REPORT

Air Quality Follow-Up Program

Magino Project

Version 1.2

Submitted to:

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Distribution List

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Document Version Control

The following table summarizes the versions of this document.

Version	Revision Description	Prepared By	Reviewed By
1.0	Draft RevA	Golder Associates Ltd.	Prodigy Gold Inc., DPRA Canada
1.1	Draft RevB – response to Prodigy and DPRA comments on RevA	Golder Associates Ltd.	Prodigy Gold Inc., DPRA Canada
1.2	Draft Rev0 – response to ECCC and HC comments on RevB	Golder Associates Ltd.	

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1.0 INTRODUCTION

This Air Quality Follow-Up Program (AQFP) outlines the monitoring program that has been developed for the Prodigy Gold Inc. Magino Gold Project (the Project) to satisfy Condition 5.3 of the Project's Environmental Assessment (EA) conditions issued to Prodigy by the federal Minister of the Environment on January 24, 2019, in the Decision Statement[1], as well as the Environmental Impact Statement (EIS) Commitments posted to the Impact Assessment Agency of Canada's (IAAC) Registry in December 2018[2].

The contents of the AQFP provide the information required to satisfy the applicable parts of Condition 2.4 of the EA. In addition, the air quality monitoring procedures outlined in this AQFP were prepared considering the guidance provided in the *Operations Manual for Air Quality Monitoring in Ontario* (Operations Manual)[3] (March 2008) produced by the Ontario Ministry of the Environment, Conservation and Parks (MECP) Operations Division Technical Support Section (PIBS 6687e) and the Program Monitoring and Quality Assurance/Quality Control Guidelines from the National Air Pollution Surveillance Program (NAPS) (2017).

1.1 Facility Description

Table 1 presents general information about the Project relevant to this AQFP.

Table 1: Project Description

Facility:	Magino Gold Project
Location:	14 km southeast of Dubreuilville, Ontario
Area occupied:	1820 hectares
Main activities relevant to air quality:	■ Construction, operation, and closure of an open pit mine, including: ▪ Drilling and blasting ▪ Material handling ■ Construction, operation, and decommissioning (as appropriate) and/or closure of a rock crushing and ore process plant, including: ▪ Crushed rock and low-grade ore stockpiles ▪ Overburden stockpiles ▪ Gold recovery consisting of crushing, grinding, cyanide leaching, and treatment of the tailings to destroy the cyanide ▪ Chemical, fuel, and hazardous materials management and storage facilities

[1] Canadian Environmental Assessment Agency. January 2019. *Decision Statement Issued Under Section 54 of the Canadian Environmental Assessment Act, 2012 for the Magino Gold Project.* https://iaac-aeic.gc.ca/050/documents/p80044/126612E.pdf

[2] Prodigy Gold Inc. December 2018. *Magino Project Commitments List.* https://iaac-aeic.gc.ca/050/documents/p80044/125783E.pdf

[3] MECP *Operations Manual for Air Quality Monitoring* (March 2008). https://dr6j45jk9xcmk.cloudfront.net/documents/1466/3-7-32-manual-for-air-quality-monitoring-en.pdf

Facility:	Magino Gold Project
	▪ An explosives magazine ▪ Non-mining waste management facilities ■ Construction, operation, and closure of mine waste management area components, including a Tailings Management Project (TMF) and Mine Rock Management Project (MRMF). ■ Construction, operation, and decommissioning (as appropriate) of the enabling infrastructure for the Project, including: ▪ Camp accommodation for workers ▪ A landfill ▪ Roads ▪ Electrical transmission lines and a substation ▪ Power generation equipment ▪ Potable water supply system ▪ Sewage treatment system ▪ Site security features
Production capacity:	Mine – 10 years, 45,200 tonnes per day Mill – 12 to 15 years, 35,000 tonnes per day
Predominant wind direction:	West-southwest through south

1.2 Meteorology

Meteorology describes the physical processes that will govern the transport, dispersion, and deposition of air emissions from the Project. Prodigy operated a local Meteorological Station (MET) in Dubreuilville, Ontario, to facilitate the collection of baseline data for the EA. Figure 1 below shows wind-roses for local seasonal winds measured from January 2011 to September 2013.

