17:00	36.353	12.9
2/17/2024 12:45	36.72	8.2	2/18/2024 3:00	54.573	15	2/18/2024 17:15	31.413	12.4
2/17/2024 13:00	29.9	6.6	2/18/2024 3:15	86.507	20.9	2/18/2024 17:30	30.173	12.1
2/17/2024 13:15	24.307	10.6	2/18/2024 3:30	83.48	19.6	2/18/2024 17:45	30.693	12.8
2/17/2024 13:30	26.667	7.6	2/18/2024 3:45	146.26	26.8	2/18/2024 18:00	35.927	13.6
2/17/2024 13:45	28.573	6.9	2/18/2024 4:00	84.613	25.2	2/18/2024 18:15	77.76	14.5
2/17/2024 14:00	26.033	7.4	2/18/2024 4:15	51.167	18	2/18/2024 18:30	101.093	23.2
2/17/2024 14:15	23.567	7.1	2/18/2024 4:30	43.973	13.2	2/18/2024 18:45	90.72	22.1
2/17/2024 14:30	23.333	10.9	2/18/2024 4:45	47.793	13.4	2/18/2024 19:00	62.38	19.6
2/17/2024 14:45	25.073	7.5	2/18/2024 5:00	53.767	16.4	2/18/2024 19:15	82.173	22
2/17/2024 15:00	19.4	6.9	2/18/2024 5:15	50.22	15	2/18/2024 19:30	55.033	20.8
2/17/2024 15:15	24.473	13.8	2/18/2024 5:30	48.713	15.3	2/18/2024 19:45	46.94	9.6
2/17/2024 15:30	21.46	5.9	2/18/2024 5:45	49.567	15.4	2/18/2024 20:00	145.473	22.8
2/17/2024 15:45	21.967	7.7	2/18/2024 6:00	45.973	14.5	2/18/2024 20:15	122.5	27.2
2/17/2024 16:00	21.713	6.9	2/18/2024 6:15	46.333	16.3	2/18/2024 20:30	122.373	20.2
2/17/2024 16:15	21.507	5.6	2/18/2024 6:30	67.14	14.1	2/18/2024 20:45	181.867	27
2/17/2024 16:30	18.733	5.8	2/18/2024 6:45	55.927	20.4	2/18/2024 21:00	187.387	27.4
2/17/2024 16:45	23.027	6.1	2/18/2024 7:00	55.86	15.2	2/18/2024 21:15	185.58	28.8
2/17/2024 17:00	24.393	12.2	2/18/2024 7:15	56.7	14.9	2/18/2024 21:30	180.193	23.7
2/17/2024 17:15	21.933	7.5	2/18/2024 7:30	69.04	18.4	2/18/2024 21:45	140.707	22.2
2/17/2024 17:30	21.153	6.4	2/18/2024 7:45	63.64	14.9	2/18/2024 22:00	163.213	21.6
2/17/2024 17:45	23.193	6.2	2/18/2024 8:00	54.753	16.5	2/18/2024 22:15	145.893	27
2/17/2024 18:00	26.947	6.8	2/18/2024 8:15	56.22	14.9	2/18/2024 22:30	106.44	21.2
2/17/2024 18:15	28.333	5.5	2/18/2024 8:30	52.613	15.7	2/18/2024 22:45	112.8	23.3
2/17/2024 18:30	24.607	6.7	2/18/2024 8:45	48.847	14.8	2/18/2024 23:00	92.987	16.9
2/17/2024 18:45	19.58	5.4	2/18/2024 9:00	50.82	13.8	2/18/2024 23:15	63.507	16.8
2/17/2024 19:00	22.42	5.5	2/18/2024 9:15	50.653	12.8	2/18/2024 23:30	73.447	19.9
2/17/2024 19:15	20.68	5.9	2/18/2024 9:30	51.853	14.2	2/18/2024 23:45	54.093	10.9
2/17/2024 19:30	21.207	5.3	2/18/2024 9:45	49.013	13.8	2/19/2024 0:00	35.94	11.5
2/17/2024 19:45	21.667	6.2	2/18/2024 10:00	37.58	12.2	2/19/2024 0:15	31.027	11.2
2/17/2024 20:00	18.427	5.4	2/18/2024 10:15	38.033	11.1	2/19/2024 0:30	25.42	5.3
2/17/2024 20:15	19.993	6	2/18/2024 10:30	59.293	10.6	2/19/2024 0:45	24.8	7.1
2/17/2024 20:30	25.447	5.7	2/18/2024 10:45	77.993	12.3	2/19/2024 1:00	16.373	6.5
2/17/2024 20:45	37.807	6.1	2/18/2024 11:00	46.607	14.7	2/19/2024 1:15	11.587	5.9
2/17/2024 21:00	26.053	7.3	2/18/2024 11:15	58.22	13.9	2/19/2024 1:30	10.04	6.4
2/17/2024 21:15	33.06	10.5	2/18/2024 11:30	52.127	13.6	2/19/2024 1:45	17.453	6
2/17/2024 21:30	22.22	8.6	2/18/2024 11:45	40.053	15.2	2/19/2024 2:00	15.32	5.9
2/17/2024 21:45	26.44	5.2	2/18/2024 12:00	40.1	11.4	2/19/2024 2:15	12.793	6.3
2/17/2024 22:00	25.78	5.1	2/18/2024 12:15	48.92	15.7	2/19/2024 2:30	10.773	4.7
2/17/2024 22:15	20.733	5.5	2/18/2024 12:30	40	12.6	2/19/2024 2:45	11.1	7
2/17/2024 22:30	20.747	5.2	2/18/2024 12:45	59.453	11.3	2/19/2024 3:00	11.307	4.8
2/17/2024 22:45	32.06	6.4	2/18/2024 13:00	34.813	9.4	2/19/2024 3:15	12.393	5
2/17/2024 23:00	40.18	9.4	2/18/2024 13:15	34.647	10.2	2/19/2024 3:30	12.673	5.6
2/17/2024 23:15	46.447	12	2/18/2024 13:30	30.933	12.8	2/19/2024 3:45	11.993	4.2
2/17/2024 23:30	49.04	12.2	2/18/2024 13:45	38.367	11	2/19/2024 4:00	11.253	5.2
2/17/2024 23:45	70.747	21	2/18/2024 14:00	50.193	9.4	2/19/2024 4:15	12.667	5
2/18/2024 0:00	60.827	19.6	2/18/2024 14:15	45.047	15.3	2/19/2024 4:30	12.933	4.3
2/18/2024 0:15	53.947	18.3	2/18/2024 14:30	60.64	14.9	2/19/2024 4:45	10.827	5.4
2/18/2024 0:30	70.053	17.6	2/18/2024 14:45	52.973	18.6	2/19/2024 5:00	11.293	5.7

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/19/2024 5:15	12.387	5.3	2/19/2024 19:30	16.78	3.8	2/20/2024 9:45	9.7	3.2
2/19/2024 5:30	10.26	5.2	2/19/2024 19:45	17.067	3.2	2/20/2024 10:00	10.573	3.3
2/19/2024 5:45	12.173	4.4	2/19/2024 20:00	17.38	3.4	2/20/2024 10:15	9.933	3.4
2/19/2024 6:00	9.867	6.8	2/19/2024 20:15	17.133	2.9	2/20/2024 10:30	9.233	3
2/19/2024 6:15	12.073	4.8	2/19/2024 20:30	15.627	2.8	2/20/2024 10:45	9.22	3
2/19/2024 6:30	10.92	6.2	2/19/2024 20:45	19.947	4.8	2/20/2024 11:00	9.1	3
2/19/2024 6:45	9	3.4	2/19/2024 21:00	28.347	20.7	2/23/2024 9:15	14.2	0
2/19/2024 7:00	8.807	3	2/19/2024 21:15	19.687	3.7	2/23/2024 9:30	18.247	2.8
2/19/2024 7:15	10.293	2.5	2/19/2024 21:30	20.5	3.7	2/23/2024 9:45	11.947	2.8
2/19/2024 7:30	9.393	4	2/19/2024 21:45	21.04	4.7	2/23/2024 10:00	11.787	2.7
2/19/2024 7:45	9.4	2.9	2/19/2024 22:00	22.76	3.7	2/23/2024 10:15	9.613	2.3
2/19/2024 8:00	9.767	2.8	2/19/2024 22:15	18.02	4.3	2/23/2024 10:30	22	2.9
2/19/2024 8:15	14.36	6.1	2/19/2024 22:30	17.633	4.3	2/23/2024 10:45	34.133	2.6
2/19/2024 8:30	14.833	2.8	2/19/2024 22:45	16.86	3.5	2/23/2024 11:00	55.873	3.5
2/19/2024 8:45	12.327	3.4	2/19/2024 23:00	18.593	2.8	2/23/2024 11:15	40.393	4.4
2/19/2024 9:00	9.853	3.5	2/19/2024 23:15	26.8	5.3	2/23/2024 11:30	77.267	12.2
2/19/2024 9:15	17.793	5.3	2/19/2024 23:30	26.447	5.3	2/23/2024 11:45	50.22	5.3
2/19/2024 9:30	42.653	3.6	2/19/2024 23:45	27.607	5.1	2/23/2024 12:00	67.033	6
2/19/2024 9:45	29.193	4.2	2/20/2024 0:00	32.013	5.1	2/23/2024 12:15	60.24	5.1
2/19/2024 10:00	16.687	3.5	2/20/2024 0:15	35.167	6.8	2/23/2024 12:30	60.933	7.3
2/19/2024 10:15	15.667	3.6	2/20/2024 0:30	46.807	10.4	2/23/2024 12:45	63.1	22.2
2/19/2024 10:30	29.46	4.1	2/20/2024 0:45	35.733	9	2/23/2024 13:00	33.193	22.9
2/19/2024 10:45	53.68	8.7	2/20/2024 1:00	32.393	10.1	2/23/2024 13:15	13.733	3.7
2/19/2024 11:00	42.06	6.3	2/20/2024 1:15	33.96	7.5	2/23/2024 13:30	20.7	4.7
2/19/2024 11:15	57.127	10.7	2/20/2024 1:30	31.4	6.1	2/23/2024 13:45	20.18	3.4
2/19/2024 11:30	78.833	5.7	2/20/2024 1:45	28.307	5.8	2/23/2024 14:00	18.34	3.5
2/19/2024 11:45	44.247	3.6	2/20/2024 2:00	25.593	6.7	2/23/2024 14:15	32.953	5
2/19/2024 12:00	65.773	13.2	2/20/2024 2:15	23.733	4.6	2/23/2024 14:30	70.187	15.3
2/19/2024 12:15	70.62	11	2/20/2024 2:30	25.833	5.6	2/23/2024 14:45	75.8	13.8
2/19/2024 12:30	80.3	17.8	2/20/2024 2:45	20.22	4.6	2/23/2024 15:00	25.48	3.8
2/19/2024 12:45	45.007	11.8	2/20/2024 3:00	23.153	4	2/23/2024 15:15	27.34	10.4
2/19/2024 13:00	26.027	5.3	2/20/2024 3:15	27.513	5.6	2/23/2024 15:30	38.38	13.6
2/19/2024 13:15	24.173	7.4	2/20/2024 3:30	23.193	4	2/23/2024 15:45	45.413	3
2/19/2024 13:30	27.247	4.4	2/20/2024 3:45	22.607	4.1	2/23/2024 16:00	40.373	22.2
2/19/2024 13:45	29.367	5.4	2/20/2024 4:00	24.56	4.1	2/23/2024 16:15	46.28	3.2
2/19/2024 14:00	29.773	3.5	2/20/2024 4:15	23.847	5.6	2/23/2024 16:30	29.027	5.4
2/19/2024 14:15	27.813	11.5	2/20/2024 4:30	21.053	5.4	2/23/2024 16:45	26.353	5
2/19/2024 14:30	55.107	4.5	2/20/2024 4:45	17.68	3.4	2/23/2024 17:00	30.047	8.3
2/19/2024 14:45	87.24	10.9	2/20/2024 5:00	7.207	3.1	2/23/2024 17:15	28.147	8.8
2/19/2024 15:00	74.093	17.1	2/20/2024 5:15	7.133	3.2	2/23/2024 17:30	24.2	3.3
2/19/2024 15:15	85.7	7.7	2/20/2024 5:30	7.293	4	2/23/2024 17:45	32.193	15.1
2/19/2024 15:30	109.913	14.7	2/20/2024 5:45	7.073	4	2/23/2024 18:00	41.787	5.4
2/19/2024 15:45	61.56	16.2	2/20/2024 6:00	7.087	4	2/23/2024 18:15	28.48	7.6
2/19/2024 16:00	76.953	16.2	2/20/2024 6:15	7.54	4.3	2/23/2024 18:30	22.867	3.8
2/19/2024 16:15	40.2	15.5	2/20/2024 6:30	8.08	4.3	2/23/2024 18:45	30.227	7
2/19/2024 16:30	46.733	5.9	2/20/2024 6:45	8.113	4.4	2/23/2024 19:00	14.533	5.8
2/19/2024 16:45	48.367	15	2/20/2024 7:00	8.373	4.9	2/23/2024 19:15	11.64	3.1
2/19/2024 17:00	45.347	11.5	2/20/2024 7:15	8.44	4.8	2/23/2024 19:30	12.053	3.6
2/19/2024 17:15	32.547	8.1	2/20/2024 7:30	8.56	4.7	2/23/2024 19:45	11.287	3.9
2/19/2024 17:30	28.407	6.3	2/20/2024 7:45	8.693	5.2	2/23/2024 20:00	9.273	3.3
2/19/2024 17:45	26.18	10.9	2/20/2024 8:00	8.633	5.3	2/23/2024 20:15	10.3	3.6
2/19/2024 18:00	26.987	3	2/20/2024 8:15	8.02	5.1	2/23/2024 20:30	13.833	2.8
2/19/2024 18:15	21.32	10.2	2/20/2024 8:30	7.953	4.5	2/23/2024 20:45	10.547	4.2
2/19/2024 18:30	20.447	3.9	2/20/2024 8:45	7.887	4.7	2/23/2024 21:00	19.34	3.4
2/19/2024 18:45	15.707	4.7	2/20/2024 9:00	7.66	3.5	2/23/2024 21:15	8.78	3.4
2/19/2024 19:00	27.44	14	2/20/2024 9:15	7.633	3.2	2/23/2024 21:30	14.64	2.6
2/19/2024 19:15	21.667	3.5	2/20/2024 9:30	7.373	3	2/23/2024 21:45	10.08	3.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/23/2024 22:00	10.767	2.7
2/23/2024 22:15	9.573	2.3
2/23/2024 22:30	9.64	2.7
2/23/2024 22:45	9.907	3.7
2/23/2024 23:00	9.72	2.5
2/23/2024 23:15	10.633	4.7
2/23/2024 23:30	8.953	3.7
2/23/2024 23:45	10.967	3.9
2/24/2024 0:00	9.653	3.9
2/24/2024 0:15	8.827	4.2
2/24/2024 0:30	8.673	3.3
2/24/2024 0:45	8.627	3.2
2/24/2024 1:00	8.873	3.6
2/24/2024 1:15	10.82	3.2
2/24/2024 1:30	12.14	3.3
2/24/2024 1:45	10.127	4
2/24/2024 2:00	12.62	4.2
2/24/2024 2:15	11.713	3.5
2/24/2024 2:30	10.673	3.5
2/24/2024 2:45	10.213	3.8
2/24/2024 3:00	10.073	4.4
2/24/2024 3:15	9.793	4
2/24/2024 3:30	8.707	3.8
2/24/2024 3:45	9.233	3.5
2/24/2024 4:00	8.973	3.6
2/24/2024 4:15	8.38	3.3
2/24/2024 4:30	8.44	3.3
2/24/2024 4:45	9.8	3.6
2/24/2024 5:00	8.213	4.1
2/24/2024 5:15	8.62	2.6
2/24/2024 5:30	10.28	3.2
2/24/2024 5:45	14.713	2.9
2/24/2024 6:00	12.047	3.6
2/24/2024 6:15	25.533	4.4
2/24/2024 6:30	16.467	3.2
2/24/2024 6:45	20.627	3.8
2/24/2024 7:00	19.42	5.1
2/24/2024 7:15	9.913	3.9
2/24/2024 7:30	12.24	2.9
2/24/2024 7:45	8.033	2.7
2/24/2024 8:00	10.707	2.8
2/24/2024 8:15	20.827	6.4
2/24/2024 8:30	56.62	5.9
2/24/2024 8:45	47.64	7.6
2/24/2024 9:00	35.973	6.2
2/24/2024 9:15	23.46	3.9
2/24/2024 9:30	41.4	7
2/24/2024 9:45	60.013	5.2
2/24/2024 10:00	34.633	5.1
2/24/2024 10:15	21.24	6.9
2/24/2024 10:30	38.687	6.5
2/24/2024 10:45	38.253	7.9
2/24/2024 11:00	60.633	7
2/24/2024 11:15	53.973	9.7
2/24/2024 11:30	67.187	12.2
2/24/2024 11:45	93.207	6.9
2/24/2024 12:00	54.327	12.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/24/2024 12:15	49.873	12
2/24/2024 12:30	69.96	14.3
2/24/2024 12:45	72.913	6.2
2/24/2024 13:00	32.12	4.8
2/24/2024 13:15	31.7	5.1
2/24/2024 13:30	45.073	5.6
2/24/2024 13:45	24.093	4.5
2/24/2024 14:00	44.967	3.7
2/24/2024 14:15	117.007	7.4
2/24/2024 14:30	179.407	11.4
2/24/2024 14:45	103.7	20.9
2/24/2024 15:00	160.153	19.6
2/24/2024 15:15	167.007	24.3
2/24/2024 15:30	182.68	20.8
2/24/2024 15:45	150.367	20.2
2/24/2024 16:00	133.247	24.1
2/24/2024 16:15	147.26	25
2/24/2024 16:30	163.96	11.8
2/24/2024 16:45	184.56	23.6
2/24/2024 17:00	61.107	13.9
2/24/2024 17:15	31.893	4.9
2/24/2024 17:30	31.04	4.6
2/24/2024 17:45	29.153	4.1
2/24/2024 18:00	34.687	6.6
2/24/2024 18:15	28.84	5
2/24/2024 18:30	37.593	13.2
2/24/2024 18:45	31.253	5.5
2/24/2024 19:00	33.793	3.4
2/24/2024 19:15	16.693	4.1
2/24/2024 19:30	27.807	5.4
2/24/2024 19:45	51.587	6
2/24/2024 20:00	36.493	6
2/24/2024 20:15	21.52	5
2/24/2024 20:30	33.08	5.3
2/24/2024 20:45	21.82	12.8
2/24/2024 21:00	26.46	15.1
2/24/2024 21:15	13.3	5.3
2/24/2024 21:30	12.94	4.7
2/24/2024 21:45	13.78	4.4
2/24/2024 22:00	11.78	4.5
2/24/2024 22:15	15.953	5.4
2/24/2024 22:30	17.533	4.2
2/24/2024 22:45	17.2	4.6
2/24/2024 23:00	17.36	4.5
2/24/2024 23:15	14.68	4.6
2/24/2024 23:30	15.533	5.1
2/24/2024 23:45	11.14	4
2/25/2024 0:00	13.96	4.9
2/25/2024 0:15	19.32	5.1
2/25/2024 0:30	13.793	5.2
2/25/2024 0:45	13.52	4.4
2/25/2024 1:00	14.3	5.6
2/25/2024 1:15	16.413	5
2/25/2024 1:30	18.8	4.8
2/25/2024 1:45	18.047	5.4
2/25/2024 2:00	17.973	5.5
2/25/2024 2:15	14.98	5.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/25/2024 2:30	14.94	3.9
2/25/2024 2:45	12.34	5.2
2/25/2024 3:00	12.173	4.3
2/25/2024 3:15	11.4	3.4
2/25/2024 3:30	11.747	3.5
2/25/2024 3:45	11.847	3.8
2/25/2024 4:00	11.047	3.9
2/25/2024 4:15	11.78	4.2
2/25/2024 4:30	10.587	3.8
2/25/2024 4:45	11.553	3.6
2/25/2024 5:00	10.793	3.5
2/25/2024 5:15	22.087	5.3
2/25/2024 5:30	12.113	3.6
2/25/2024 5:45	10.96	3.8
2/25/2024 6:00	22.26	4.4
2/25/2024 6:15	24.573	5.8
2/25/2024 6:30	60.56	12.2
2/25/2024 6:45	17.34	8.2
2/25/2024 7:00	71.527	5.6
2/25/2024 7:15	16.133	4.6
2/25/2024 7:30	17.653	5.2
2/25/2024 7:45	14.973	4.1
2/25/2024 8:00	18.793	4.3
2/25/2024 8:15	18.727	2.9
2/25/2024 8:30	24.973	5.4
2/25/2024 8:45	18.693	5.4
2/25/2024 9:00	15.333	3.9
2/25/2024 9:15	16.653	4.2
2/25/2024 9:30	21	3.8
2/25/2024 9:45	22.347	8.6
2/25/2024 10:00	20.4	4.1
2/25/2024 10:15	53.167	5.3
2/25/2024 10:30	57.013	16.1
2/25/2024 10:45	51.227	13
2/25/2024 11:00	94	19.8
2/25/2024 11:15	113.573	23
2/25/2024 11:30	90.387	21.9
2/25/2024 11:45	113.187	23.5
2/25/2024 12:00	110.08	21.1
2/25/2024 12:15	75.487	19.4
2/25/2024 12:30	69.24	23.3
2/25/2024 12:45	90.733	22.3
2/25/2024 13:00	99.42	24.4
2/25/2024 13:15	111.527	19.7
2/25/2024 13:30	88.653	19.4
2/25/2024 13:45	94.36	23
2/25/2024 14:00	79.227	22.9
2/25/2024 14:15	76.687	21.4
2/25/2024 14:30	62.98	26.2
2/25/2024 14:45	68.14	19.2
2/25/2024 15:00	72.367	24
2/25/2024 15:15	49.947	16
2/25/2024 15:30	61.953	17.3
2/25/2024 15:45	64.92	17.4
2/25/2024 16:00	44.573	8.2
2/25/2024 16:15	48.453	11.7
2/25/2024 16:30	47.573	8.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/25/2024 16:45	57.227	18.8
2/25/2024 17:00	102.073	18.8
2/25/2024 17:15	68.94	21.1
2/25/2024 17:30	103.453	18.9
2/25/2024 17:45	85.973	22.1
2/25/2024 18:00	70.6	18.6
2/25/2024 18:15	70.127	21.6
2/25/2024 18:30	98.887	22.6
2/25/2024 18:45	110.487	22.9
2/25/2024 19:00	111.98	23.7
2/25/2024 19:15	106.94	22.7
2/25/2024 19:30	104.847	24.3
2/25/2024 19:45	105.213	22.3
2/25/2024 20:00	97.533	21.4
2/25/2024 20:15	114.867	20.9
2/25/2024 20:30	78.16	20.7
2/25/2024 20:45	78.667	17.8
2/25/2024 21:00	73.027	18
2/25/2024 21:15	57.113	19.7
2/25/2024 21:30	48.113	12.2
2/25/2024 21:45	54.173	11.6
2/25/2024 22:00	53.687	12.8
2/25/2024 22:15	40.193	18.5
2/25/2024 22:30	34.587	14.6
2/25/2024 22:45	25.88	12.8
2/25/2024 23:00	23.513	15.4
2/25/2024 23:15	27.513	15.8
2/25/2024 23:30	24.233	17.3
2/25/2024 23:45	22.493	16.9
2/26/2024 0:00	24.553	18.7
2/26/2024 0:15	22.067	16
2/26/2024 0:30	23.8	15.4
2/26/2024 0:45	28.54	21.1
2/26/2024 1:00	28.993	19.5
2/26/2024 1:15	29.1	8.5
2/26/2024 1:30	38.087	12.2
2/26/2024 1:45	28.973	9.3
2/26/2024 2:00	32.2	11.4
2/26/2024 2:15	24.16	13.4
2/26/2024 2:30	22.238	15.4
2/28/2024 11:30	25.2	0
2/28/2024 11:45	31.127	21.8
2/28/2024 12:00	37.893	27.7
2/28/2024 12:15	39.127	29.8
2/28/2024 12:30	40.247	31.5
2/28/2024 12:45	39.887	33.2
2/28/2024 13:00	36.7	29.7
2/28/2024 13:15	38.38	32.4
2/28/2024 13:30	37.713	33.8
2/28/2024 13:45	37.313	27.6
2/28/2024 14:00	34.307	33
2/28/2024 14:15	29.487	29.6
2/28/2024 14:30	29.347	26.4
2/28/2024 14:45	25.553	19.9
2/28/2024 15:00	27.307	35.4
2/28/2024 15:15	28.32	31.7
2/28/2024 15:30	26	26.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/28/2024 15:45	37.493	28.1
2/28/2024 16:00	35.993	27.1
2/28/2024 16:15	36.673	25.5
2/28/2024 16:30	36.227	31.3
2/28/2024 16:45	31.447	26.9
2/28/2024 17:00	31.467	27.2
2/28/2024 17:15	32.68	29.7
2/28/2024 17:30	30.433	22.5
2/28/2024 17:45	22.087	25.3
2/28/2024 18:00	24.967	15.5
2/28/2024 18:15	32.027	26.5
2/28/2024 18:30	34.213	25.5
2/28/2024 18:45	25.773	25.2
2/28/2024 19:00	16.773	12.4
2/28/2024 19:15	15.487	10
2/28/2024 19:30	15.847	9.6
2/28/2024 19:45	17.853	7.9
2/28/2024 20:00	40.48	20.3
2/28/2024 20:15	33.767	27.9
2/28/2024 20:30	36.067	25
2/28/2024 20:45	34.34	28.6
2/28/2024 21:00	36.4	23
2/28/2024 21:15	37.327	33.1
2/28/2024 21:30	34.46	29.3
2/28/2024 21:45	23.053	14
2/28/2024 22:00	24.88	16
2/28/2024 22:15	29.093	21.8
2/28/2024 22:30	29.64	22.4
2/28/2024 22:45	30.727	25.5
2/28/2024 23:00	35.673	27.3
2/28/2024 23:15	40.793	28.8
2/28/2024 23:30	32.853	40.5
2/28/2024 23:45	22.32	6
2/29/2024 0:00	35.307	17.1
2/29/2024 0:15	38.767	27.8
2/29/2024 0:30	31.073	22.4
2/29/2024 0:45	32.927	26.6
2/29/2024 1:00	32.713	29.7
2/29/2024 1:15	20.707	20.8
2/29/2024 1:30	19.16	13.5
2/29/2024 1:45	28.52	16.6
2/29/2024 2:00	23.68	20.5
2/29/2024 2:15	26.813	18
2/29/2024 2:30	22.433	34
2/29/2024 2:45	19.953	12.1
2/29/2024 3:00	23.413	12.2
2/29/2024 3:15	32.693	25.5
2/29/2024 3:30	30.947	18
2/29/2024 3:45	30.573	29.9
2/29/2024 4:00	27.387	16.6
2/29/2024 4:15	40.707	30.4
2/29/2024 4:30	40.287	37.2
2/29/2024 4:45	44.193	31.2
2/29/2024 5:00	32.333	39.3
2/29/2024 5:15	22.853	27.8
2/29/2024 5:30	23.447	16.8
2/29/2024 5:45	24.013	15.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/29/2024 6:00	23.633	29.1
2/29/2024 6:15	21.633	24.7
2/29/2024 6:30	21.973	22.3
2/29/2024 6:45	24.24	27
2/29/2024 7:00	25.673	31
2/29/2024 7:15	21.513	26.4
2/29/2024 7:30	21	35.3
2/29/2024 7:45	20.953	22.6
2/29/2024 8:00	19.153	19
2/29/2024 8:15	18.64	19.8
2/29/2024 8:30	19.64	20.8
2/29/2024 8:45	19.7	21.4
2/29/2024 9:00	20.593	20.4
2/29/2024 9:15	19.9	12.3
2/29/2024 9:30	20.62	33.4
2/29/2024 9:45	19.767	19.5
2/29/2024 10:00	19.033	12.5
2/29/2024 10:15	18.973	14.4
2/29/2024 10:30	20.193	14.9
2/29/2024 10:45	20.753	12.3
2/29/2024 11:00	23.927	18.4
2/29/2024 11:15	21.18	15.8
2/29/2024 11:30	20.68	15.9
2/29/2024 11:45	23.267	23.9
2/29/2024 12:00	22.407	18.2
2/29/2024 12:15	23.513	15.4
2/29/2024 12:30	24.38	14.5
2/29/2024 12:45	25.707	20
2/29/2024 13:00	32.787	29.9
2/29/2024 13:15	33.3	38.7
2/29/2024 13:30	29.633	28.1
2/29/2024 13:45	29.327	37.7
2/29/2024 14:00	33.36	19.3
2/29/2024 14:15	34.333	32
2/29/2024 14:30	31.56	20
2/29/2024 14:45	40.24	41.3
2/29/2024 15:00	52.22	49.4
2/29/2024 15:15	68.533	42
2/29/2024 15:30	38.533	46.8
2/29/2024 15:45	35.4	20.4
2/29/2024 16:00	31.34	23.9
2/29/2024 16:15	33.753	72.1
2/29/2024 16:30	27.44	20.3
2/29/2024 16:45	36.28	23.9
2/29/2024 17:00	31.393	28.2
2/29/2024 17:15	25.1	24.6
2/29/2024 17:30	20.3	16.8
2/29/2024 17:45	26.793	15.2
2/29/2024 18:00	30.367	21.7
2/29/2024 18:15	41.353	36.1
2/29/2024 18:30	32.86	30.7
2/29/2024 18:45	28.84	21.6
2/29/2024 19:00	28.913	19.6
2/29/2024 19:15	25.607	24.7
2/29/2024 19:30	22.093	15.8
2/29/2024 19:45	22.14	23.2
2/29/2024 20:00	23.587	21

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/29/2024 20:15	22.02	18.5	3/1/2024 10:30	15.067	7.8	3/2/2024 0:45	25.787	6.9
2/29/2024 20:30	22.127	17.1	3/1/2024 10:45	14.867	8.3	3/2/2024 1:00	25.033	6.4
2/29/2024 20:45	18.853	15.9	3/1/2024 11:00	15.573	7	3/2/2024 1:15	23.247	6.7
2/29/2024 21:00	20.553	21.5	3/1/2024 11:15	16.993	7.4	3/2/2024 1:30	21.933	6.2
2/29/2024 21:15	19.88	15	3/1/2024 11:30	18.88	7.5	3/2/2024 1:45	23.247	7.6
2/29/2024 21:30	23.393	12.9	3/1/2024 11:45	17.213	7.1	3/2/2024 2:00	21.12	6.3
2/29/2024 21:45	22.8	16.4	3/1/2024 12:00	16.8	6.7	3/2/2024 2:15	17.807	6.5
2/29/2024 22:00	26.293	18.1	3/1/2024 12:15	17.787	15	3/2/2024 2:30	17.967	7.1
2/29/2024 22:15	30.527	22.3	3/1/2024 12:30	19.027	9.5	3/2/2024 2:45	18.94	6.9
2/29/2024 22:30	32.3	26.8	3/1/2024 12:45	20.28	10.5	3/2/2024 3:00	16.807	5.2
2/29/2024 22:45	31.02	20.7	3/1/2024 13:00	20.667	8	3/2/2024 3:15	17.353	5.1
2/29/2024 23:00	35.827	25.1	3/1/2024 13:15	22.547	10	3/2/2024 3:30	19.133	7.8
2/29/2024 23:15	34.327	25.1	3/1/2024 13:30	20.813	8.3	3/2/2024 3:45	15.767	6.4
2/29/2024 23:30	36.147	20.1	3/1/2024 13:45	19.553	6.3	3/2/2024 4:00	18.547	6.8
2/29/2024 23:45	39.213	26.9	3/1/2024 14:00	20.373	6.3	3/2/2024 4:15	19.267	7.1
3/1/2024 0:00	36.807	26.9	3/1/2024 14:15	20.947	6.3	3/2/2024 4:30	23.987	9.3
3/1/2024 0:15	27.967	26.3	3/1/2024 14:30	22.787	6.9	3/2/2024 4:45	25	8.5
3/1/2024 0:30	34.153	34.4	3/1/2024 14:45	25.82	5.8	3/2/2024 5:00	24.347	8.3
3/1/2024 0:45	34.28	17.4	3/1/2024 15:00	23.7	7.9	3/2/2024 5:15	20.893	8.9
3/1/2024 1:00	28.187	17	3/1/2024 15:15	26.62	7.2	3/2/2024 5:30	16.24	8.9
3/1/2024 1:15	29.773	16.9	3/1/2024 15:30	22.54	6.4	3/2/2024 5:45	14.067	7.6
3/1/2024 1:30	37.84	24.7	3/1/2024 15:45	25.807	6.7	3/2/2024 6:00	15.493	7.1
3/1/2024 1:45	27.933	17.4	3/1/2024 16:00	24.107	6.3	3/2/2024 6:15	16.453	8
3/1/2024 2:00	35.707	43.1	3/1/2024 16:15	21.053	7.9	3/2/2024 6:30	20.087	8.6
3/1/2024 2:15	32.44	44.4	3/1/2024 16:30	25.807	6.9	3/2/2024 6:45	19.947	8.5
3/1/2024 2:30	37.453	58.1	3/1/2024 16:45	22.64	6.1	3/2/2024 7:00	17.727	9.2
3/1/2024 2:45	32.98	37.5	3/1/2024 17:00	21.807	6.3	3/2/2024 7:15	19.287	8.2
3/1/2024 3:00	46.88	77.2	3/1/2024 17:15	22.213	7.8	3/2/2024 7:30	13.373	7.9
3/1/2024 3:15	27.187	25	3/1/2024 17:30	23.873	7.9	3/2/2024 7:45	14.4	7
3/1/2024 3:30	27.08	15.6	3/1/2024 17:45	23.12	6.7	3/2/2024 8:00	18.34	7.9
3/1/2024 3:45	27.66	16.4	3/1/2024 18:00	23.507	7	3/2/2024 8:15	20.113	8.4
3/1/2024 4:00	28.933	15.4	3/1/2024 18:15	23.48	6.7	3/2/2024 8:30	18.96	9.3
3/1/2024 4:15	28.3	24.7	3/1/2024 18:30	25.067	6.8	3/2/2024 8:45	15.82	7
3/1/2024 4:30	28.413	43.9	3/1/2024 18:45	25.833	7.2	3/2/2024 9:00	16.387	7.6
3/1/2024 4:45	24.82	26.1	3/1/2024 19:00	23.3	9.1	3/2/2024 9:15	19.947	7.5
3/1/2024 5:00	26.18	14.1	3/1/2024 19:15	24.787	7.6	3/2/2024 9:30	21	8.9
3/1/2024 5:15	26.693	14.2	3/1/2024 19:30	22.613	9.1	3/2/2024 9:45	22.867	9.4
3/1/2024 5:30	26.647	15.2	3/1/2024 19:45	23.94	7.6	3/2/2024 10:00	20.673	8.3
3/1/2024 5:45	27.14	15.4	3/1/2024 20:00	23.553	7	3/2/2024 10:15	21.84	10.5
3/1/2024 6:00	28.273	15.6	3/1/2024 20:15	21.613	8.9	3/2/2024 10:30	24.227	9.3
3/1/2024 6:15	28.093	15	3/1/2024 20:30	21.327	8.1	3/2/2024 10:45	22.18	9.9
3/1/2024 6:30	32.513	14.4	3/1/2024 20:45	21.5	8.6	3/2/2024 11:00	25.3	8.9
3/1/2024 6:45	32.32	42.6	3/1/2024 21:00	21.553	9.3	3/2/2024 11:15	23.06	9.1
3/1/2024 7:00	31.087	28.8	3/1/2024 21:15	26.547	9.1	3/2/2024 11:30	23.353	9.5
3/1/2024 7:15	23.973	19.5	3/1/2024 21:30	30.78	7.8	3/2/2024 11:45	20.227	8.6
3/1/2024 7:30	17.287	24.1	3/1/2024 21:45	24.707	6	3/2/2024 12:00	18.267	8.2
3/1/2024 7:45	19.3	19.1	3/1/2024 22:00	26.087	6.6	3/2/2024 12:15	20.52	8.4
3/1/2024 8:00	14.76	13.8	3/1/2024 22:15	26.553	6.6	3/2/2024 12:30	20.927	6.4
3/1/2024 8:15	14.413	5.8	3/1/2024 22:30	24.433	6	3/2/2024 12:45	18.133	7.2
3/1/2024 8:30	11.627	7.1	3/1/2024 22:45	24.287	6.6	3/2/2024 13:00	19.06	7.6
3/1/2024 8:45	13.393	6.4	3/1/2024 23:00	24.867	7.6	3/2/2024 13:15	19.313	7
3/1/2024 9:00	11.627	7	3/1/2024 23:15	24.193	5.6	3/2/2024 13:30	22.333	7.9
3/1/2024 9:15	12.147	11.2	3/1/2024 23:30	26.433	6	3/2/2024 13:45	21.153	7
3/1/2024 9:30	10.92	14.7	3/1/2024 23:45	23.233	5.8	3/2/2024 14:00	17.32	5.5
3/1/2024 9:45	12.587	9.7	3/2/2024 0:00	24.473	6.2	3/2/2024 14:15	27.78	5.5
3/1/2024 10:00	11.04	5	3/2/2024 0:15	26.36	7	3/2/2024 14:30	35.393	5.4
3/1/2024 10:15	13.627	9.7	3/2/2024 0:30	27.033	6.6	3/2/2024 14:45	33.06	4.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/2/2024 15:00	42.793	6.1
3/2/2024 15:15	28.767	5.9
3/2/2024 15:30	32.093	5.9
3/2/2024 15:45	29.307	5.1
3/2/2024 16:00	24.813	4.2
3/2/2024 16:15	18.46	4.5
3/2/2024 16:30	19.233	4.2
3/2/2024 16:45	18.48	4.5
3/2/2024 17:00	21.313	4.1
3/2/2024 17:15	25.007	4.7
3/2/2024 17:30	15.613	3.7
3/2/2024 17:45	15.033	3.7
3/2/2024 18:00	19.647	3.9
3/2/2024 18:15	22.507	3.9
3/2/2024 18:30	21.753	4.7
3/2/2024 18:45	19.793	4.5
3/2/2024 19:00	25.44	4.3
3/2/2024 19:15	24.173	5.6
3/2/2024 19:30	22.587	5
3/2/2024 19:45	25.873	5.8
3/2/2024 20:00	24.813	6.1
3/2/2024 20:15	27.9	5.9
3/2/2024 20:30	27.32	6
3/2/2024 20:45	27.553	6.6
3/2/2024 21:00	26.54	5.5
3/2/2024 21:15	25.72	4.8
3/2/2024 21:30	27.1	6.3
3/2/2024 21:45	32.3	4.7
3/2/2024 22:00	38.727	6.9
3/2/2024 22:15	52.113	8.3
3/2/2024 22:30	64.38	10.6
3/2/2024 22:45	68.56	15.3
3/2/2024 23:00	72.973	12.6
3/2/2024 23:15	88.893	15.9
3/2/2024 23:30	99.713	17.8
3/2/2024 23:45	102.573	17.8
3/3/2024 0:00	100.933	17.7
3/3/2024 0:15	96.493	19.2
3/3/2024 0:30	91.187	16.8
3/3/2024 0:45	58.6	15.2
3/3/2024 1:00	54.9	8.9
3/3/2024 1:15	39.827	9.2
3/3/2024 1:30	29.18	5.9
3/3/2024 1:45	25.613	5.2
3/3/2024 2:00	21.993	4.6
3/3/2024 2:15	14.493	3.2
3/3/2024 2:30	17.187	2.3
3/3/2024 2:45	20.867	3.7
3/3/2024 3:00	16.093	3.8
3/3/2024 3:15	15.587	2.4
3/3/2024 3:30	11.46	3
3/3/2024 3:45	10.38	2.6
3/3/2024 4:00	10.013	3.1
3/3/2024 4:15	12.993	2.7
3/3/2024 4:30	18.92	3.3
3/3/2024 4:45	15.16	3.8
3/3/2024 5:00	15.86	4.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/3/2024 5:15	21.347	4.4
3/3/2024 5:30	21.14	5.4
3/3/2024 5:45	18.527	4.4
3/3/2024 6:00	21.747	5.3
3/3/2024 6:15	15.587	4.8
3/3/2024 6:30	17.153	3.1
3/3/2024 6:45	18.647	4.2
3/3/2024 7:00	16.1	4.3
3/3/2024 7:15	13.867	3.7
3/3/2024 7:30	18.273	3.8
3/3/2024 7:45	22.053	6.7
3/3/2024 8:00	22.587	7.9
3/3/2024 8:15	22.8	8
3/3/2024 8:30	21.873	6.7
3/3/2024 8:45	20.893	6.1
3/3/2024 9:00	21.04	7.1
3/3/2024 9:15	16.927	7
3/3/2024 9:30	20.913	7.1
3/3/2024 9:45	21.06	6.4
3/3/2024 10:00	19.66	5.1
3/3/2024 10:15	21.947	6.8
3/3/2024 10:30	26.973	8
3/3/2024 10:45	69.087	8.5
3/3/2024 11:00	66.427	13.3
3/3/2024 11:15	43.34	5.9
3/3/2024 11:30	29.767	5.9
3/3/2024 11:45	12.84	5.4
3/3/2024 12:00	12.493	5.4
3/3/2024 12:15	12.173	5.8
3/3/2024 12:30	13.06	6.8
3/3/2024 12:45	12.627	5
3/3/2024 13:00	14.547	5.2
3/3/2024 13:15	10.767	4.5
3/3/2024 13:30	10.473	4.7
3/3/2024 13:45	10.64	4.3
3/3/2024 14:00	10.267	4.4
3/3/2024 14:15	11.433	3
3/3/2024 14:30	20.967	4.2
3/3/2024 14:45	53.787	4.4
3/3/2024 15:00	35.833	11.7
3/3/2024 15:15	20.213	4.4
3/3/2024 15:30	26.267	5.5
3/3/2024 15:45	20.213	4.2
3/3/2024 16:00	34.673	5.9
3/3/2024 16:15	19.76	3.3
3/3/2024 16:30	22.207	8.5
3/3/2024 16:45	26.553	6.6
3/3/2024 17:00	16.287	4.3
3/3/2024 17:15	9.84	2.4
3/3/2024 17:30	9.553	3.3
3/3/2024 17:45	12.76	2.5
3/3/2024 18:00	18.153	4.1
3/3/2024 18:15	12.507	3.7
3/3/2024 18:30	11.847	3.2
3/3/2024 18:45	12.987	3.4
3/3/2024 19:00	11.873	3.9
3/3/2024 19:15	11.753	2.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/3/2024 19:30	13.14	3
3/3/2024 19:45	13.987	3.8
3/3/2024 20:00	10.933	3.4
3/3/2024 20:15	8.913	3.4
3/3/2024 20:30	9.413	4.4
3/3/2024 20:45	9.16	3.1
3/3/2024 21:00	8.913	3.5
3/3/2024 21:15	8.62	3.9
3/3/2024 21:30	10.853	4.4
3/3/2024 21:45	9.353	4.2
3/3/2024 22:00	8.027	4
3/3/2024 22:15	8.887	4.9
3/3/2024 22:30	9.487	4.3
3/3/2024 22:45	10.007	3.9
3/3/2024 23:00	15.02	4.3
3/3/2024 23:15	14.88	4.6
3/3/2024 23:30	13.36	4.2
3/3/2024 23:45	11.9	3.7
3/4/2024 0:00	10.42	3.9
3/4/2024 0:15	8.927	3.3
3/4/2024 0:30	6.893	3.7
3/4/2024 0:45	13.267	3.5
3/4/2024 1:00	18.5	5.1
3/4/2024 1:15	12.2	4.5
3/4/2024 1:30	14.6	4.4
3/4/2024 1:45	14.747	4.9
3/4/2024 2:00	15.16	4.7
3/4/2024 2:15	16.72	5.4
3/4/2024 2:30	18.28	5
3/4/2024 2:45	21.253	5.9
3/4/2024 3:00	19.44	6.2
3/4/2024 3:15	19.773	6.2
3/4/2024 3:30	17.5	5.3
3/4/2024 3:45	14.987	4.7
3/4/2024 4:00	15.207	4.5
3/4/2024 4:15	17.853	4.7
3/4/2024 4:30	22.027	5.4
3/4/2024 4:45	22.787	4.6
3/4/2024 5:00	21.427	5.7
3/4/2024 5:15	24.687	5.8
3/4/2024 5:30	23.52	6.1
3/4/2024 5:45	25.113	5.9
3/4/2024 6:00	22.893	5.5
3/4/2024 6:15	21.747	5.2
3/4/2024 6:30	21.76	6
3/4/2024 6:45	23.32	5.4
3/4/2024 7:00	27.033	5.7
3/4/2024 7:15	26.633	5
3/4/2024 7:30	29.627	6.3
3/4/2024 7:45	27.533	4.6
3/4/2024 8:00	31.667	6
3/4/2024 8:15	26.4	4.5
3/4/2024 8:30	26.633	5.4
3/4/2024 8:45	33.193	5.6
3/4/2024 9:00	33.4	6.3
3/4/2024 9:15	41.853	6.5
3/4/2024 9:30	38.267	7.2

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/4/2024 9:45	35.92	7.7	3/5/2024 0:00	39.02	8.5	3/5/2024 14:15	24.847	7.4
3/4/2024 10:00	43.887	9.8	3/5/2024 0:15	38.153	7	3/5/2024 14:30	23.12	6.7
3/4/2024 10:15	48.607	14.2	3/5/2024 0:30	36.413	7.5	3/5/2024 14:45	22.853	7.2
3/4/2024 10:30	38.127	5.2	3/5/2024 0:45	37.713	7.3	3/5/2024 15:00	24.093	7.8
3/4/2024 10:45	39.447	6	3/5/2024 1:00	34.78	6	3/5/2024 15:15	22.46	6.2
3/4/2024 11:00	51.767	6.4	3/5/2024 1:15	38.293	8.6	3/5/2024 15:30	21.927	6.6
3/4/2024 11:15	60.74	7.7	3/5/2024 1:30	34.493	7	3/5/2024 15:45	25.893	5.7
3/4/2024 11:30	80.727	10.2	3/5/2024 1:45	33.387	10.3	3/5/2024 16:00	26.56	7.7
3/4/2024 11:45	56.64	19.4	3/5/2024 2:00	30.553	6.5	3/5/2024 16:15	25.48	6.9
3/4/2024 12:00	57.647	11.2	3/5/2024 2:15	34.267	8.5	3/5/2024 16:30	27.387	6.9
3/4/2024 12:15	70.753	14.4	3/5/2024 2:30	33.587	7	3/5/2024 16:45	23.973	6.6
3/4/2024 12:30	71.213	15.6	3/5/2024 2:45	28.267	6.9	3/5/2024 17:00	26.1	6.6
3/4/2024 12:45	79.58	22.2	3/5/2024 3:00	29.393	6.7	3/5/2024 17:15	34.187	7
3/4/2024 13:00	81.913	10.6	3/5/2024 3:15	39.333	7.6	3/5/2024 17:30	56.427	12.7
3/4/2024 13:15	60.34	9.7	3/5/2024 3:30	31.04	10.8	3/5/2024 17:45	41.073	18.2
3/4/2024 13:30	42.813	11.4	3/5/2024 3:45	27.387	8.3	3/5/2024 18:00	25.267	7.6
3/4/2024 13:45	43.827	17.8	3/5/2024 4:00	32.327	5.3	3/5/2024 18:15	25.613	7
3/4/2024 14:00	52.08	11.4	3/5/2024 4:15	25.527	5.6	3/5/2024 18:30	28.48	12.2
3/4/2024 14:15	84.233	11.8	3/5/2024 4:30	18.813	4.5	3/5/2024 18:45	29.453	8.4
3/4/2024 14:30	56.913	16.4	3/5/2024 4:45	18.987	5.3	3/5/2024 19:00	19.327	9.1
3/4/2024 14:45	61.727	13.9	3/5/2024 5:00	18.887	4.4	3/5/2024 19:15	19.387	7.1
3/4/2024 15:00	54.68	19.9	3/5/2024 5:15	20.82	3.1	3/5/2024 19:30	18.68	7.6
3/4/2024 15:15	39.9	11.9	3/5/2024 5:30	19.5	3.8	3/5/2024 19:45	14.667	5.2
3/4/2024 15:30	45.98	7.1	3/5/2024 5:45	20.047	3.8	3/5/2024 20:00	16.48	5.5
3/4/2024 15:45	36.02	13.1	3/5/2024 6:00	19.44	3.7	3/5/2024 20:15	19.793	7.3
3/4/2024 16:00	46.867	13	3/5/2024 6:15	19.7	4.1	3/5/2024 20:30	17.027	6.1
3/4/2024 16:15	31.673	8.4	3/5/2024 6:30	21.26	4.3	3/5/2024 20:45	16.567	7.3
3/4/2024 16:30	47.067	7.9	3/5/2024 6:45	21.42	4.9	3/5/2024 21:00	17.173	6.7
3/4/2024 16:45	43.14	5.7	3/5/2024 7:00	23.353	4.6	3/5/2024 21:15	19.68	7.2
3/4/2024 17:00	46.24	7.3	3/5/2024 7:15	21.2	5.4	3/5/2024 21:30	21.82	7.2
3/4/2024 17:15	40.26	6	3/5/2024 7:30	18.373	5.1	3/5/2024 21:45	22.74	6.5
3/4/2024 17:30	56.633	8.4	3/5/2024 7:45	20.413	5.1	3/5/2024 22:00	19.287	5.4
3/4/2024 17:45	51.94	11.7	3/5/2024 8:00	21.853	4.8	3/5/2024 22:15	22.833	6.3
3/4/2024 18:00	34.527	7.6	3/5/2024 8:15	20.333	5	3/5/2024 22:30	23.567	7
3/4/2024 18:15	33.553	8.3	3/5/2024 8:30	23.66	5.3	3/5/2024 22:45	27.94	7.6
3/4/2024 18:30	28.66	6.2	3/5/2024 8:45	30.987	5.5	3/5/2024 23:00	28.167	7.8
3/4/2024 18:45	30.66	8.3	3/5/2024 9:00	28.367	5.5	3/5/2024 23:15	16.287	6.7
3/4/2024 19:00	30.047	6.4	3/5/2024 9:15	48.987	6.5	3/5/2024 23:30	16.207	5.5
3/4/2024 19:15	29.453	6.5	3/5/2024 9:30	46.793	7.4	3/5/2024 23:45	21.067	4.9
3/4/2024 19:30	33.26	7.4	3/5/2024 9:45	44.593	11.1	3/6/2024 0:00	22.6	6
3/4/2024 19:45	31.147	6.7	3/5/2024 10:00	31	7.1	3/6/2024 0:15	24.4	8.1
3/4/2024 20:00	35.76	7.7	3/5/2024 10:15	27.153	6	3/6/2024 0:30	24.533	6.5
3/4/2024 20:15	36.873	7.8	3/5/2024 10:30	31.573	6.1	3/6/2024 0:45	29.147	6.8
3/4/2024 20:30	34.687	8.1	3/5/2024 10:45	31.933	7.2	3/6/2024 1:00	35.14	7.7
3/4/2024 20:45	35.807	7.3	3/5/2024 11:00	23.84	7	3/6/2024 1:15	31.747	6.8
3/4/2024 21:00	34.16	8.8	3/5/2024 11:15	25.253	6.1	3/6/2024 1:30	32.04	7
3/4/2024 21:15	41.327	8.8	3/5/2024 11:30	23.727	7.3	3/6/2024 1:45	29.393	6.4
3/4/2024 21:30	35.833	8.9	3/5/2024 11:45	24.773	8.3	3/6/2024 2:00	30.333	6.8
3/4/2024 21:45	40.373	11	3/5/2024 12:00	28.253	8.6	3/6/2024 2:15	30.013	5.4
3/4/2024 22:00	39.073	8.2	3/5/2024 12:15	29.793	6.6	3/6/2024 2:30	27.653	8.1
3/4/2024 22:15	40.427	8.2	3/5/2024 12:30	24.693	6.6	3/6/2024 2:45	27.587	7.3
3/4/2024 22:30	39.227	9.7	3/5/2024 12:45	25.547	7.9	3/6/2024 3:00	28.527	7
3/4/2024 22:45	40.58	8.3	3/5/2024 13:00	32.06	10.7	3/6/2024 3:15	38.44	8.3
3/4/2024 23:00	42.647	7.6	3/5/2024 13:15	23.907	6.5	3/6/2024 3:30	36.573	12.6
3/4/2024 23:15	35.653	8.5	3/5/2024 13:30	32.907	13.6	3/6/2024 3:45	10.987	6.1
3/4/2024 23:30	37.947	7.5	3/5/2024 13:45	24.02	7.5	3/6/2024 4:00	10.287	5.1
3/4/2024 23:45	40.707	8	3/5/2024 14:00	25.92	6	3/6/2024 4:15	12.267	5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/6/2024 4:30	16.587	8.9
3/6/2024 4:45	13.347	8.9
3/6/2024 5:00	17.24	8
3/6/2024 5:15	30.027	11
3/6/2024 5:30	21.547	11.4
3/6/2024 5:45	18.68	9
3/6/2024 6:00	18.627	8.7
3/6/2024 6:15	12.007	7.1
3/6/2024 6:30	10.56	8.6
3/6/2024 6:45	17.127	9.1
3/6/2024 7:00	23.433	10.4
3/6/2024 7:15	18.093	10
3/6/2024 7:30	23.44	9.8
3/6/2024 7:45	22.827	9.6
3/6/2024 8:00	18.873	10.3
3/6/2024 8:15	17.4	7.4
3/6/2024 8:30	15.18	10.4
3/6/2024 8:45	13.42	8.6
3/6/2024 9:00	12.693	6.6
3/6/2024 9:15	10.133	7.1
3/6/2024 9:30	10.593	8.6
3/6/2024 9:45	13.52	7.5
3/6/2024 10:00	10.747	4.8
3/6/2024 10:15	19.367	6.9
3/6/2024 10:30	25.64	6.6
3/6/2024 10:45	14.007	6.6
3/6/2024 11:00	15.593	9
3/6/2024 11:15	13.633	5.1
3/6/2024 11:30	15.267	7.9
3/6/2024 11:45	16.667	7.7
3/6/2024 12:00	19.207	8.1
3/6/2024 12:15	15.427	7.5
3/6/2024 12:30	14.46	6.4
3/6/2024 12:45	17.373	6.3
3/6/2024 13:00	13.967	6.2
3/6/2024 13:15	11.273	4.3
3/6/2024 13:30	12.067	4.5
3/6/2024 13:45	13.267	5.5
3/6/2024 14:00	11.773	4.6
3/6/2024 14:15	13.633	4.2
3/6/2024 14:30	20.147	5.3
3/6/2024 14:45	20.287	7.4
3/6/2024 15:00	19.447	8
3/6/2024 15:15	17.153	5
3/6/2024 15:30	19.207	6.4
3/6/2024 15:45	21.933	6.7
3/6/2024 16:00	20.207	5.8
3/6/2024 16:15	34.64	6.2
3/6/2024 16:30	18.04	6.1
3/6/2024 16:45	19.487	6.3
3/6/2024 17:00	29.84	5.9
3/6/2024 17:15	27.62	6.3
3/6/2024 17:30	21.893	7.2
3/6/2024 17:45	23.173	8
3/6/2024 18:00	25.507	8.4
3/6/2024 18:15	19.793	6.8
3/6/2024 18:30	25.18	9.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/6/2024 18:45	22.76	7.6
3/6/2024 19:00	19.12	7.2
3/6/2024 19:15	19.787	6.2
3/6/2024 19:30	18.6	6.9
3/6/2024 19:45	19.247	6.2
3/6/2024 20:00	18.673	5.4
3/6/2024 20:15	18.367	7
3/6/2024 20:30	18.02	6.3
3/6/2024 20:45	19.153	6.7
3/6/2024 21:00	19.993	6.8
3/6/2024 21:15	16.913	6.4
3/6/2024 21:30	17.1	6.5
3/6/2024 21:45	15.66	6.5
3/6/2024 22:00	15.273	7.3
3/6/2024 22:15	17.62	7.4
3/6/2024 22:30	17.16	7.3
3/6/2024 22:45	19.213	6.7
3/6/2024 23:00	16.607	6
3/6/2024 23:15	17.54	5.5
3/6/2024 23:30	17.353	5.7
3/6/2024 23:45	15.427	7
3/7/2024 0:00	15.213	6
3/7/2024 0:15	17.447	6.1
3/7/2024 0:30	15.92	5.9
3/7/2024 0:45	17.6	6.1
3/7/2024 1:00	16.827	6.1
3/7/2024 1:15	16.713	6.1
3/7/2024 1:30	14.56	5.8
3/7/2024 1:45	15.86	6.4
3/7/2024 2:00	15.887	7.4
3/7/2024 2:15	16.54	7.4
3/7/2024 2:30	16.307	8.1
3/7/2024 2:45	16.047	6.9
3/7/2024 3:00	15.833	8.1
3/7/2024 3:15	14.567	7.5
3/7/2024 3:30	16.533	7.9
3/7/2024 3:45	17.593	7.6
3/7/2024 4:00	18.267	7.5
3/7/2024 4:15	17.193	7.7
3/7/2024 4:30	15.913	8.3
3/7/2024 4:45	15.427	7.2
3/7/2024 5:00	16.993	7.6
3/7/2024 5:15	16.573	5.9
3/7/2024 5:30	16.687	6.9
3/7/2024 5:45	15.267	7.7
3/7/2024 6:00	14.947	6.6
3/7/2024 6:15	16.753	6.5
3/7/2024 6:30	14.94	6.7
3/7/2024 6:45	15.7	7
3/7/2024 7:00	16.393	7.3
3/7/2024 7:15	14.893	6.4
3/7/2024 7:30	14.333	7.4
3/7/2024 7:45	15.187	6.8
3/7/2024 8:00	15.7	6.6
3/7/2024 8:15	17.56	6.5
3/7/2024 8:30	17.413	6.6
3/7/2024 8:45	19.273	6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/7/2024 9:00	20.42	6.7
3/7/2024 9:15	24.473	7.4
3/7/2024 9:30	28.84	6.6
3/7/2024 9:45	33.633	8
3/7/2024 10:00	39.193	6.2
3/7/2024 10:15	30.96	7.8
3/7/2024 10:30	35.653	7.4
3/7/2024 10:45	37.793	7.8
3/7/2024 11:00	42.547	8.3
3/7/2024 11:15	37.38	10.8
3/7/2024 11:30	42.06	7.4
3/7/2024 11:45	37.753	8.3
3/7/2024 12:00	31.42	9.1
3/7/2024 12:15	34.107	8.1
3/7/2024 12:30	31.147	7.4
3/7/2024 12:45	33.193	6.4
3/7/2024 13:00	37.24	8
3/7/2024 13:15	37.907	8.1
3/7/2024 13:30	32.187	8.4
3/7/2024 13:45	31.427	7.7
3/7/2024 14:00	39.9	8
3/7/2024 14:15	32.353	7.9
3/7/2024 14:30	27.193	8.2
3/7/2024 14:45	28.093	6.7
3/7/2024 15:00	26.093	6.5
3/7/2024 15:15	28.88	6.8
3/7/2024 15:30	27.96	7
3/7/2024 15:45	24.453	7.1
3/7/2024 16:00	27.34	6
3/7/2024 16:15	25.027	8.2
3/7/2024 16:30	22.433	8.1
3/7/2024 16:45	26.187	7.1
3/7/2024 17:00	26.493	7.1
3/7/2024 17:15	29.62	8.5
3/7/2024 17:30	25.633	7.2
3/7/2024 17:45	27.127	6.9
3/7/2024 18:00	31.413	7.3
3/7/2024 18:15	28.38	8.3
3/7/2024 18:30	29.78	6.5
3/7/2024 18:45	27.08	7.6
3/7/2024 19:00	28.613	8.6
3/7/2024 19:15	28.12	7.4
3/7/2024 19:30	31.4	8.5
3/7/2024 19:45	33.887	8.7
3/7/2024 20:00	31.467	6.9
3/7/2024 20:15	29.588	8
3/8/2024 20:00	27.6	6.8
3/8/2024 20:15	23.5	6.4
3/8/2024 20:30	28	6.6
3/8/2024 20:45	23.2	6.5
3/8/2024 21:00	28.1	7.2
3/8/2024 21:15	25.5	6.3
3/8/2024 21:30	28.9	6.9
3/8/2024 21:45	29.3	7.1
3/8/2024 22:00	27.1	6.4
3/8/2024 22:15	26.1	6.5
3/8/2024 22:30	32.2	7.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/8/2024 22:45	44.3	9.7
3/8/2024 23:00	49.7	11.8
3/8/2024 23:15	40	8.5
3/8/2024 23:30	39.3	8.9
3/8/2024 23:45	59	13.5
3/9/2024 0:00	64	13.5
3/9/2024 0:15	56.9	12.8
3/9/2024 0:30	55.1	11.9
3/9/2024 0:45	35.4	8.8
3/9/2024 1:00	31.7	8
3/9/2024 1:15	29	7.5
3/9/2024 1:30	29.9	7.2
3/9/2024 1:45	34.2	8
3/9/2024 2:00	30	7.7
3/9/2024 2:15	63.1	12.9
3/9/2024 2:30	57.4	13.2
3/9/2024 2:45	107.8	19.2
3/9/2024 3:00	69.2	15.7
3/9/2024 3:15	54.5	13.9
3/9/2024 3:30	71.8	16.8
3/9/2024 3:45	90.7	19.5
3/9/2024 4:00	87.6	18.8
3/9/2024 4:15	89.7	19.3
3/9/2024 4:30	101.2	19.9
3/9/2024 4:45	95.7	20.3
3/9/2024 5:00	82.2	19.8
3/9/2024 5:15	65.9	15
3/9/2024 5:30	55	13.7
3/9/2024 5:45	68.7	15.9
3/9/2024 6:00	71.5	18.7
3/9/2024 6:15	78.7	17.7
3/9/2024 6:30	87.3	18.6
3/9/2024 6:45	59.3	13.1
3/9/2024 7:00	66.6	13.9
3/9/2024 7:15	87.8	18.8
3/9/2024 7:30	67.6	14.3
3/9/2024 7:45	41	10.2
3/9/2024 8:00	77.1	14.6
3/9/2024 8:15	43.9	10.6
3/9/2024 8:30	68.8	13.9
3/9/2024 8:45	57.8	13.8
3/9/2024 9:00	60	13.2
3/9/2024 9:15	71.9	16.2
3/9/2024 9:30	89.9	18.7
3/9/2024 9:45	99.6	20.3
3/9/2024 10:00	85.7	18.2
3/9/2024 10:15	74.5	17.4
3/9/2024 10:30	50.6	12.6
3/9/2024 10:45	38.6	10.4
3/9/2024 11:00	38.2	10.3
3/9/2024 11:15	40.7	9.7
3/9/2024 11:30	38.8	9.7
3/9/2024 11:45	48.8	10.8
3/9/2024 12:00	42	11
3/9/2024 12:15	36.8	9.3
3/9/2024 12:30	40	10
3/9/2024 12:45	64.3	12.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/9/2024 13:00	80.6	16
3/9/2024 13:15	45.6	13.6
3/9/2024 13:30	40.3	11.7
3/9/2024 13:45	40.9	11.6
3/9/2024 14:00	38.4	11.1
3/9/2024 14:15	37.1	11.2
3/9/2024 14:30	33.5	10.7
3/9/2024 14:45	34.6	9.9
3/9/2024 15:00	34	9.3
3/9/2024 15:15	28.9	9.1
3/9/2024 15:30	29.9	9.1
3/9/2024 15:45	34.1	9.5
3/9/2024 16:00	27.5	9.1
3/9/2024 16:15	29.8	8.8
3/9/2024 16:30	34.7	9.4
3/9/2024 16:45	36.3	10
3/9/2024 17:00	35.2	10
3/10/2024 15:30	27.467	0
3/10/2024 15:45	34.033	8.9
3/10/2024 16:00	28.093	9.8
3/10/2024 16:15	36.24	8.9
3/10/2024 16:30	33.66	12.2
3/10/2024 16:45	37.833	15.6
3/10/2024 17:00	38.793	9.6
3/10/2024 17:15	41.293	13
3/10/2024 17:30	59.813	17.6
3/10/2024 17:45	76.973	23.2
3/10/2024 18:00	40.473	17.1
3/10/2024 18:15	26.28	17.7
3/10/2024 18:30	16.66	5.3
3/10/2024 18:45	18.013	5.2
3/10/2024 19:00	23.927	7.9
3/10/2024 19:15	26.347	9.4
3/10/2024 19:30	25.807	13.7
3/10/2024 19:45	24.207	8.8
3/10/2024 20:00	36.747	10.3
3/10/2024 20:15	30.333	9.5
3/10/2024 20:30	36.713	9.2
3/10/2024 20:45	25.433	10.3
3/10/2024 21:00	23.393	8.8
3/10/2024 21:15	22.847	8.6
3/10/2024 21:30	23.393	8.6
3/10/2024 21:45	24.327	8.9
3/10/2024 22:00	21.207	8.6
3/10/2024 22:15	22.68	7.7
3/10/2024 22:30	26.08	7.7
3/10/2024 22:45	68.493	10.8
3/10/2024 23:00	97.56	20.7
3/10/2024 23:15	75.793	22.4
3/10/2024 23:30	51.04	18.1
3/10/2024 23:45	36.887	13.6
3/11/2024 0:00	25.567	10.8
3/11/2024 0:15	26.293	9.8
3/11/2024 0:30	22.167	7.6
3/11/2024 0:45	22.927	8.3
3/11/2024 1:00	21.98	9
3/11/2024 1:15	21.967	8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/11/2024 1:30	20.74	8
3/11/2024 1:45	21.253	8.6
3/11/2024 2:00	19.153	7.6
3/11/2024 2:15	18.973	8.8
3/11/2024 2:30	19.52	7.2
3/11/2024 2:45	17.453	6.8
3/11/2024 3:00	19.453	8.7
3/11/2024 3:15	22.353	7.6
3/11/2024 3:30	17.567	7.8
3/11/2024 3:45	21.793	7.3
3/11/2024 4:00	23.433	8
3/11/2024 4:15	26.287	9.6
3/11/2024 4:30	23.893	9.7
3/11/2024 4:45	25.067	9.6
3/11/2024 5:00	21.85	8.2
3/11/2024 5:15	27.3	0
3/11/2024 5:30	31.54	8.8
3/11/2024 5:45	29.66	8.4
3/11/2024 6:00	26.633	6.8
3/11/2024 6:15	35.38	7.6
3/11/2024 6:30	24.173	8.2
3/11/2024 6:45	36.233	8.8
3/11/2024 7:00	42.693	16.2
3/11/2024 7:15	40.2	19.6
3/11/2024 7:30	37.447	18.8
3/11/2024 7:45	44.293	21.3
3/11/2024 8:00	55.62	21.5
3/11/2024 8:15	59.933	21.9
3/11/2024 8:30	56.373	23.1
3/11/2024 8:45	69.9	19.4
3/11/2024 9:00	87.173	21.1
3/11/2024 9:15	109.12	23.7
3/11/2024 9:30	103.173	24.2
3/11/2024 9:45	94.293	22.2
3/11/2024 10:00	67.48	17.1
3/11/2024 10:15	54.973	14.5
3/11/2024 10:30	53.513	17.2
3/11/2024 10:45	48.64	15.9
3/11/2024 11:00	49.46	13.9
3/11/2024 11:15	59.413	16.6
3/11/2024 11:30	59.393	16.3
3/11/2024 11:45	46.267	15.5
3/11/2024 12:00	45.627	11.7
3/11/2024 12:15	47.053	10.3
3/11/2024 12:30	41.027	10.9
3/11/2024 12:45	38.053	10.4
3/11/2024 13:00	39.587	9.9
3/11/2024 13:15	37.867	10.2
3/11/2024 13:30	36.293	9.6
3/11/2024 13:45	34.4	8.8
3/11/2024 14:00	35.667	9.9
3/11/2024 14:15	36.98	11.5
3/11/2024 14:30	35.38	9.1
3/11/2024 14:45	31.133	8.5
3/11/2024 15:00	33.153	9.7
3/11/2024 15:15	31.353	9
3/11/2024 15:30	29.613	7.1