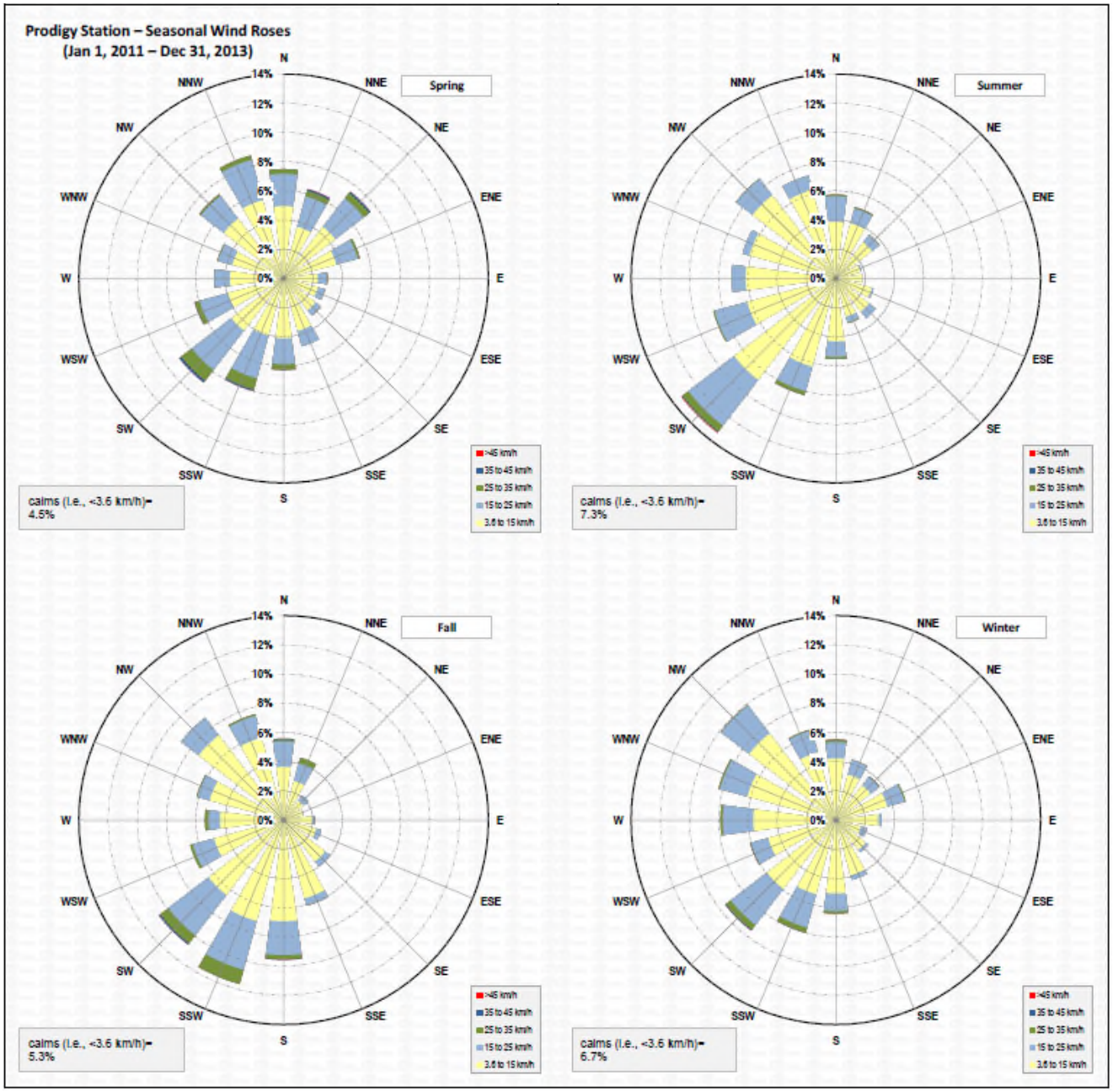

Figure 1: Seasonal Wind Roses from the Prodigy Meteorological Station

1.3 Emission Sources

The Project involves the construction, operation, and closure of an open pit mine and associated ore processing facility including supporting operations. The following sources of emissions are associated with the Project during construction and operation:

- During Construction
  - Fugitive dust emissions from bulldozing and material handling
  - Open pit extraction emissions, including blasting and material handling (bulldozing and drop operations into haul trucks and from trucks to stockpiles)
  - Emissions from power generators
  - Crushing and screening
  - Concrete batch plant
  - Fugitive dust emissions from haul routes (unpaved roads), grading, and mobile equipment emissions
- During Operations
  - Open pit extraction emissions including blasting and material handling (bulldozing and drop operations into haul trucks and from trucks to stockpiles)
  - Fugitive dust emissions from material handling activities in the pit and on surface, including ore handling in the crushing area and mine rock handling in the tailings management facility and mine rock management facility
  - Emissions from ore processing and refining
  - Emissions from dust collectors from ore handling and crushing processes and refinery processes
  - Emissions from the tailings management facility
  - Emissions from emergency power generators
  - Emissions from comfort heating
  - Fugitive dust emissions from haul routes (unpaved roads), grading, and mobile equipment emissions

1.4 Model Predictions

Isopleths of the predicted concentrations of suspended particles, nitrogen dioxide, and sulphur dioxide taken from Golder's report "*Meteorology and Air Quality Technical Supporting Document*", January 2017, are included in Appendix A. Locations where the maximum predicted ambient air concentrations occurred were also considered when siting the monitoring stations.

2.0 AIR QUALITY MONITORING PROGRAM

2.1 Program Objectives

The objectives of this AQFP are to provide a monitoring program which satisfies Condition 5.3 of the EA Decision Statement, specifically a program which verifies the accuracy of the air quality component of the EA and assesses the effectiveness of the mitigation measures as they pertain to the adverse environmental effects on the health of Indigenous Peoples caused by increased concentration of air compounds, including total suspended particulates (TSP), particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), sulphur dioxide (SO_2), nitrogen dioxide (NO_2), and cadmium.

The MECP has set guidelines related to ambient air concentrations, which are summarized in Ontario's *Ambient Air Quality Criteria* (AAQC) document (MECP 2020). The Ontario AAQCs are characterized as desirable ambient air concentrations. They are not regulatory limits and are frequently exceeded at various locations across Ontario due to weather conditions and long-range transportation but represent an indicator of good air quality. The Ontario AAQCs are used for screening the air quality effects in environmental assessments, studies using ambient air monitoring data, and assessment of general air quality in a community or across the province (MECP 2020).

The federal objectives and criteria are summarized in the Canadian Ambient Air Quality Standards (CAAQSs) (formerly National Ambient Air Quality Standards). The CAAQSs drive the Canadian Air Quality Management System, which is to be a comprehensive approach to improving air quality in Canada.

Table 2 summaries the AAQCs and CAAQSs applicable to the Project's monitoring program.

Table 2: Ambient Air Quality Criteria and Standards

Compound	Averaging Period	Ontario AAQC[a] ($\mu g/m^3$)	Canadian AAQS[b] ($\mu g/m^3$)
SPM[c]	24-Hour	120	-
	Annual	60[d]	-
PM_{10}	24-Hour	50[e]	-
$PM_{2.5}$	24-Hour	30[f]	27[f]
	Annual	-	8.8[g]
Cadmium	24-Hour	0.025	-
NO_2	1-hour	400	79 (42 ppb)[h]
	24-hour	200	-
	Annual	-	22.6 (12 ppb)[h]
SO_2	Annual	55	10.5 (4 ppb)[i]

[a] MECP (2020)
[b] CAAQS published in the Canada Gazette Volume 147, No. 21 - May 25, 2013. Final standard phase in date of 2025 used, except where noted.
[c] SPM in Ontario is defined as Suspended Particulate Matter (<44 µm diameter)
[d] Geometric mean
[e] Interim AAQC
[f] Compliance is based on 3-year average of annual 98th percentile of the daily 24-hour average concentrations.
[g] The annual mean is based on 24-hour averaged over three consecutive years.
[h] Canadian ambient air quality standards for NO_2 are effective from 2025. The new 1-hour standard (42 ppb) is based on the three-year average of the annual 98th percentile of the daily maximum 1-hour average concentration. The annual standard (12.0 ppb) is based on the annual mean averaged over 1-hour concentrations over a single calendar year. The air quality standards concentration is provided in parts per billion (ppb) and were converted to $\mu g/m^3$ using a reference temperature of 25°C and pressure of 1 atmosphere (atm).
[i] The 4 ppb standard for SO_2 is effective from 2025, the current standard is 5 ppb, and is is based on the annual mean averaged over three consecutive years.

Section 3.0 outlines trigger levels for each monitored compound above which a review of mitigation measures may be conducted, to assess whether modified or additional mitigation measures are necessary.

2.2 Program Duration

The monitoring program will be initiated at the commencement of construction and will continue throughout operations and the first three years of decommissioning of the Project.

2.3 Air Quality Parameters to be Monitored and Frequency

The air quality parameters that will be monitored and/or sampled are listed in Table 3 and are based on Condition 5.3 of the EA Decision Statement. Table 3 below also contains the frequency of sampling, the proposed monitoring equipment, and analytical method for each parameter. The MECP outlines in its Operations Manual that the only acceptable method for measuring ambient NO_2 is through the use of an inline analyzer using the chemiluminescence principle of measurement and references the reference methods listed in the U.S. EPA list for allowable instrumentation.

Table 3: Air Quality Monitoring Parameters

Compound[(1)]	Frequency	Proposed Monitoring Equipment	Analytical Method	Station Location (see Figure 2)
TSP	6-day National Air Pollutant Surveillance (NAPS) Cycle	Hi-Vol (if power is available)	Method IO-3.1[4]	1, 2, 3
PM_{10} & $PM_{2.5}$	Real-time/continuous	Continuous Dust Sentry PRO (or equivalent)	Multi-channel light-scattering	1
PM_{10}	6-day NAPS Cycle	Hi-Vol (if power is available)	Method IO-3.1	2, 3
$PM_{2.5}$	Real-time/continuous	Continuous e-sampler (or equivalent)	Light-scattering	2, 3
Cadmium	6-day NAPS Cycle	Using TSP Hi-Vol	Method IO-3.1[4]	1, 2, 3
NO_2	Real-time/continuous	200U Analyzer (or equivalent)	Chemiluminescence inline analyzer (RFNA-1289-074)	1
NO_2	Monthly	Passive cartridge	SOP PTC SOP-00148	2, 3
SO_2	Monthly	Passive cartridge	SOP PTC SOP-00149	1, 2, 3

(1) These compounds are required to be monitored as per Condition 5.3 of the EA Decision Statement.

[4] Metals to be analyzed by Atomic Emissions Spectroscopy/Inductively Coupled Plasma (AES/ICP) method.

2.4 Monitoring Sites

2.4.1 General Criteria for Selecting Monitoring Sites

The selection process of the program's monitoring stations involved the assessment of several general criteria, including:

- Fulfillment of the AQFP objectives
- Local meteorology and predominant wind directions
- Dispersion modelling predictions
- Activities on adjacent properties
- Accessibility to proposed location, including factors such as station shelter and access by public
- Electric power availability, 15- and 20-amp circuits necessary for the monitoring stations

2.4.2 Selection of Monitoring Sites

Ambient monitoring site selection was dependant upon assessing community exposure, with consideration for suspected sensitive receptors, and previous documented locations where the highest concentrations of air compounds are anticipated, based on local meteorological and dispersion modelling information. As such, data available from nearby meteorological stations, wind roses encompassing the period from January 1, 2011, to December 31, 2013, was used to initially select the location of the monitoring stations. Figure 2 illustrates the three monitoring stations, denoted with red squares, that will be located around the fenceline of the Magino Gold property. The equipment will be commissioned at each station location as described in Table 3. A real-time continuous monitoring sampler for PM_{10} & $PM_{2.5}$ and an NO_2 analyzer will be installed at Station 1, which represents the location where the maximum predicted NO_2 and PM_{10} point of impingement (POI) concentration was modelled. Stations 2 and 3 will have High Volume (Hi-Vol) air samplers installed to measure PM_{10} as per the NAPS cycle. The stations will be positioned in fixed locations to ensure consistent coverage of predominant wind directions, as described in Section 1.2. Placing the monitoring stations at the fenceline will allow the verification of predicted POI concentrations for fugitive sources such as piles, roadways, and demonstrate that the maximum predicted concentrations presented in the EA are conservative. Table 4 below summarizes the monitoring stations siting rationale. It should be noted that, based on site conditions at the identified locations at the time of implementation of this AQFP, the selected monitoring locations may require revision to allow for safe and practical installation and operation of the equipment.

Table 4: Monitoring Stations Siting Rationale

Station ID	Location	Siting Rationale
1	Southern property	Located in the area where the maximum predicted PM_{10} and NO_2 concentrations were modelled.
2	Western property	Located downwind of the primary activities in the area where maximum predicted TSP and $PM_{2.5}$ concentrations were modelled.
3	Northwestern property	Located downwind of the primary activities and likely represents air quality following the Project impacts.

The continuous monitors in Station 1 will be installed in a properly designed monitoring shelter, taking into consideration air sample integrity, monitor requirements, functionality, and operator safety. As per the MECP Operations Manual, the shelter should be ventilated, heated, and cooled to maintain a stable inside temperature in the desirable range of 15°C to 25°C throughout the year. Thus, adequate design of the shelter plays an important role in achieving the high data quality objectives for accuracy and comparability and helps prevent equipment malfunction as per the Operations Manual. This climate-controlled shelter must be equipped with reliable power requirements for the monitors and communications system.