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/11/2024 15:45	28.627	9.3	3/12/2024 10:30	51.647	10.9	3/13/2024 0:45	102.133	16.3
3/11/2024 16:00	28.44	8.5	3/12/2024 10:45	42.227	11.5	3/13/2024 1:00	104.287	17.1
3/11/2024 16:15	30.133	8.5	3/12/2024 11:00	49.94	13.2	3/13/2024 1:15	123.573	16.8
3/11/2024 16:30	33.007	8.1	3/12/2024 11:15	53.147	17.2	3/13/2024 1:30	103.193	17.9
3/11/2024 16:45	28.047	9	3/12/2024 11:30	45.793	12.7	3/13/2024 1:45	113.267	15.1
3/11/2024 17:00	34.22	8.8	3/12/2024 11:45	44.987	11.7	3/13/2024 2:00	98.72	14.9
3/11/2024 17:15	29.977	7.8	3/12/2024 12:00	55.62	11.5	3/13/2024 2:15	55.227	13.6
3/11/2024 22:00	39.443	0	3/12/2024 12:15	68.48	14.8	3/13/2024 2:30	38.82	9.6
3/11/2024 22:15	37.513	11.2	3/12/2024 12:30	44.82	13.3	3/13/2024 2:45	22.707	6.8
3/11/2024 22:30	33.313	8.8	3/12/2024 12:45	113.447	15.9	3/13/2024 3:00	19.22	6.5
3/11/2024 22:45	34.113	8.1	3/12/2024 13:00	143.88	46.6	3/13/2024 3:15	18.967	4.8
3/11/2024 23:00	35.787	8.1	3/12/2024 13:15	128.56	24.8	3/13/2024 3:30	27.573	6.2
3/11/2024 23:15	32.5	8.4	3/12/2024 13:30	104.527	25.3	3/13/2024 3:45	33.98	5.5
3/11/2024 23:30	34.453	8.8	3/12/2024 13:45	104.173	24.4	3/13/2024 4:00	18.56	5.6
3/11/2024 23:45	36.073	9	3/12/2024 14:00	100.38	25.6	3/13/2024 4:15	18.9	4.4
3/12/2024 0:00	52.447	12.1	3/12/2024 14:15	97.46	22.9	3/13/2024 4:30	24.913	4.2
3/12/2024 0:15	45.793	11.1	3/12/2024 14:30	113.687	24.6	3/13/2024 4:45	25.34	4
3/12/2024 0:30	50.093	10.7	3/12/2024 14:45	115.413	27.4	3/13/2024 5:00	26.22	5.2
3/12/2024 0:45	89.347	20	3/12/2024 15:00	106.32	26.5	3/13/2024 5:15	20.907	4.4
3/12/2024 1:00	47	9.3	3/12/2024 15:15	114.82	24.5	3/13/2024 5:30	18.827	6
3/12/2024 1:15	59.667	9.9	3/12/2024 15:30	109.327	26.1	3/13/2024 5:45	18.187	5
3/12/2024 1:30	78.813	16.4	3/12/2024 15:45	63.373	20.1	3/13/2024 6:00	18.027	4.9
3/12/2024 1:45	129.513	20	3/12/2024 16:00	60.873	17.8	3/13/2024 6:15	16.847	6.2
3/12/2024 2:00	104.92	22.9	3/12/2024 16:15	43.467	13.3	3/13/2024 6:30	18.9	7.1
3/12/2024 2:15	117.473	21.3	3/12/2024 16:30	57.313	15.2	3/13/2024 6:45	17.18	7.6
3/12/2024 2:30	89.073	20	3/12/2024 16:45	82.073	21.2	3/13/2024 7:00	17.24	6.4
3/12/2024 2:45	84.487	17	3/12/2024 17:00	52.107	22.4	3/13/2024 7:15	17.18	6.3
3/12/2024 3:00	88.98	14.9	3/12/2024 17:15	40.06	13.8	3/13/2024 7:30	16.72	7
3/12/2024 3:15	101.867	19.2	3/12/2024 17:30	54.627	19.1	3/13/2024 7:45	18.853	5.5
3/12/2024 3:30	85.66	18	3/12/2024 17:45	63.873	18.9	3/13/2024 8:00	16.86	5.6
3/12/2024 3:45	54.227	15.4	3/12/2024 18:00	86.44	20.5	3/13/2024 8:15	20.933	4.9
3/12/2024 4:00	44.353	10.8	3/12/2024 18:15	82.973	21.8	3/13/2024 8:30	29.233	6.2
3/12/2024 4:15	58.747	9.8	3/12/2024 18:30	86.327	21.8	3/13/2024 8:45	49.193	6.4
3/12/2024 4:30	54.613	11.6	3/12/2024 18:45	168.14	29.8	3/13/2024 9:00	147.653	19.1
3/12/2024 4:45	61.3	13	3/12/2024 19:00	169.54	83.3	3/13/2024 9:15	138.907	18.3
3/12/2024 5:00	89.567	11.3	3/12/2024 19:15	161.193	83.6	3/13/2024 9:30	117.66	21.3
3/12/2024 5:15	44.8	11.8	3/12/2024 19:30	152.74	69.8	3/13/2024 9:45	110.473	21.3
3/12/2024 5:30	57.8	11.1	3/12/2024 19:45	177.533	85	3/13/2024 10:00	84.353	23.4
3/12/2024 5:45	126.587	13.2	3/12/2024 20:00	169.387	79.9	3/13/2024 10:15	51.093	12.8
3/12/2024 6:00	99.307	21.4	3/12/2024 20:15	208.793	84.2	3/13/2024 10:30	54.787	13
3/12/2024 6:15	107.64	21.4	3/12/2024 20:30	211	86.5	3/13/2024 10:45	38.973	11
3/12/2024 6:30	127.18	14.8	3/12/2024 20:45	209.633	85.9	3/13/2024 11:00	42.967	6.8
3/12/2024 6:45	146.873	14.7	3/12/2024 21:00	208.427	62	3/13/2024 11:15	49.94	7.6
3/12/2024 7:00	161.477	0	3/12/2024 21:15	195.64	31.8	3/13/2024 11:30	50.627	7.3
3/12/2024 7:15	121.74	19.1	3/12/2024 21:30	182.567	29.1	3/13/2024 11:45	35.533	12.4
3/12/2024 7:30	101.547	20.1	3/12/2024 21:45	148.46	27.3	3/13/2024 12:00	37.313	9.8
3/12/2024 7:45	50.007	12.8	3/12/2024 22:00	151.747	26.4	3/13/2024 12:15	58.88	5.2
3/12/2024 8:00	68.82	10.5	3/12/2024 22:15	135.067	22.4	3/13/2024 12:30	113.46	22.8
3/12/2024 8:15	50.293	11.3	3/12/2024 22:30	142.12	21.7	3/13/2024 12:45	55.647	24
3/12/2024 8:30	43.64	13.1	3/12/2024 22:45	138.64	21.5	3/13/2024 13:00	56.2	16.2
3/12/2024 8:45	35	10.8	3/12/2024 23:00	134.347	21	3/13/2024 13:15	52.933	8.3
3/12/2024 9:00	52.547	10.6	3/12/2024 23:15	134.607	21.9	3/13/2024 13:30	60.153	13.7
3/12/2024 9:15	61.507	10.2	3/12/2024 23:30	112.813	25.5	3/13/2024 13:45	66.587	15.8
3/12/2024 9:30	47.873	12.1	3/12/2024 23:45	97.7	21.9	3/13/2024 14:00	45.967	13.7
3/12/2024 9:45	81.8	14.8	3/13/2024 0:00	86.54	17.5	3/13/2024 14:15	44.453	5.8
3/12/2024 10:00	72.127	14.3	3/13/2024 0:15	116.78	15.1	3/13/2024 14:30	75.4	18
3/12/2024 10:15	63.313	18.8	3/13/2024 0:30	118.267	15.2	3/13/2024 14:45	56.813	8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/13/2024 15:00	59.473	12.9
3/13/2024 15:15	51.193	8.9
3/13/2024 15:30	47.713	15.5
3/13/2024 15:45	54.327	6.8
3/13/2024 16:00	42.573	8.8
3/13/2024 16:15	41.267	7.7
3/13/2024 16:30	30.973	7.8
3/13/2024 16:45	30.66	4.5
3/13/2024 17:00	45.467	9.3
3/13/2024 17:15	29.887	5
3/13/2024 17:30	20.793	4.7
3/13/2024 17:45	31.673	4.8
3/13/2024 18:00	28.073	10.5
3/13/2024 18:15	23.673	5.9
3/13/2024 18:30	20.927	4.5
3/13/2024 18:45	17.053	5.6
3/13/2024 19:00	16.06	4.7
3/13/2024 19:15	13.667	4.3
3/13/2024 19:30	14.88	3.6
3/13/2024 19:45	13.453	3.4
3/13/2024 20:00	19.533	3.2
3/13/2024 20:15	16.473	4.1
3/13/2024 20:30	25.12	3.9
3/13/2024 20:45	41.08	9.2
3/13/2024 21:00	36.1	11.5
3/13/2024 21:15	43.793	12.1
3/13/2024 21:30	43.853	12.3
3/13/2024 21:45	46.62	14.7
3/13/2024 22:00	50.027	15.2
3/13/2024 22:15	55.86	16.5
3/13/2024 22:30	63.093	20.9
3/13/2024 22:45	65.913	18.9
3/13/2024 23:00	64.467	20.8
3/13/2024 23:15	63.547	19.6
3/13/2024 23:30	69.893	20.9
3/13/2024 23:45	64.633	19.5
3/14/2024 0:00	57.907	19.3
3/14/2024 0:15	72.3	19.8
3/14/2024 0:30	58.3	24
3/14/2024 0:45	44.533	13.5
3/14/2024 1:00	47.3	15.3
3/14/2024 1:15	54.393	14.9
3/14/2024 1:30	48.847	14.1
3/14/2024 1:45	43.96	15.3
3/14/2024 2:00	43.127	10.6
3/14/2024 2:15	47.66	14.2
3/14/2024 2:30	39.247	14.1
3/14/2024 2:45	44.62	14.7
3/14/2024 3:00	46.967	14.4
3/14/2024 3:15	51.573	16
3/14/2024 3:30	46.613	14
3/14/2024 3:45	48.147	15.5
3/14/2024 4:00	42.467	12.2
3/14/2024 4:15	33.647	10.1
3/14/2024 4:30	38.767	7.7
3/14/2024 4:45	44.56	13.3
3/14/2024 5:00	36.187	12.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/14/2024 5:15	37.013	13.7
3/14/2024 5:30	32.873	11.8
3/14/2024 5:45	46.333	15.2
3/14/2024 6:00	40.933	13.8
3/14/2024 6:15	37.347	12
3/14/2024 6:30	39.74	11.8
3/14/2024 6:45	40.6	19.2
3/14/2024 7:00	27.68	7.4
3/14/2024 7:15	28.333	6.2
3/14/2024 7:30	22.407	4.9
3/14/2024 7:45	21.053	4.7
3/14/2024 8:00	15.293	4.8
3/14/2024 8:15	13.367	3.9
3/14/2024 8:30	14.653	3.8
3/14/2024 8:45	17.24	4.8
3/14/2024 9:00	32.44	5.7
3/14/2024 9:15	51.66	9.7
3/14/2024 9:30	44.28	13.2
3/14/2024 9:45	34.273	6.8
3/14/2024 10:00	31.64	10
3/14/2024 10:15	19.533	7.3
3/14/2024 10:30	14.9	5.3
3/14/2024 10:45	15.74	4.2
3/14/2024 11:00	24.873	4.5
3/14/2024 11:15	16.453	4.1
3/14/2024 11:30	13.007	4.2
3/14/2024 11:45	15.147	4.5
3/14/2024 12:00	19.347	5.6
3/14/2024 12:15	17.567	4.6
3/14/2024 12:30	21.827	6
3/14/2024 12:45	21.527	4.6
3/14/2024 13:00	25.58	8.3
3/14/2024 13:15	49.027	11.7
3/14/2024 13:30	30.72	5.2
3/14/2024 13:45	21.127	4.1
3/14/2024 14:00	24.287	3.1
3/14/2024 14:15	31.167	4.6
3/14/2024 14:30	19.867	9.6
3/14/2024 14:45	29.967	5.5
3/14/2024 15:00	19.74	4.4
3/14/2024 15:15	25.28	4
3/14/2024 15:30	24.8	4.2
3/14/2024 15:45	23.227	3.6
3/14/2024 16:00	24.02	3.3
3/14/2024 16:15	27.813	9.7
3/14/2024 16:30	14.993	3.2
3/14/2024 16:45	28.713	4.1
3/14/2024 17:00	18.75	3.3
3/14/2024 20:00	25.6	0
3/14/2024 20:15	18.82	3.9
3/14/2024 20:30	14.44	9.9
3/14/2024 20:45	12.72	2.9
3/14/2024 21:00	15.393	3.6
3/14/2024 21:15	11.46	2.7
3/14/2024 21:30	9.387	3.1
3/14/2024 21:45	12.367	3
3/14/2024 22:00	11.247	2.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/14/2024 22:15	11.56	2.6
3/14/2024 22:30	10.24	2.7
3/14/2024 22:45	9.3	2.2
3/14/2024 23:00	10.433	2.9
3/14/2024 23:15	8.847	2.1
3/14/2024 23:30	10.573	2.9
3/14/2024 23:45	9.513	3.6
3/15/2024 0:00	17.547	2.7
3/15/2024 0:15	12.733	10.7
3/15/2024 0:30	8.82	3.7
3/15/2024 0:45	9.2	3.1
3/15/2024 1:00	10.027	2.6
3/15/2024 1:15	10.52	3.6
3/15/2024 1:30	10.62	4.1
3/15/2024 1:45	10.787	3.4
3/15/2024 2:00	8.553	2.8
3/15/2024 2:15	10.1	3.1
3/15/2024 2:30	18.24	3.1
3/15/2024 2:45	11.54	3.5
3/15/2024 3:00	12.647	2.5
3/15/2024 3:15	11.08	2.2
3/15/2024 3:30	19	2.3
3/15/2024 3:45	11.207	2.9
3/15/2024 4:00	9.467	2.7
3/15/2024 4:15	10.133	2.9
3/15/2024 4:30	10.247	2.9
3/15/2024 4:45	10.013	2.3
3/15/2024 5:00	8.92	1.7
3/15/2024 5:15	11.387	3
3/15/2024 5:30	9.793	2.1
3/15/2024 5:45	13.74	2.1
3/15/2024 6:00	41.587	6.6
3/15/2024 6:15	36.767	6.1
3/15/2024 6:30	63.427	3.4
3/15/2024 6:45	20.62	3.2
3/15/2024 7:00	10.387	2.9
3/15/2024 7:15	26.007	3.4
3/15/2024 7:30	19.207	3.1
3/15/2024 7:45	12.773	3.5
3/15/2024 8:00	17.56	3.3
3/15/2024 8:15	11.007	3.4
3/15/2024 8:30	10.607	2.6
3/15/2024 8:45	13.933	4.5
3/15/2024 9:00	17.627	3.4
3/15/2024 9:15	17.88	7.5
3/15/2024 9:30	16.647	4.2
3/15/2024 9:45	16.307	5
3/15/2024 10:00	20.927	3.4
3/15/2024 10:15	24.307	4.8
3/15/2024 10:30	15.76	4.4
3/15/2024 10:45	16.613	4
3/15/2024 11:00	19.907	3.7
3/15/2024 11:15	25.073	4.7
3/15/2024 11:30	20.76	6.3
3/15/2024 11:45	19.733	3.4
3/15/2024 12:00	31.087	14.1
3/15/2024 12:15	25.107	3.6

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/15/2024 12:30	18.9	7.3	3/16/2024 6:45	21.847	4.4	3/16/2024 21:00	23.113	4.4
3/15/2024 12:45	22.36	7.7	3/16/2024 7:00	26.853	5.1	3/16/2024 21:15	25.013	5.3
3/15/2024 13:00	20.833	7.2	3/16/2024 7:15	23.227	6.5	3/16/2024 21:30	23.787	6.2
3/15/2024 13:15	18.78	4	3/16/2024 7:30	26.467	8.2	3/16/2024 21:45	22.807	4.7
3/15/2024 13:30	35.44	4.6	3/16/2024 7:45	26.553	5.8	3/16/2024 22:00	21.3	6.6
3/15/2024 13:45	18.767	6.2	3/16/2024 8:00	32.1	10.4	3/16/2024 22:15	21.287	4.4
3/15/2024 14:00	18.4	4.4	3/16/2024 8:15	29.333	5.7	3/16/2024 22:30	20.007	5.7
3/15/2024 14:15	20.38	3.2	3/16/2024 8:30	30.153	4.8	3/16/2024 22:45	21.773	6.2
3/15/2024 14:30	16.687	4	3/16/2024 8:45	35.88	8.8	3/16/2024 23:00	22.007	5.1
3/15/2024 14:45	19.893	3.5	3/16/2024 9:00	37.96	6.9	3/16/2024 23:15	21.393	4.6
3/15/2024 15:00	20.4	3.9	3/16/2024 9:15	38.667	10.5	3/16/2024 23:30	25.833	5.4
3/15/2024 15:15	19.947	4.1	3/16/2024 9:30	32.693	8.6	3/16/2024 23:45	35.867	9
3/15/2024 15:30	18.66	4.7	3/16/2024 9:45	31.02	7.5	3/17/2024 0:00	34.98	8.4
3/15/2024 15:45	19.593	4.5	3/16/2024 10:00	38.74	7.1	3/17/2024 0:15	23.5	5.8
3/15/2024 16:00	25.513	4.2	3/16/2024 10:15	44.773	15.1	3/17/2024 0:30	21.86	4.4
3/15/2024 16:15	22.96	4.5	3/16/2024 10:30	34.413	8.2	3/17/2024 0:45	23.473	6.2
3/15/2024 16:30	27.273	5.9	3/16/2024 10:45	33.027	7	3/17/2024 1:00	25.96	5.1
3/15/2024 16:45	19.947	4.9	3/16/2024 11:00	41.213	7.1	3/17/2024 1:15	27.987	6.3
3/15/2024 17:00	18.887	4.8	3/16/2024 11:15	34	5.6	3/17/2024 1:30	30.427	9
3/15/2024 17:15	22.967	6.8	3/16/2024 11:30	26.353	5.6	3/17/2024 1:45	26.627	10.2
3/15/2024 17:30	19.867	4.5	3/16/2024 11:45	28.02	6.6	3/17/2024 2:00	27.92	6.1
3/15/2024 17:45	27.513	3.8	3/16/2024 12:00	26.587	9.7	3/17/2024 2:15	27.687	6.9
3/15/2024 18:00	29.453	4.8	3/16/2024 12:15	31.967	12.7	3/17/2024 2:30	20.467	5.6
3/15/2024 18:15	21.507	5	3/16/2024 12:30	30.627	7.1	3/17/2024 2:45	19.567	4
3/15/2024 18:30	22.153	4.5	3/16/2024 12:45	23.727	9.4	3/17/2024 3:00	22.307	4.8
3/15/2024 18:45	23.347	5.7	3/16/2024 13:00	35.44	4.9	3/17/2024 3:15	27.153	6.6
3/15/2024 19:00	18.387	5.2	3/16/2024 13:15	23.02	6.2	3/17/2024 3:30	22.333	5.1
3/15/2024 19:15	18.793	4.6	3/16/2024 13:30	26.84	5.1	3/17/2024 3:45	20.153	4.7
3/15/2024 19:30	19.787	4.8	3/16/2024 13:45	19.733	4.8	3/17/2024 4:00	22.213	4.4
3/15/2024 19:45	21.053	4.7	3/16/2024 14:00	27.847	18.9	3/17/2024 4:15	18.387	4
3/15/2024 20:00	21.333	4.8	3/16/2024 14:15	24.947	5	3/17/2024 4:30	20.933	5.6
3/15/2024 20:15	24.487	4.6	3/16/2024 14:30	26.78	5	3/17/2024 4:45	17.667	4.2
3/15/2024 20:30	21.56	5.4	3/16/2024 14:45	25.547	5	3/17/2024 5:00	19.28	4.2
3/15/2024 20:45	32.233	4.9	3/16/2024 15:00	24.667	10.3	3/17/2024 5:15	19.687	4.7
3/15/2024 21:00	20.233	4	3/16/2024 15:15	23.387	5.3	3/17/2024 5:30	19.08	4.4
3/15/2024 21:15	22.033	5.6	3/16/2024 15:30	26.747	4.9	3/17/2024 5:45	18.84	4.2
3/15/2024 21:30	19.327	4.5	3/16/2024 15:45	20.453	4.8	3/17/2024 6:00	28.073	5.7
3/15/2024 21:45	20.6	4.1	3/16/2024 16:00	25.867	7.9	3/17/2024 6:15	21.353	3.9
3/15/2024 22:00	23.36	3.8	3/16/2024 16:15	24.807	7.1	3/17/2024 6:30	23.12	5.6
3/15/2024 22:15	19.333	6.7	3/16/2024 16:30	24.68	5.6	3/17/2024 6:45	22.793	4.9
3/16/2024 2:30	13.9	0	3/16/2024 16:45	22.667	5.3	3/17/2024 7:00	23.247	10.1
3/16/2024 2:45	18.767	4.7	3/16/2024 17:00	22.247	6.4	3/17/2024 7:15	19.46	3.9
3/16/2024 3:00	15.427	3.2	3/16/2024 17:15	22.133	6.3	3/17/2024 7:30	20.967	3.8
3/16/2024 3:15	14.42	4.6	3/16/2024 17:30	23.62	12.4	3/17/2024 7:45	24.607	4.1
3/16/2024 3:30	14.64	3.8	3/16/2024 17:45	28.5	8.6	3/17/2024 8:00	20.387	6.6
3/16/2024 3:45	14.533	3.3	3/16/2024 18:00	33.36	7.5	3/17/2024 8:15	22.52	5.2
3/16/2024 4:00	40.127	3.2	3/16/2024 18:15	33.24	8.5	3/17/2024 8:30	24.233	4.3
3/16/2024 4:15	21.04	4.4	3/16/2024 18:30	29.813	6.6	3/17/2024 8:45	26.847	5.1
3/16/2024 4:30	16.653	4.9	3/16/2024 18:45	28	9.1	3/17/2024 9:00	32.867	6.8
3/16/2024 4:45	17.127	4.4	3/16/2024 19:00	22.18	5.9	3/17/2024 9:15	31.34	8.6
3/16/2024 5:00	12.54	3.8	3/16/2024 19:15	21.787	4.9	3/17/2024 9:30	40.18	6.5
3/16/2024 5:15	14.373	3.6	3/16/2024 19:30	21.853	5.7	3/17/2024 9:45	29.547	6.5
3/16/2024 5:30	17.24	4.9	3/16/2024 19:45	21.593	5.2	3/17/2024 10:00	31.853	5.8
3/16/2024 5:45	13.793	3.4	3/16/2024 20:00	24.44	6.6	3/17/2024 10:15	28.387	8.5
3/16/2024 6:00	14.62	3.4	3/16/2024 20:15	26.96	7.7	3/17/2024 10:30	42.273	6
3/16/2024 6:15	14.267	4.2	3/16/2024 20:30	23.873	5.6	3/17/2024 10:45	26.927	5.4
3/16/2024 6:30	16.507	4.5	3/16/2024 20:45	21.327	4.8	3/17/2024 11:00	31.287	7.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/17/2024 11:15	31.76	7.9
3/17/2024 11:30	27.92	8.2
3/17/2024 11:45	29.66	5.9
3/17/2024 12:00	30.227	7.2
3/17/2024 12:15	33.04	8.9
3/17/2024 12:30	28.233	7.9
3/17/2024 12:45	34.807	8.6
3/17/2024 13:00	28.92	9.4
3/17/2024 13:15	28.173	7.4
3/17/2024 13:30	30.547	8.1
3/17/2024 13:45	31.453	8.5
3/17/2024 14:00	29.473	8.8
3/17/2024 14:15	26.94	7.4
3/17/2024 14:30	28.727	7.9
3/17/2024 14:45	24.427	8.1
3/17/2024 15:00	23.607	7.3
3/17/2024 15:15	30.54	9.3
3/17/2024 15:30	23.813	9.6
3/17/2024 15:45	26.32	9.4
3/17/2024 16:00	23.86	9.1
3/17/2024 16:15	25.3	6.9
3/17/2024 16:30	25.493	7.9
3/17/2024 16:45	26.893	9.1
3/17/2024 17:00	24.607	8
3/17/2024 17:15	26.62	7.4
3/17/2024 17:30	24.933	7.9
3/17/2024 17:45	26.933	10.2
3/17/2024 18:00	29.14	7.8
3/17/2024 18:15	30.527	8.5
3/17/2024 18:30	28.707	7.8
3/17/2024 18:45	29.987	8.8
3/17/2024 19:00	31.507	8.7
3/17/2024 19:15	32.033	7.7
3/17/2024 19:30	33.753	8.8
3/17/2024 19:45	35.46	8.2
3/17/2024 20:00	33.193	9.5
3/17/2024 20:15	45.5	9.8
3/17/2024 20:30	32.447	8.1
3/17/2024 20:45	37.3	10.4
3/17/2024 21:00	36.067	8.7
3/17/2024 21:15	40.593	8.7
3/17/2024 21:30	53.453	13
3/17/2024 21:45	57.4	12.1
3/17/2024 22:00	48.767	12.7
3/17/2024 22:15	46.953	10.6
3/17/2024 22:30	46.713	13.9
3/17/2024 22:45	45.76	13
3/17/2024 23:00	45.1	12.7
3/17/2024 23:15	49.253	14.5
3/17/2024 23:30	44.467	11.3
3/17/2024 23:45	50.393	12.2
3/18/2024 0:00	50.673	17.3
3/18/2024 0:15	45.493	15.6
3/18/2024 0:30	44.427	11.9
3/18/2024 0:45	45.86	17.2
3/18/2024 1:00	39.773	13.8
3/18/2024 1:15	38.487	10.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/18/2024 1:30	37.653	11
3/18/2024 1:45	43.587	11.6
3/18/2024 2:00	35.887	9.8
3/18/2024 2:15	37.94	9.3
3/18/2024 2:30	38.893	12.8
3/18/2024 2:45	39.76	8.2
3/18/2024 3:00	38.653	12.1
3/18/2024 3:15	42.387	11.7
3/18/2024 3:30	36.827	9.7
3/18/2024 3:45	36.553	9.9
3/18/2024 4:00	58.1	10.4
3/18/2024 4:15	63.873	13.3
3/18/2024 4:30	60.027	17.9
3/18/2024 4:45	52.253	15.1
3/18/2024 5:00	42.973	11.5
3/18/2024 5:15	42.533	10.9
3/18/2024 5:30	40.033	8.6
3/18/2024 5:45	46.227	8.8
3/18/2024 6:00	38.727	11.2
3/18/2024 6:15	41.02	11.4
3/18/2024 6:30	50.873	9.8
3/18/2024 6:45	46.507	9.3
3/18/2024 7:00	43.52	11.5
3/18/2024 7:15	43.56	14.9
3/18/2024 7:30	61.633	11.6
3/18/2024 7:45	121.9	22.5
3/18/2024 8:00	54.193	14.8
3/18/2024 8:15	51.533	15.1
3/18/2024 8:30	44.28	10.7
3/18/2024 8:45	39.58	9.8
3/18/2024 9:00	36.78	9.3
3/18/2024 9:15	47.44	10.9
3/18/2024 9:30	54.547	11.3
3/18/2024 9:45	47.693	17.2
3/18/2024 10:00	41.487	11.9
3/18/2024 10:15	43.16	18.5
3/18/2024 10:30	39.867	10.4
3/18/2024 10:45	47.273	15.5
3/18/2024 11:00	37.033	16.6
3/18/2024 11:15	34.747	11.5
3/18/2024 11:30	40.147	13.8
3/18/2024 11:45	34.2	9.7
3/18/2024 12:00	26.553	8.6
3/18/2024 12:15	33.967	10.6
3/18/2024 12:30	30.867	10.8
3/18/2024 12:45	29.507	9.5
3/18/2024 13:00	27.74	9.5
3/18/2024 13:15	27.167	13.5
3/18/2024 13:30	27.373	7.9
3/18/2024 13:45	25.847	9.7
3/18/2024 14:00	27.773	8.7
3/18/2024 14:15	24.167	7.3
3/18/2024 14:30	26.34	8.3
3/18/2024 14:45	27.893	18.5
3/18/2024 15:00	28.46	8.1
3/18/2024 15:15	26.713	8.9
3/18/2024 15:30	33.713	9.8