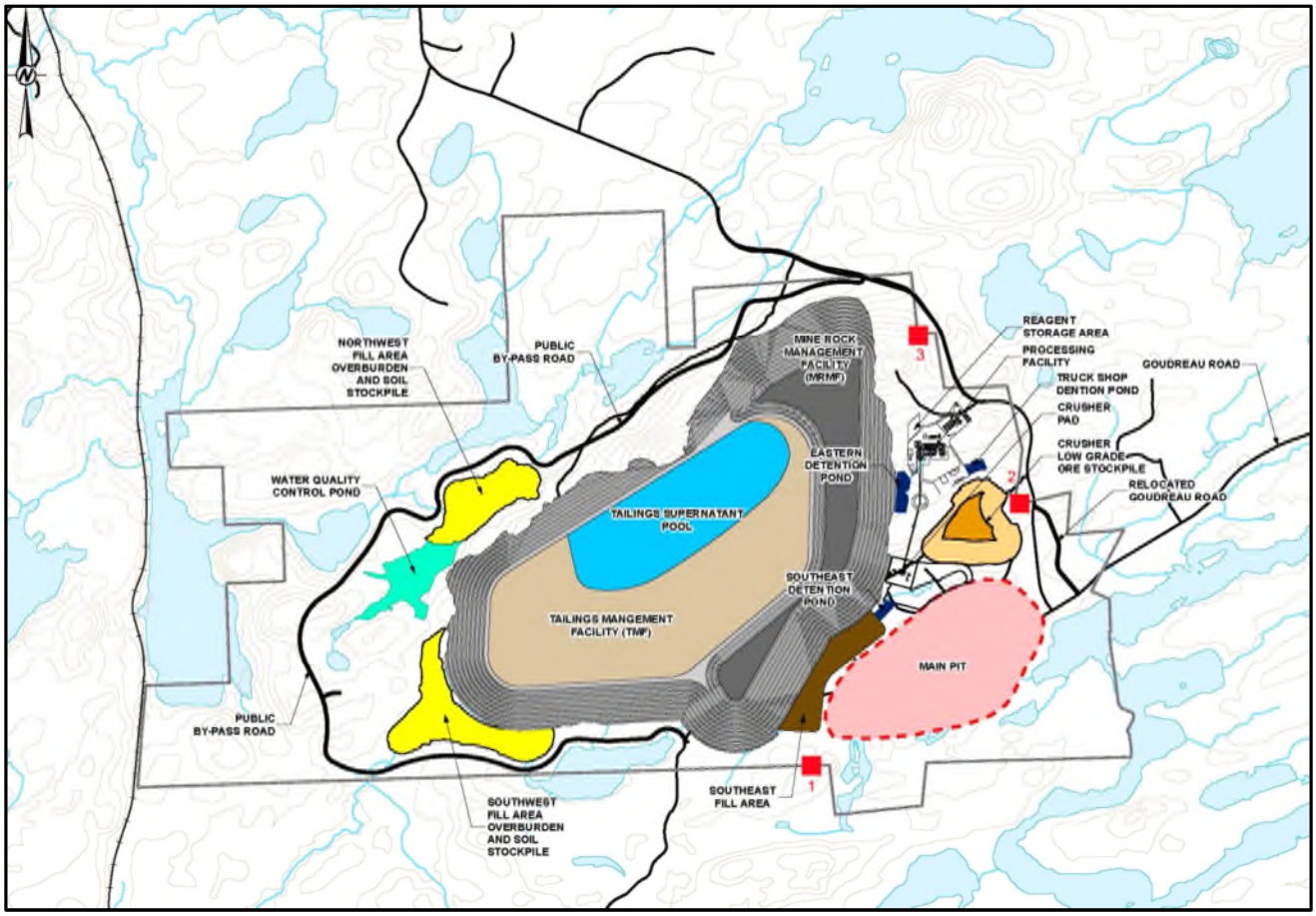

Figure 2: Monitoring Station Locations

2.4.3 Local Meteorological Data

Prodigy currently operates a meteorological station in Dubreuilville, Ontario. The Prodigy station is ten meters (10 m) above grade, mounted on concrete slab, measuring wind speed, direction, RH, temperature, and atmospheric pressure. The Prodigy station will be re-located to the Project site, to an area that is in a practical and accessible location, that will not be affected by building downwash from nearby structures or influenced by other obstructions, such as tall trees. Meteorological data comparisons between this station and the MECP station in Chapleau, Ontario, and the climate station in Wawa, Ontario, will be used when processing the results of the monitoring. This will allow for better correlation between the sampled results from the monitoring program and local meteorological conditions.

2.5 Laboratory Services

Filters for Hi-Vol samplers consist of 8”x10” glass fibre filters that will be conditioned by an accredited laboratory and supplied to Prodigy Gold for field deployment. Exposed filters will be stored until the individual calendar month samples have been completed and then sent to an accredited laboratory for gravimetric analysis. The filters will be conditioned and pre- and post-weighed by an accredited laboratory. The TSP filters will undergo further analysis using Atomic Emission Spectroscopy/Inductively Coupled Plasma (AES/ICP) to obtain results for selected metal compounds, including cadmium.

Monthly passive monitoring for NO_2 and SO_2 will use the All-Season Passive Air Sampling System (PASS). The passive samplers will be provided by an accredited laboratory and supplied to Prodigy Gold for field deployment. Lab analyses for the NO_2 and SO_2 passive air samplers will be performed via Ion Chromatography.

2.6 Quality Assurance and Quality Control Plan

Prodigy Gold will follow instrument calibration, data validation, and reporting, as described in the MECP Operations Manual, for quality assurance and control guidance and direction when conducting monitoring and sampling of air quality. This will support the accuracy, reliability, and completeness of the ambient air sampling program results.

The Hi-Vol samplers and continuous monitoring equipment will be calibrated prior to field deployment and at a minimum, should be calibrated again on quarterly basis. The sampler monitors have built in system of calibration menus, which allow the station operator to audit and/or calibrate the airflow control system parameters for optimal performance. These parameters should be audited monthly and calibrated quarterly during continuous operation of the units.

To meet the requirements of 1-in 6-day sampling schedule (suggested NAPS Cycle), stations will be visited once every six days. The Hi-Vol exposed filter will be collected, and a pre-weighed filter installed for the subsequent sample run. As part of each 1-in 6-day sampling schedule, an additional blank ambient air sample per monitoring location will be analyzed for QA/QC purposes. Field duplicate samples will be collected at a frequency of 10% of the test samples, to check that sampling and laboratory analyses produce repeatable results. Chain of custody forms will be completed and submitted to the laboratory along with the exposed samples.

Additional visits maybe required to resolve instrumentation issues and perform flow calibration checks and preventative maintenance.

2.7 Data Acquisition and Reporting Procedures

The continuous monitoring equipment have a built-in mini-computer with router to connect the monitors onto a cellular network provider and data can be downloaded remotely on any web browser. Real-time data access enables real-time alerts (SMS or email) and improved environmental threats mitigation.

Every weekday, a daily data review should be conducted to check the real time continuous NO_2, PM_{10} and $PM_{2.5}$ data. Monitors that do not appear to be functioning normally are to be investigated and simple problems rectified. If major problems are noted, they are to be referred to the Prodigy representative assigned to the monitoring stations. Data is reviewed and corrections made where possible.

The air monitoring results will be provided in quarterly reports, within two weeks of receipt of the last quarterly laboratory results, as per the required elements of a Quarterly Report defined in the Operations Manual for Air Quality Monitoring in Ontario (MECP, 2018). The quarterly reports will include the following information:

- Sampling dates (start and end where applicable)
- A summary of results above criteria listed in Table 2

A total of three quarterly reports and one annual report will be prepared annually. The annual report will include the results from the final quarterly report and will interpret the sample results of the air quality monitoring program using local meteorology and activities occurring at the site. The frequency of the monitoring will be reviewed at the submission of the annual report. The annual report will also include the relevant information concerning this AQFP with respect to the implementation of EA Conditions (as per EA Condition 2.9). The annual report will be provided to Indigenous groups and the IAAC. The quarterly reports will be kept onsite and can be made available to other relevant stakeholders upon request.

Records of implementation of this AQFP will be maintained and made available to IAAC, in accordance Condition 10.1 of the EA Decision Statement.

3.0 TRIGGER LEVELS FOR REVIEW OR MODIFICATION OF MITIGATION MEASURES

This section outlines the air quality monitoring trigger levels above which a review of mitigation measures may be conducted to assess whether modified or additional mitigation measures are necessary. The trigger levels selected are based on the Canadian Air Quality Management System “orange” management level, as well as applicable AAQCs and CAAQSs, as detailed in Table 2. For compounds with no management levels, 70% of the relevant criteria was selected as the trigger level. Table 5 outlines the most significant Project emission sources associated with each monitored compound, the current mitigation measures to which Prodigy has committed to date, trigger levels for review of current mitigation measures, and potential additional mitigation measures that could be implemented should monitoring indicate that the trigger level has been met.

Where monitoring data indicates that trigger levels have been met for a given parameter, an investigation will be conducted to assess the likely cause for the trigger level event. The investigation will review Project activities pertaining to emission sources associated with the compound at the time of the trigger level event and assess whether the trigger level event may have been caused by site conditions outside of normal Project operations or if a review or modification of mitigations associated with that compound are necessary.

Where trigger levels are met for compounds that are associated fugitive dust sources that are covered by the Project’s Fugitive Dust Best Management Practices Plan [5] (BMPP), which cannot be correlated to an event outside of normal operations, a review/update of the risk score for the associated emission sources documented within the BMPP will be completed and sources identified as having the highest risk score, and as being most likely to have contributed to the trigger level event, will be targeted for more comprehensive control measures.

[5] Prodigy Gold Inc., Magino Mine Project, Best Management Practices Plan for the Control of Fugitive Dust, version 2 (October 2020).

Table 5 outlines some additional mitigation measures that could be implemented for each compound, depending on the activity that may result in a given trigger level event. Technical and economic feasibility of modified or additional mitigation will be evaluated on a case-by-case basis, depending on the parameter, nature of the trigger level event and result of the investigation.

Table 5: Compound Specific Trigger Levels for Review of Mitigation Measures

Compound	Significant Sources	Implemented Mitigation Measures	Trigger Levels to Review Mitigation Measures	Potential Additional Mitigation
TSP	■ Mobile equipment – fugitive dust ■ Material Handling ■ Process Sources	■ Fugitive Dust BMPP ■ Dust collectors on process sources ■ Measures outlined in s.5.2 of Met and Air Quality TSD of EA	■ Monitored daily average TSP concentration greater than 84 µg/m³.	■ Increasing the frequency of watering or implementing a different type of dust suppressant. ■ Paving sections of roadways building enclosures around material storage or handling areas. ■ Ceasing the activity during high wind conditions (greater than 40 km/hr).
PM_{10}	■ Mobile equipment – fugitive dust ■ Material Handling Process Sources	■ Fugitive Dust BMPP ■ Dust collectors on process sources ■ Measures outlined in s.5.2 of Met and Air Quality TSD of EA	■ Monitored daily average PM_{10} concentration greater than 35 µg/m³.	
$PM_{2.5}$	■ Mobile equipment – tailpipe exhaust ■ Process combustion sources	■ Tier 3 or greater equipment to be used ■ Dust collectors on process sources ■ Measures outlined in s.5.2 of Met and Air Quality TSD of EA	■ Monitored daily average $PM_{2.5}$ concentration greater than 19 µg/m³.	
Cadmium	■ Mobile equipment – fugitive dust ■ Material Handling Process Sources	■ Fugitive Dust BMPP ■ Dust collectors on process sources ■ Measures outlined in s.5.2 of Met and Air Quality TSD of EA	■ Monitored daily average Cadmium concentration that is greater than 0.0175 µg/m³.	

Compound	Significant Sources	Implemented Mitigation Measures	Trigger Levels to Review Mitigation Measures	Potential Additional Mitigation
NO_2	■ Mobile Equipment ■ Generators	■ Tier 3 or greater equipment to be used ■ Equipment maintained in accordance with manufacturer's specification	■ Monitored hourly average concentration greater than 31 ppb. ■ Monitored monthly concentration greater than 14 ppb (using the annual "orange" management level and converting to a 30-day average).	■ Minimizing unnecessary idling of equipment.
SO_2	■ Mobile Equipment ■ Generators ■ Process Sources	■ Tier 3 or greater equipment to be used ■ Equipment maintained in accordance with manufacturer's specification use of diesel fuel with less than 15 ppm sulphur	■ Monitored monthly concentration greater than 6 ppb (using the annual "orange" management level and converting to a 30-day average).	■ Decrease reliance on on-site power generation (e.g., for crushing operations).

4.0 COMMUNICATION PLAN

As outlined in EA Condition 5.3.3, the IAAC and Indigenous groups will be notified in writing within 24 hours of receipt of monitoring results indicating an exceedance of 1-hour and 24-hour limits of the standards and criteria, for compounds except $PM_{2.5}$, set out in the Canadian Council of Ministers of the Environment's Canadian Ambient Air Quality Standards and Ontario's Ambient Air Quality Criteria, which are summarized in Table 2.

As outlined in EA Condition 5.3.4, a threshold concentration for $PM_{2.5}$ above which Prodigy shall notify indigenous groups, is to be determined in consultation with Indigenous groups and relevant authorities. Two such threshold concentrations are proposed; the CAAQS for $PM_{2.5}$: 27 µg/m³ (24-hour averaging time) and 8.8 µg/m³ (annual averaging time). These values have been selected as they are stated by the Canadian Council of Ministers of the Environment to be stringent enough to protect human health and the environment.

Results of this AQFP, including any potential health risks indicated by collected data, will be communicated, in plain language, to Indigenous groups, in accordance with the Project's Indigenous Engagement Plan (section 7.1 of the Project's Construction Environmental Management Plan). The purpose of the Indigenous Engagement Plan is to guide Indigenous engagement conducted throughout all Project phases, in a meaningful and effective manner, and in accordance with EA conditions, EIS commitments, and the IBAs. The Indigenous Communication Plan meets the EA condition requirements for the development of a communications plan to share information related to the Project and adverse environmental effects of the Project (EA Condition 6.1). Contact information for any notification of Indigenous communities is provided in the master 'Indigenous Community Contact List', (Appendix 2.3 of the Construction Environmental Management Plan).

As outlined in s.2.7, relevant information concerning this AQFP will be included in the annual report to IAAC on implementation of EA Conditions (as per EA Condition 2.9).

5.0 REFERENCES

Canadian Environmental Assessment Agency. January 2019. *Decision Statement Issued Under Section 54 of the Canadian Environmental Assessment Act, 2012 for the Magino Gold Project.* https://iaac-aeic.gc.ca/050/documents/p80044/126612E.pdf

MECP *Operations Manual for Air Quality Monitoring* (March 2008). https://dr6j45jk9xcmk.cloudfront.net/documents/1466/3-7-32-manual-for-air-quality-monitoring-en.pdf

Prodigy Gold Inc. December 2018. *Magino Project Commitments List.* https://iaac-aeic.gc.ca/050/documents/p80044/125783E.pdf

Prodigy Gold Inc., Magino Mine Project, Best Management Practices Plan for the Control of Fugitive Dust, version 2 (October 2020)

Signature Page

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Associate, Senior Air Quality Specialist