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/18/2024 15:45	24.533	8.5
3/18/2024 16:00	28.12	8.4
3/18/2024 16:15	24.047	9.6
3/18/2024 16:30	24.8	7.6
3/18/2024 16:45	31.387	7.3
3/18/2024 17:00	22.687	7.8
3/18/2024 17:15	29.947	8.4
3/18/2024 17:30	22.46	10
3/18/2024 17:45	25.653	7.5
3/18/2024 18:00	29.9	8.1
3/18/2024 18:15	29.16	8.2
3/18/2024 18:30	28.32	8.8
3/18/2024 18:45	22.593	7.3
3/18/2024 19:00	22.927	8.2
3/18/2024 19:15	22.533	8.3
3/18/2024 19:30	23.833	8.4
3/18/2024 19:45	27.587	9
3/18/2024 20:00	27.213	8
3/18/2024 20:15	29.247	8.1
3/18/2024 20:30	23.207	8.4
3/18/2024 20:45	28.62	8.9
3/18/2024 21:00	25.467	8.9
3/18/2024 21:15	36.7	7.6
3/18/2024 21:30	31.173	10.2
3/18/2024 21:45	28.253	10.1
3/18/2024 22:00	49.727	10.3
3/18/2024 22:15	35.053	10
3/18/2024 22:30	34.513	9.9
3/18/2024 22:45	32.707	8.1
3/18/2024 23:00	28.633	8.7
3/18/2024 23:15	31.44	9.6
3/18/2024 23:30	35.567	8.8
3/18/2024 23:45	33.98	8.1
3/19/2024 0:00	31.12	8.7
3/19/2024 0:15	37.653	9.9
3/19/2024 0:30	37.007	10.2
3/19/2024 0:45	31.627	9.2
3/19/2024 1:00	36.64	9.1
3/19/2024 1:15	34.733	9.9
3/19/2024 1:30	34.673	9.2
3/19/2024 1:45	32.713	9.5
3/19/2024 2:00	32.8	10.2
3/19/2024 2:15	30.613	9.6
3/19/2024 2:30	31.68	9.5
3/19/2024 2:45	31.313	9
3/19/2024 3:00	31.92	8.9
3/19/2024 3:15	28.98	8.3
3/19/2024 3:30	30.907	10.2
3/19/2024 3:45	32.787	7.6
3/19/2024 4:00	32	8.3
3/19/2024 4:15	68.467	11.1
3/19/2024 4:30	87.24	20.8
3/19/2024 4:45	44.053	18.9
3/19/2024 5:00	44.773	9.9
3/19/2024 5:15	33.987	8.6
3/19/2024 5:30	49.593	10.2
3/19/2024 5:45	35.053	9.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/19/2024 6:00	35.413	7.9
3/19/2024 6:15	34.593	8.7
3/19/2024 6:30	34.893	8.3
3/19/2024 6:45	33.067	10.7
3/19/2024 7:00	34.62	9.4
3/19/2024 7:15	38.747	10.3
3/19/2024 7:30	33.3	9.1
3/19/2024 7:45	47.867	8.8
3/19/2024 8:00	45.48	17.7
3/19/2024 8:15	43.96	12.6
3/19/2024 8:30	38.887	10
3/19/2024 8:45	31.607	9
3/19/2024 9:00	31.1	9.9
3/19/2024 9:15	34.46	9.5
3/19/2024 9:30	33.267	7.7
3/19/2024 9:45	35.627	9.8
3/19/2024 10:00	27.14	10.8
3/19/2024 10:15	27.087	8.5
3/19/2024 10:30	32.14	9.8
3/19/2024 10:45	28.26	6.9
3/19/2024 11:00	36.933	7
3/19/2024 11:15	49.707	13.1
3/19/2024 11:30	59.667	18.3
3/19/2024 11:45	48.993	17.8
3/19/2024 12:00	42.267	10
3/19/2024 12:15	44.487	9.4
3/19/2024 12:30	49.867	9.5
3/19/2024 12:45	35.573	15.4
3/19/2024 13:00	33.253	8.4
3/19/2024 13:15	32.147	9.5
3/19/2024 13:30	34.153	9.4
3/19/2024 13:45	27.427	7.3
3/19/2024 14:00	29.12	12.3
3/19/2024 14:15	33.107	9.3
3/19/2024 14:30	26.867	9
3/19/2024 14:45	24.9	8.4
3/19/2024 15:00	31.747	7.8
3/19/2024 15:15	25.46	8.7
3/19/2024 15:30	24.28	9.6
3/19/2024 15:45	25.633	6.8
3/19/2024 16:00	23.647	7.2
3/19/2024 16:15	25.38	8
3/19/2024 16:30	26.307	6.8
3/19/2024 16:45	24.033	10.7
3/19/2024 17:00	26.407	8.5
3/19/2024 17:15	27.367	8.2
3/19/2024 17:30	29.433	8.1
3/19/2024 17:45	26.887	8.2
3/19/2024 18:00	27.187	15.1
3/19/2024 18:15	23.393	8.3
3/19/2024 18:30	27.627	9.1
3/19/2024 18:45	32.84	10.3
3/19/2024 19:00	28.78	9.6
3/19/2024 19:15	29.753	8.2
3/19/2024 19:30	40.38	10
3/19/2024 19:45	35.953	10.8
3/19/2024 20:00	33.887	10.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/19/2024 20:15	28.28	8.8
3/19/2024 20:30	29.193	9
3/19/2024 20:45	26.1	8.3
3/19/2024 21:00	27.367	8.2
3/19/2024 21:15	26.393	7.5
3/19/2024 21:30	28.913	9.6
3/19/2024 21:45	25.293	7.1
3/19/2024 22:00	23.893	9.2
3/19/2024 22:15	23.693	6.7
3/19/2024 22:30	25.833	8.4
3/19/2024 22:45	26.787	7.6
3/19/2024 23:00	26.767	8.7
3/19/2024 23:15	26	8.7
3/19/2024 23:30	26.593	8
3/19/2024 23:45	28.26	8
3/20/2024 0:00	26.567	8.6
3/20/2024 0:15	28.12	9.3
3/20/2024 0:30	31.307	8
3/20/2024 0:45	29.513	10.2
3/20/2024 1:00	28.94	8.4
3/20/2024 1:15	30.687	8.7
3/20/2024 1:30	32.62	6.8
3/20/2024 1:45	37	10.4
3/20/2024 2:00	38.94	10.6
3/20/2024 2:15	44.213	11.3
3/20/2024 2:30	46.467	14.6
3/20/2024 2:45	42.347	11.4
3/20/2024 3:00	39.047	13.3
3/20/2024 3:15	45.987	14.8
3/20/2024 3:30	66.447	12.6
3/20/2024 3:45	66.7	18.5
3/20/2024 4:00	47.093	13.9
3/20/2024 4:15	43.953	12.9
3/20/2024 4:30	42.82	17.8
3/20/2024 4:45	43.873	11.8
3/20/2024 5:00	35.773	12.4
3/20/2024 5:15	51.173	9.8
3/20/2024 5:30	63.307	19
3/20/2024 5:45	71.26	18.9
3/20/2024 6:00	45.087	10.3
3/20/2024 6:15	29.86	8
3/20/2024 6:30	22.147	6.1
3/20/2024 6:45	23.913	7.5
3/20/2024 7:00	25.253	6.3
3/20/2024 7:15	25.167	6.9
3/20/2024 7:30	28.92	8.1
3/20/2024 7:45	28.767	10.2
3/20/2024 8:00	32.713	8.1
3/20/2024 8:15	31.993	10.3
3/20/2024 8:30	36.753	11
3/20/2024 8:45	40.607	10
3/20/2024 9:00	39.98	10.8
3/20/2024 9:15	44.08	11.6
3/20/2024 9:30	37.513	9.9
3/20/2024 9:45	41.193	10.1
3/20/2024 10:00	82.293	12.3
3/20/2024 10:15	60.78	15.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/20/2024 10:30	77.327	16.6
3/20/2024 10:45	81.093	25.2
3/20/2024 11:00	70.3	12.5
3/20/2024 11:15	80.387	21.7
3/20/2024 11:30	112.733	25.3
3/20/2024 11:45	103.86	21.5
3/20/2024 12:00	91.113	22.1
3/20/2024 12:15	107.567	20.3
3/20/2024 12:30	119.527	25.8
3/20/2024 12:45	93.307	23.7
3/20/2024 13:00	63.28	17.4
3/20/2024 13:15	49.653	17.2
3/20/2024 13:30	81.693	19.3
3/20/2024 13:45	75.5	22.2
3/20/2024 14:00	66.407	18.1
3/20/2024 14:15	67.127	20.4
3/20/2024 14:30	38.413	20.2
3/20/2024 14:45	30.28	11.5
3/20/2024 15:00	28.74	10.5
3/20/2024 15:15	27.58	10.3
3/20/2024 15:30	33.147	8.5
3/20/2024 15:45	27.553	10.6
3/20/2024 16:00	30.047	8.9
3/20/2024 16:15	27.467	9.4
3/20/2024 16:30	35.247	13.1
3/20/2024 16:45	29.413	9.5
3/20/2024 17:00	36.527	12.1
3/20/2024 17:15	39.087	10.8
3/20/2024 17:30	37.553	9.3
3/20/2024 17:45	38.5	19
3/20/2024 18:00	32.46	11.3
3/20/2024 18:15	32.54	10.2
3/20/2024 18:30	38.453	10.9
3/20/2024 18:45	35.113	15.5
3/20/2024 19:00	37.447	13.1
3/20/2024 19:15	34.247	10.5
3/20/2024 19:30	33.66	12.8
3/20/2024 19:45	32.447	10.7
3/20/2024 20:00	29.293	10
3/20/2024 20:15	31.8	10.8
3/20/2024 20:30	30.22	9.9
3/20/2024 20:45	34.007	10.5
3/20/2024 21:00	30.613	9.9
3/20/2024 21:15	31.573	9.7
3/20/2024 21:30	32.793	8.7
3/20/2024 21:45	31.293	9.5
3/20/2024 22:00	31.34	10.1
3/20/2024 22:15	31.273	9.8
3/20/2024 22:30	34.193	11.5
3/20/2024 22:45	36.26	14
3/20/2024 23:00	51.293	13.5
3/20/2024 23:15	119.56	24.3
3/20/2024 23:30	116.627	26.4
3/20/2024 23:45	119.773	27.4
3/21/2024 0:00	147.18	29
3/21/2024 0:15	136.927	29.3
3/21/2024 0:30	114.547	28.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/21/2024 0:45	85.267	25
3/21/2024 1:00	55.94	18.7
3/21/2024 1:15	59.847	19.7
3/21/2024 1:30	52.62	22.4
3/21/2024 1:45	49.66	17.4
3/21/2024 2:00	50.467	16.7
3/21/2024 2:15	40.613	17
3/21/2024 2:30	40.587	15.2
3/21/2024 2:45	54.293	15.2
3/21/2024 3:00	58.953	16.2
3/21/2024 3:15	60.8	17.6
3/21/2024 3:30	66.04	18.8
3/21/2024 3:45	74.953	20
3/21/2024 4:00	50.9	20.2
3/21/2024 4:15	30.653	11.2
3/21/2024 4:30	34.493	9.9
3/21/2024 4:45	29.46	10.5
3/21/2024 5:00	32.807	11.3
3/21/2024 5:15	31.833	11
3/21/2024 5:30	33.26	9.9
3/21/2024 5:45	32.34	9.5
3/21/2024 6:00	29.193	9.1
3/21/2024 6:15	28.187	10.2
3/21/2024 6:30	29.013	8.8
3/21/2024 6:45	30.807	10.8
3/21/2024 7:00	33.36	8.4
3/21/2024 7:15	29.627	11.5
3/21/2024 7:30	29.1	8.8
3/21/2024 7:45	31.34	8.7
3/21/2024 8:00	33.087	9
3/21/2024 8:15	28.58	10.6
3/21/2024 8:30	30.693	10.6
3/21/2024 8:45	32.34	11.6
3/21/2024 9:00	32.393	10.9
3/21/2024 9:15	30.287	10.2
3/21/2024 9:30	27.76	9.9
3/21/2024 9:45	28.227	8.6
3/21/2024 10:00	26.06	9.8
3/21/2024 10:15	23.107	8
3/21/2024 10:30	23.82	8.7
3/21/2024 10:45	26.773	5.9
3/21/2024 11:00	21.814	6.6
3/21/2024 17:45	32.533	11.5
3/21/2024 18:00	38.02	16.4
3/21/2024 18:15	31.347	12.8
3/21/2024 18:30	30.507	13.5
3/21/2024 18:45	31.227	10.4
3/21/2024 19:00	30.233	9.4
3/21/2024 19:15	27.4	10.4
3/21/2024 19:30	32.5	9.5
3/21/2024 19:45	27.807	9.4
3/21/2024 20:00	29.64	10.6
3/21/2024 20:15	28.793	7.9
3/21/2024 20:30	30.12	10.8
3/21/2024 20:45	31.087	10.3
3/21/2024 21:00	27.393	9.6
3/21/2024 21:15	30.84	13.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/21/2024 21:30	27.593	8.7
3/21/2024 21:45	27.58	10.8
3/21/2024 22:00	27.593	8.6
3/21/2024 22:15	27.66	9.2
3/21/2024 22:30	28.587	8.7
3/21/2024 22:45	28.367	9.2
3/21/2024 23:00	25.7	8.3
3/21/2024 23:15	27.407	7.9
3/21/2024 23:30	29.693	10.3
3/21/2024 23:45	30.9	8.3
3/22/2024 0:00	33.773	9.5
3/22/2024 0:15	31.047	7.8
3/22/2024 0:30	33.42	8.8
3/22/2024 0:45	32.773	9.5
3/22/2024 1:00	34.187	8
3/22/2024 1:15	28.92	9.9
3/22/2024 1:30	28.04	8.8
3/22/2024 1:45	27.207	9.6
3/22/2024 2:00	27.48	9.5
3/22/2024 2:15	19.207	5.2
3/22/2024 2:30	20.407	5.1
3/22/2024 2:45	24.72	6.7
3/22/2024 3:00	22.793	6.6
3/22/2024 3:15	22.1	6.3
3/22/2024 3:30	32.16	9.5
3/22/2024 3:45	37.54	12
3/22/2024 4:00	35.28	14.5
3/22/2024 4:15	37.433	12.6
3/22/2024 4:30	27.887	8.9
3/22/2024 4:45	28.187	8.2
3/22/2024 5:00	31.373	8.3
3/22/2024 5:15	34.967	7.1
3/22/2024 5:30	28	6.8
3/22/2024 5:45	26.273	7.2
3/22/2024 6:00	31.94	6.7
3/22/2024 6:15	27.22	9.1
3/22/2024 6:30	41.967	8.1
3/22/2024 6:45	44.913	8.9
3/22/2024 7:00	27.053	6.4
3/22/2024 7:15	23.647	8
3/22/2024 7:30	26.607	5.5
3/22/2024 7:45	26.1	7.1
3/22/2024 8:00	36.047	6.4
3/22/2024 8:15	48.2	9.4
3/22/2024 8:30	68.433	7.8
3/22/2024 8:45	40.167	11.8
3/22/2024 9:00	48.167	13.3
3/22/2024 9:15	32.533	5.4
3/22/2024 9:30	30.667	16.6
3/22/2024 9:45	32.273	8.8
3/22/2024 10:00	27.193	6.6
3/22/2024 10:15	28.093	7.3
3/22/2024 10:30	26.373	7.1
3/22/2024 10:45	30.267	8.6
3/22/2024 11:00	27.287	6.8
3/22/2024 11:15	26.953	8.8
3/22/2024 11:30	29.233	5.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/22/2024 11:45	28.873	12.8
3/22/2024 12:00	24.153	5.2
3/22/2024 12:15	23.393	5.4
3/22/2024 12:30	26.613	5.1
3/22/2024 12:45	22.367	6.9
3/22/2024 13:00	24.907	5.9
3/22/2024 13:15	29.367	7.5
3/22/2024 13:30	28.433	10.4
3/22/2024 13:45	28.667	13.9
3/22/2024 14:00	24.22	7
3/22/2024 14:15	23.447	8.4
3/22/2024 14:30	23.093	6.7
3/22/2024 14:45	22.367	7.1
3/22/2024 15:00	21.867	7.2
3/22/2024 15:15	27.287	6.9
3/22/2024 15:30	24.213	7.2
3/22/2024 15:45	24.067	8
3/22/2024 16:00	25.14	7.9
3/22/2024 16:15	23.207	7.8
3/22/2024 16:30	23.973	7.1
3/22/2024 16:45	28.133	7.1
3/22/2024 17:00	24.553	8.9
3/22/2024 17:15	25.86	8.2
3/22/2024 17:30	26.12	9.2
3/22/2024 17:45	27.387	9.5
3/22/2024 18:00	26.22	8.9
3/22/2024 18:15	29.133	8.2
3/22/2024 18:30	27.68	8.2
3/22/2024 18:45	29.167	8.6
3/22/2024 19:00	31.24	8.5
3/22/2024 19:15	32.427	9.1
3/22/2024 19:30	31.74	9
3/22/2024 19:45	31.94	8.4
3/22/2024 20:00	35.327	8.8
3/22/2024 20:15	37.02	9.5
3/22/2024 20:30	33.407	8.7
3/22/2024 20:45	31.413	7.8
3/22/2024 21:00	29.007	9.6
3/22/2024 21:15	40.04	7.8
3/22/2024 21:30	34.62	9.9
3/22/2024 21:45	34.913	7.9
3/22/2024 22:00	41.647	8.8
3/22/2024 22:15	34.227	8.9
3/22/2024 22:30	33.187	6.7
3/22/2024 22:45	34.167	9.2
3/22/2024 23:00	34.187	10
3/22/2024 23:15	25.633	7
3/22/2024 23:30	24.887	6.2
3/22/2024 23:45	35.76	7
3/23/2024 0:00	39.653	6.7
3/23/2024 0:15	35.367	7.7
3/23/2024 0:30	40.52	8.3
3/23/2024 0:45	42.907	10
3/23/2024 1:00	50.087	15.6
3/23/2024 1:15	39.833	8.7
3/23/2024 1:30	41.293	8.3
3/23/2024 1:45	40.193	9.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/23/2024 2:00	35.62	9.5
3/23/2024 2:15	35.4	8.5
3/23/2024 2:30	35.02	9.6
3/23/2024 2:45	35.74	9.2
3/23/2024 3:00	37.92	8.4
3/23/2024 3:15	37.86	8.8
3/23/2024 3:30	37.48	11.2
3/23/2024 3:45	37.093	10.5
3/23/2024 4:00	39.427	10.5
3/23/2024 4:15	39.707	11.5
3/23/2024 4:30	40.013	11.9
3/23/2024 4:45	38.66	10.8
3/23/2024 5:00	40.187	10.1
3/23/2024 5:15	41.027	11.3
3/23/2024 5:30	37.633	10.1
3/23/2024 5:45	34.653	9.2
3/23/2024 6:00	35.82	11
3/23/2024 6:15	38.167	9.5
3/23/2024 6:30	37.527	8.7
3/23/2024 6:45	37.94	10.9
3/23/2024 7:00	52.387	11.3
3/23/2024 7:15	39.373	9.3
3/23/2024 7:30	36.453	10.1
3/23/2024 7:45	31.933	10
3/23/2024 8:00	36.427	9.5
3/23/2024 8:15	39.24	12.1
3/23/2024 8:30	34.473	10.2
3/23/2024 8:45	32.4	9.6
3/23/2024 9:00	33.673	9.2
3/23/2024 9:15	37.253	10.2
3/23/2024 9:30	30.773	10
3/23/2024 9:45	34.207	9.8
3/23/2024 10:00	40.727	10.3
3/23/2024 10:15	31.54	8.4
3/23/2024 10:30	32.933	11.7
3/23/2024 10:45	32.16	9
3/23/2024 11:00	31.9	14.1
3/23/2024 11:15	26.733	8.3
3/23/2024 11:30	34.627	8.8
3/23/2024 11:45	31.167	14.8
3/23/2024 12:00	24.987	8.5
3/23/2024 12:15	25.98	8.7
3/23/2024 12:30	45	9.1
3/23/2024 12:45	34.973	11.5
3/23/2024 13:00	30.927	8
3/23/2024 13:15	24.747	9.9
3/23/2024 13:30	21.853	6.7
3/23/2024 13:45	22.633	6.9
3/23/2024 14:00	22.007	7.8
3/23/2024 14:15	22.053	7.4
3/23/2024 14:30	26.48	7.1
3/23/2024 14:45	23.987	7.3
3/23/2024 15:00	24.733	6.3
3/23/2024 15:15	27.833	11.3
3/23/2024 15:30	22.54	7.2
3/23/2024 15:45	19.107	7.3
3/23/2024 16:00	16.113	5.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/23/2024 16:15	21.487	7.2
3/23/2024 16:30	21.193	6.1
3/23/2024 16:45	19.26	8.8
3/23/2024 17:00	18.573	5.5
3/23/2024 17:15	20.113	6.1
3/23/2024 17:30	21.04	6.5
3/23/2024 17:45	22.513	7
3/23/2024 18:00	40.4	7.8
3/23/2024 18:15	30.127	12.7
3/23/2024 18:30	25.733	6.8
3/23/2024 18:45	26.473	6.5
3/23/2024 19:00	27.1	6.7
3/23/2024 19:15	25.62	7.3
3/23/2024 19:30	22.913	7.6
3/23/2024 19:45	24.46	7.5
3/23/2024 20:00	22.4	6.5
3/23/2024 20:15	20.46	6.8
3/23/2024 20:30	20.02	8.4
3/23/2024 20:45	21.827	6.2
3/23/2024 21:00	20.047	6.4
3/23/2024 21:15	24.52	8.4
3/23/2024 21:30	21.313	5.8
3/23/2024 21:45	22.187	5.2
3/23/2024 22:00	23.74	7.6
3/23/2024 22:15	22.947	7.2
3/23/2024 22:30	25.94	7
3/23/2024 22:45	24.947	6.2
3/23/2024 23:00	26.087	7.1
3/23/2024 23:15	29.527	7
3/23/2024 23:30	30.913	8.6
3/23/2024 23:45	26.687	8.1
3/24/2024 0:00	34.613	8.2
3/24/2024 0:15	33.053	9.2
3/24/2024 0:30	26.707	6.5
3/24/2024 0:45	25.567	6.3
3/24/2024 1:00	21.58	7.2
3/24/2024 1:15	21.38	7
3/24/2024 1:30	22.013	6
3/24/2024 1:45	20.913	6.2
3/24/2024 2:00	18.567	5.9
3/24/2024 2:15	23.633	5.7
3/24/2024 2:30	19.967	7.4
3/24/2024 2:45	20.813	5.9
3/24/2024 3:00	22.72	6
3/24/2024 3:15	24.667	7
3/24/2024 3:30	21.207	7.1
3/24/2024 3:45	37.72	6.6
3/24/2024 4:00	27.927	10.1
3/24/2024 4:15	37.747	7.6
3/24/2024 4:30	35.24	6.9
3/24/2024 4:45	20.76	7.4
3/24/2024 5:00	19.86	6
3/24/2024 5:15	25.047	7.9
3/24/2024 5:30	19.233	5.7
3/24/2024 5:45	24.48	6.4
3/24/2024 6:00	23.067	7.3
3/24/2024 6:15	28.927	7.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/24/2024 6:30	26.327	8.5
3/24/2024 6:45	23.587	7.4
3/24/2024 7:00	22.853	7.6
3/24/2024 7:15	27.447	10.3
3/24/2024 7:30	44.233	8.7
3/24/2024 7:45	27.267	11.5
3/24/2024 8:00	22.993	6.9
3/24/2024 8:15	24.053	6.1
3/24/2024 8:30	25.547	6.9
3/24/2024 8:45	21.707	7.7
3/24/2024 9:00	21.047	6.2
3/24/2024 9:15	21.113	7
3/24/2024 9:30	20.347	5.1
3/24/2024 9:45	15.427	4.5
3/24/2024 10:00	18.96	4.4
3/24/2024 10:15	20.067	4.8
3/24/2024 10:30	19.933	5.6
3/24/2024 10:45	18.247	5.5
3/24/2024 11:00	21.333	6.8
3/24/2024 11:15	27.047	5.9
3/24/2024 11:30	26.333	6.8
3/24/2024 11:45	23.467	7.7
3/24/2024 12:00	20.64	6.7
3/24/2024 12:15	20.807	5.7
3/24/2024 12:30	19.66	6.6
3/24/2024 12:45	21.867	6.8
3/24/2024 13:00	21.14	6.9
3/24/2024 13:15	20.473	6
3/24/2024 13:30	20.647	7.4
3/24/2024 13:45	18.813	6.6
3/24/2024 14:00	21.287	6.2
3/24/2024 14:15	19.84	10.4
3/24/2024 14:30	19.06	6.8
3/24/2024 14:45	20.92	11.8
3/24/2024 15:00	20	6.4
3/24/2024 15:15	20.427	7
3/24/2024 15:30	20.98	6.2
3/24/2024 15:45	22.78	6.2
3/24/2024 16:00	21.84	15.9
3/24/2024 16:15	18.953	6.3
3/24/2024 16:30	21.167	6.5
3/24/2024 16:45	18.8	6
3/24/2024 17:00	18.307	6.4
3/24/2024 17:15	22.7	7.7
3/24/2024 17:30	19.947	6.5
3/24/2024 17:45	22.613	6
3/24/2024 18:00	22.8	7.6
3/24/2024 18:15	24.587	7.9
3/24/2024 18:30	21.6	7
3/24/2024 18:45	20.56	7.2
3/24/2024 19:00	21.853	6.6
3/24/2024 19:15	24.36	7.2
3/24/2024 19:30	25.16	6.5
3/24/2024 19:45	23.88	6.3
3/24/2024 20:00	22.367	6.8
3/24/2024 20:15	26.853	8.5
3/24/2024 20:30	24.527	7.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/24/2024 20:45	27.487	7.3
3/24/2024 21:00	25.82	7.1
3/24/2024 21:15	24.573	6.8
3/24/2024 21:30	24.32	6.3
3/24/2024 21:45	24.007	7
3/24/2024 22:00	25.88	7.7
3/24/2024 22:15	26.607	7.6
3/24/2024 22:30	26.587	8.4
3/24/2024 22:45	26.32	7.7
3/24/2024 23:00	23.133	7.3
3/24/2024 23:15	22.467	6.2
3/24/2024 23:30	22.973	6.8
3/24/2024 23:45	24.613	7.1
3/25/2024 0:00	24.207	8
3/25/2024 0:15	20.067	6.7
3/25/2024 0:30	22.393	8.6
3/25/2024 0:45	24.34	7.9
3/25/2024 1:00	26.367	8.3
3/25/2024 1:15	27.167	8.7
3/25/2024 1:30	28.98	8.7
3/25/2024 1:45	26.94	9.5
3/25/2024 2:00	30.173	7.4
3/25/2024 2:15	30.567	7.5
3/25/2024 2:30	27.38	8.8
3/25/2024 2:45	27.353	7.3
3/25/2024 3:00	30.293	8.7
3/25/2024 3:15	27.907	8
3/25/2024 3:30	28.227	8.9
3/25/2024 3:45	35.653	6
3/25/2024 4:00	36.66	9
3/25/2024 4:15	43.853	8.9
3/25/2024 4:30	39.573	15.2
3/25/2024 4:45	33.507	8.8
3/25/2024 5:00	29.393	8.5
3/25/2024 5:15	30.073	8.3
3/25/2024 5:30	34.12	8.2
3/25/2024 5:45	24.5	7.7
3/25/2024 6:00	22.727	7.9
3/25/2024 6:15	25.52	7.5
3/25/2024 6:30	25.733	7.3
3/25/2024 6:45	26.24	7.5
3/25/2024 7:00	26.153	9
3/25/2024 7:15	26.673	7.1
3/25/2024 7:30	30.967	9.6
3/25/2024 7:45	36.293	9.7
3/25/2024 8:00	33.987	8
3/25/2024 8:15	32.1	8.6
3/25/2024 8:30	36.907	9
3/25/2024 8:45	30.767	9
3/25/2024 9:00	25.613	8.4
3/25/2024 9:15	27.513	8.9
3/25/2024 9:30	29.34	9.1
3/25/2024 9:45	42.633	7.2
3/25/2024 10:00	27.133	7.4
3/25/2024 10:15	25.84	10.1
3/25/2024 10:30	32.76	9.1
3/25/2024 10:45	29.013	7.5

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/25/2024 11:00	32.027	9.8
3/25/2024 11:15	37.327	7.6
3/25/2024 11:30	28.447	9.1
3/25/2024 11:45	27.847	13.1
3/25/2024 12:00	25.8	7.5
3/25/2024 12:15	26.6	8.4
3/25/2024 12:30	26.993	9.2
3/25/2024 12:45	22.28	7.2
3/25/2024 13:00	20.413	6.8
3/25/2024 13:15	21.62	7.1
3/25/2024 13:30	22.233	7
3/25/2024 13:45	29.253	6.6
3/25/2024 14:00	22.8	8.2
3/25/2024 14:15	26.06	7.1
3/25/2024 14:30	26.113	7.2
3/25/2024 14:45	35.213	12.7
3/25/2024 15:00	29.473	10.9
3/25/2024 15:15	24.393	8.6
3/25/2024 15:30	21.48	6.8
3/25/2024 15:45	25.867	8.6
3/25/2024 16:00	34.833	8.2
3/25/2024 16:15	24.793	9.3
3/25/2024 16:30	27.107	7.3
3/25/2024 16:45	22.68	8
3/25/2024 17:00	21.587	9.4
3/25/2024 17:15	21.66	7.2
3/25/2024 17:30	19.787	6.7
3/25/2024 17:45	19.2	5.9
3/25/2024 18:00	17.82	5.8
3/25/2024 18:15	17.04	6.3
3/25/2024 18:30	21.64	6.8
3/25/2024 18:45	26.08	6.6
3/25/2024 19:00	24.467	7.3
3/25/2024 19:15	21.727	8.2
3/25/2024 19:30	28.453	7.9
3/25/2024 19:45	34.88	10
3/25/2024 20:00	24.407	8
3/25/2024 20:15	19.687	5.7
3/25/2024 20:30	21.787	6.9
3/25/2024 20:45	24.993	6.1
3/25/2024 21:00	22.16	6.5
3/25/2024 21:15	19.453	6.8
3/25/2024 21:30	21.493	6.3
3/25/2024 21:45	23.087	7.3
3/25/2024 22:00	20.253	6
3/25/2024 22:15	21.533	8.7
3/25/2024 22:30	19.067	6.8
3/25/2024 22:45	20.887	5.7
3/25/2024 23:00	20.333	7.1
3/25/2024 23:15	21.507	6.5
3/25/2024 23:30	21.793	6.1
3/25/2024 23:45	26.26	7.6
3/26/2024 0:00	19.627	6.1
3/26/2024 0:15	21.453	7.6
3/26/2024 0:30	30	7.8
3/26/2024 0:45	39.173	9.2
3/26/2024 1:00	68.493	20.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/26/2024 1:15	56.007	19.6
3/26/2024 1:30	61.433	23.6
3/26/2024 1:45	49.973	25.4
3/26/2024 2:00	33.587	10.2
3/26/2024 2:15	32.94	13.8
3/26/2024 2:30	28.9	9.6
3/26/2024 2:45	24.54	7.5
3/26/2024 3:00	24.553	7.9
3/26/2024 3:15	27.98	6.9
3/26/2024 3:30	24.813	7.8
3/26/2024 3:45	24.58	9.1
3/26/2024 4:00	36.9	9
3/26/2024 4:15	35.407	9.1
3/26/2024 4:30	31.453	9.9
3/26/2024 4:45	30.513	9.2
3/26/2024 5:00	27.9	9.5
3/26/2024 5:15	29.067	10.2
3/26/2024 5:30	32.593	9.2
3/26/2024 5:45	29.7	9.3
3/26/2024 6:00	30.273	9.4
3/26/2024 6:15	32.313	9.5
3/26/2024 6:30	30.147	9
3/26/2024 6:45	31.287	10
3/26/2024 7:00	30.587	10.1
3/26/2024 7:15	35.527	9.4
3/26/2024 7:30	33.28	10.6
3/26/2024 7:45	42.12	10.6
3/26/2024 8:00	41.667	12.3
3/26/2024 8:15	36.693	10.6
3/26/2024 8:30	47.2	13.5
3/26/2024 8:45	52.793	20.7
3/26/2024 9:00	56.06	16.6
3/26/2024 9:15	51.1	13.7
3/26/2024 9:30	45.54	12.9
3/26/2024 9:45	57.627	17.7
3/26/2024 10:00	58	20.7
3/26/2024 10:15	61.333	20.9
3/26/2024 10:30	63.707	20.2
3/26/2024 10:45	54.34	14.1
3/26/2024 11:00	40.333	15.9
3/26/2024 11:15	40.24	12.4
3/26/2024 11:30	38.573	11.5
3/26/2024 11:45	44.48	12.9
3/26/2024 12:00	42.413	14
3/26/2024 12:15	37.147	11.9
3/26/2024 12:30	35.22	11
3/26/2024 12:45	36.96	13
3/26/2024 13:00	30.08	11.7
3/26/2024 13:15	29.533	11.3
3/26/2024 13:30	32.253	10.5
3/26/2024 13:45	30.52	10.5
3/26/2024 14:00	33.473	10.6
3/26/2024 14:15	33.727	11.9
3/26/2024 14:30	31.52	10.4
3/26/2024 14:45	41.2	11.3
3/26/2024 15:00	54.753	12.8
3/26/2024 15:15	52.033	17

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/26/2024 15:30	41.813	16.5
3/26/2024 15:45	37.227	13.7
3/26/2024 16:00	36.553	12.5
3/26/2024 16:15	34.867	11.8
3/26/2024 16:30	33.787	12.2
3/26/2024 16:45	42.413	9.2
3/26/2024 17:00	36.96	14.2
3/26/2024 17:15	37	11.9
3/26/2024 17:30	28.213	10.8
3/26/2024 17:45	33.74	11.4
3/26/2024 18:00	34.847	10.3
3/26/2024 18:15	32.467	11.4
3/26/2024 18:30	37.353	10.7
3/26/2024 18:45	29.267	15.3
3/26/2024 19:00	27.133	8.7
3/26/2024 19:15	42.767	10
3/26/2024 19:30	39.38	10.8
3/26/2024 19:45	118.533	22
3/26/2024 20:00	106.04	26.8
3/26/2024 20:15	27.96	15.7
3/26/2024 20:30	18.02	6.4
3/26/2024 20:45	14.867	4.5
3/26/2024 21:00	18.287	4.5
3/26/2024 21:15	19.247	5.9
3/26/2024 21:30	21.427	5.7
3/26/2024 21:45	39.633	7.6
3/26/2024 22:00	32.187	9.7
3/26/2024 22:15	31.68	12.9
3/26/2024 22:30	40.06	10.8
3/26/2024 22:45	44.74	17.1
3/26/2024 23:00	40.02	12.6
3/26/2024 23:15	39.453	12.9
3/26/2024 23:30	42.427	18.6
3/26/2024 23:45	40.547	12.9
3/27/2024 0:00	42.527	13.8
3/27/2024 0:15	35.947	13.2
3/27/2024 0:30	36.947	13.7
3/27/2024 0:45	38.78	13.4
3/27/2024 1:00	37.04	13.1
3/27/2024 1:15	36.733	13.2
3/27/2024 1:30	34.138	11.2
3/27/2024 6:45	30.78	0
3/27/2024 7:00	31.94	10.7
3/27/2024 7:15	32.34	14.3
3/27/2024 7:30	43.667	15
3/27/2024 7:45	33.54	14.9
3/27/2024 8:00	44.464	16
3/27/2024 8:15	42.333	14.1
3/27/2024 8:30	35.333	13.2
3/27/2024 8:45	43.847	15
3/27/2024 9:00	49.687	16.8
3/27/2024 9:15	54.033	17.3
3/27/2024 9:30	61.873	16.4
3/27/2024 9:45	73.947	20.4
3/27/2024 10:00	77.207	21.7
3/27/2024 10:15	63.627	19.6
3/27/2024 10:30	55.167	19.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/27/2024 10:45	42.573	18.5
3/27/2024 11:00	40.32	16.6
3/27/2024 11:15	55.433	16.1
3/27/2024 11:30	45.16	18.4
3/27/2024 11:45	49.647	15.5
3/27/2024 12:00	47.06	18.1
3/27/2024 12:15	42.72	14.4
3/27/2024 12:30	40.327	16
3/27/2024 12:45	43.533	13.5
3/27/2024 13:00	38.413	15.8
3/27/2024 13:15	36.593	14.2
3/27/2024 13:30	44.06	14.6
3/27/2024 13:45	41.793	15.8
3/27/2024 14:00	46.833	16.5
3/27/2024 14:15	35.013	11.6
3/27/2024 14:30	30.68	10.6
3/27/2024 14:45	34.393	11.1
3/27/2024 15:00	37.527	11.8
3/27/2024 15:15	38.667	13.8
3/27/2024 15:30	35.993	13.4
3/27/2024 15:45	38.113	14.2
3/27/2024 16:00	34.553	14.2
3/27/2024 16:15	39.527	15.9
3/27/2024 16:30	37.88	15.3
3/27/2024 16:45	35.66	16.4
3/27/2024 17:00	32.627	12.5
3/27/2024 17:15	32.213	11.5
3/27/2024 17:30	30.873	12.5
3/27/2024 17:45	28.96	8.9
3/27/2024 18:00	29.753	6.8
3/27/2024 18:15	36.653	10.2
3/27/2024 18:30	25.067	6.8
3/27/2024 18:45	25.053	7.7
3/27/2024 19:00	22.287	6.9
3/27/2024 19:15	23.48	7.6
3/27/2024 19:30	22.873	6.3
3/27/2024 19:45	26.313	7.7
3/27/2024 20:00	25.107	8.3
3/27/2024 20:15	26.34	8.9
3/27/2024 20:30	30.6	7.5
3/27/2024 20:45	30.26	9.1
3/27/2024 21:00	28.367	8.3
3/27/2024 21:15	29.673	8.1
3/27/2024 21:30	32.513	8.6
3/27/2024 21:45	30.793	6.9
3/27/2024 22:00	35.247	8.3
3/27/2024 22:15	33.027	10.2
3/27/2024 22:30	33.787	9.8
3/27/2024 22:45	30.693	7.8
3/27/2024 23:00	32.9	9.7
3/27/2024 23:15	31.827	9
3/27/2024 23:30	34.747	9.5
3/27/2024 23:45	31.02	9
3/28/2024 0:00	33.407	7.7
3/28/2024 0:15	35.1	7.4
3/28/2024 0:30	35.467	7.6
3/28/2024 0:45	30.633	9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/28/2024 1:00	31.02	8.6
3/28/2024 1:15	30.84	8.9
3/28/2024 1:30	31.393	8
3/28/2024 1:45	31.727	8.6
3/28/2024 2:00	29.36	8.1
3/28/2024 2:15	30.407	10.8
3/28/2024 2:30	29.04	8.9
3/28/2024 2:45	32.92	8.8
3/28/2024 3:00	30.187	9.5
3/28/2024 3:15	30.36	8.9
3/28/2024 3:30	31.74	8.1
3/28/2024 3:45	46.447	14.4
3/28/2024 4:00	74.973	7.5
3/28/2024 4:15	82.313	16.8
3/28/2024 4:30	63.073	20.2
3/28/2024 4:45	46.213	14.4
3/28/2024 5:00	41.5	10
3/28/2024 5:15	38.04	9.3
3/28/2024 5:30	36.38	10
3/28/2024 5:45	38.72	9.3
3/28/2024 6:00	30.713	10.8
3/28/2024 6:15	31.64	9
3/28/2024 6:30	31.76	9.7
3/28/2024 6:45	35.533	11
3/28/2024 7:00	50.333	9.7
3/28/2024 7:15	41.933	9.8
3/28/2024 7:30	57.033	8.5
3/28/2024 7:45	51.593	22.2
3/28/2024 8:00	38.073	10.5
3/28/2024 8:15	36.373	9.8
3/28/2024 8:30	31.147	14.7
3/28/2024 8:45	28.133	8.2
3/28/2024 9:00	25.9	6.5
3/28/2024 9:15	36.187	11
3/28/2024 9:30	43.7	13.5
3/28/2024 9:45	33.04	8.7
3/28/2024 10:00	27.56	8.5
3/28/2024 10:15	29.993	8.9
3/28/2024 10:30	32.72	7.9
3/28/2024 10:45	35.947	8.6
3/28/2024 11:00	31.24	8.6
3/28/2024 11:15	29.807	9.3
3/28/2024 11:30	31.473	10.4
3/28/2024 11:45	29.673	10.5
3/28/2024 12:00	35.227	15.9
3/28/2024 12:15	27.86	10.9
3/28/2024 12:30	30.16	9.3
3/28/2024 12:45	30.08	9.5
3/28/2024 13:00	29.64	10.9
3/28/2024 13:15	44.127	9.5
3/28/2024 13:30	30.153	11.8
3/28/2024 13:45	28.4	9
3/28/2024 14:00	26.267	8.8
3/28/2024 14:15	30.653	8.8
3/28/2024 14:30	28.893	8.3
3/28/2024 14:45	27.4	9.8
3/28/2024 15:00	53.48	9.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/28/2024 15:15	28.22	16.6
3/28/2024 15:30	27.207	8.9
3/28/2024 15:45	23.927	8.3
3/28/2024 16:00	23.893	9.3
3/28/2024 16:15	27.8	7.5
3/28/2024 16:30	27.087	10
3/28/2024 16:45	26.627	8.5
3/28/2024 17:00	30.373	9
3/28/2024 17:15	26.367	9.1
3/28/2024 17:30	25.26	8.8
3/28/2024 17:45	25.987	9.3
3/28/2024 18:00	31.927	8.3
3/28/2024 18:15	26.553	9.4
3/28/2024 18:30	26.367	8.7
3/28/2024 18:45	28.72	9
3/28/2024 19:00	28.18	9.2
3/28/2024 19:15	34.047	8.6
3/28/2024 19:30	38.293	9.4
3/28/2024 19:45	37.287	10.8
3/28/2024 20:00	36.067	11.7
3/28/2024 20:15	38.94	12.5
3/28/2024 20:30	39.84	10.3
3/28/2024 20:45	42.293	10.3
3/28/2024 21:00	38.9	9.9
3/28/2024 21:15	36.413	10.7
3/28/2024 21:30	34.367	7.6
3/28/2024 21:45	35.593	5.8
3/28/2024 22:00	45.233	9.4
3/28/2024 22:15	32.92	7.7
3/28/2024 22:30	48.72	15.6
3/28/2024 22:45	30.02	8.4
3/28/2024 23:00	35.58	7.4
3/28/2024 23:15	37.64	7.5
3/28/2024 23:30	39.833	9.5
3/28/2024 23:45	33.42	9.1
3/29/2024 0:00	32.76	7.8
3/29/2024 0:15	36.82	8.1
3/29/2024 0:30	33.927	8.9
3/29/2024 0:45	35.167	9.1
3/29/2024 1:00	35.593	7.2
3/29/2024 1:15	32.96	7.9
3/29/2024 1:30	27.133	6.6
3/29/2024 1:45	25.047	6.2
3/29/2024 2:00	31.1	9.5
3/29/2024 2:15	26.727	7.4
3/29/2024 2:30	32.073	7.6
3/29/2024 2:45	47.64	14.7
3/29/2024 3:00	79.44	18.7
3/29/2024 3:15	83.473	23.5
3/29/2024 3:30	89.753	22.8
3/29/2024 3:45	96.84	23.6
3/29/2024 4:00	97.053	24.9
3/29/2024 4:15	97.72	22.8
3/29/2024 4:30	93.527	21.2
3/29/2024 4:45	97.593	23.6
3/29/2024 5:00	98.947	22.9
3/29/2024 5:15	95.1	21.3