RLP/RS/NCJ/sm

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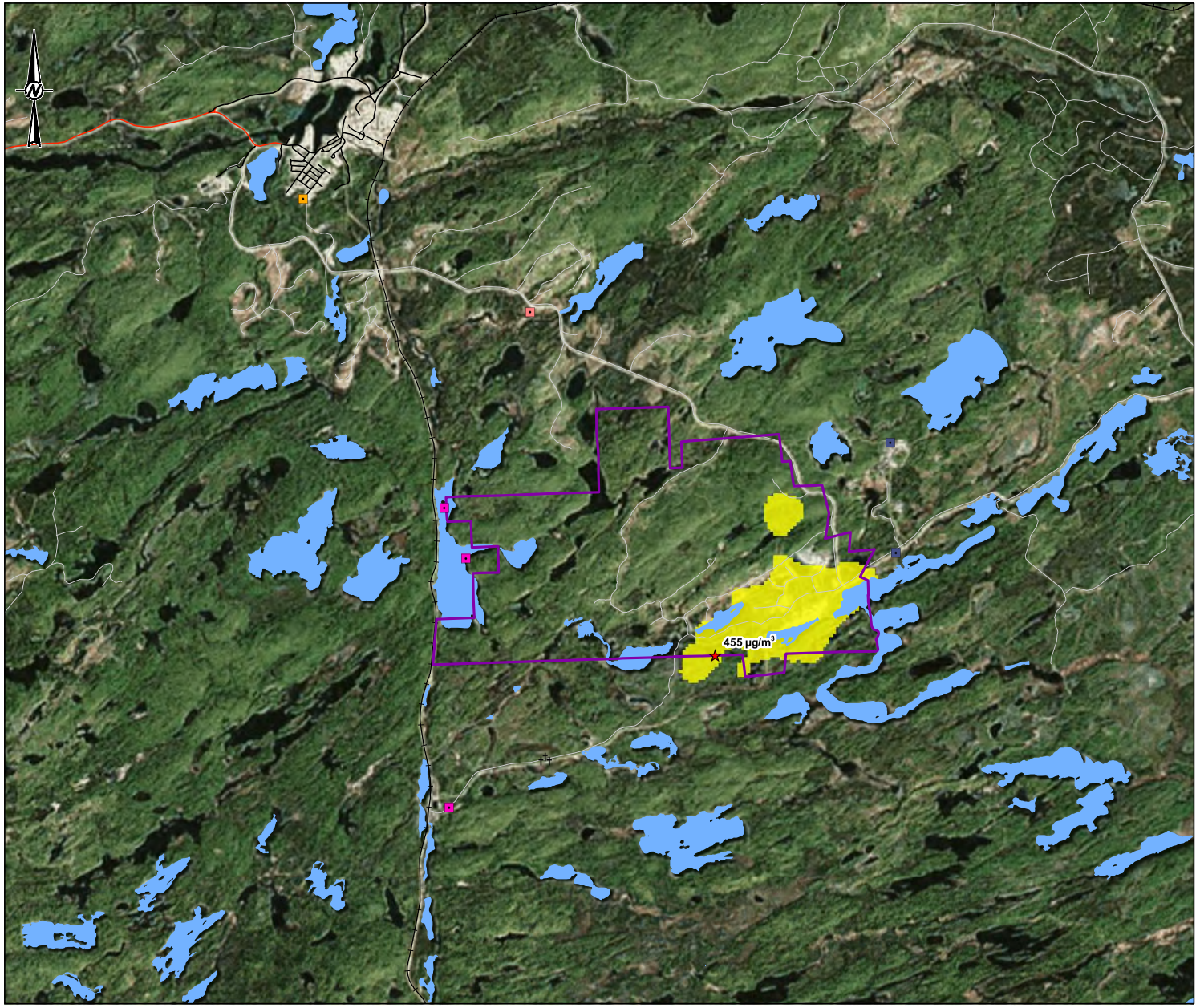
APPENDIX A

Additional Figures



LEGEND

- Primary Road
- Secondary Road
- Tertiary Road
- Railway
- Waterbody
- Property Boundary

Human Health Receptor

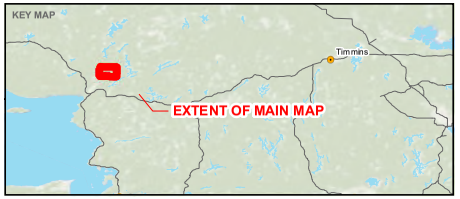
- Camp/Cottage
- Cemetery
- Community of Dubreuilville
- Neighbouring mine's administration building
- Trapper Cabin
- Maximum Predicted Ambient Air Concentration

Ambient Concentration (µg/m³)

- >400

AAQC: 400 µg/m3
Baseline: 10.5 µg/m3

KEY MAP



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CLIENT
ARGONAUT GOLD INC

PROJECT
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MAGINO MINE

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CONSULTANT
Golder Associates

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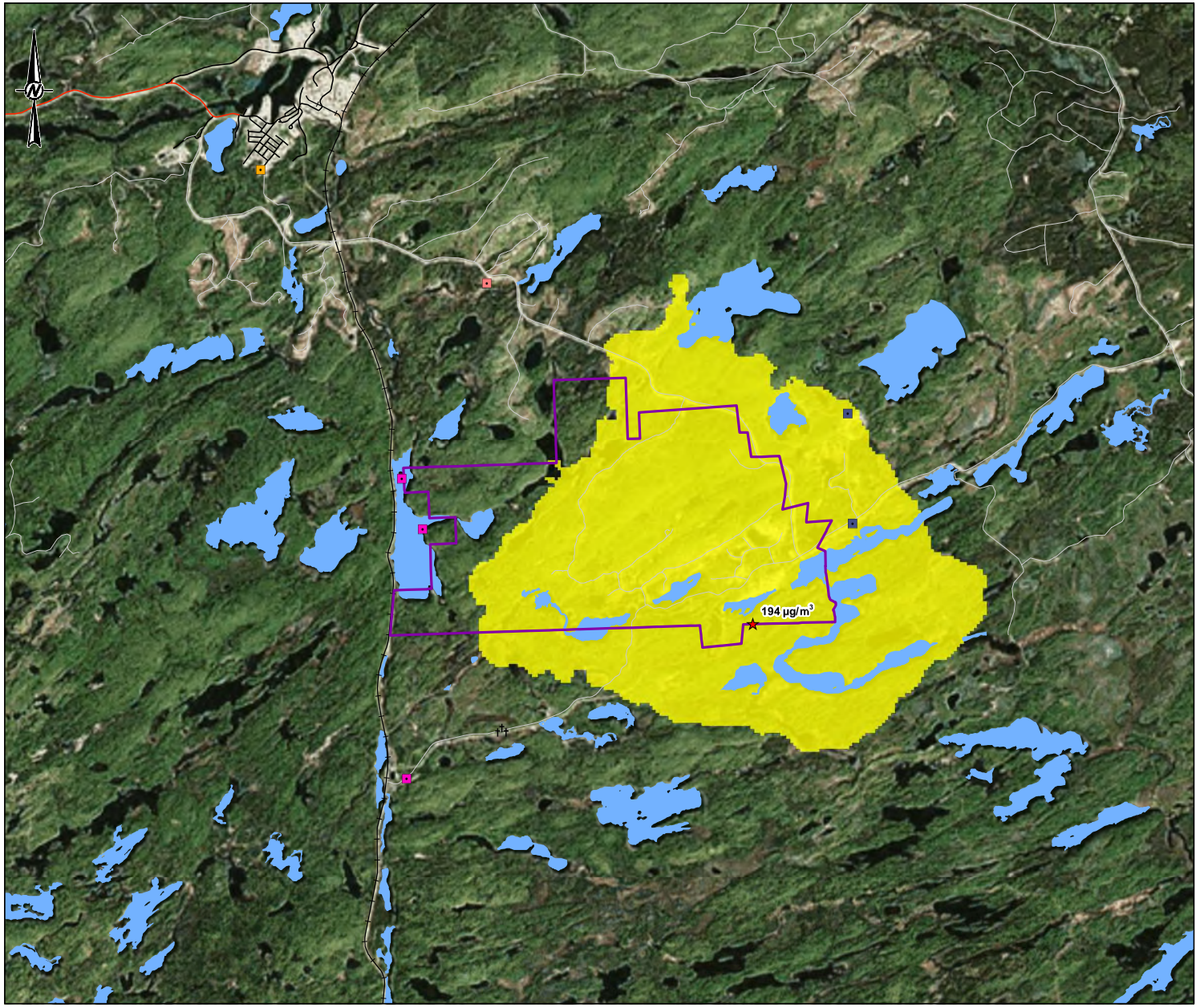