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/29/2024 5:30	95.72	20.6
3/29/2024 5:45	91.793	20.1
3/29/2024 6:00	90.36	20.9
3/29/2024 6:15	93.507	19.1
3/29/2024 6:30	84.127	19.3
3/29/2024 6:45	80.993	19.2
3/29/2024 7:00	77.613	19.7
3/29/2024 7:15	80.367	20.1
3/29/2024 7:30	96.213	20.3
3/29/2024 7:45	83.793	19.2
3/29/2024 8:00	80.2	19.4
3/29/2024 8:15	87.667	19.8
3/29/2024 8:30	81.913	19.7
3/29/2024 8:45	97.3	20.5
3/29/2024 9:00	96.78	20.8
3/29/2024 9:15	95.627	19.4
3/29/2024 9:30	96.093	20.9
3/29/2024 9:45	85.567	19.8
3/29/2024 10:00	82.62	20.8
3/29/2024 10:15	74.993	21.4
3/29/2024 10:30	76.807	18
3/29/2024 10:45	83.94	20.6
3/29/2024 11:00	76.3	20.2
3/29/2024 11:15	80.647	19.3
3/29/2024 11:30	75.333	20.1
3/29/2024 11:45	73.38	20.1
3/29/2024 12:00	73.167	19.7
3/29/2024 12:15	90.74	19
3/29/2024 12:30	98.433	20.4
3/29/2024 12:45	103.167	20.9
3/29/2024 13:00	101.173	21.6
3/29/2024 13:15	96.58	19.7
3/29/2024 13:30	94.727	20.2
3/29/2024 13:45	91.14	19.8
3/29/2024 14:00	85.107	18.9
3/29/2024 14:15	79.147	20.5
3/29/2024 14:30	76.833	20.3
3/29/2024 14:45	79.733	20.8
3/29/2024 15:00	78.113	20.9
3/29/2024 15:15	72.053	19.7
3/29/2024 15:30	79.147	19.3
3/29/2024 15:45	74.127	20
3/29/2024 16:00	74.693	19.8
3/29/2024 16:15	78.153	20
3/29/2024 16:30	82.827	21.1
3/29/2024 16:45	86.08	23.4
3/29/2024 17:00	96.173	24.6
3/29/2024 17:15	91.86	22
3/29/2024 17:30	108.213	25.4
3/29/2024 17:45	113.813	26.6
3/29/2024 18:00	119.207	28
3/29/2024 18:15	101.847	26.1
3/29/2024 18:30	96.88	23.3
3/29/2024 18:45	109.767	24.2
3/29/2024 19:00	121.853	28.2
3/29/2024 19:15	131.747	26.8
3/29/2024 19:30	141.607	28.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/29/2024 19:45	144.773	28.5
3/29/2024 20:00	142.64	26.8
3/29/2024 20:15	141.573	27.4
3/29/2024 20:30	134.727	27.9
3/29/2024 20:45	136.907	28.9
3/29/2024 21:00	134.787	30.3
3/29/2024 21:15	138.853	28.4
3/29/2024 21:30	125.067	26.2
3/29/2024 21:45	128.153	26.9
3/29/2024 22:00	136.413	26.6
3/29/2024 22:15	141.047	26.7
3/29/2024 22:30	144.827	26
3/29/2024 22:45	145.14	26.5
3/29/2024 23:00	142.92	21.2
3/29/2024 23:15	130.18	24.1
3/29/2024 23:30	140.393	20.7
3/30/2024 5:30	10	0
3/30/2024 5:45	12.06	4.2
3/30/2024 6:00	10.507	4.3
3/30/2024 6:15	19.107	3.4
3/30/2024 6:30	13.64	4.9
3/30/2024 6:45	14.88	3.5
3/30/2024 7:00	14.4	5.1
3/30/2024 7:15	15.387	3.9
3/30/2024 7:30	24.873	4.6
3/30/2024 7:45	22.927	4
3/30/2024 8:00	22.433	4.9
3/30/2024 8:15	26.16	6.1
3/30/2024 8:30	26.467	5.3
3/30/2024 8:45	34.567	6.5
3/30/2024 9:00	26.187	8.4
3/30/2024 9:15	31.22	7.5
3/30/2024 9:30	33.093	5.5
3/30/2024 9:45	28.193	7.4
3/30/2024 10:00	28.84	8
3/30/2024 10:15	26.053	5.5
3/30/2024 10:30	31.62	7.3
3/30/2024 10:45	28.887	5.7
3/30/2024 11:00	28.48	4.3
3/30/2024 11:15	30.047	6.8
3/30/2024 11:30	27.54	4.5
3/30/2024 11:45	33.487	6.5
3/30/2024 12:00	23.373	7.6
3/30/2024 12:15	32.107	6.2
3/30/2024 12:30	36.56	4.2
3/30/2024 12:45	32.567	4
3/30/2024 13:00	33.52	11.7
3/30/2024 13:15	40.287	4.9
3/30/2024 13:30	46.38	11.7
3/30/2024 13:45	41.507	11.3
3/30/2024 14:00	35.093	10.8
3/30/2024 14:15	51.52	8.3
3/30/2024 14:30	39.833	10.4
3/30/2024 14:45	31.367	8.4
3/30/2024 15:00	41.447	17.5
3/30/2024 15:15	36.567	7.9
3/30/2024 15:30	44.56	8.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/30/2024 15:45	31	9.2
3/30/2024 16:00	43.353	5.7
3/30/2024 16:15	27.647	6.2
3/30/2024 16:30	30.233	4.6
3/30/2024 16:45	21.173	5.8
3/30/2024 17:00	24.613	5.8
3/30/2024 17:15	17.287	4.2
3/30/2024 17:30	20.653	8.5
3/30/2024 17:45	19.547	5.1
3/30/2024 18:00	27.96	5.2
3/30/2024 18:15	25.48	6.7
3/30/2024 18:30	19.627	4.1
3/30/2024 18:45	14.62	3.4
3/30/2024 19:00	17.167	4
3/30/2024 19:15	17.74	3
3/30/2024 19:30	16.913	5.4
3/30/2024 19:45	15.107	3.3
3/30/2024 20:00	19.227	3.8
3/30/2024 20:15	16.28	3.4
3/30/2024 20:30	18.107	3.5
3/30/2024 20:45	17.773	2.5
3/30/2024 21:00	18.2	3.3
3/30/2024 21:15	16.3	2.9
3/30/2024 21:30	16.973	2.8
3/30/2024 21:45	21.653	2.5
3/30/2024 22:00	16.4	4.3
3/30/2024 22:15	25.807	3.8
3/30/2024 22:30	22.427	4.2
3/30/2024 22:45	23.547	4.3
3/30/2024 23:00	19.473	4.6
3/30/2024 23:15	24.34	4.8
3/30/2024 23:30	21.44	3.9
3/30/2024 23:45	23.813	4.5
3/31/2024 0:00	26.613	5.6
3/31/2024 0:15	28.227	7.4
3/31/2024 0:30	29.973	7.4
3/31/2024 0:45	28.527	4.6
3/31/2024 1:00	28.207	5.8
3/31/2024 1:15	27.9	5.3
3/31/2024 1:30	26.093	5.9
3/31/2024 1:45	26.3	5.3
3/31/2024 2:00	27.767	6.6
3/31/2024 2:15	29.3	7.3
3/31/2024 2:30	29.24	6.4
3/31/2024 2:45	24.94	7
3/31/2024 3:00	25.793	5.6
3/31/2024 3:15	22.953	5.7
3/31/2024 3:30	26.98	5.3
3/31/2024 3:45	35.387	11
3/31/2024 4:00	62.727	15.5
3/31/2024 4:15	22.44	7.5
3/31/2024 4:30	24.66	5.8
3/31/2024 4:45	26.64	6.6
3/31/2024 5:00	26.1	5.8
3/31/2024 5:15	19.94	4.7
3/31/2024 5:30	18.22	3.3
3/31/2024 5:45	18.813	3.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/31/2024 6:00	18.907	4.1
3/31/2024 6:15	15.293	2.6
3/31/2024 6:30	16.36	2.6
3/31/2024 6:45	19.213	3.6
3/31/2024 7:00	13.227	3.1
3/31/2024 7:15	14.68	2.8
3/31/2024 7:30	14.593	2.7
3/31/2024 7:45	31.193	2.3
3/31/2024 8:00	14.953	2.4
3/31/2024 8:15	17.993	2.2
3/31/2024 8:30	16.06	3.2
3/31/2024 8:45	21.413	9.4
3/31/2024 9:00	16.727	3.3
3/31/2024 9:15	17.933	3.3
3/31/2024 9:30	15.307	2.6
3/31/2024 9:45	14.96	2.9
3/31/2024 10:00	17.6	4.5
3/31/2024 10:15	17.173	3.9
3/31/2024 10:30	18.34	3.7
3/31/2024 10:45	19.2	2.4
3/31/2024 11:00	17.7	3.5
3/31/2024 11:15	18.42	4.2
3/31/2024 11:30	21.267	3.4
3/31/2024 11:45	18.987	3.6
3/31/2024 12:00	16.993	3.5
3/31/2024 12:15	18.487	4
3/31/2024 12:30	14.407	4.2
3/31/2024 12:45	16.313	3.7
3/31/2024 13:00	17.507	5.8
3/31/2024 13:15	15.027	3.7
3/31/2024 13:30	15.467	2.6
3/31/2024 13:45	14.193	3.1
3/31/2024 14:00	15.2	3.7
3/31/2024 14:15	15.413	3.4
3/31/2024 14:30	14.015	3.2
3/31/2024 17:15	15.25	0
3/31/2024 17:30	18.08	3.6
3/31/2024 17:45	17.7	5
3/31/2024 18:00	22.713	3.9
3/31/2024 18:15	20.493	3.1
3/31/2024 18:30	32.193	3.9
3/31/2024 18:45	30.653	3.6
3/31/2024 19:00	17.193	3.5
3/31/2024 19:15	15.68	2.9
3/31/2024 19:30	19.893	3.1
3/31/2024 19:45	16.52	4.1
3/31/2024 20:00	16.093	3.4
3/31/2024 20:15	15.253	3.8
3/31/2024 20:30	19.033	3.8
3/31/2024 20:45	21.62	3.1
3/31/2024 21:00	23.527	5.1
3/31/2024 21:15	21.767	3.9
3/31/2024 21:30	20.08	5.9
3/31/2024 21:45	17.64	3.3
3/31/2024 22:00	25.233	4.8
3/31/2024 22:15	19.36	4.1
3/31/2024 22:30	16.82	4.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
3/31/2024 22:45	19.447	3.2
3/31/2024 23:00	15.227	3.2
3/31/2024 23:15	15.213	2.4
3/31/2024 23:30	14.227	2.8
3/31/2024 23:45	14.646	2.9
4/1/2024 3:45	64.717	0
4/1/2024 4:00	80.547	11.7
4/1/2024 4:15	104.353	21.5
4/1/2024 4:30	109.067	25.2
4/1/2024 4:45	55.833	20.7
4/1/2024 5:00	44.133	13.4
4/1/2024 5:15	39.187	9.5
4/1/2024 5:30	40.72	11.1
4/1/2024 5:45	45.86	8.8
4/1/2024 6:00	46.6	15
4/1/2024 6:15	41.793	15.6
4/1/2024 6:30	33.493	7.3
4/1/2024 6:45	35.6	7.6
4/1/2024 7:00	35.56	6.6
4/1/2024 7:15	39.093	9.5
4/1/2024 7:30	75.973	9.2
4/1/2024 7:45	45.807	22
4/1/2024 8:00	36.98	12.6
4/1/2024 8:15	30.167	7.7
4/1/2024 8:30	24.507	3.9
4/1/2024 8:45	25.527	4.9
4/1/2024 9:00	17.013	3.6
4/1/2024 9:15	23.287	7.7
4/1/2024 9:30	24.06	4.6
4/1/2024 9:45	22.953	4.5
4/1/2024 10:00	25.987	5.7
4/1/2024 10:15	26.86	5.8
4/1/2024 10:30	25.08	6
4/1/2024 10:45	27.433	6.3
4/1/2024 11:00	26.533	5.9
4/1/2024 11:15	28.193	7.9
4/1/2024 11:30	26.813	5.1
4/1/2024 11:45	22.053	6.5
4/1/2024 12:00	24.413	8.9
4/1/2024 12:15	26.687	6.3
4/1/2024 12:30	25.653	6
4/1/2024 12:45	27.807	6.8
4/1/2024 13:00	25.56	6.6
4/1/2024 13:15	32.253	7.3
4/1/2024 13:30	27.08	8.9
4/1/2024 13:45	31.987	7
4/1/2024 14:00	26.713	6.2
4/1/2024 14:15	26.64	9.4
4/1/2024 14:30	25.46	7.1
4/1/2024 14:45	22.78	6.3
4/1/2024 15:00	25.667	6.7
4/1/2024 15:15	32.6	9.5
4/1/2024 15:30	31.04	6.2
4/1/2024 15:45	22.34	6
4/1/2024 16:00	20.78	6
4/1/2024 16:15	22.773	7.2
4/1/2024 16:30	21.713	5.6

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/1/2024 16:45	24.187	5.6
4/1/2024 17:00	31.12	20.1
4/1/2024 17:15	23.933	10
4/1/2024 17:30	20.673	5.7
4/1/2024 17:45	25.127	11.1
4/1/2024 18:00	33.193	6.4
4/1/2024 18:15	26.947	8
4/1/2024 18:30	23.68	5.8
4/1/2024 18:45	22.54	5.9
4/1/2024 19:00	19.787	5.7
4/1/2024 19:15	19.68	5.3
4/1/2024 19:30	22.887	7.6
4/1/2024 19:45	22.64	5.5
4/1/2024 20:00	21.62	7.4
4/1/2024 20:15	20.62	4.8
4/1/2024 20:30	21.68	6
4/1/2024 20:45	25.027	6.5
4/1/2024 21:00	22.987	5.4
4/1/2024 21:15	23.707	4.5
4/1/2024 21:30	25.247	6
4/1/2024 21:45	22.233	6.4
4/1/2024 22:00	30.273	5.4
4/1/2024 22:15	24.98	4.8
4/1/2024 22:30	25.36	5.3
4/1/2024 22:45	27.313	6.4
4/1/2024 23:00	28.553	15.8
4/1/2024 23:15	22.987	4.8
4/1/2024 23:30	21.287	6.5
4/1/2024 23:45	21.627	5.6
4/2/2024 0:00	23.22	5.1
4/2/2024 0:15	40.673	5
4/2/2024 0:30	17.267	4.8
4/2/2024 0:45	22.293	4.6
4/2/2024 1:00	21.693	5.1
4/2/2024 1:15	20.367	4
4/2/2024 1:30	21.747	5.1
4/2/2024 1:45	24.287	4.4
4/2/2024 2:00	20.6	5.5
4/2/2024 2:15	22.06	5.1
4/2/2024 2:30	19.28	4.3
4/2/2024 2:45	23.927	5
4/2/2024 3:00	23.36	5.2
4/2/2024 3:15	23.533	6.2
4/2/2024 3:30	24.727	5.3
4/2/2024 3:45	28.173	6
4/2/2024 4:00	38.813	5.6
4/2/2024 4:15	46.907	4.3
4/2/2024 4:30	100.56	21.1
4/2/2024 4:45	89.553	20.6
4/2/2024 5:00	114.673	22.9
4/2/2024 5:15	96.707	23.8
4/2/2024 5:30	88.38	20.4
4/2/2024 5:45	68.453	18.9
4/2/2024 6:00	60.507	17.8
4/2/2024 6:15	67.14	19.3
4/2/2024 6:30	68.907	20
4/2/2024 6:45	67.36	19.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/2/2024 7:00	64.053	18
4/2/2024 7:15	66.607	19.3
4/2/2024 7:30	64.473	20.5
4/2/2024 7:45	71.087	19.3
4/2/2024 8:00	83.133	19.4
4/2/2024 8:15	92.913	18.2
4/2/2024 8:30	89.72	19.4
4/2/2024 8:45	87.887	19.8
4/2/2024 9:00	89.513	21.3
4/2/2024 9:15	78.447	19.5
4/2/2024 9:30	74.987	20.8
4/2/2024 9:45	98.727	21.9
4/2/2024 10:00	87.52	20.7
4/2/2024 10:15	92.307	22.6
4/2/2024 10:30	93.82	23.1
4/2/2024 10:45	87.213	22
4/2/2024 11:00	89.507	21
4/2/2024 11:15	90.333	19.8
4/2/2024 11:30	81.56	19.9
4/2/2024 11:45	80.14	19.8
4/2/2024 12:00	73.1	21.3
4/2/2024 12:15	74.333	22.3
4/2/2024 12:30	68.607	19.9
4/2/2024 12:45	70.9	19.3
4/2/2024 13:00	74.86	19.9
4/2/2024 13:15	58.36	19.2
4/2/2024 13:30	61.407	21.7
4/2/2024 13:45	56	18.1
4/2/2024 14:00	47.447	18.5
4/2/2024 14:15	46.833	19
4/2/2024 14:30	53.807	18.1
4/2/2024 14:45	43.027	16.3
4/2/2024 15:00	49.247	14.3
4/2/2024 15:15	43.847	15.6
4/2/2024 15:30	50.527	18.2
4/2/2024 15:45	43.493	14.6
4/2/2024 16:00	39.853	12.7
4/2/2024 16:15	44.067	16.5
4/2/2024 16:30	38.133	15.6
4/2/2024 16:45	39.607	14.3
4/2/2024 17:00	37.653	12.1
4/2/2024 17:15	38.14	14.8
4/2/2024 17:30	41.687	13.6
4/2/2024 17:45	42	16.2
4/2/2024 18:00	46.673	19.5
4/2/2024 18:15	44.62	16.1
4/2/2024 18:30	47.813	18.6
4/2/2024 18:45	43.893	16
4/2/2024 19:00	39.693	13.8
4/2/2024 19:15	42.66	14.6
4/2/2024 19:30	44.733	15.7
4/2/2024 19:45	44.887	17.2
4/2/2024 20:00	51.433	17.9
4/2/2024 20:15	48.42	16.8
4/2/2024 20:30	48.12	17.4
4/2/2024 20:45	51.72	18.9
4/2/2024 21:00	52.093	17.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/2/2024 21:15	51.147	19.9
4/2/2024 21:30	49.7	17.4
4/2/2024 21:45	45.62	15.4
4/2/2024 22:00	46.573	15.6
4/2/2024 22:15	46.68	15.5
4/2/2024 22:30	49.82	15.4
4/2/2024 22:45	41.167	14.8
4/2/2024 23:00	41.053	15.5
4/2/2024 23:15	37.28	13.6
4/2/2024 23:30	40.98	10.3
4/2/2024 23:45	34.227	10.5
4/3/2024 0:00	28.227	9.9
4/3/2024 0:15	26.98	8.7
4/3/2024 0:30	33.113	8.6
4/3/2024 0:45	32.387	9.1
4/3/2024 1:00	33.407	9.2
4/3/2024 1:15	36.267	10
4/3/2024 1:30	31.8	11.6
4/3/2024 1:45	32.293	13
4/3/2024 2:00	27.88	11.6
4/3/2024 2:15	26.647	10.2
4/3/2024 2:30	24.253	10.5
4/3/2024 2:45	21.413	7.4
4/3/2024 3:00	23.493	7.9
4/3/2024 3:15	26.207	7.7
4/3/2024 3:30	23.347	7.7
4/3/2024 3:45	24.48	8.5
4/3/2024 4:00	26.733	8.4
4/3/2024 4:15	20.013	5.9
4/3/2024 4:30	18.92	5
4/3/2024 4:45	24.013	5.9
4/3/2024 5:00	22.127	5.2
4/3/2024 5:15	18.667	5.9
4/3/2024 5:30	19.56	5.9
4/3/2024 5:45	18.073	5.5
4/3/2024 6:00	18.98	4.7
4/3/2024 6:15	18.86	6.9
4/3/2024 6:30	20.193	6.2
4/3/2024 6:45	20.153	5.3
4/3/2024 7:00	17.72	5.4
4/3/2024 7:15	19.613	5.8
4/3/2024 7:30	22.74	6.5
4/3/2024 7:45	22.367	6.3
4/3/2024 8:00	19.213	5.7
4/3/2024 8:15	24.887	4.8
4/3/2024 8:30	24	5.6
4/3/2024 8:45	22.7	8.6
4/3/2024 9:00	33.927	7
4/3/2024 9:15	25.787	5.4
4/3/2024 9:30	23.98	9
4/3/2024 9:45	19.393	8.1
4/3/2024 10:00	25.673	7.8
4/3/2024 10:15	17.827	4.8
4/3/2024 10:30	22.2	5.9
4/3/2024 10:45	21.62	5.9
4/3/2024 11:00	23.38	5.4
4/3/2024 11:15	31.973	5.7

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/3/2024 11:30	23.12	7.7	4/4/2024 1:45	16.673	4.4	4/4/2024 16:00	21.36	6
4/3/2024 11:45	27.207	5.8	4/4/2024 2:00	16.653	3.7	4/4/2024 16:15	24.213	8.1
4/3/2024 12:00	26.107	6.2	4/4/2024 2:15	14.613	3.6	4/4/2024 16:30	24.973	6.4
4/3/2024 12:15	21.993	8.2	4/4/2024 2:30	15.493	3.8	4/4/2024 16:45	24.327	7.2
4/3/2024 12:30	22.913	5.9	4/4/2024 2:45	14.453	3.4	4/4/2024 17:00	22.927	5.8
4/3/2024 12:45	24.12	6.1	4/4/2024 3:00	14.307	3.5	4/4/2024 17:15	19.9	5.9
4/3/2024 13:00	20.627	5.9	4/4/2024 3:15	17.707	3.6	4/4/2024 17:30	22.52	6.7
4/3/2024 13:15	27.307	5.4	4/4/2024 3:30	41.28	10.3	4/4/2024 17:45	24.873	6.2
4/3/2024 13:30	25.813	7.7	4/4/2024 3:45	48.387	3.7	4/4/2024 18:00	38.2	6.2
4/3/2024 13:45	19.653	4.8	4/4/2024 4:00	52.607	11.2	4/4/2024 18:15	27.54	9.9
4/3/2024 14:00	18.56	5.9	4/4/2024 4:15	42.073	4.5	4/4/2024 18:30	22.027	5.9
4/3/2024 14:15	20.893	5.7	4/4/2024 4:30	35	20.6	4/4/2024 18:45	22.04	6.1
4/3/2024 14:30	18.693	5.2	4/4/2024 4:45	15.947	4.1	4/4/2024 19:00	22.54	6.4
4/3/2024 14:45	22.227	4.9	4/4/2024 5:00	28.847	4.3	4/4/2024 19:15	24.967	6.6
4/3/2024 15:00	23.333	11.6	4/4/2024 5:15	17.64	4.7	4/4/2024 19:30	24.613	7.3
4/3/2024 15:15	32.58	14.7	4/4/2024 5:30	17.927	4.1	4/4/2024 19:45	28.347	7.9
4/3/2024 15:30	22.647	6.3	4/4/2024 5:45	31.167	4.2	4/4/2024 20:00	27.173	5.7
4/3/2024 15:45	21.26	8.2	4/4/2024 6:00	25.78	9.9	4/4/2024 20:15	26.027	7.5
4/3/2024 16:00	22.807	6.6	4/4/2024 6:15	19.287	4.4	4/4/2024 20:30	23.553	6.5
4/3/2024 16:15	22.72	7.2	4/4/2024 6:30	21.053	4.4	4/4/2024 20:45	26.68	7
4/3/2024 16:30	18.993	5.9	4/4/2024 6:45	25.667	5.1	4/4/2024 21:00	28.207	5.2
4/3/2024 16:45	21.667	4	4/4/2024 7:00	25.4	5.4	4/4/2024 21:15	28.493	5.8
4/3/2024 17:00	19.953	7.5	4/4/2024 7:15	26.053	3.9	4/4/2024 21:30	25.627	5.6
4/3/2024 17:15	20.113	4.5	4/4/2024 7:30	35.5	5.4	4/4/2024 21:45	30.787	6.5
4/3/2024 17:30	18.553	3.9	4/4/2024 7:45	34.407	7.8	4/4/2024 22:00	23.853	6.1
4/3/2024 17:45	24.04	6.9	4/4/2024 8:00	40.487	5.1	4/4/2024 22:15	30.907	5.7
4/3/2024 18:00	23.087	8.6	4/4/2024 8:15	28.827	5.8	4/4/2024 22:30	29.453	5.9
4/3/2024 18:15	22.94	4	4/4/2024 8:30	31.633	6.2	4/4/2024 22:45	25.38	6.6
4/3/2024 18:30	15.427	6.2	4/4/2024 8:45	43.14	8.9	4/4/2024 23:00	24.507	6.7
4/3/2024 18:45	17.967	4.8	4/4/2024 9:00	34.387	6.8	4/4/2024 23:15	28.553	6.4
4/3/2024 19:00	16.827	4.7	4/4/2024 9:15	22.527	5.6	4/4/2024 23:30	24.993	8.6
4/3/2024 19:15	16.86	4.3	4/4/2024 9:30	23.053	5.1	4/4/2024 23:45	24.927	5.2
4/3/2024 19:30	18.24	5	4/4/2024 9:45	28.387	4.5	4/5/2024 0:00	23.487	7.8
4/3/2024 19:45	20.433	5.2	4/4/2024 10:00	32.333	7.6	4/5/2024 0:15	23.06	5.5
4/3/2024 20:00	19.5	5	4/4/2024 10:15	30	6.6	4/5/2024 0:30	21.607	5.3
4/3/2024 20:15	18.873	7.5	4/4/2024 10:30	38.053	8.5	4/5/2024 0:45	17.547	5.5
4/3/2024 20:30	18.547	6	4/4/2024 10:45	30.927	7.4	4/5/2024 1:00	17.573	5
4/3/2024 20:45	18.38	5.3	4/4/2024 11:00	34.313	6.7	4/5/2024 1:15	20.267	6.1
4/3/2024 21:00	19.58	5.1	4/4/2024 11:15	28.567	10.8	4/5/2024 1:30	18.673	4.9
4/3/2024 21:15	16.76	5	4/4/2024 11:30	31.307	6.4	4/5/2024 1:45	19.853	4.9
4/3/2024 21:30	17.493	4.6	4/4/2024 11:45	29.153	8.3	4/5/2024 2:00	18.78	3.9
4/3/2024 21:45	15.74	5.4	4/4/2024 12:00	25.887	7.3	4/5/2024 2:15	20.2	5
4/3/2024 22:00	18.307	4.4	4/4/2024 12:15	25.407	6.4	4/5/2024 2:30	20.48	4.4
4/3/2024 22:15	18.647	5.4	4/4/2024 12:30	29.92	7.7	4/5/2024 2:45	18.667	4.4
4/3/2024 22:30	21.253	4.8	4/4/2024 12:45	25.953	5.3	4/5/2024 3:00	16.487	6.1
4/3/2024 22:45	18.88	5.4	4/4/2024 13:00	30.807	7.9	4/5/2024 3:15	22.86	4.1
4/3/2024 23:00	19.24	5.2	4/4/2024 13:15	30.867	7.7	4/5/2024 3:30	21.087	3.7
4/3/2024 23:15	19.947	5.1	4/4/2024 13:30	27.227	8.5	4/5/2024 3:45	21.04	7.9
4/3/2024 23:30	21.347	5.6	4/4/2024 13:45	23.473	6.5	4/5/2024 4:00	45.007	5.4
4/3/2024 23:45	20.393	4.8	4/4/2024 14:00	22.44	6.4	4/5/2024 4:15	17.44	6
4/4/2024 0:00	24.107	4.7	4/4/2024 14:15	21.16	7.4	4/5/2024 4:30	16.02	4
4/4/2024 0:15	22.34	5.9	4/4/2024 14:30	22.227	7.1	4/5/2024 4:45	17.86	4.1
4/4/2024 0:30	27.38	5.2	4/4/2024 14:45	32.333	6.9	4/5/2024 5:00	17	4.5
4/4/2024 0:45	27.893	11.4	4/4/2024 15:00	22.94	5.6	4/5/2024 5:15	17.493	5.2
4/4/2024 1:00	19.747	6.1	4/4/2024 15:15	24.973	6.9	4/5/2024 5:30	19.587	6.4
4/4/2024 1:15	20.02	5.6	4/4/2024 15:30	22.927	5.8	4/5/2024 5:45	20.887	5.6
4/4/2024 1:30	18.7	5.1	4/4/2024 15:45	23.08	6	4/5/2024 6:00	22.287	5.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/5/2024 6:15	29.1	6.7
4/5/2024 6:30	23.6	5
4/5/2024 6:45	15.353	5.8
4/5/2024 7:00	17.833	5.5
4/5/2024 7:15	24.58	5.3
4/5/2024 7:30	23.713	4.2
4/5/2024 7:45	19.973	4
4/5/2024 8:00	22.967	5.2
4/5/2024 8:15	36.88	7.2
4/5/2024 8:30	36.22	9.3
4/5/2024 8:45	24.067	6.5
4/5/2024 9:00	19.113	6.5
4/5/2024 9:15	18.86	5.1
4/5/2024 9:30	31.787	11.7
4/5/2024 9:45	21.767	6.2
4/5/2024 10:00	21.493	6.2
4/5/2024 10:15	23.407	5.9
4/5/2024 10:30	22.913	6
4/5/2024 10:45	27.467	5.9
4/5/2024 11:00	26.893	5.8
4/5/2024 11:15	24.647	6.7
4/5/2024 11:30	27.493	6.8
4/5/2024 11:45	26.753	13.3
4/5/2024 12:00	26.827	5.1
4/5/2024 12:15	28.46	6.1
4/5/2024 12:30	26.98	7.2
4/5/2024 12:45	28.307	6.1
4/5/2024 13:00	24.327	6.2
4/5/2024 13:15	31.42	6.6
4/5/2024 13:30	28	17.9
4/5/2024 13:45	21.007	8.6
4/5/2024 14:00	22.58	6.5
4/5/2024 14:15	18.807	6.8
4/5/2024 14:30	23.447	7.6
4/5/2024 14:45	18.18	6.2
4/5/2024 15:00	20.6	6.6
4/5/2024 15:15	19.54	4.9
4/5/2024 15:30	24.42	6.7
4/5/2024 15:45	21.127	6.8
4/5/2024 16:00	18.66	8.2
4/5/2024 16:15	17.773	6
4/5/2024 16:30	19.747	5.4
4/5/2024 16:45	17.093	7
4/5/2024 17:00	18.813	5.5
4/5/2024 17:15	17.047	5.6
4/5/2024 17:30	16.887	4.6
4/5/2024 17:45	17.06	5.8
4/5/2024 18:00	17.693	5.7
4/5/2024 18:15	17.907	5.5
4/5/2024 18:30	16.3	5.1
4/5/2024 18:45	17.153	5.6
4/5/2024 19:00	16.327	4.3
4/5/2024 19:15	16.007	4.8
4/5/2024 19:30	16.827	4.8
4/5/2024 19:45	15.96	5
4/5/2024 20:00	16.52	4.6
4/5/2024 20:15	16.9	4.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/5/2024 20:30	37.847	11.7
4/5/2024 20:45	19.28	18.1
4/5/2024 21:00	19.56	5.3
4/5/2024 21:15	20.107	5.2
4/5/2024 21:30	20.367	4.7
4/5/2024 21:45	18.76	4.5
4/5/2024 22:00	17.687	5.8
4/5/2024 22:15	18.58	5.4
4/5/2024 22:30	19.74	4.6
4/5/2024 22:45	20.467	5.4
4/5/2024 23:00	28.42	4.8
4/5/2024 23:15	22.32	6
4/5/2024 23:30	20.887	4.8
4/5/2024 23:45	21.313	5
4/6/2024 0:00	21.287	3.7
4/6/2024 0:15	44.74	6.3
4/6/2024 0:30	26.547	6.4
4/6/2024 0:45	26.193	5.8
4/6/2024 1:00	22.147	5.4
4/6/2024 1:15	23.047	4.8
4/6/2024 1:30	49.16	12.3
4/6/2024 1:45	27.927	8.1
4/6/2024 2:00	21.547	4.2
4/6/2024 2:15	19.2	4.6
4/6/2024 2:30	23.393	4.8
4/6/2024 2:45	25.373	4.7
4/6/2024 3:00	18.113	4.7
4/6/2024 3:15	20.22	4.7
4/6/2024 3:30	18.467	4.3
4/6/2024 3:45	18.52	3.6
4/6/2024 4:00	32.693	4.5
4/6/2024 4:15	75.913	9.1
4/6/2024 4:30	38.673	11.4
4/6/2024 4:45	23.42	6.3
4/6/2024 5:00	19.513	5.5
4/6/2024 5:15	22.853	3.7
4/6/2024 5:30	18.36	4.5
4/6/2024 5:45	19.733	4.4
4/6/2024 6:00	17.48	5.3
4/6/2024 6:15	31.833	4
4/6/2024 6:30	25.34	8.8
4/6/2024 6:45	21.393	5.1
4/6/2024 7:00	21.18	5.4
4/6/2024 7:15	27.827	7.6
4/6/2024 7:30	25.307	6.6
4/6/2024 7:45	50.113	8
4/6/2024 8:00	35.033	5.4
4/6/2024 8:15	42.24	10.4
4/6/2024 8:30	38.24	7.1
4/6/2024 8:45	31.28	8.7
4/6/2024 9:00	26.513	5.8
4/6/2024 9:15	26.38	8.3
4/6/2024 9:30	27.06	7.1
4/6/2024 9:45	28.56	5.5
4/6/2024 10:00	21.647	5.3
4/6/2024 10:15	19.327	5
4/6/2024 10:30	26.333	6.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/6/2024 10:45	24.527	6
4/6/2024 11:00	23.647	9.9
4/6/2024 11:15	28.593	6.3
4/6/2024 11:30	18.253	5.2
4/6/2024 11:45	22.487	6.1
4/6/2024 12:00	38.36	6
4/6/2024 12:15	41.767	7.1
4/6/2024 12:30	99.7	19.1
4/6/2024 12:45	28.28	4.6
4/6/2024 13:00	23.087	7
4/6/2024 13:15	15.393	4.7
4/6/2024 13:30	23.98	5.2
4/6/2024 13:45	20.28	4.6
4/6/2024 14:00	22.467	4.8
4/6/2024 14:15	19.653	12.4
4/6/2024 14:30	20.107	5.6
4/6/2024 14:45	22.773	9.6
4/6/2024 15:00	23.213	6.5
4/6/2024 15:15	24.34	6
4/6/2024 15:30	20.62	5.7
4/6/2024 15:45	25.073	5.3
4/6/2024 16:00	19.107	8.2
4/6/2024 16:15	20.013	4.4
4/6/2024 16:30	15.9	5.7
4/6/2024 16:45	22.487	4.5
4/6/2024 17:00	21.793	5.5
4/6/2024 17:15	17.16	5.3
4/6/2024 17:30	14.393	4.2
4/6/2024 17:45	15.6	5
4/6/2024 18:00	36.327	5.2
4/6/2024 18:15	15.72	4.2
4/6/2024 18:30	14.747	4.1
4/6/2024 18:45	16.36	6.2
4/6/2024 19:00	15.127	4.3
4/6/2024 19:15	15.7	3.8
4/6/2024 19:30	14.52	5.2
4/6/2024 19:45	15.293	3.6
4/6/2024 20:00	14.053	4
4/6/2024 20:15	13.647	4.3
4/6/2024 20:30	12.967	3.6
4/6/2024 20:45	11.873	3.6
4/6/2024 21:00	13.627	3.1
4/6/2024 21:15	13.38	3.3
4/6/2024 21:30	13.74	3.9
4/6/2024 21:45	16.18	4.5
4/6/2024 22:00	13.92	3.7
4/6/2024 22:15	26.513	4
4/6/2024 22:30	21.493	13.8
4/6/2024 22:45	37.487	4.5
4/6/2024 23:00	32.4	13.2
4/6/2024 23:15	19.107	3.2
4/6/2024 23:30	17.9	4.4
4/6/2024 23:45	16.913	3.3
4/7/2024 0:00	19.447	3.6
4/7/2024 0:15	17.167	3.7
4/7/2024 0:30	20.033	3.6
4/7/2024 0:45	17.487	3.9

Sampling Location	A1-23		Sampling Location	A1-23		Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/7/2024 1:00	59.107	4.1	4/7/2024 15:15	23.307	5.5	4/8/2024 5:30	18.087	4.4
4/7/2024 1:15	24.553	6.8	4/7/2024 15:30	14.993	4	4/8/2024 5:45	16.76	4.2
4/7/2024 1:30	20.947	5.4	4/7/2024 15:45	23.433	6.4	4/8/2024 6:00	20.333	4.4
4/7/2024 1:45	27.613	5.2	4/7/2024 16:00	20.7	4.7	4/8/2024 6:15	17.64	3.5
4/7/2024 2:00	29.313	6.3	4/7/2024 16:15	13.087	4	4/8/2024 6:30	20.407	4
4/7/2024 2:15	37.693	8.3	4/7/2024 16:30	12.36	4.2	4/8/2024 6:45	18.88	5
4/7/2024 2:30	41.62	13.4	4/7/2024 16:45	14.453	3.9	4/8/2024 7:00	20.647	4
4/7/2024 2:45	33.16	9.1	4/7/2024 17:00	15	4.6	4/8/2024 7:15	22.993	4.9
4/7/2024 3:00	26.307	5.8	4/7/2024 17:15	13.16	5.8	4/8/2024 7:30	27.553	4.7
4/7/2024 3:15	37.7	4.9	4/7/2024 17:30	16.573	4.2	4/8/2024 7:45	72.413	5.3
4/7/2024 3:30	27.76	4.2	4/7/2024 17:45	15.853	4.6	4/8/2024 8:00	48.333	11.3
4/7/2024 3:45	27.553	7	4/7/2024 18:00	20.127	4.2	4/8/2024 8:15	35.693	9.6
4/7/2024 4:00	46.313	12.1	4/7/2024 18:15	14.26	4.7	4/8/2024 8:30	38.093	8.9
4/7/2024 4:15	34.167	10.8	4/7/2024 18:30	14	4.1	4/8/2024 8:45	42.74	12.7
4/7/2024 4:30	38.973	13.3	4/7/2024 18:45	15.053	4	4/8/2024 9:00	57.027	10.3
4/7/2024 4:45	20.64	5.6	4/7/2024 19:00	14.287	4.6	4/8/2024 9:15	42.74	9.5
4/7/2024 5:00	19.673	3.5	4/7/2024 19:15	13.573	3.6	4/8/2024 9:30	36.887	7.8
4/7/2024 5:15	19.28	4.3	4/7/2024 19:30	16.093	3.8	4/8/2024 9:45	40.72	10.4
4/7/2024 5:30	19.733	4.1	4/7/2024 19:45	13.933	4	4/8/2024 10:00	52.413	13.2
4/7/2024 5:45	20.073	3.5	4/7/2024 20:00	15.04	3.4	4/8/2024 10:15	44.547	10.1
4/7/2024 6:00	19.74	3.5	4/7/2024 20:15	18.233	4.7	4/8/2024 10:30	43.347	9.5
4/7/2024 6:15	21.813	4.2	4/7/2024 20:30	16.553	4.7	4/8/2024 10:45	34.333	10.2
4/7/2024 6:30	18.427	4.4	4/7/2024 20:45	18.307	3.5	4/8/2024 11:00	36.86	9.3
4/7/2024 6:45	17.367	6	4/7/2024 21:00	16.06	4	4/8/2024 11:15	31.8	8.8
4/7/2024 7:00	19.387	3.8	4/7/2024 21:15	20.527	3.5	4/8/2024 11:30	34.527	9
4/7/2024 7:15	21.7	4.1	4/7/2024 21:30	21.947	4.6	4/8/2024 11:45	32.793	10
4/7/2024 7:30	22.3	4.8	4/7/2024 21:45	36.98	4.9	4/8/2024 12:00	35.107	7.5
4/7/2024 7:45	26.82	4.3	4/7/2024 22:00	21.093	5	4/8/2024 12:15	39.367	9.8
4/7/2024 8:00	60.213	5.2	4/7/2024 22:15	58.773	16.6	4/8/2024 12:30	34.1	8.1
4/7/2024 8:15	33.64	10.2	4/7/2024 22:30	20.1	7.6	4/8/2024 12:45	34.847	6.9
4/7/2024 8:30	22.607	4.2	4/7/2024 22:45	16.087	3.2	4/8/2024 13:00	32.127	9
4/7/2024 8:45	29.567	5	4/7/2024 23:00	17.613	3.6	4/8/2024 13:15	30.147	8.4
4/7/2024 9:00	22.553	5.5	4/7/2024 23:15	16.467	3.2	4/8/2024 13:30	43.327	8
4/7/2024 9:15	25.2	5.9	4/7/2024 23:30	18.907	3.4	4/8/2024 13:45	31.893	10.2
4/7/2024 9:30	23.673	5.8	4/7/2024 23:45	20.46	3.6	4/8/2024 14:00	34.653	9.2
4/7/2024 9:45	21.92	5	4/8/2024 0:00	22.733	4.9	4/8/2024 14:15	25.587	7.5
4/7/2024 10:00	20.093	5.1	4/8/2024 0:15	22.327	3.7	4/8/2024 14:30	23.573	6.8
4/7/2024 10:15	17.053	4.6	4/8/2024 0:30	21.78	4.7	4/8/2024 14:45	28.987	6.2
4/7/2024 10:30	18.34	5	4/8/2024 0:45	25.187	4.8	4/8/2024 15:00	28.233	8.1
4/7/2024 10:45	17.067	4.4	4/8/2024 1:00	22.28	4.5	4/8/2024 15:15	31.24	8.2
4/7/2024 11:00	17.367	4	4/8/2024 1:15	23.207	4.2	4/8/2024 15:30	25.08	7.6
4/7/2024 11:15	14.993	4.2	4/8/2024 1:30	23.207	4.7	4/8/2024 15:45	31.04	5.8
4/7/2024 11:30	20.108	4.4	4/8/2024 1:45	22.073	4.8	4/8/2024 16:00	23.327	7.5
4/7/2024 11:45	16.26	5.8	4/8/2024 2:00	25.227	4.4	4/8/2024 16:15	30.713	10
4/7/2024 12:00	15.487	5.1	4/8/2024 2:15	31.907	4.3	4/8/2024 16:30	21.06	6.3
4/7/2024 12:15	20.24	4.5	4/8/2024 2:30	23.72	6.4	4/8/2024 16:45	23.387	7.1
4/7/2024 12:30	20.42	4.6	4/8/2024 2:45	21.88	4.1	4/8/2024 17:00	19.133	6
4/7/2024 12:45	30.213	5.5	4/8/2024 3:00	21.007	4.1	4/8/2024 17:15	28.153	6.2
4/7/2024 13:00	18.18	9.3	4/8/2024 3:15	41.027	3.6	4/8/2024 17:30	30.04	8
4/7/2024 13:15	23.073	7.8	4/8/2024 3:30	26.14	5.7	4/8/2024 17:45	47.227	5.7
4/7/2024 13:30	18.58	4	4/8/2024 3:45	20.893	3.4	4/8/2024 18:00	53.273	30.7
4/7/2024 13:45	21.173	13.9	4/8/2024 4:00	50.607	3.7	4/8/2024 18:15	33.353	6.8
4/7/2024 14:00	15.6	5.3	4/8/2024 4:15	65.92	25.5	4/8/2024 18:30	32.507	6.1
4/7/2024 14:15	16.513	4	4/8/2024 4:30	24.56	12.2	4/8/2024 18:45	37.447	7.4
4/7/2024 14:30	13.993	4.1	4/8/2024 4:45	18.973	4.1	4/8/2024 19:00	30.5	8.2
4/7/2024 14:45	16.853	4.6	4/8/2024 5:00	19.62	3.6	4/8/2024 19:15	29.893	7
4/7/2024 15:00	24.867	4.7	4/8/2024 5:15	19.82	4.7	4/8/2024 19:30	31.227	7.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/8/2024 19:45	35.76	6.9
4/8/2024 20:00	39.553	9.2
4/8/2024 20:15	39.187	8
4/8/2024 20:30	42.647	9
4/8/2024 20:45	46.433	10
4/8/2024 21:00	40.153	8.8
4/8/2024 21:15	37.553	7
4/8/2024 21:30	40.267	7.8
4/8/2024 21:45	34.033	6.6
4/8/2024 22:00	36.3	8.1
4/8/2024 22:15	40.1	14.6
4/8/2024 22:30	38.767	7.4
4/8/2024 22:45	39.413	8
4/8/2024 23:00	39.88	7.3
4/8/2024 23:15	37.473	8.2
4/8/2024 23:30	38.16	7.8
4/8/2024 23:45	37.16	8
4/9/2024 0:00	37.093	7.1
4/9/2024 0:15	38.02	9.8
4/9/2024 0:30	35.78	8.2
4/9/2024 0:45	37.867	9.1
4/9/2024 1:00	36.207	7.9
4/9/2024 1:15	33.92	8
4/9/2024 1:30	37.393	7.8
4/9/2024 1:45	39.033	7.4
4/9/2024 2:00	37.407	7.9
4/9/2024 2:15	34.847	7.5
4/9/2024 2:30	33.093	6.7
4/9/2024 2:45	32.913	7
4/9/2024 3:00	30.487	7.5
4/9/2024 3:15	34.627	7
4/9/2024 3:30	50.98	9
4/9/2024 3:45	63.433	7.7
4/9/2024 4:00	59.867	8.1
4/9/2024 4:15	53.573	21.4
4/9/2024 4:30	25.16	5.9
4/9/2024 4:45	19.913	4.6
4/9/2024 5:00	19.507	5.1
4/9/2024 5:15	15.567	4.2
4/9/2024 5:30	15.573	5
4/9/2024 5:45	18.72	5.3
4/9/2024 6:00	18.84	4.8
4/9/2024 6:15	19.16	6.2
4/9/2024 6:30	24.633	6.6
4/9/2024 6:45	30.173	8.4
4/9/2024 7:00	32.86	9.3
4/9/2024 7:15	40.84	11.8
4/9/2024 7:30	40.067	13.4
4/9/2024 7:45	35.44	11.7
4/9/2024 8:00	37.96	9.7
4/9/2024 8:15	42.72	11.8
4/9/2024 8:30	42.66	10.2
4/9/2024 8:45	51.38	14.7
4/9/2024 9:00	55.027	11.4
4/9/2024 9:15	74.673	15
4/9/2024 9:30	59.413	11.8
4/9/2024 9:45	69.353	12.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/9/2024 10:00	56.093	13.3
4/9/2024 10:15	58.893	11.4
4/9/2024 10:30	45.66	18.3
4/9/2024 10:45	41.64	13.5
4/9/2024 11:00	37.133	13.2
4/9/2024 11:15	29.764	9
4/9/2024 11:30	43.425	0
4/9/2024 11:45	45.96	15.4
4/9/2024 12:00	37.293	13.1
4/9/2024 12:15	40.66	14.2
4/9/2024 12:30	44.027	14.4
4/9/2024 12:45	45.46	13.3
4/9/2024 13:00	40.5	15.9
4/9/2024 13:15	48.107	19.1
4/9/2024 13:30	53.08	16
4/9/2024 13:45	48.647	15.5
4/9/2024 14:00	48.653	16
4/9/2024 14:15	43.587	14.9
4/9/2024 14:30	37.333	12.7
4/9/2024 14:45	34.453	13.5
4/9/2024 15:00	37.953	12.3
4/9/2024 15:15	43.467	13.9
4/9/2024 15:30	38.793	12.8
4/9/2024 15:45	42.647	15.6
4/9/2024 16:00	42.387	16.3
4/9/2024 16:15	44.313	17.5
4/9/2024 16:30	44.313	18.8
4/9/2024 16:45	52.947	18.9
4/9/2024 17:00	65.167	21.2
4/9/2024 17:15	56.88	21.4
4/9/2024 17:30	49.08	19.9
4/9/2024 17:45	59.327	19.4
4/9/2024 18:00	62.58	20.3
4/9/2024 18:15	62.427	19.2
4/9/2024 18:30	59.9	20.9
4/9/2024 18:45	53.113	19.8
4/9/2024 19:00	54.013	19.8
4/9/2024 19:15	51.473	20.3
4/9/2024 19:30	43.493	17.9
4/9/2024 19:45	46.32	18.3
4/9/2024 20:00	49.06	18.5
4/9/2024 20:15	44.927	18.3
4/9/2024 20:30	40.133	16.5
4/9/2024 20:45	42.853	19
4/9/2024 21:00	37.233	17.6
4/9/2024 21:15	39.967	14
4/9/2024 21:30	38.2	15.4
4/9/2024 21:45	34.52	14.8
4/9/2024 22:00	33.02	12
4/9/2024 22:15	32.987	13.7
4/9/2024 22:30	34.267	12.3
4/9/2024 22:45	32.04	13.7
4/9/2024 23:00	28.12	12.7
4/9/2024 23:15	35.927	10.2
4/9/2024 23:30	46.967	15.7
4/9/2024 23:45	45.873	17.9
4/10/2024 0:00	42.44	20

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/10/2024 0:15	51.167	16.2
4/10/2024 0:30	61.553	18.1
4/10/2024 0:45	70.213	19.8
4/10/2024 1:00	77.233	21.4
4/10/2024 1:15	80.253	20.9
4/10/2024 1:30	65.627	22.5
4/10/2024 1:45	68.227	19.1
4/10/2024 2:00	72.727	18.6
4/10/2024 2:15	71.86	19.9
4/10/2024 2:30	69.273	19.8
4/10/2024 2:45	76.48	20.6
4/10/2024 3:00	74.393	21.5
4/10/2024 3:15	78.447	21.9
4/10/2024 3:30	71.907	22.5
4/10/2024 3:45	65.493	21.9
4/10/2024 4:00	68.767	20.6
4/10/2024 4:15	56.82	20.9
4/10/2024 4:30	53.953	18.5
4/10/2024 4:45	50.14	19.1
4/10/2024 5:00	48.88	17.6
4/10/2024 5:15	50.347	16.9
4/10/2024 5:30	49.06	18.2
4/10/2024 5:45	50.567	18.8
4/10/2024 6:00	48.12	17.4
4/10/2024 6:15	44.567	16.6
4/10/2024 6:30	41.4	18.3
4/10/2024 6:45	42.127	16.6
4/10/2024 7:00	33.067	16.1
4/10/2024 7:15	36.433	14.5
4/10/2024 7:30	37.047	12.5
4/10/2024 7:45	31.987	12.5
4/10/2024 8:00	36.447	14.3
4/10/2024 8:15	43.72	16.5
4/10/2024 8:30	45.68	11.4
4/10/2024 8:45	53.54	13.1
4/10/2024 9:00	48.613	14.7
4/10/2024 9:15	47.393	13.6
4/10/2024 9:30	47.833	12.7
4/10/2024 9:45	45.42	14
4/10/2024 10:00	39.113	12.5
4/10/2024 10:15	36.44	8.4
4/10/2024 10:30	36.147	12.4
4/10/2024 10:45	36.107	10.2
4/10/2024 11:00	34.133	10.4
4/10/2024 11:15	32.393	11.6
4/10/2024 11:30	33.04	8.8
4/10/2024 11:45	30.5	11
4/10/2024 12:00	28.927	10.3
4/10/2024 12:15	28.167	8.8
4/10/2024 12:30	28.873	10.5
4/10/2024 12:45	28.527	8.2
4/10/2024 13:00	27.893	8.9
4/10/2024 13:15	29.68	9.3
4/10/2024 13:30	26.773	9.2
4/10/2024 13:45	28.9	10.4
4/10/2024 14:00	29.44	8.3
4/10/2024 14:15	26.353	10.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/10/2024 14:30	25.98	9.2
4/10/2024 14:45	25.713	9.8
4/10/2024 15:00	26.453	11.1
4/10/2024 15:15	28.607	9.3
4/10/2024 15:30	25.187	8.5
4/10/2024 15:45	25.667	8.6
4/10/2024 16:00	25.807	8.2
4/10/2024 16:15	24.307	8.3
4/10/2024 16:30	27.053	7.3
4/10/2024 16:45	25.827	7.1
4/10/2024 17:00	24.807	8.6
4/10/2024 17:15	24.78	7.5
4/10/2024 17:30	26.96	10.7
4/10/2024 17:45	26.753	8.2
4/10/2024 18:00	26.52	9.3
4/10/2024 18:15	27.607	8.6
4/10/2024 18:30	27.847	8.9
4/10/2024 18:45	27.673	8.9
4/10/2024 19:00	27.8	7.1
4/10/2024 19:15	26.927	9.3
4/10/2024 19:30	29.707	9.1
4/10/2024 19:45	31.853	8.6
4/10/2024 20:00	31.34	9.4
4/10/2024 20:15	30.987	10.5
4/10/2024 20:30	32.653	10.3
4/10/2024 20:45	33.767	11.4
4/10/2024 21:00	31.627	10
4/10/2024 21:15	35.227	10.5
4/10/2024 21:30	38.087	10
4/10/2024 21:45	30.733	10.2
4/10/2024 22:00	33.24	9.2
4/10/2024 22:15	32.133	11.7
4/10/2024 22:30	32.14	10.4
4/10/2024 22:45	30.933	9.8
4/10/2024 23:00	29.067	11.2
4/10/2024 23:15	39.573	10.5
4/10/2024 23:30	40.627	11.1
4/10/2024 23:45	37.787	11.7
4/11/2024 0:00	61.387	9.6
4/11/2024 0:15	44	12.7
4/11/2024 0:30	40.84	11
4/11/2024 0:45	43.8	11.7
4/11/2024 1:00	37.533	10.8
4/11/2024 1:15	37.787	11.3
4/11/2024 1:30	40.533	11.2
4/11/2024 1:45	42.333	11.1
4/11/2024 2:00	41.873	12.2
4/11/2024 2:15	40.987	10.3
4/11/2024 2:30	42.3	11.8
4/11/2024 2:45	42.053	9.6
4/11/2024 3:00	40.147	10.8
4/11/2024 3:15	39.707	11.1
4/11/2024 3:30	41.527	11.6
4/11/2024 3:45	41.12	11.9
4/11/2024 4:00	41.72	12
4/11/2024 4:15	43.78	9.4
4/11/2024 4:30	53.933	11.7

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/11/2024 4:45	45.14	12.5
4/11/2024 5:00	44.087	13.4
4/11/2024 5:15	39.66	11.4
4/11/2024 5:30	38.807	11.3
4/11/2024 5:45	37.247	9.9
4/11/2024 6:00	40.173	9.5
4/11/2024 6:15	51.26	10.6
4/11/2024 6:30	71.147	11.8
4/11/2024 6:45	94.707	28.8
4/11/2024 7:00	48.913	18.8
4/11/2024 7:15	43.8	13
4/11/2024 7:30	38.78	10
4/11/2024 7:45	38.753	12.6
4/11/2024 8:00	42.96	9.8
4/11/2024 8:15	36.04	9.6
4/11/2024 8:30	33.787	8.8
4/11/2024 8:45	35.893	10
4/11/2024 9:00	37.66	10.8
4/11/2024 9:15	53.787	12
4/11/2024 9:30	40.707	9.5
4/11/2024 9:45	34.713	12.3
4/11/2024 10:00	38.94	10.4
4/11/2024 10:15	30.96	13.7
4/11/2024 10:30	33.353	9.8
4/11/2024 10:45	33.513	9.9
4/11/2024 11:00	29.627	9.8
4/11/2024 11:15	31.387	12.1
4/11/2024 11:30	27.793	9.9
4/11/2024 11:45	39.733	9.9
4/11/2024 12:00	36.253	9.9
4/11/2024 12:15	43.453	11.2
4/11/2024 12:30	56.347	12.9
4/11/2024 12:45	41.24	12.6
4/11/2024 13:00	44.98	16.6
4/11/2024 13:15	37.147	14.4
4/11/2024 13:30	46.92	22.8
4/11/2024 13:45	45.667	10.9
4/11/2024 14:00	47.847	17.3
4/11/2024 14:15	48.02	18.7
4/11/2024 14:30	39.293	12.5
4/11/2024 14:45	35.753	15.5
4/11/2024 15:00	38.42	9.6
4/11/2024 15:15	33.233	9.9
4/11/2024 15:30	58.093	10.2
4/11/2024 15:45	48.773	15.8
4/11/2024 16:00	49.507	12.2
4/11/2024 16:15	45.013	14.5
4/11/2024 16:30	44.067	11
4/11/2024 16:45	45.52	12.9
4/11/2024 17:00	34.987	11.2
4/11/2024 17:15	24.94	8
4/11/2024 17:30	27.853	9.4
4/11/2024 17:45	39.28	7.8
4/11/2024 18:00	29.213	8.8
4/11/2024 18:15	29.8	9.2
4/11/2024 18:30	28.967	10.6
4/11/2024 18:45	25.68	7.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/11/2024 19:00	27.18	8.7
4/11/2024 19:15	29.947	7.5
4/11/2024 19:30	33.2	9.2
4/11/2024 19:45	33.94	8.1
4/11/2024 20:00	32.34	8.7
4/11/2024 20:15	30.833	10.2
4/11/2024 20:30	32.94	10
4/11/2024 20:45	27.867	8.8
4/11/2024 21:00	26.893	8.7
4/11/2024 21:15	26.507	8.9
4/11/2024 21:30	34.747	8.7
4/11/2024 21:45	39.16	13.5
4/11/2024 22:00	31.853	9.8
4/11/2024 22:15	26.82	9.6
4/11/2024 22:30	26.06	8.8
4/11/2024 22:45	26.593	9.4
4/11/2024 23:00	28.04	9.2
4/11/2024 23:15	27.887	8.9
4/11/2024 23:30	26.147	8.4
4/11/2024 23:45	23.993	8.4
4/12/2024 0:00	25.747	7.2
4/12/2024 0:15	26.073	7.5
4/12/2024 0:30	26.36	6.7
4/12/2024 0:45	27.913	7.6
4/12/2024 1:00	32.027	9.7
4/12/2024 1:15	32.8	11.5
4/12/2024 1:30	36.187	11.5
4/12/2024 1:45	42.3	17.8
4/12/2024 2:00	42.82	15.8
4/12/2024 2:15	46.653	15.6
4/12/2024 2:30	49.253	17.8
4/12/2024 2:45	55.12	20.3
4/12/2024 3:00	53.067	19.6
4/12/2024 3:15	50.653	17.9
4/12/2024 3:30	56.08	20.1
4/12/2024 3:45	56.033	20.8
4/12/2024 4:00	51.5	18.8
4/12/2024 4:15	47.047	19.2
4/12/2024 4:30	43.84	17.7
4/12/2024 4:45	40.947	16.8
4/12/2024 5:00	41.073	15
4/12/2024 5:15	41.493	14.2
4/12/2024 5:30	41.093	12.7
4/12/2024 5:45	49.907	12.1
4/12/2024 6:00	50.24	12.5
4/12/2024 6:15	51.18	13
4/12/2024 6:30	47.953	13.3
4/12/2024 6:45	47.2	13.5
4/12/2024 7:00	45.233	11.6
4/12/2024 7:15	56.56	13.2
4/12/2024 7:30	49.587	13.8
4/12/2024 7:45	46.84	17
4/12/2024 8:00	66.513	12
4/12/2024 8:15	63.413	16.2
4/12/2024 8:30	51.967	9.8
4/12/2024 8:45	49.02	13.2
4/12/2024 9:00	41.313	10.9

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/12/2024 9:15	60.593	10.4
4/12/2024 9:30	38.067	11.5
4/12/2024 9:45	49.64	11.1
4/12/2024 10:00	46.907	11.5
4/12/2024 10:15	41.78	8.7
4/12/2024 10:30	65.847	12.5
4/12/2024 10:45	47.433	13.3
4/12/2024 11:00	56.293	11.7
4/12/2024 11:15	63.96	19.6
4/12/2024 11:30	50.393	15.8
4/12/2024 11:45	69.76	12.3
4/12/2024 12:00	60.893	21.4
4/12/2024 12:15	61.713	14.8
4/12/2024 12:30	49.14	14
4/12/2024 12:45	55.667	20.7
4/12/2024 13:00	43.74	21.1
4/12/2024 13:15	38.213	12.5
4/12/2024 13:30	40.14	15.7
4/12/2024 13:45	39.44	11.5
4/12/2024 14:00	34.193	12.8
4/12/2024 14:15	38.367	12.5
4/12/2024 14:30	40.713	15.1
4/12/2024 14:45	39.507	16.4
4/12/2024 15:00	39.38	17
4/12/2024 15:15	37.113	11.8
4/12/2024 15:30	42.327	19.1
4/12/2024 15:45	45.233	10.9
4/12/2024 16:00	49.263	0
4/12/2024 16:15	37.38	8.9
4/12/2024 16:30	49.827	20.3
4/12/2024 16:45	45.523	9.6
4/12/2024 17:00	33.867	10.6
4/12/2024 17:15	42.4	0
4/12/2024 17:30	40.54	15.5
4/12/2024 17:45	31.747	11.4
4/12/2024 18:00	33.293	12.9
4/12/2024 18:15	31.94	11
4/12/2024 18:30	33.8	9.9
4/12/2024 18:45	30.707	10.8
4/12/2024 19:00	31.207	9.7
4/12/2024 19:15	29.113	10.7
4/12/2024 19:30	26.107	9
4/12/2024 19:45	29.613	7.8
4/12/2024 20:00	40.42	15.1
4/12/2024 20:15	79.42	21
4/12/2024 20:30	80.8	22.9
4/12/2024 20:45	64.513	21.3
4/12/2024 21:00	66.087	22.4
4/12/2024 21:15	94.973	20.7
4/12/2024 21:30	137.833	82.9
4/12/2024 21:45	151.573	83.4
4/12/2024 22:00	159.553	77.3
4/12/2024 22:15	152.713	75.1
4/12/2024 22:30	135.687	25.3
4/12/2024 22:45	108.347	24.5
4/12/2024 23:00	88.88	25
4/12/2024 23:15	81.347	25.1

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/12/2024 23:30	53.387	22.5
4/12/2024 23:45	49.173	20.8
4/13/2024 0:00	44.987	19.3
4/13/2024 0:15	41.727	16.4
4/13/2024 0:30	38.14	15
4/13/2024 0:45	40.667	15
4/13/2024 1:00	55.54	18.6
4/13/2024 1:15	44.487	18.7
4/13/2024 1:30	41.58	18.6
4/13/2024 1:45	36.213	15.5
4/13/2024 2:00	44.213	9.7
4/13/2024 2:15	23.793	11.1
4/13/2024 2:30	18.036	0
4/13/2024 2:45	12.693	5.7
4/13/2024 3:00	9.44	5.5
4/13/2024 3:15	9.4	4.4
4/13/2024 3:30	7.593	3.7
4/13/2024 3:45	9.487	4.4
4/13/2024 4:00	8.96	5.5
4/13/2024 4:15	10.78	5.1
4/13/2024 4:30	13.42	4.2
4/13/2024 4:45	10.327	5.2
4/13/2024 5:00	12.62	5.4
4/13/2024 5:15	12.207	5.1
4/13/2024 5:30	12.847	4.9
4/13/2024 5:45	14.88	5
4/13/2024 6:00	14.06	5.8
4/13/2024 6:15	16.327	4.8
4/13/2024 6:30	17.807	4.4
4/13/2024 6:45	17.007	4.5
4/13/2024 7:00	15.26	5.8
4/13/2024 7:15	13.747	5.6
4/13/2024 7:30	13.753	5.6
4/13/2024 7:45	12.52	4.6
4/13/2024 8:00	12.7	4.4
4/13/2024 8:15	16.353	4.4
4/13/2024 8:30	14.62	5.5
4/13/2024 8:45	14.727	3.8
4/13/2024 9:00	14.953	4.8
4/13/2024 9:15	14.78	4.2
4/13/2024 9:30	11.467	3.9
4/13/2024 9:45	12.78	4.2
4/13/2024 10:00	13.787	4.1
4/13/2024 10:15	18.647	5.6
4/13/2024 10:30	24.34	5.4
4/13/2024 10:45	26.813	7.6
4/13/2024 11:00	29	9
4/13/2024 11:15	28.607	6.9
4/13/2024 11:30	29.98	7.6
4/13/2024 11:45	31.96	9
4/13/2024 12:00	31.613	9.4
4/13/2024 12:15	35.753	10.2
4/13/2024 12:30	41.267	9.8
4/13/2024 12:45	40.567	15.8
4/13/2024 13:00	37.487	12.9
4/13/2024 13:15	36.273	15.7
4/13/2024 13:30	35.527	14

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/13/2024 13:45	38.993	14.2
4/13/2024 14:00	38.747	15
4/13/2024 14:15	38.747	17
4/13/2024 14:30	37.08	14.4
4/13/2024 14:45	36.1	15.3
4/13/2024 15:00	35.013	14.2
4/13/2024 15:15	43.767	16
4/13/2024 15:30	38.187	14.3
4/13/2024 15:45	34.187	15.1
4/13/2024 16:00	59.14	13
4/13/2024 16:15	48.633	16.4
4/13/2024 16:30	36.067	12.3
4/13/2024 16:45	33.633	11.8
4/13/2024 17:00	29.413	11.6
4/13/2024 17:15	27.633	10.7
4/13/2024 17:30	27.2	11
4/13/2024 17:45	26.613	9.5
4/13/2024 18:00	27.933	9.5
4/13/2024 18:15	24.827	8.7
4/13/2024 18:30	25.04	8.3
4/13/2024 18:45	31.027	7.8
4/13/2024 19:00	42.06	10.6
4/13/2024 19:15	105.267	21.9
4/13/2024 19:30	119.913	22.3
4/13/2024 19:45	115.013	23.1
4/13/2024 20:00	125.073	22.4
4/13/2024 20:15	121.167	22.3
4/13/2024 20:30	117.487	20.2
4/13/2024 20:45	108.567	23.5
4/13/2024 21:00	78.84	17.9
4/13/2024 21:15	77.92	18.6
4/13/2024 21:30	60.713	18.9
4/13/2024 21:45	26.693	9.1
4/13/2024 22:00	24.273	7.5
4/13/2024 22:15	42.34	8
4/13/2024 22:30	50.3	14.5
4/13/2024 22:45	40.073	9
4/13/2024 23:00	35	9.5
4/13/2024 23:15	30.053	8.4
4/13/2024 23:30	20.253	7.6
4/13/2024 23:45	15.62	6.6
4/14/2024 0:00	14.807	5.6
4/14/2024 0:15	14.273	5.3
4/14/2024 0:30	13.4	6
4/14/2024 0:45	17.567	4.2
4/14/2024 1:00	21.707	6.6
4/14/2024 1:15	15.88	5.6
4/14/2024 1:30	15.02	5.8
4/14/2024 1:45	13.78	4.7
4/14/2024 2:00	12.947	6
4/14/2024 2:15	14.66	5.2
4/14/2024 2:30	16.227	5.9
4/14/2024 2:45	16.66	5.3
4/14/2024 3:00	17.54	5.4
4/14/2024 3:15	18.773	7.2
4/14/2024 3:30	18.447	5.8
4/14/2024 3:45	16.42	6.2

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/14/2024 4:00	14.167	7.5
4/14/2024 4:15	17.687	8.4
4/14/2024 4:30	19.107	8.3
4/14/2024 4:45	20.62	7.8
4/14/2024 5:00	25.64	9.5
4/14/2024 5:15	32.707	9.6
4/14/2024 5:30	31.953	8.9
4/14/2024 5:45	31.433	9.5
4/14/2024 6:00	16.187	8.9
4/14/2024 6:15	16.12	7.1
4/14/2024 6:30	15.3	8.8
4/14/2024 6:45	13.127	8.1
4/14/2024 7:00	15.9	7.9
4/14/2024 7:15	9.54	6.5
4/14/2024 7:30	12.193	6.6
4/14/2024 7:45	11.44	6.6
4/14/2024 8:00	12.58	6.2
4/14/2024 8:15	16.267	5.9
4/14/2024 8:30	15.093	6.8
4/14/2024 8:45	16.08	5.9
4/14/2024 9:00	24.96	7
4/14/2024 9:15	30.413	7.4
4/14/2024 9:30	29.987	7.4
4/14/2024 9:45	32	9.4
4/14/2024 10:00	29.053	6.4
4/14/2024 10:15	31.12	8.7
4/14/2024 10:30	29.8	8.3
4/14/2024 10:45	32.7	9.2
4/14/2024 11:00	27.953	7.3
4/14/2024 11:15	36.26	14.7
4/14/2024 11:30	28.667	11
4/14/2024 11:45	31.48	7.4
4/14/2024 12:00	31.753	9.4
4/14/2024 12:15	43.673	22.2
4/14/2024 12:30	28.88	11.7
4/14/2024 12:45	32.307	9
4/14/2024 13:00	34.24	7
4/14/2024 13:15	27.36	8.3
4/14/2024 13:30	26.7	7.2
4/14/2024 13:45	29.56	8.6
4/14/2024 14:00	28.06	8.1
4/14/2024 14:15	33.96	12.2
4/14/2024 14:30	35.487	7.7
4/14/2024 14:45	48.16	17.1
4/14/2024 15:00	40.573	7.8
4/14/2024 15:15	31.027	7.2
4/14/2024 15:30	28.34	6.8
4/14/2024 15:45	18.887	8
4/14/2024 16:00	20.08	6.5
4/14/2024 16:15	18.153	5.6
4/14/2024 16:30	19.1	7.9
4/14/2024 16:45	16	8.4
4/14/2024 17:00	41.573	6.5
4/14/2024 17:15	24.533	7.2
4/14/2024 17:30	10.72	6.5
4/14/2024 17:45	11.307	5
4/14/2024 18:00	10.773	5.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/14/2024 18:15	15.167	6.3
4/14/2024 18:30	17.453	7.8
4/14/2024 18:45	24.313	7.5
4/14/2024 19:00	26.5	7.7
4/14/2024 19:15	31.513	9.2
4/14/2024 19:30	44.2	10.2
4/14/2024 19:45	34.127	10.7
4/14/2024 20:00	28.167	7
4/14/2024 20:15	71.493	4.4
4/14/2024 20:30	145.753	27.3
4/14/2024 20:45	114.647	84.8
4/14/2024 21:00	133.393	85.2
4/14/2024 21:15	118.253	85.4
4/14/2024 21:30	113.893	84.3
4/14/2024 21:45	135.907	85.1
4/14/2024 22:00	125.307	66.3
4/14/2024 22:15	122.38	79.2
4/14/2024 22:30	120.473	57.9
4/14/2024 22:45	110.633	35.9
4/14/2024 23:00	105.6	82.6
4/14/2024 23:15	117.327	82.2
4/14/2024 23:30	119.213	83.5
4/14/2024 23:45	112.127	83.8
4/15/2024 0:00	100.833	83.1
4/15/2024 0:15	97.333	80.2
4/15/2024 0:30	97.14	33.5
4/15/2024 0:45	93.707	34.8
4/15/2024 1:00	45.513	23.3
4/15/2024 1:15	30.513	10.1
4/15/2024 1:30	28.387	10.4
4/15/2024 1:45	10.767	7.3
4/15/2024 2:00	14.293	5.5
4/15/2024 2:15	10.833	5
4/15/2024 2:30	11.9	4.2
4/15/2024 2:45	10.6	3.8
4/15/2024 3:00	10.013	4.5
4/15/2024 3:15	12.133	4.1
4/15/2024 3:30	47.26	5.7
4/15/2024 3:45	57.933	15
4/15/2024 4:00	80.747	18.3
4/15/2024 4:15	57.233	18.9
4/15/2024 4:30	85.793	16.9
4/15/2024 4:45	74.78	17.1
4/15/2024 5:00	72.193	14.5
4/15/2024 5:15	60.333	13.5
4/15/2024 5:30	33.02	8.7
4/15/2024 5:45	25.893	7.9
4/15/2024 6:00	12.08	5.9
4/15/2024 6:15	6.347	3.4
4/15/2024 6:30	6.213	2.7
4/15/2024 6:45	5.92	3
4/15/2024 7:00	6.753	4.1
4/15/2024 7:15	6.447	4
4/15/2024 7:30	4.28	2.8
4/15/2024 7:45	4.947	2.8
4/15/2024 8:00	4.987	3.6
4/15/2024 8:15	4.153	3.4

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
4/15/2024 8:30	4.013	2.5
4/15/2024 8:45	4.453	2.3
4/15/2024 9:00	5.733	2.6
4/15/2024 9:15	7.207	4
4/15/2024 9:30	7.953	3.5
4/15/2024 9:45	10.107	4.5
4/15/2024 10:00	10.307	4
4/15/2024 10:15	8.5	2.5
4/15/2024 10:30	11.753	3
4/15/2024 10:45	12.627	4.2
4/15/2024 11:00	14.387	4
4/15/2024 11:15	17.273	5
4/15/2024 11:30	16.747	5
4/15/2024 11:45	15.713	4.8
4/15/2024 12:00	18.153	4.6
4/15/2024 12:15	20.233	5
4/15/2024 12:30	20.773	4.6
4/15/2024 12:45	19.293	5.3
4/15/2024 13:00	15.893	3.2
4/15/2024 13:15	18.907	3.9
4/15/2024 13:30	29.42	4.7
4/15/2024 13:45	31.247	5.8
4/15/2024 14:00	28.327	5.6
4/15/2024 14:15	37.727	7.9
4/15/2024 14:30	33.64	7.8
4/15/2024 14:45	30.427	7.5
4/15/2024 15:00	31.237	7.4

B.2 24 Hrs Data

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
Start Time	10/1/2023	
End Time	4/15/2024	
10/1/2023	27.696	6.035
10/2/2023	26.015	6.264
10/3/2023	29.021	10.226
10/4/2023	32.133	11.479
10/5/2023	25.792	9.972
10/6/2023	78.239	24.521
10/7/2023	49.605	16.361
10/8/2023	34.959	11.264
10/9/2023	29.407	9.952
10/10/2023	25.351	9.479
10/11/2023	24.779	9.035
10/12/2023	26.031	9.569
10/13/2023	116.176	37.623
10/14/2023	67.063	19.8
10/15/2023	98.016	23.584
10/16/2023	42.517	13.98
10/17/2023	37.86	12.122
10/18/2023	49.871	15.614
10/19/2023	46.016	15.795
10/20/2023	40.148	15.505
10/21/2023	74.716	21.957
10/22/2023	40.896	14.022
10/23/2023	31.09	11.802
10/26/2023	25.507	12.465
10/27/2023	29.868	13.359
11/3/2023	45.034	16.664
11/4/2023	50.051	17.187
11/5/2023	44.994	14.814
11/6/2023	58.234	14.82
11/7/2023	46.183	15.054
11/11/2023	21.88	7
11/22/2023	38.447	15.371
11/23/2023	30.095	8.066
11/24/2023	37.903	10.626
11/25/2023	22.465	9.018
11/26/2023	28.959	13.274
11/27/2023	35.839	20.679
11/28/2023	30.965	17.206
11/29/2023	32.636	16.81
11/30/2023	32.562	12.529
12/1/2023	31.696	12.833
12/2/2023	25.205	10.368
12/3/2023	21.867	9.141
12/6/2023	22.387	5.669
12/7/2023	26.674	5.62
12/8/2023	26.693	6.373
12/9/2023	31.736	9.23
12/10/2023	37.884	9.387
12/11/2023	23.191	6.945
12/12/2023	70.227	20.403
12/13/2023	65.817	17.171

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
12/14/2023	66.278	13.677
12/15/2023	45.382	14.446
12/16/2023	31.707	6.494
12/18/2023	24.459	5.073
12/19/2023	21.462	4.962
12/20/2023	25.612	10.183
12/21/2023	32.87	15.623
12/22/2023	33.503	15.223
12/23/2023	73.81	17.051
12/24/2023	78.301	19.122
12/25/2023	38.828	15.05
12/26/2023	44.715	14.974
12/27/2023	49.508	16.096
12/29/2023	57.066	15.008
12/30/2023	114.219	22.079
12/31/2023	79.419	19.19
1/1/2024	75.186	19.208
1/2/2024	23.553	7.074
1/3/2024	34.999	10.065
1/4/2024	29.743	12.048
1/5/2024	18.132	8.902
1/6/2024	41.436	12.663
1/7/2024	51.716	12.799
1/10/2024	38.389	7.614
1/11/2024	27.882	5.732
1/12/2024	61.781	13.111
1/13/2024	48.605	11.723
1/14/2024	25.779	6.915
1/17/2024	29.48	7.857
1/18/2024	27.74	7.528
1/19/2024	45.794	10.719
1/21/2024	30.946	8.078
1/22/2024	28.579	7.554
1/23/2024	24.703	6.516
1/24/2024	36.222	8.359
1/25/2024	28.264	7.572
1/26/2024	43.928	13.111
1/27/2024	60.671	16.497
1/28/2024	46.769	12.372
1/30/2024	48.663	12.646
2/7/2024	25.867	5.078
2/8/2024	35.79	7.731
2/9/2024	31.447	6.96
2/10/2024	30.709	6.782
2/11/2024	32.544	7.472
2/14/2024	24.004	5.281
2/15/2024	24.482	5.962
2/16/2024	26.212	6.248
2/17/2024	31.815	9.077
2/18/2024	62.996	15.75
2/19/2024	29.205	6.247
2/20/2024	12.501	4.193
2/23/2024	25.181	5.293
2/24/2024	41.212	7.289
2/25/2024	51.22	13.686
2/26/2024	22.238	16.163

Sampling Location	A1-23	
Time	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
2/28/2024	30.965	25.369
2/29/2024	28.184	24.674
3/1/2024	22.967	11.251
3/2/2024	29.435	7.782
3/3/2024	17.499	4.642
3/4/2024	38.485	8.439
3/5/2024	25.877	6.794
3/6/2024	18.404	7.188
3/7/2024	25.615	7.587
3/8/2024	36.965	8.638
3/9/2024	58.756	13.717
3/10/2024	33.205	10.113
3/11/2024	45.447	12.552
3/12/2024	99.382	24.415
3/13/2024	43.325	10.527
3/14/2024	24.143	6.631
3/15/2024	20.152	4.591
3/16/2024	25.521	6.057
3/17/2024	31.227	8.279
3/18/2024	36.421	10.348
3/19/2024	33.504	9.907
3/20/2024	52.553	14.758
3/21/2024	32.489	10.307
3/22/2024	31.271	8.434
3/23/2024	29.342	8.455
3/24/2024	23.614	7.174
3/25/2024	28.331	8.674
3/26/2024	38.171	12.295
3/27/2024	37.228	12.173
3/28/2024	35.03	9.836
3/29/2024	98.416	22.221
3/30/2024	26.114	6.162
3/31/2024	19.884	4.151
4/1/2024	30.409	7.474
4/2/2024	55.748	16.238
4/3/2024	21.45	6.092
4/4/2024	26.565	6.707
4/5/2024	22.53	6.178
4/6/2024	24.622	5.931
4/7/2024	22.02	5.277
4/8/2024	34.101	8.075
4/9/2024	44.987	14.621
4/10/2024	38.231	12.222
4/11/2024	38.101	11.459
4/12/2024	54.268	18.313
4/13/2024	32.362	9.583
4/14/2024	42.081	19.93
4/15/2024	23.142	6.298

Appendix C: Development of Relationship of Background Concentrations of Particulate Matter with Wind Speed

The subsequent sections describe the relationship between the PM₁₀ and PM_{2.5} concentrations and wind speeds, and directions. Although other parameters such as relative humidity and precipitation significantly influence the PM₁₀ concentrations, a relation of the reported concentrations was not assessed for these parameters. This was due to very limited variation in relative humidity (15% to 25%) as well as there being only 1-day with precipitation of more than 0.25 mm during the overall monitoring duration.