LEGEND

- Primary Road
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- Property Boundary

Human Health Receptor

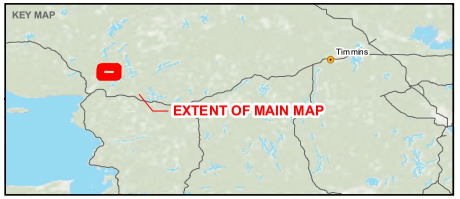
- Camp/Cottage
- Cemetery
- Community of Dubreuilville
- Neighbouring mine's administration building
- Trapper Cabin
- Maximum Predicted Ambient Air Concentration

Ambient Concentration (µg/m³)

- >50

AAQC: 50 µg/m3
Baseline: 17.8 µg/m3

KEY MAP



REFERENCE

BASE DATA - ATLAS OF CANADA,
BASE IMAGERY - MICROSOFT BING ©2015 MICROSOFT CORPORATION AND ITS DATA SUPPLIERS.
CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE – ONTARIO.
HTTPS://WWW.ONTARIO.CA/GOVERNMENT/OPEN-GOVERNMENT-LICENCE-ONTARIO
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: UTM ZONE 16 VERTICAL DATUM: CGVD28

0 625 1,250 2,500
METRES

SCALE 1:50,000

CLIENT
ARGONAUT GOLD INC

PROJECT
AIR QUALITY MODELLING
MAGINO MINE

TITLE
24HR PM_{10}
AMBIENT CONCENTRATION

CONSULTANT

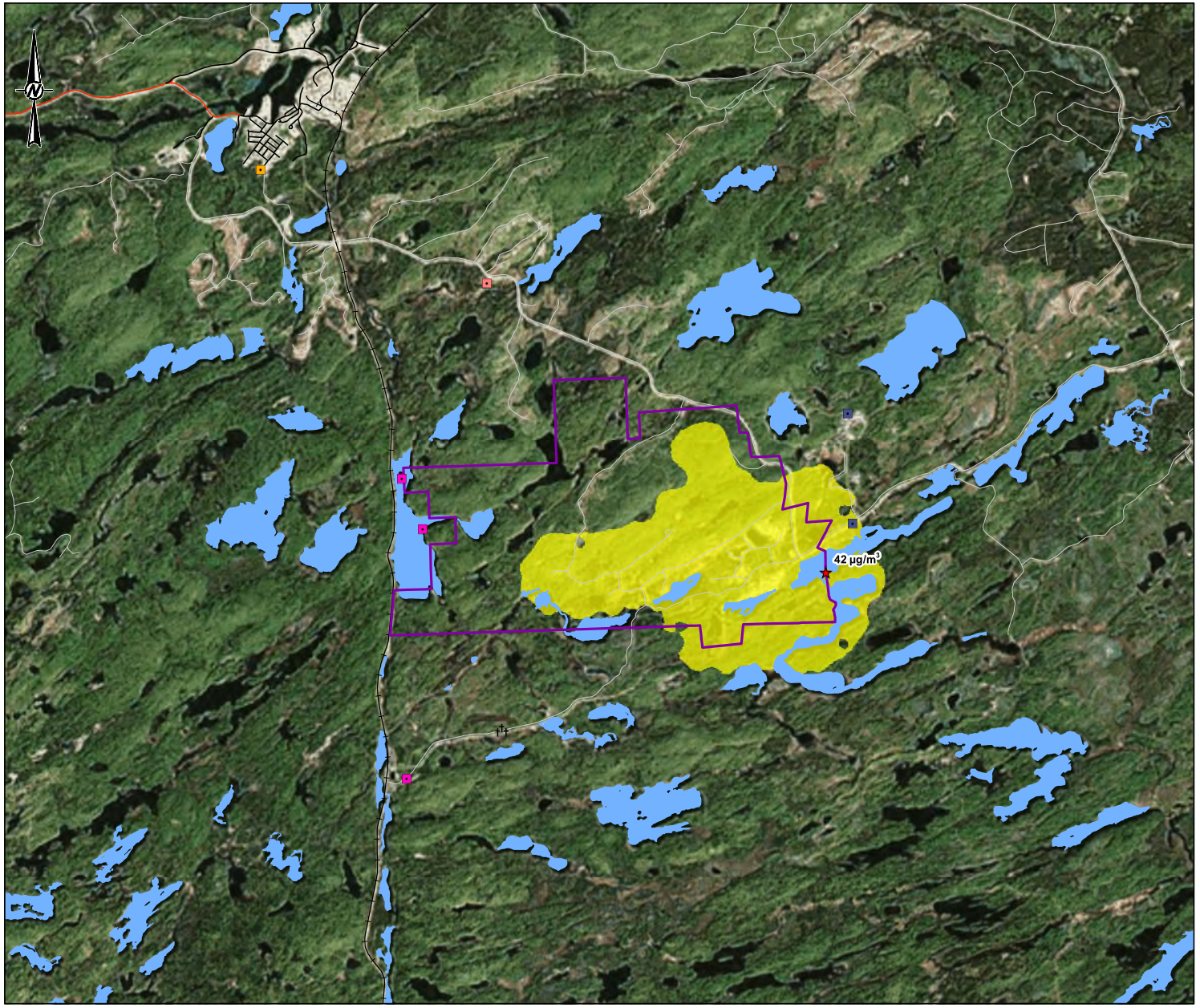
Golder Associates

YYYY-MM-DD	2017-12-08
PREPARED	RRD
DESIGN	--
REVIEW	NJ
APPROVED	SC

PROJECT No.	PHASE	Rev.	FIGURE
1659317	2000	1	2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D
25mm
0

Path: K:_Clients\ARGONAUT_GOLD_INC\Magino Mine\09_PRO\1659317\40_PRO\RRA\4_Acoustic_Noise_Vibration\001\1_layouts\1659317-0001-RN-0002.mxd



LEGEND

- Primary Road
- Secondary Road
- Tertiary Road
- Railway
- Waterbody
- Property Boundary

Human Health Receptor

- Camp/Cottage
- Cemetery
- Community of Dubreuilville
- Neighbouring mine's administration building
- Trapper Cabin

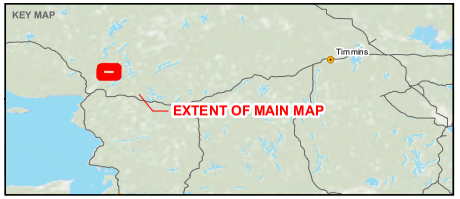
- Maximum Predicted Ambient Air Concentration