C.1 Validation of Data Collated

A period of ~2 months starting from September 25, 2023, and terminating on November 15, 2023, was selected as validation period¹ for this assessment. This period was selected as it contains relatively fewer missing periods and has PM₁₀ and PM_{2.5} concentrations that align with the onsite meteorological dataset available.

C.1.1 Dependence of PM₁₀ and PM_{2.5} Concentrations on Wind Speed

Relation between PM₁₀ and PM_{2.5} concentrations was drawn to assess the coefficient of determination (R^2)² which explains how much variation in PM₁₀ and PM_{2.5} concentrations can occur with changing wind speeds. A low R^2 close to zero indicates a very low variance between the dependent and independent variables. A high R^2 close to 1 indicates that the dependent variable is directly linked with the independent variable, thus corresponding to a high variance among the datasets.

Exhibit C.1 and **Exhibit C.2** depict the PM₁₀ and PM_{2.5} concentrations and their relationship with changing wind speeds. The relationship has been plotted using PM₁₀ and PM_{2.5} concentrations and wind speeds monitored at a 15-minute temporal resolution.

¹ For the purpose of analysis, a period of September 25, 2023 to November 17, 2023 was taken as period for establishing relationship between PM₁₀ and PM_{2.5} concentrations and wind speeds and direction.

² R^2 is a statistical measure that determines the proportion of variance in the dependent variable that can be explained by the independent variable.

Exhibit C.1: Relation of PM₁₀ Concentrations with Wind Speeds

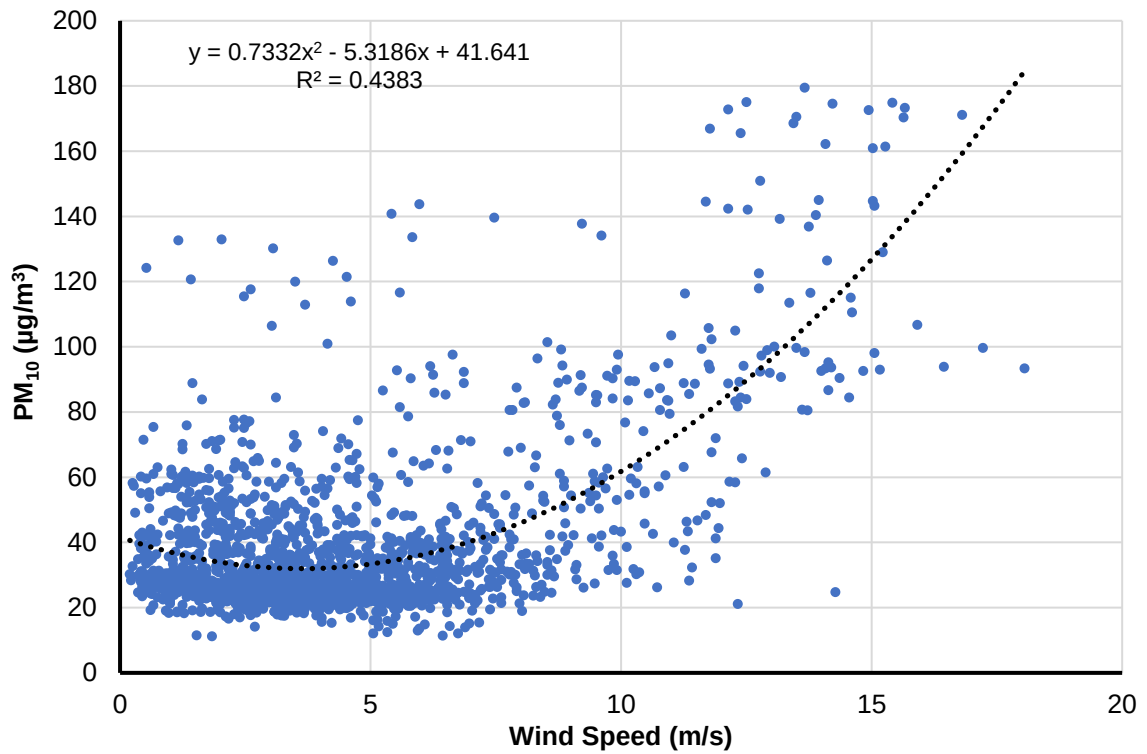
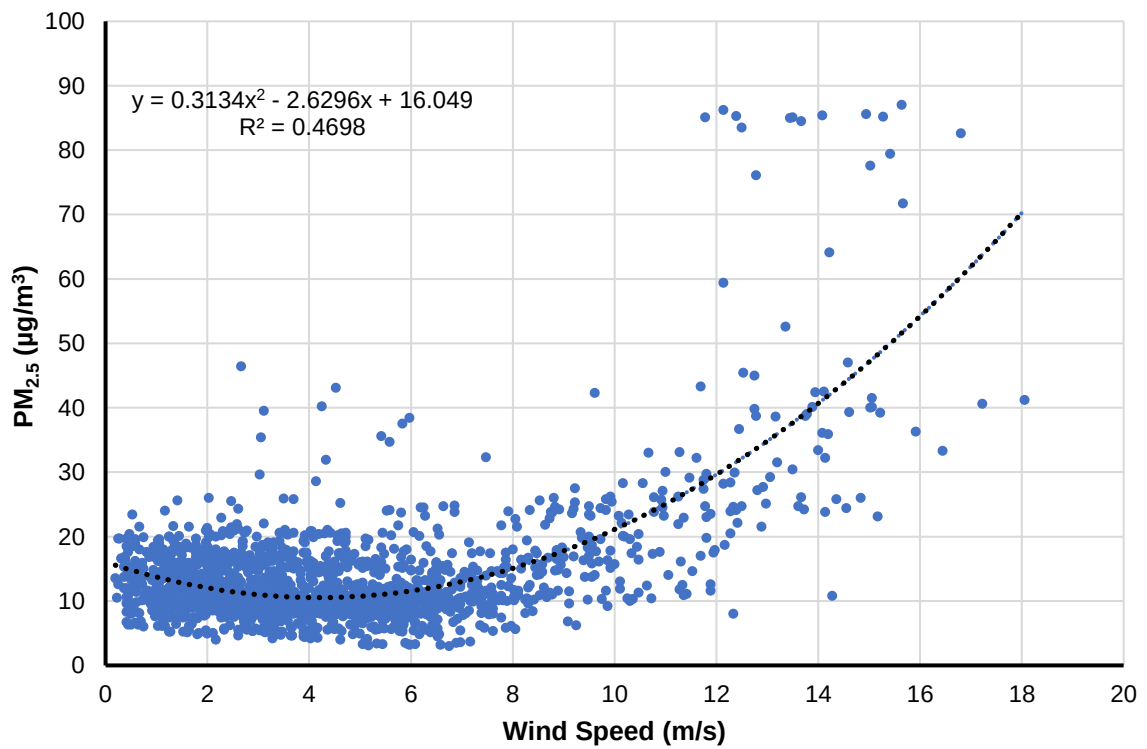


Exhibit C.2: Relation of PM_{2.5} Concentrations with Wind Speeds



A low R^2 (<0.5) in **Exhibit C.1** and **Exhibit C.2** depicts that there is relatively lower dependence of PM_{10} and $PM_{2.5}$ concentrations on wind speeds. Furthermore, most of the PM_{10} and $PM_{2.5}$ concentrations at wind speeds less than 6 m/s do not show dependence on wind speeds. However, the PM_{10} and $PM_{2.5}$ concentrations show an upward trend with lower noise³ when the wind speeds exceed 6 m/s. In order to further explore this pattern, the dataset was split at wind speed of 6 m/s and analysed to assess the relationship between the two variables.

Exhibit C.3 and **Exhibit C.4** depict the PM_{10} and $PM_{2.5}$ concentrations as a function of wind speed when the threshold limit exceeds 6 m/s. This assessment at higher speeds depicts relatively lower noise in the scatter as compared to the noise witnessed at lower wind speed (<6 m/s). This relationship has been studied in detail in studies conducted by Cowherd Jr (1983) and Muleski (1985) which assessed particulate concentrations as a function of wind speeds. According to these studies, the particulate matter tends to remain still or depicts minimum dispersion when the wind speeds are less than 5 m/s. However, the particulate matter depicts an exponential spread when the wind speeds exceed the threshold limit of 5 m/s. This trend in particulate dispersion is primarily related to the threshold wind velocity and particulate friction velocity. As the wind speed exceeds 5 m/s, the threshold velocity exceeds the friction velocity of particulate matter ($<30 \mu m$ in size), therefore, initiating particulate dispersion.

Based on this assessment, it can be concluded that the small variance in PM_{10} and $PM_{2.5}$ concentrations at lower wind speeds (<6 m/s) is due to threshold velocity lower than the friction velocity, thus causing background PM_{10} and $PM_{2.5}$ concentrations only due to gusting. At higher wind speeds (>6 m/s), the higher R^2 in the two datasets is primarily linked with higher threshold velocity exceeding friction velocity, thus causing particulates dispersion at significant rates. This phenomenon leads to an upward trend in PM_{10} and $PM_{2.5}$ concentrations with increasing wind speeds.

³ Noise or statistical noise is the variability in the dependent variable which cannot be directly explained by the independent variable.

Exhibit C.3: Relation of PM₁₀ Concentrations with High-Speed Winds (>6 m/s)

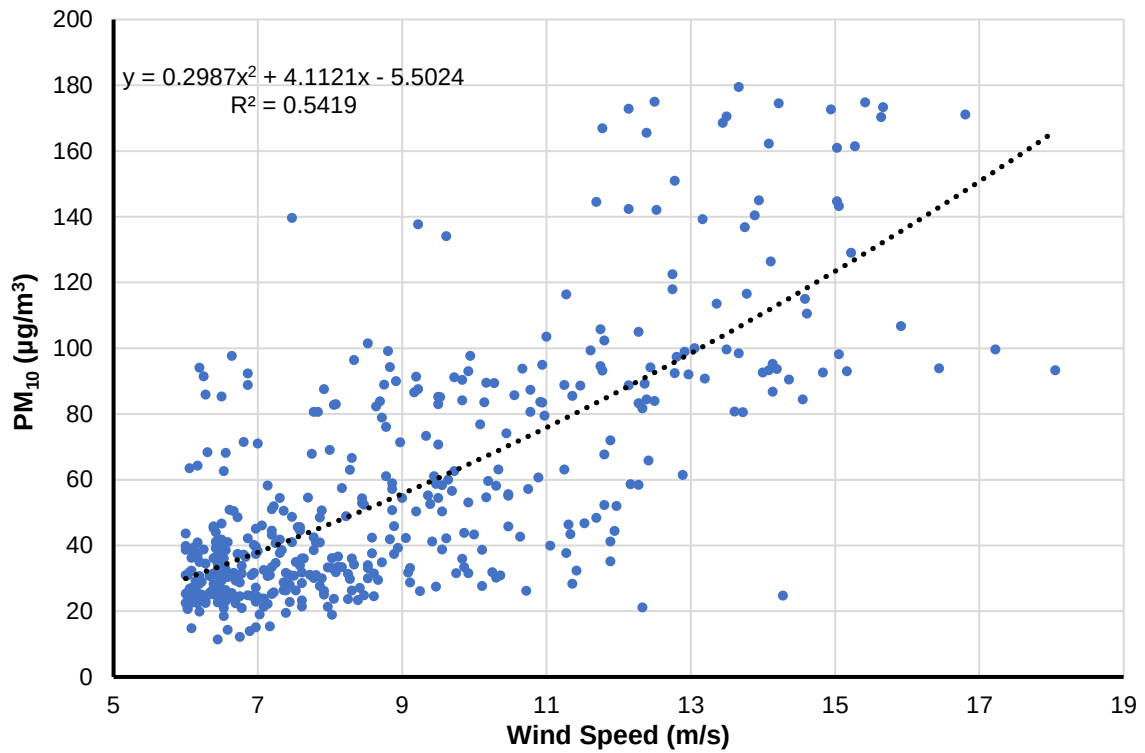
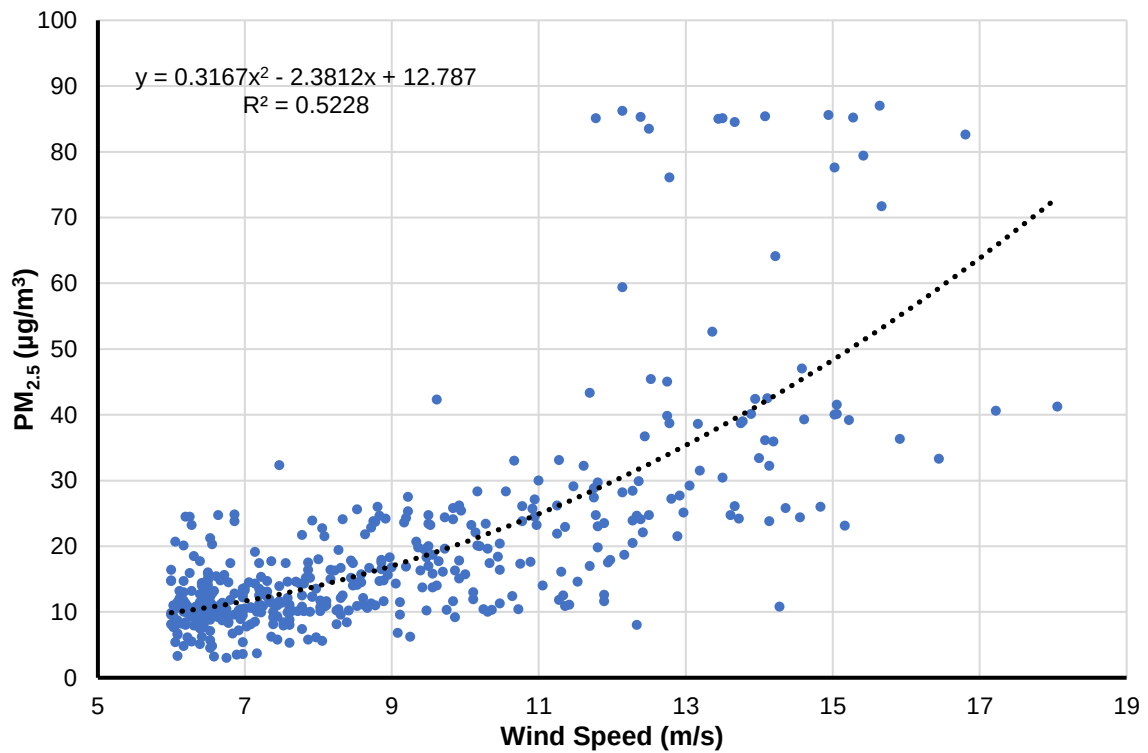


Exhibit C.4: Relation of PM_{2.5} Concentrations with High-Speed Winds (> 6 m/s)



C.1.2 Fluctuations in PM₁₀ and PM_{2.5} Concentrations at Low Wind Speeds

The analysis carried out in **Exhibit C.1** and **Exhibit C.2** shows high noise in PM₁₀ and PM_{2.5} concentrations at wind speed lower than 6 m/s. In order to assess the reasons for this noise, the PM₁₀ and PM_{2.5} concentrations at lower wind speed (<6 m/s) were plotted as a function of wind speed (see **Exhibit C.5** and **Exhibit C.6**).

Both PM₁₀ and PM_{2.5} exhibit a relatively flat horizontal trendline, indicating constant concentrations despite increasing wind speed. This flat horizontal trendline can be associated with lower threshold wind velocity than the friction velocity (Cowherd Jr, 1983) (Muleski, 1985). Lower R² in PM₁₀ and PM_{2.5} concentrations at lower wind speeds also corresponds to very low variance among the variables, thus showing that the average PM₁₀ and PM_{2.5} concentrations will remain relatively consistent until wind speed exceeds 6 m/s.

Exhibit C.5: Relation of PM₁₀ Concentrations with Low-Speed Winds (< 6 m/s)

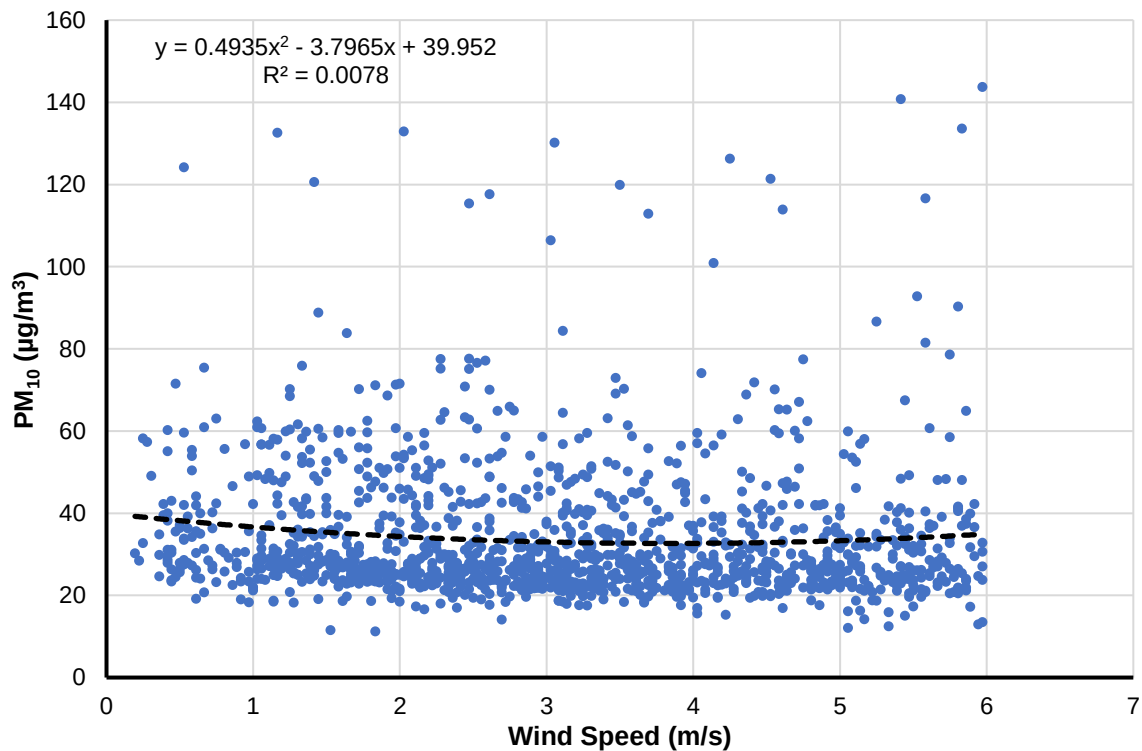
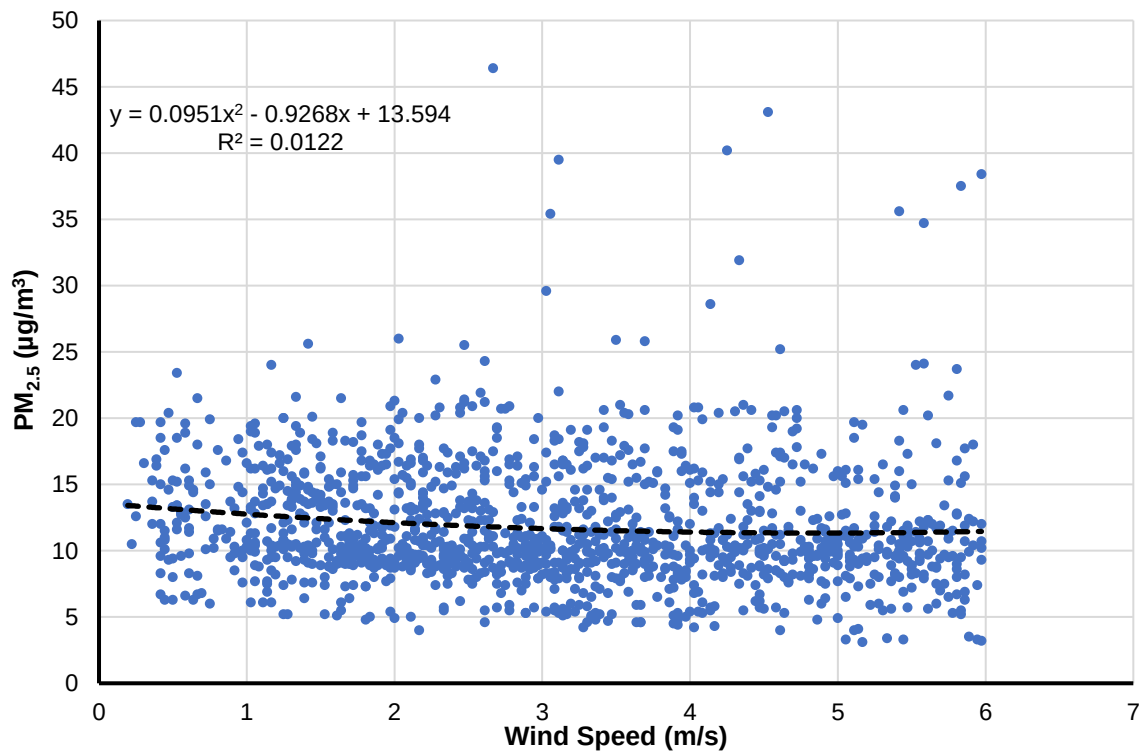


Exhibit C.6: Relation of PM_{2.5} Concentrations with Low-Speed Winds (<6 m/s)



The trends observed in **Exhibit C.5** and **Exhibit C.6** also show high noise. This noise cannot be associated with relative humidity or precipitation as these parameters remained relatively constant throughout the validation period. High noise can be attributed to changing wind directions which can cause PM₁₀ and PM_{2.5} concentrations from other directions to contribute to the background concentrations. This high noise can also be attributed to wind gusts. Wind gusts have the tendency to uplift the particulate matter. These particulates, especially PM_{2.5} can remain suspended in the atmosphere for longer durations when the wind conditions are relatively calm (<6 m/s) and can cause elevated PM₁₀ and PM_{2.5} concentrations at lower wind speeds. A discussion of each of these assessments is provided below:

- ▶ **Relation of PM₁₀ and PM_{2.5} concentrations with Wind Directions:** According to the wind rose of the validation period (see **Exhibit C.7**), predominant winds were primarily blowing from northeast direction for ~80% time of the total validation period. Limited wind speeds from northwest direction were also witnessed however, these remained persistent for <5% time of the total monitoring period. The relationship observed in **Exhibit C.8** also depicts that the wind directions remain relatively stable over the course of 24-hours. Therefore, high noise in PM₁₀ and PM_{2.5} concentrations at lower wind speed (<6 m/s) cannot be attributed with the wind directions.
- ▶ **Relation of PM₁₀ and PM_{2.5} concentrations with Wind Gusts:** **Exhibit C.8** depicts that wind speeds remain variable throughout the 24-hours duration despite stable wind directions. The peak formations in the wind speeds also aligns with the peaks formed in PM₁₀ and PM_{2.5} concentrations (see **Exhibit C.9**). The formation

of peaks in wind speeds and PM₁₀ and PM_{2.5} concentrations shows that high noise in the reported concentrations at lower wind speeds was primarily due to wind gusts. The particulates remain suspended in the atmosphere during calm periods followed by a gust event. During the calm conditions, the horizontal mixing of particles is expected to remain relatively lower (Bilal, Hassan, Tahir, Iqbal, & Shahid, 2022), therefore, causing elevated PM₁₀ and PM_{2.5} concentrations higher than usual after a gust event.

Based on this analysis, high noise in PM₁₀ and PM_{2.5} concentrations observed in **Exhibit C.5** and **Exhibit C.6** can be attributed to wind gusts. Therefore, the PM₁₀ and PM_{2.5} concentrations can be accepted as constant average along the trendline for periods with low-speed winds (<6 m/s).

Exhibit C.7: Wind Rose for the Validation Period (Sep 25, 2023 to Nov 17, 2023)

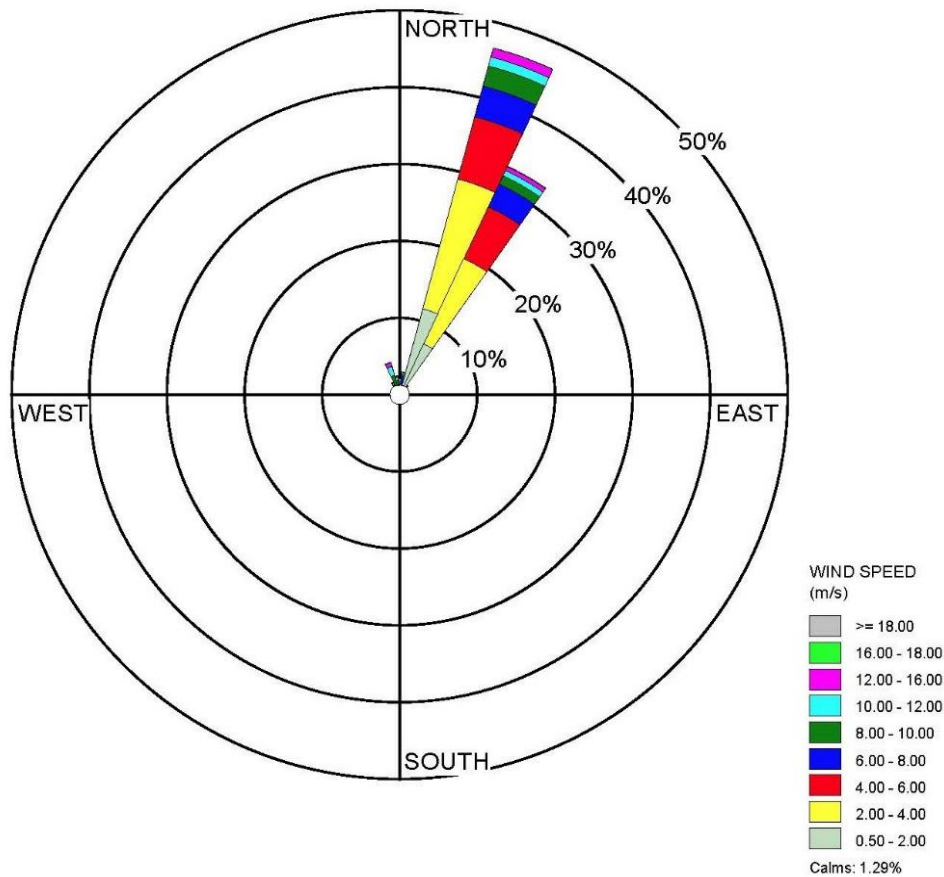


Exhibit C.8: Comparison of Wind Speed and Direction over 24-hours
(Typical Day in Oct 2023)

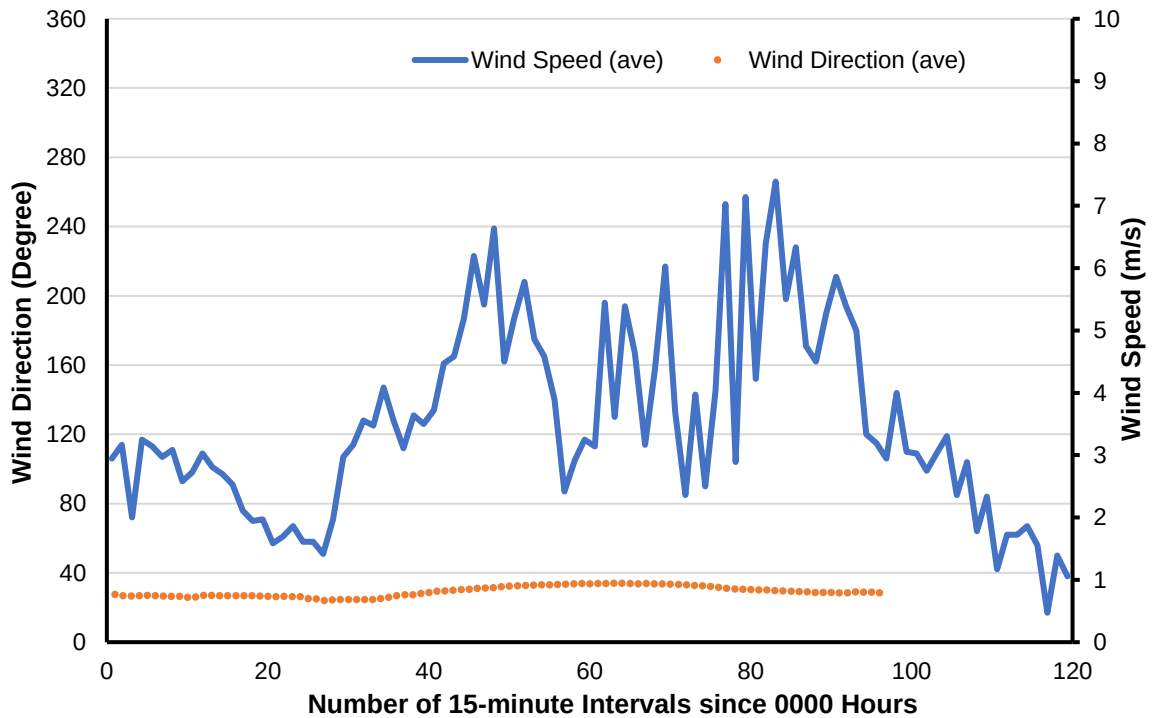
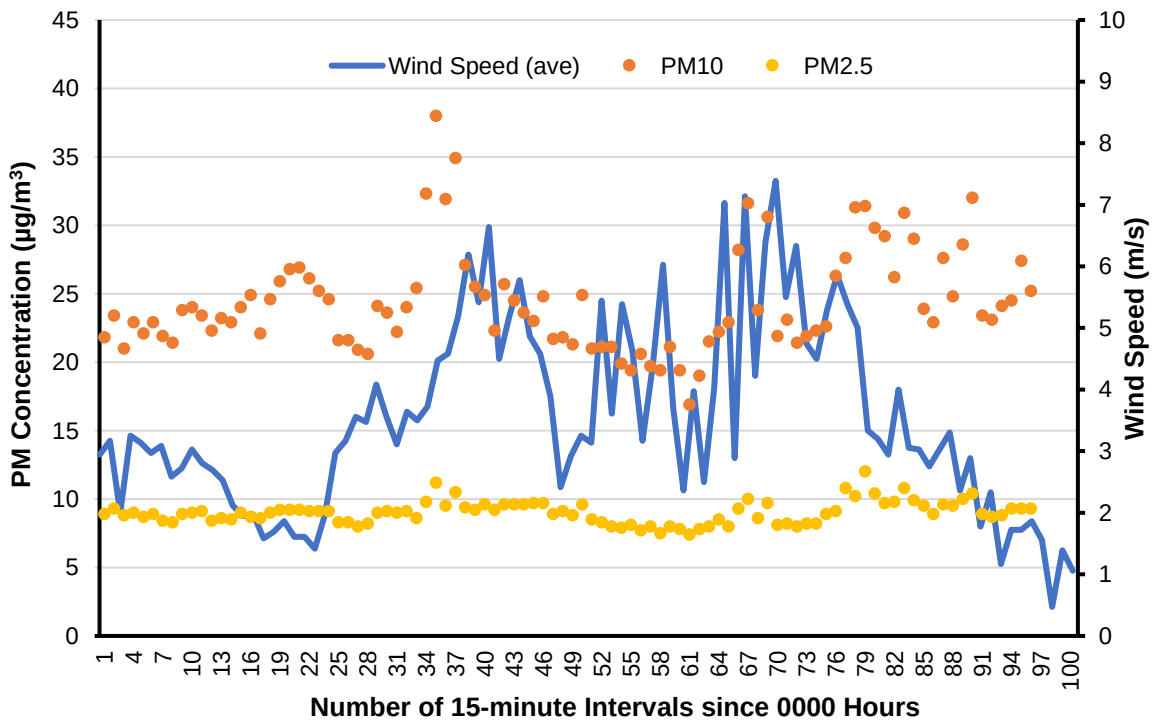


Exhibit C.9: Comparison of PM Concentrations and Wind Speed over 24-hours
(Typical Day in October 2023)



C.2 Methodology for Estimating Background PM Concentrations

This section provides the methodology followed for estimating background PM₁₀ and PM_{2.5} concentrations based on the analysis carried out in **Section C.1**.

C.2.1 Background PM Concentrations

The analysis carried out in **Section C.1.2** concluded that the PM₁₀ and PM_{2.5} concentrations remain constant when wind speeds are less than 6 m/s. This is primarily due to lower threshold wind velocity as compared to friction velocity due to which particulates remain undisturbed. Therefore, a constant PM₁₀ and PM_{2.5} concentration is taken for periods with low wind speeds (6 m/s).

For periods when the wind speeds are higher than 6 m/s, the following 2nd order polynomial equations have been used to estimate background PM₁₀ and PM_{2.5} concentrations. These equations have been derived using the calibration curves drawn in **Exhibit C.3** and **Exhibit C.4** based on the relation between PM₁₀ and PM_{2.5} concentrations and wind speeds.

$$PM_{10} = 0.2987x^2 + 4.1121x - 5.5024$$

$$PM_{2.5} = 0.3167x^2 - 2.3812x + 12.787$$

Where;

PM₁₀ = Background concentration of PM₁₀ in µg/m³

PM_{2.5} = Background concentration of PM_{2.5} in µg/m³

x = wind speed in m/s

C.2.2 Correction of Background Concentrations

The background PM₁₀ and PM_{2.5} concentrations for low wind speeds (<6 m/s) are taken as constant and, therefore, do not require correction.

For wind speeds over 6 m/s, the meteorological dataset from Lakes Environmental was also used for comparison with PM₁₀ and PM_{2.5} concentrations for periods during which onsite weather data was not collected (November 18, 2023, to April 15, 2024). This comparison was used to assess the biases in simulated PM₁₀ and PM_{2.5} concentrations provided in **Section C.3**.

For background PM₁₀ and PM_{2.5} concentrations at high wind speeds, delta change approach has been employed for correction of the background PM₁₀ and PM_{2.5} concentrations. Delta change approach is the best available approach for bias correction of larger datasets. This approach does not alter the timings of the peaks, therefore, making the datasets more reliable for use in various applications (Räty, Räisänen, & Ylhäisi, 2014). This approach estimates the delta between the dynamic and observed datasets which is used to correct the dynamic datasets.

It is important to note that most of the spread of the recorded PM₁₀ and PM_{2.5} concentration is when speeds are between 0.1 m/s and 10 m/s. Therefore, the corrections are applied to the background PM₁₀ and PM_{2.5} concentrations only when the wind speeds are less than 10 m/s.

The sample size of PM₁₀ and PM_{2.5} concentrations recorded for wind speeds more than 10 m/s is relatively small. Correction of a dataset using a small sample size has the tendency to induce biases as well as alter the peak timings. Therefore, the background PM₁₀ and PM_{2.5} concentrations for wind speeds more than 10 m/s have been taken as actual without employment of a bias correction approach.

C.3 Background PM Concentrations

This section describes the relationship between the PM₁₀ and PM_{2.5} concentrations and wind speeds. **Exhibit C.10** and **Exhibit C.11** show the background PM₁₀ and PM_{2.5} concentrations as a function of wind speed.

Exhibit C.10: Background PM₁₀ Concentrations as Function of Wind Speeds

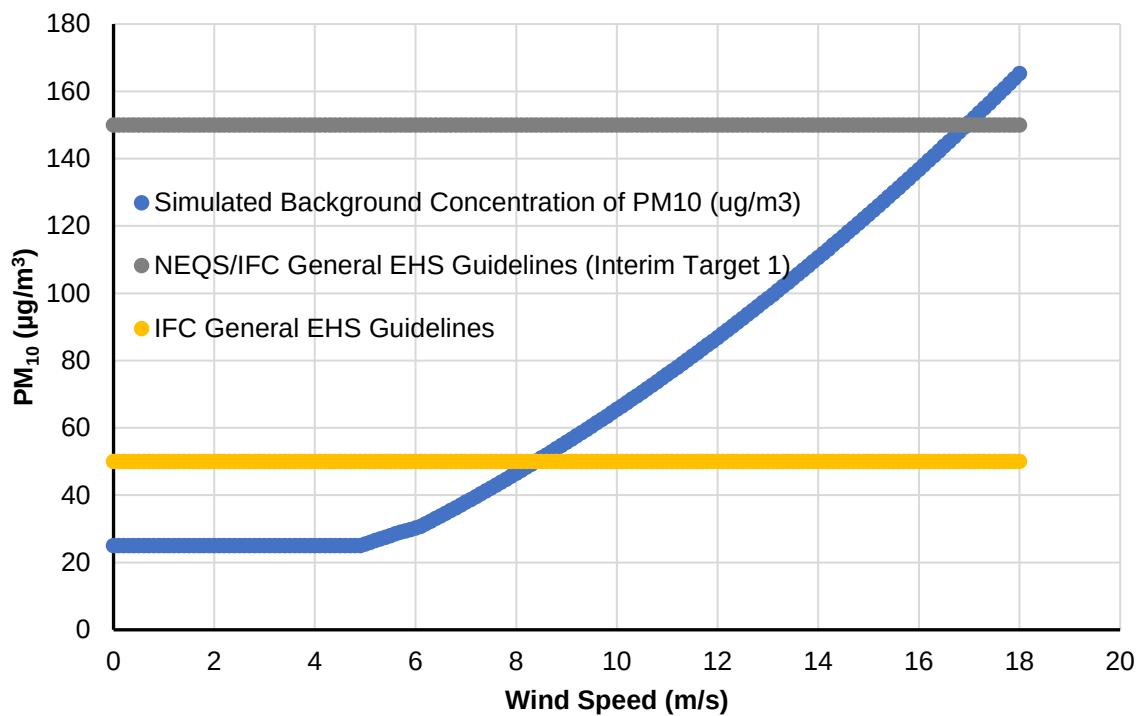
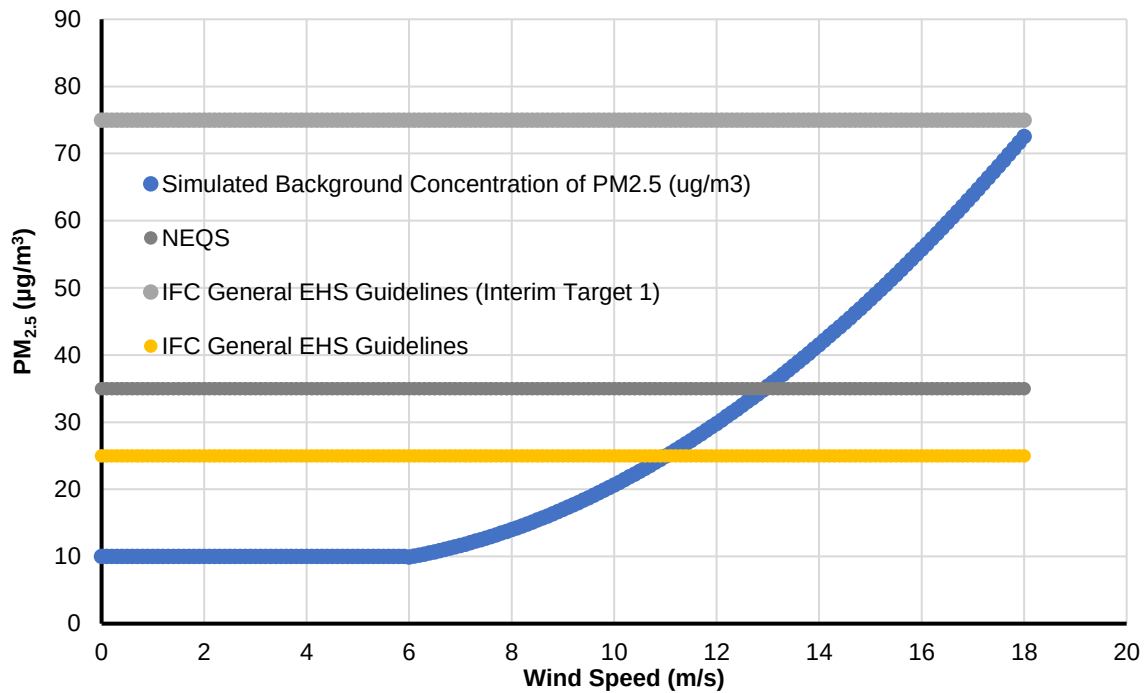


Exhibit C.11: Simulated Background PM_{2.5} Concentrations as Function of Wind Speed



Both **Exhibit C.10** and **Exhibit C.11** indicate an increasing pattern in PM concentrations with increasing wind speeds. The simulated background PM₁₀ and PM_{2.5} concentrations depict biases of less than 10% when the simulated dataset is compared with the PM₁₀ and PM_{2.5} concentrations recorded at the Reko Diq Mine Site for wind speeds ranging between 6 m/s and 10 m/s. Therefore, a bias correction is not necessitated for the background PM₁₀ and PM_{2.5} concentrations. A comparison of the background concentrations of PM₁₀ and PM_{2.5} with the limits prescribed in NEQS for ambient air quality and IFC General EHS Guidelines is provided below.

- ▶ **PM₁₀:** The background concentrations of PM₁₀ remain within the limit of 150 µg/m³ prescribed in NEQS for ambient air quality and IFC General EHS Guidelines (Interim Target 1) when the wind speeds are less than 16.5 m/s. A maximum concentration of 165 µg/m³ is anticipated when the wind speeds reach 18 m/s.
- ▶ **PM_{2.5}:** The background concentrations of PM_{2.5} indicates that PM_{2.5} concentrations remain within the limit of 35 µg/m³ prescribed in NEQS for ambient air quality when the wind speeds are less than 12.5 m/s. For high-speed winds in the range of 12.5 m/s to 18 m/s, the background concentrations of PM_{2.5} range between 35 µg/m³ and 72 µg/m³. However, the background concentration remained within the limit of 75 µg/m³ prescribed in IFC General EHS Guidelines (Interim Target 1) at all wind speeds till 18 m/s.

Appendix D: Laboratory Results of Gaseous Pollutants

See the following pages.

Test Report Air Pollution Measurement

passam ag

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

air quality monitoring

customer information

customer: Gradko
customer ID: GDK
contact person: Andy Poole
project:
reference: 80982 / S1163

passive samplers

date received: 06.11.2020
type: tube (Palms)
pollutant: NOx (NO+NO2)
protective filter: yes

analysis

method: SP12-S photometer, Salzmann
analyte: [NO]-
date: 12.11.2020
place: passam ag

test report

created on: 13.11.2020
created by: U. Kunz
checked on: 13.11.2020
checked by: S. Huber
file name: GDK12-S-2026-2
pages: 1



note: applies to the sample as received; for information on measurement uncertainty, detection limit and sampling rates, see data sheet: www.passam.ch
concentration calculated assuming: T = 20°C; p = 1013 hPa; this method is accredited to ISO 17025

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time	h	NO ug	NO2 ug	NOx ug	NO ug/m3	NO2 ug/m3	NOx ug/m3	
	Comment on sampling													
A 1-Siareg	467	417	43949	43984	06/10/2020	9:00	362.5	< 0.04	< 0.01	< 0.04	< 1.9	< 0.6	< 2.4	Protocol bad to read.
A 2 -Humai	475	404	43949	43984	06/10/2020	12:30	360.5	< 0.04	0.03	< 0.04	< 1.9	1.7	< 2.4	
A 3 - Nok Kundi	488	395	43949	43984	07/10/2020	9:00	343.5	< 0.04	0.07	0.07	< 2	4.4	4.4	

Sampling information

Annex: Test Report Air Pollution Measurement GDK12-S-2026-2

passam ag

air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

measuring site	passive sampler		measuring period				Optional information		
	label	label	start		end		Temp	air pressure	Comment on sampling
	NO2	NOx	date	time	date	time	[°C]	[hPa]	
A 1-Siareg	467	417	10/6/2020	9:00	10/21/2020	11:30			N-29 08 52.4, E 062 06 52.6
A 2 -Humai	475	404	10/6/2020	12:30	10/21/2020	13:00			N 29 05 45.2, E 062 17 34.5
A 3 - Nok Kundi	488	395	10/7/2020	9:00	10/21/2020	16:30			N 28 49 18.7, E 062 45 13.2

Test Report Air Pollution Measurement

passam ag

air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

customer information

customer: Gradko
customer ID: GDK
contact person: Andy Poole
project: 104018 / Q1213
reference:

passive samplers

date received: 29.11.2023
type: tube (Palms)
pollutant: NOx (NO+NO2)
protective filter: yes
limit of detection: NO: 2.5 ug/m3 (14 days)
NO2: 0.7 ug/m3 (14 days)

analysis

method: SP12-S photometer, Salzmann
analyte: [NO]-
date: 07.12.2023
place: passam ag

test report

created on: 09.12.2023
created by: U. Kunz
checked on: 13.12.2023
checked by: T. Hangartner
file name: GDK12-S-2329-3
pages: 1



note: applies to the sample as received; results below the detection limit are indicated with "<" and the associated value; this method is accredited to ISO/IEC 17025 measurement uncertainty <30%; sampling rate related to 20 °C; further information at www.passam.ch

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time		h	NO ug	NO2 ug		NOx ug	NO ug/m3	
A1	961	973	45132	45146	24/10/2023	14:50	621.0	0.15	0.02	0.17	4.2	0.7	4.9	
A2	976	990	45132	45146	24/10/2023	16:50	622.9	< 0.05	0.14	0.14	< 1.3	5.0	5.0	

Test Report Air Pollution Measurement

passam ag

air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

customer information

customer: Gradko
customer ID: GDK
contact person: Andy Poole
project: 104468/ P0042
reference:

passive samplers

date received: 22.01.2024
type: tube (Palms)
pollutant: NOx (NO+NO2)
protective filter: yes
limit of detection: NO: 2.5 ug/m3 (14 days)
NO2: 0.7 ug/m3 (14 days)

analysis

method: SP12-S photometer, Salzmann
analyte: [NO]-
date: 25.01.2024
place: passam ag

test report

created on: 31.01.2024
created by: U. Kunz
checked on: 31.01.2024
checked by: T. Hangartner
file name: GDK12-S-2333-1
pages: 1



note: applies to the sample as received; results below the detection limit are indicated with "<" and the associated value; this method is accredited to ISO/IEC 17025
measurement uncertainty <30%; sampling rate related to 20 °C; further information at www.passam.ch

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time	h	NO ug	NO2 ug	NOx ug	NO ug/m3	NO2 ug/m3	NOx ug/m3	
A1	GDK-933	GDK-936	45132	45168	19/11/2023	13:00	938.0	< 0.05	0.27	0.27	< 0.9	6.6	6.6	specs not met: exp. time;
A2	GDK-910	GDK-946	45132	45138	19/11/2023	16:00	960.0	< 0.05	0.04	< 0.05	< 0.9	1.1	< 1.1	specs not met: exp. time;

Sampling information

Annex: Test Report Air Pollution Measurement GDK12-S-2333-1



air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

measuring site	passive sampler		measuring period				Optional information		
	label	label	start		end		Temp	air pressure	Comment on sampling
	NO2	NOx	date	time	date	time	[°C]	[hPa]	
A1	GDK-933	GDK-936	11/19/2023	13:00	12/28/2023	15:00			
A2	GDK-910	GDK-946	11/19/2023	16:00	12/29/2023	16:00			

Test Report Air Pollution Measurement



air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

customer information

customer: Gradko
customer ID: GDK
contact person: Andy Poole
project: 105232/P0133
reference:

passive samplers

date received: 09.02.2024
type: tube (Palms)
pollutant: NOx (NO+NO2)
protective filter: yes
limit of detection: NO: 2.5 ug/m3 (14 days)
NO2: 0.7 ug/m3 (14 days)

analysis

method: SP12-S photometer, Salzmann
analyte: [NO]-
date: 13.02.2024
place: passam ag

test report

created on: 16.02.2024
created by: K. Bodei
checked on: 20.02.2024
checked by: C. Panier
file name: GDK12-S-2401-1
pages: 1



note: applies to the sample as received; results below the detection limit are indicated with "<" and the associated value; this method is accredited to ISO/IEC 17025
measurement uncertainty <30%; sampling rate related to 20 °C; further information at www.passam.ch

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time	h	NO ug	NO2 ug	NOx ug	NO ug/m3	NO2 ug/m3	NOx ug/m3	
A1	GDK-1070	GDK-1016	45216	45224	28/12/2023	16:00	643.0	0.08	0.16	0.24	2.2	5.5	7.7	
A2	1056	1004	45216	45224	29/12/2023	16:30	644.5	< 0.05	0.03	< 0.05	< 1.3	1.2	< 1.7	

Sampling information

Annex: Test Report Air Pollution Measurement GDK12-S-2401-1

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

measuring site	passive sampler		measuring period				Optional information		
	label	label	start		end		Temp	air pressure	Comment on sampling
	NO2	NOx	date	time	date	time	[°C]	[hPa]	
A1	GDK-1070	GDK-1016	12/28/2023	16:00	1/24/2024	11:00			
A2	1056	1004	12/29/2023	16:30	1/25/2024	13:00			

Test Report Air Pollution Measurement



air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

customer information

customer: Gradko
customer ID: GDK
contact person: Andy Poole
project: 105960 / P0154
reference:

passive samplers

date received: 21.02.2024
type: tube (Palms)
pollutant: NOx (NO+NO2)
protective filter: yes
limit of detection: NO: 2.5 ug/m3 (14 days)
NO2: 0.7 ug/m3 (14 days)

analysis

method: SP12-S photometer, Salzmann
analyte: [NO]-
date: 22.02.2024
place: passam ag

test report

created on: 27.02.2024
created by: U. Kunz
checked on: 28.02.2024
checked by: T. Hangartner
file name: GDK12-S-2403-4
pages: 1



note: applies to the sample as received; results below the detection limit are indicated with "<" and the associated value; this method is accredited to ISO/IEC 17025
measurement uncertainty <30%; sampling rate related to 20 °C; further information at www.passam.ch

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time	h	NO ug	NO2 ug	NOx ug	NO ug/m3	NO2 ug/m3	NOx ug/m3	
A1	GDK-1026	GDK-1063	45216	45224	25/01/2024	12:00	336.0	0.06	0.08	0.14	3.3	5.1	8.4	
A2	1034	1086	45216	45224	25/01/2024	12:00	336.0	< 0.05	0.01	< 0.05	< 2.5	0.9	< 3.2	

Sampling information

Annex: Test Report Air Pollution Measurement GDK12-S-2403-4

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

measuring site	passive sampler		measuring period				Optional information		
	label	label	start		end		Temp	air pressure	Comment on sampling
	NO2	NOx	date	time	date	time	[°C]	[hPa]	
A1	GDK-1026	GDK-1063	1/25/2024	12:00	2/8/2024				
A2	1034	1086	1/25/2024	12:00	2/8/2024				

Test Report Air Pollution Measurement



air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

customer information

customer: GRADKO
customer ID: GDKS
contact person: Andy Poole
project: 106341 / P0261
reference:

passive samplers

date received: 20.03.2024
type: tube (Palms)
pollutant: NOx (NO+NO2)
protective filter: yes
limit of detection: NO: 2.5 ug/m3 (14 days)
NO2: 0.7 ug/m3 (14 days)

analysis

method: SP12-S photometer, Salzmann
analyte: [NO]-
date: 22.03.2024
place: passam ag

test report

created on: 28.03.2024
created by: U. Kunz
checked on: 02.04.2024
checked by: C. Panier
file name: GDKS12-S-2406-4
pages: 1



note: applies to the sample as received; results below the detection limit are indicated with "<" and the associated value; this method is accredited to ISO/IEC 17025
measurement uncertainty <30%; sampling rate related to 20 °C; further information at www.passam.ch

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time	h	NO ug	NO2 ug	NOx ug	NO ug/m3	NO2 ug/m3	NOx ug/m3	
A1	1121	1068	45216	45224	06/03/2024		192.0	0.07	0.03	0.10	6.7	3.4	10.1	
A2	1115	1079	45216	45224	06/03/2024		192.0	< 0.05	0.10	0.10	< 4.4	11.3	11.3	

Sampling information

Annex: Test Report Air Pollution Measurement GDKS12-S-2406-4

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

measuring site	passive sampler		measuring period				Optional information		
	label	label	start		end		Temp	air pressure	Comment on sampling
	NO2	NOx	date	time	date	time	[°C]	[hPa]	
A1	1121	1068	3/6/2024		3/14/2024				
A2	1115	1079	3/6/2024		3/14/2024				

Test Report Air Pollution Measurement



air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

customer information

customer: Gradko
customer ID: GDK
contact person: Andy Poole
project: 106752/ P0296
reference:

passive samplers

date received: 10.04.2024
type: tube (Palms)
pollutant: NOx (NO+NO2)
protective filter: yes
limit of detection: NO: 2.5 ug/m3 (14 days)
NO2: 0.7 ug/m3 (14 days)

analysis

method: SP12-S photometer, Salzmann
analyte: [NO]-
date: 11.04.2024
place: passam ag

test report

created on: 16.04.2024
created by: U. Kunz
checked on: 19.04.2024
checked by: T. Hangartner
file name: GDK12-S-2407-3
pages: 1



note: applies to the sample as received; results below the detection limit are indicated with "<" and the associated value; this method is accredited to ISO/IEC 17025
measurement uncertainty <30%; sampling rate related to 20 °C; further information at www.passam.ch

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time	h	NO ug	NO2 ug	NOx ug	NO ug/m3	NO2 ug/m3	NOx ug/m3	
A1 - Site	GDK-1123	GDK1109	45216	45218	14/03/2024	10:00	336.0	< 0.05	0.10	0.10	< 2.5	6.8	6.8	
A2 - Humai	GDK1019	GDK1108	45216	45218	14/03/2024	10:00	336.0	< 0.05	0.02	< 0.05	< 2.5	1.5	< 3.2	

Sampling information

Annex: Test Report Air Pollution Measurement GDK12-S-2407-3

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

measuring site	passive sampler		measuring period				Optional information		
	label	label	start		end		Temp	air pressure	Comment on sampling
	NO2	NOx	date	time	date	time	[°C]	[hPa]	
-	GDK-1123	GDK1109	3/14/2024	10:00	3/28/2024	10:00			
-	GDK1019	GDK1108	3/14/2024	10:00	3/28/2024	10:00			

LABORATORY ANALYSIS REPORT

DETERMINATION OF SULPHUR DIOXIDE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER O06156R
BOOKING IN REFERENCE No O06156
DESPATCH NOTE No 80982
CUSTOMER Hagler Bailly Pakistan Ltd Attn: Sadia Asghar
39, Street 3, E7
Islamabad 44000
Pakistan
DATE SAMPLES RECEIVED 02/11/2020

JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	SO ₄ ²⁻ µg/ml	µgSO ₄ ²⁻ - Blank	SO ₂ µg/m ³ *	SO ₂ ppb*
A1 - Siareg	1630048	06/10/2020	21/10/2020	362.50	<0.09	<0.07	<2.32	<0.87
A4 - Siareg	1630049	06/10/2020	21/10/2020	362.50	<0.09	<0.07	<2.32	<0.87
A2 - Human	1630050	06/10/2020	21/10/2020	360.50	0.87	0.85	28.78	10.79
A3 - Nok Kumdi	1630051	06/10/2020	21/10/2020	367.50	0.13	0.11	3.62	1.36
A5	1630052	06/10/2020	21/10/2020	367.50	<0.09	<0.07	<2.29	<0.86

Laboratory Blank

0.02

Comment: Results are blank subtracted

Results reported as < 0.09 µg SO₄²⁻ are below the reporting limit.

Overall M.U. ±9.6% **Reporting Limit** 0.09µg SO₄²⁻
The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU11

Analyst Name Alison Wright **Report Checked By** Katya Paldamova
Date of Analysis 12/11/2020 **Date of Report** 13/11/2020

Analysis has been carried out in accordance with in-house method GLM1

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.
Form LQF32b Issue 9 – August 2019 **Report Number O06156R** **Page 1 of 1**

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF SULPHUR DIOXIDE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER R08447R
BOOKING IN REFERENCE No R08447
DESPATCH NOTE No 104018
CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000
Pakistan
DATE SAMPLES RECEIVED 23/11/2023
JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	SO ₄ ²⁻ µg on tube	SO ₂ µg/m ³ *	SO ₂ ppb*
A1	2325483	24/10/2023	19/11/2023	621.17	<0.09	<1.71	<0.64
A2	2325484	24/10/2023	19/11/2023	623.08	<0.09	<1.70	<0.64
A3	2325485	24/10/2023	19/11/2023	621.75	<0.09	<1.70	<0.64
F.B	2235820			623.08	0.01	0.18	0.07
Laboratory Blank				623.08	0.02	0.37	0.14

Comment: Results are not blank subtracted

A tube was received without a bar code. Bar code 2235820 was assigned at booking in. Maximum exposure time used.

Results reported as <0.09 on tube are below the reporting limit.

Overall M.U. ±11% **Reporting Limit** 0.09µg SO₄²⁻
The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of k=2, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU11

Analyst Name Avneet Buttar **Report Checked By** Andy Poole
Date of Analysis 30/11/2023 **Date of Report** 05/12/2023

Analysis has been carried out in accordance with in-house method GLM1

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number R08447R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF SULPHUR DIOXIDE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER S00600R
BOOKING IN REFERENCE No S00600
DESPATCH NOTE No 104468
CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000
Pakistan
DATE SAMPLES RECEIVED 10/01/2024
JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	SO ₄ ²⁻ µg on tube	SO ₂ µg/m ³ *	SO ₂ ppb*
A1	2342796	19/11/2023	28/12/2023	938.00	0.36	4.72	1.77
A2	2342795	19/11/2023	29/12/2023	960.00	0.10	1.23	0.46
A3	2342794	19/11/2023	29/12/2023	963.00	0.12	1.52	0.57
F.B	2236097			963.00	0.02	0.23	0.08
Laboratory Blank				963.00	0.01	0.14	0.05

Comment: Results are not blank subtracted

An unlabelled tube was received, tube reference ("F.B") given on outer container cap matches with exposure sheet. Number 2236097 was allocated & maximum exposure time used.

Tubes were exposed for longer than the recommended time. Results may be compromised.

Overall M.U. ±11%

Reporting Limit 0.09µg SO₄²⁻

The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU11

Analyst Name Avneet Buttar

Report Checked By Andy Poole

Date of Analysis 22/01/2024

Date of Report 23/01/2024

Analysis has been carried out in accordance with in-house method GLM1

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S00600R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF SULPHUR DIOXIDE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER S01191R
BOOKING IN REFERENCE No S01191
DESPATCH NOTE No 105232

CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000

Pakistan

DATE SAMPLES RECEIVED 07/02/2024

JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	SO ₄ ²⁻ µg on tube	SO ₂ µg/m ³ *	SO ₂ ppb*
A1	2369333	28/12/2023	24/01/2024	643.50	<0.09	<1.65	<0.62
A2	2369332	29/12/2023	25/01/2024	644.50	0.13	2.43	0.91
A3	2369331	29/12/2023	25/01/2024	644.50	<0.09	<1.64	<0.62
F.B	2236125			644.50	0.03	0.61	0.23
Laboratory Blank				644.50	0.01	0.17	0.06

Comment: Results are not blank subtracted

Results reported as <0.09 on tube are below the reporting limit.

Tube 2236125 was received without a barcode. Barcode was deduced by reference "FB" on container cap matching exposure sheet details.

Overall M.U. ±11% **Reporting Limit** 0.09µg SO₄²⁻
The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of k=2, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU11

Analyst Name Avneet Buttar

Report Checked By Vanessa Kellie

Date of Analysis 12/02/2024

Date of Report 16/02/2024

Analysis has been carried out in accordance with in-house method GLM1

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S01191R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF SULPHUR DIOXIDE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER S01442R
BOOKING IN REFERENCE No S01442
DESPATCH NOTE No 105960

CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000

Pakistan

DATE SAMPLES RECEIVED 15/02/2024

JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	SO ₄ ²⁻ µg on tube	SO ₂ µg/m ³ *	SO ₂ ppb*
A1 site	2385086	25/01/2024	08/02/2024	336.00	0.11	4.04	1.52
A2 humai	2385085	25/01/2024	08/02/2024	336.00	0.26	9.39	3.52
A3 humai	2385084	25/01/2024	08/02/2024	336.00	<0.09	<3.15	<1.18
F.B	2385083	25/01/2024	08/02/2024	336.00	0.01	0.18	0.07
Laboratory Blank				336.00	0.01	0.37	0.14

Comment: Results are not blank subtracted

Exposure times were calculated from start and finish dates given on the exposure sheet.

Results reported as <0.09 on tube are below the reporting limit.

Overall M.U. ±11% **Reporting Limit** 0.09µg SO₄²⁻

The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU11

Analyst Name Avneet Buttar

Report Checked By

Vanessa Kellie

Date of Analysis 21/02/2024

Date of Report

28/02/2024

Analysis has been carried out in accordance with in-house method GLM1

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S01442R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF SULPHUR DIOXIDE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER S02146R
BOOKING IN REFERENCE No S02146
DESPATCH NOTE No 106341

CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000

Pakistan

DATE SAMPLES RECEIVED 18/03/2024

JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	SO ₄ ²⁻ µg on tube	SO ₂ µg/m ³ *	SO ₂ ppb*
A-2 site	2396000	06/03/2024	14/03/2024	192.00	<0.09	<5.52	<2.07
A-2 site	2395999	06/03/2024	14/03/2024	192.00	<0.09	<5.52	<2.07
F-B	2395998	06/03/2024	14/03/2024	192.00	0.02	1.10	0.41
Laboratory Blank				192.00	0.04	2.44	0.91

Comment: Results are not blank subtracted

Results reported as <0.09 on tube are below the reporting limit.

Exposure times were calculated from start and finish dates provided by customer via email.

Tubes were exposed for shorter than the recommended 2-4 weeks.

Tube 2396001 could not be analysed as it did not contain any grids.

Overall M.U. ±11% **Reporting Limit** 0.09µg SO₄²⁻
The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU11

Analyst Name Avneet Buttar

Report Checked By Vanessa Kellie

Date of Analysis 20/03/2024

Date of Report 27/03/2024

Analysis has been carried out in accordance with in-house method GLM1

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S02146R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF SULPHUR DIOXIDE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER S02350R
BOOKING IN REFERENCE No S02350
DESPATCH NOTE No 106752

CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Yasar Asad
39, Street 3, E7
Islamabad 44000

DATE SAMPLES RECEIVED Pakistan
02/04/2024
JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	SO ₄ ²⁻ µg on tube	SO ₂ µg/m ³ *	SO ₂ ppb*
A1 site	2400374	14/03/2024	28/03/2024	336.00	0.238	8.62	3.23
A2 humai	2400375	14/03/2024	28/03/2024	336.00	0.271	9.81	3.68
A2 humai	2400376	14/03/2024	28/03/2024	336.00	0.212	7.68	2.88
F.B	2400377	14/03/2024	28/03/2024	336.00	0.220	7.98	2.99
Laboratory Blank				336.00	0.003	0.10	0.04

Results are not blank subtracted.

Overall M.U. ±11% **Reporting Limit** 0.09µg SO₄²⁻
The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU10

Analyst Name Avneet Buttar

Report Checked By Hina Ilyas

Date of Analysis 10/04/2024

Date of Report 15/04/2024

Analysis has been carried out in accordance with in-house method GLM1

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S02350R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF OZONE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER R08448R
BOOKING IN REFERENCE No R08448
DESPATCH NOTE No 104018
CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000
Pakistan
DATE SAMPLES RECEIVED 23/11/2023

JOB NUMBER

Location	Sample Number	Date		Exposure Hours*	NO ₃ ⁻ µg on tube	O ₃ µg/m ³ *	O ₃ ppb*
		Exposed*	Finished*				
A1	2325488	24/10/2023	19/11/2023	621.17	1.69	63.1	31.5
A2	2325489	24/10/2023	19/11/2023	623.08	2.23	82.7	41.4
Laboratory Blank				623.08	0.01	0.19	0.10

Results are not blank subtracted.

Analytical result are now reported as µg on tube not µg/ml.

Overall M.U. ±10% **Reporting Limit** 0.12µg on tube NO₃⁻
The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU10

Analyst Name	Hina Ilyas	Report Checked By	Andy Poole
Date of Analysis	06/12/2023	Date of Report	07/12/2023

Analysis has been carried out in accordance with in-house method GLM 2

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number R08448R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF OZONE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER S00601R
BOOKING IN REFERENCE No S00601
DESPATCH NOTE No 104468

CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000

DATE SAMPLES RECEIVED Pakistan
10/01/2024
JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	NO ₃ ⁻ µg on tube	O ₃ µg/m ³ *	O ₃ ppb*
A1	2342799	19/11/2023	28/12/2023	938.00	3.23	79.71	39.85
A2	2342798	19/11/2023	29/12/2023	960.00	4.72	113.6	56.80
Laboratory Blank				960.00	0.01	0.31	0.15

Results are not blank subtracted.

Analytical result are now reported as µg on tube not µg/ml.

Tubes were exposed for longer than the recommended time and have exceeded shelf life. Results may be compromised.
Exposure times were calculated from start and finish times given on the exposure sheet.

Overall M.U. ±10% Reporting Limit 0.12µg on tube NO₃⁻
The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU10

Analyst Name Hina Ilyas Report Checked By Avneet Buttar
Date of Analysis 24/01/2024 Date of Report 25/01/2024

Analysis has been carried out in accordance with in-house method GLM 2

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S00601R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF OZONE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER S01193R
BOOKING IN REFERENCE No S01193
DESPATCH NOTE No 105232

CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000

Pakistan

DATE SAMPLES RECEIVED 07/02/2024

JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	NO ₃ ⁻ µg on tube	O ₃ µg/m ³ *	O ₃ ppb*
A1	2369336	28/12/2023	24/01/2024	643.75	1.45	51.99	25.99
A2	2369335	29/12/2023	25/01/2024	644.50	1.69	60.63	30.32
Laboratory Blank				644.50	0.01	0.40	0.20

Results are not blank subtracted.

Analytical result are now reported as µg on tube not µg/ml.

Exposure times were calculated from start and finish times given on the exposure sheet.

Overall M.U. ±10%

Reporting Limit

0.12µg on tube NO₃⁻

The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU10

Analyst Name Hina Ilyas

Report Checked By

Vanessa Kellie

Date of Analysis 14/02/2024

Date of Report

15/02/2024

Analysis has been carried out in accordance with in-house method GLM 2

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S01193R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF OZONE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER S01443R
BOOKING IN REFERENCE No S01443
DESPATCH NOTE No 105960

CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000

DATE SAMPLES RECEIVED 15/02/2024
JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	NO ₃ ⁻ µg on tube	O ₃ µg/m ³ *	O ₃ ppb*
A1 site	2385089	25/01/2024	08/02/2024	335.00	1.30	90.1	45.0
A2 humai	2385088	25/01/2024	08/02/2024	339.00	1.35	92.1	46.0
Laboratory Blank				339.00	0.01	0.68	0.34

Results are not blank subtracted.

Analytical results are now reported as µg on tube not µg/ml.

Overall M.U. ±10%

The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Reporting Limit

0.12µg on
tube NO₃⁻

Analysed on Dionex ICS1100 ICU10

Analyst Name Hina Ilyas Report Checked By Avneet Buttar
Date of Analysis 21/02/2024 Date of Report 22/02/2024

Analysis has been carried out in accordance with in-house method GLM 2

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S01443R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF OZONE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT
NUMBER S02147R
BOOKING IN
REFERENCE No S02147
DESPATCH NOTE
No 106341

CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Tahir
39, Street 3, E7
Islamabad 44000

Pakistan

DATE SAMPLES
RECEIVED 18/03/2024

JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	NO ₃ ⁻ µg on tube	O ₃ µg/m ³ *	O ₃ ppb*
A-1 site	2396003	06/03/2024	14/03/2024	192.00	0.36	43.91	21.95
A-2 hummai	2396002	06/03/2024	14/03/2024	192.00	0.34	40.90	20.45
Laboratory Blank				192.00	0.03	3.34	1.67

Results are not blank subtracted.

Analytical result are now reported as µg on tube not µg/ml.

Exposure times were calculated from start and finish times provided via email.

Tubes were exposed for shorter than the recommended 2-4 weeks.

Overall M.U. ±10%

Reporting Limit

0.12µg on tube NO₃⁻

The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU10

Analyst Name Hina Ilyas

Report Checked By Vanessa Kellie

Date of Analysis 20/03/2024

Date of Report 27/03/2024

Analysis has been carried out in accordance with in-house method GLM 2

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S02147R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager

LABORATORY ANALYSIS REPORT

DETERMINATION OF OZONE IN DIFFUSION TUBES BY ION CHROMATOGRAPHY

REPORT NUMBER S02351R
BOOKING IN REFERENCE No S02351
DESPATCH NOTE No 106752

CUSTOMER Hagler Bailly Pakistan Ltd Attn: Muhammad Yasar Asad
39, Street 3, E7
Islamabad 44000

DATE SAMPLES RECEIVED Pakistan
02/04/2024
JOB NUMBER

Location	Sample Number	Date Exposed*	Date Finished*	Exposure Hours*	NO ₃ ⁻ µg on tube	O ₃ µg/m ³ *	O ₃ ppb*
A1 site	2400379	14/03/2024	28/03/2024	336.00	0.52	35.88	17.94
A2 humai	2400380	14/03/2024	28/03/2024	336.00	0.95	65.27	32.64
Laboratory Blank				336.00	0.02	1.14	0.57

Results are not blank subtracted.

Analytical results are now reported as µg on tube not µg/ml.

Overall M.U. ±12%

Reporting Limit

0.13µg on tube NO₃⁻

The reported expanded uncertainty is based on a standard uncertainty multiplied by a factor of $k=2$, providing a level of confidence of approximately 95%. Uncertainty of measurement has not been applied to the reported results.

Analysed on Dionex ICS1100 ICU11

Analyst Name Avneet Buttar

Report Checked By

Hina Ilyas

Date of Analysis 16/04/2024

Date of Report

17/04/2024

Analysis has been carried out in accordance with in-house method GLM 2

Samples have been tested within the scope of Gradko International Ltd. Laboratory Quality Procedures. Results within this report relate only to samples as received. Data provided by the client and any subsequent calculations shall be indicated by an asterisk (*), these calculations and results are not within the scope of our UKAS accreditation. Any queries concerning data in this report should be directed to the Laboratory Manager Gradko International Ltd. This report is not to be reproduced, except in full, without the written permission of Gradko International Ltd.

Form LQF32b Issue 10 – November 2021

Report Number S02351R

Page 1 of 1

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results
Signed.....
L. Gates, Laboratory Manager