Ambient Concentration (µg/m³)

- >27

AAQC: 27 µg/m3
Baseline: 5.4 µg/m3

KEY MAP



REFERENCE

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HTTPS://WWW.ONTARIO.CA/GOVERNMENT/OPEN-GOVERNMENT-LICENCE-ONTARIO
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: UTM ZONE 16 VERTICAL DATUM: CGVD28

0 625 1,250 2,500
METRES

SCALE 1:50,000

CLIENT
ARGONAUT GOLD INC

PROJECT
AIR QUALITY MODELLING
MAGINO MINE

TITLE
24HR $PM_{2.5}$
AMBIENT CONCENTRATION

CONSULTANT

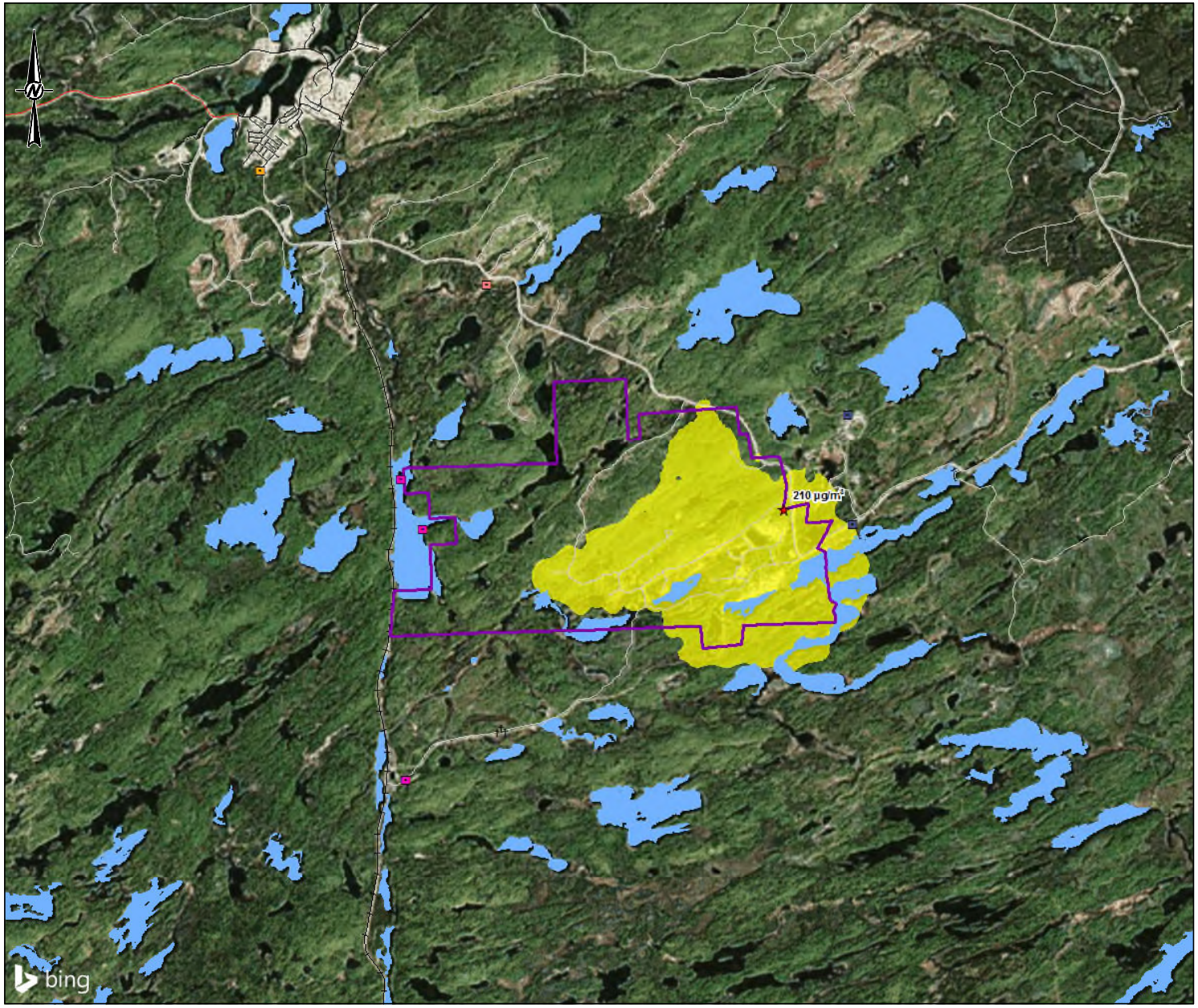
Golder Associates

YYYY-MM-DD	2017-12-08
PREPARED	RRD
DESIGN	--
REVIEW	NJ
APPROVED	SC

PROJECT No.	PHASE	Rev.	FIGURE
1659317	2000	1	3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

Path: K:_Clients\ARGONAUT_GOLD_INC\Magino Mine\09_PRO\1659317\40_PRO\RRA\4_Acoustic_Noise_Vibration\0001_layouts\1659317-0001-RN-0003.mxd



LEGEND

- Primary Road
- Secondary Road
- Tertiary Road
- Railway
- Waterbody
- Property Boundary

Human Health Receptor

- Camp/Cottage
- Cemetery
- Community of Dubreuilville
- Neighbouring mine's administration building
- Trapper Cabin

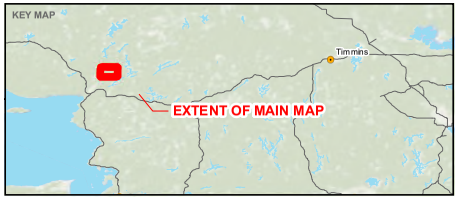
★ Maximum Predicted Ambient Air Concentration

Ambient Concentration (µg/m³)

- >120

AAQC: 120 µg/m3
Baseline: 25.6 µg/m3

KEY MAP



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HTTPS://WWW.ONTARIO.CA/GOVERNMENT/OPEN-GOVERNMENT-LICENCE-ONTARIO
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: UTM ZONE 16 VERTICAL DATUM: CGVD28

0 625 1,250 2,500
METRES

SCALE 1:60,000

CLIENT
ARGONAUT GOLD INC

PROJECT
AIR QUALITY MODELLING
MAGINO MINE

TITLE
24HR TSP
AMBIENT CONCENTRATION

CONSULTANT
Golder Associates

YYYY-MM-DD	2017-12-08
PREPARED	RRD
DESIGN	--
REVIEW	NJ
APPROVED	SC

PROJECT No.	PHASE	Rev.	FIGURE
1659317	2000	1	4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

Path: K:_Clients\ARGONAUT_GOLD_INC\Magino Mine\09_PRO\1659317\40_PRO\RRA\4_Acoustic_Noise_Vibration\0001_layouts\1659317-0001-RN-0004.mxd

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