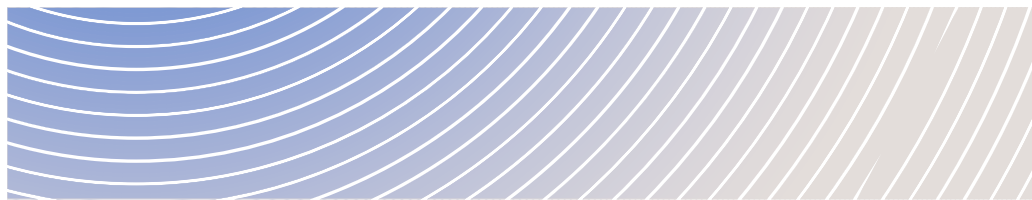


Impact Assessment Agency of Canada



DRAFT ANALYSIS OF PRODIGY GOLD INCORPORATED'S PROPOSED
CHANGES TO THE MAGINO GOLD PROJECT

JUNE 2023



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1. Introduction

The Magino Gold Project (the Project), as proposed by Prodigy Gold Incorporated (the proponent), includes the construction, operation, decommissioning, and abandonment of an open pit gold mine and on-site metal mill located 14 kilometres south-east of Dubreuilville, Ontario. Mining would occur over 10 years with an ore production capacity of 45 200 tonnes per day. The on-site metal mill would have an ore input capacity of 35 000 tonnes per day and would operate for approximately 12 to 15 years.

The Project was subject to an environmental assessment under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). The environmental assessment was conducted by the former Canadian Environmental Assessment Agency. The former Minister of Environment and Climate Change issued a Decision Statement¹ for the Project on January 24, 2019. The Decision Statement contains 120 legally binding conditions, which include mitigation and follow-up program measures that the proponent must comply with throughout the life of the Project.

On August 28, 2019, the *Impact Assessment Act* (IAA) came into force, repealing the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). Section 184 of IAA provides that decision statements issued under CEAA 2012 are deemed to be decision statements under IAA, and therefore subject to the provisions of IAA. On the same date, the Canadian Environmental Assessment Agency became the Impact Assessment Agency of Canada. In this report, the term “Agency” can refer to either the former Canadian Environmental Assessment Agency or the current Impact Assessment Agency of Canada.

On September 19, 2022, the proponent informed the Agency of proposed changes to the Project. The Agency conducted an analysis of the proposed project changes and the potential adverse environmental effects of those changes, including additional impacts on the exercise of rights of Indigenous groups, to assess:

- whether the changes constitute a new or different designated project that may require a new impact assessment; and
- whether any changes (including addition or removal) may be required to the mitigation and follow-up program measures included as conditions in the Decision Statement to address the proposed project changes.

The Agency's analysis is summarized in this report.

¹ <https://ceaa-acee.gc.ca/050/evaluations/document/126612?culture=en-CA>

2. Proposed Project Changes

The proposed project changes include the construction and operation of a 22-megawatt on-site liquefied natural gas-fired electrical power generation facility (LNG power plant) and associated infrastructure such as its storage facility, electrical distribution lines and substation, and power generation equipment. It also includes rerouting and upgrading an existing 44-kilovolt distribution line (the distribution line) from within the area of the open pit. These proposed project changes will be within the overall footprint of the Project (Figure 1). The LNG power plant and its associated infrastructure will be built and commence operations over a period of approximately 12 months.

The Project requires approximately 16.5 megawatts of power for its operation phase². The proponent stated in the environmental assessment that this power would be obtained from local and regional power suppliers; however, the proponent was unable to secure the full demands of the Project. Algoma Power Inc (API), a local power distribution company, would provide 4 megawatts of power for the operations. The remaining 12.5 megawatts of power would be generated by the proponent on-site through the proposed LNG power plant. This on-site power generation will be temporary until local or regional power generation and/or distribution companies can cover a larger portion or the entirety of the Project's power demands, which is not expected until at least 2026.

2.1 Agency's Analysis of Changes

The *Physical Activities Regulations* under IAA identify the physical activities that constitute designated projects that may require an impact assessment. The Agency is of the view that the proposed project changes do not constitute a new or different designated project that may require a new impact assessment.

The Agency analyzed the proposed project changes and the potential adverse environmental effects of those changes, whether the mitigation and follow-up program measures described in the Environmental Assessment Report³ may require additions or alterations to account for the proposed changes, and whether any additional impacts on the exercise of rights may occur on the Indigenous groups identified in the Decision Statement, or on any Indigenous groups not identified in the Decision Statement. The Agency is satisfied with the proponent's characterization of effects in relation to the proposed project changes, and has determined that the conditions established in the Minister's Decision Statement will continue to mitigate adequately effects caused by the proposed project changes. However, since the proposed project changes will increase the estimate of the Project's greenhouse gas (GHG) emissions above the estimates in the environmental assessment, the Agency recommends additional mitigation measures in relation to the Project's GHG emissions (see section 2.2.1). Additionally, since the on-site power generation is a temporary measure for the Project, the Agency recommends adding a requirement in the conditions in the Decision Statement for the

² The power plant would be built to have capacity for 22 megawatts to prepare for extreme events that may cause power outages.

³ <https://ceaa-acee.gc.ca/050/evaluations/document/129464>

Proponent to use as much grid electricity, or other low-carbon alternatives such as the incorporation of renewable natural gas, as possible, and then switch entirely to grid electricity or low-carbon alternative when such an option becomes technically and economically feasible.

The Agency also recommends a minor modification to condition 1.7 (definition of the term “Designated Project”) in the Decision Statement as the current definition refers to section 2 of the Environmental Assessment Report, which does not capture the proposed project changes. Condition 1.7 needs to be amended to encompass the proposed project changes as described in the proponent’s document titled, “Supplemental Impact Assessment Report for the Magino Gold Project”⁴, to ensure that the Agency’s ability to enforce the conditions included in the Decision Statement is not impeded with respect to the proposed LNG power plant and associated infrastructure.

The Agency reviewed a summary of the proponent’s engagement activities with Indigenous groups (Appendix A)⁴, federal authorities and provincial ministries, including concerns raised to the proponent and the proponent’s responses.

2.2 Assessment of potential adverse environmental effects

The proposed project changes could cause adverse transboundary effects (through increase in GHG emissions), health impacts on Indigenous peoples (due to increased emissions potentially affecting air quality), and impacts on current use of lands and resources for traditional purposes by Indigenous peoples due to increase in noise and potential wildlife collisions. The following is an analysis of whether the proposed project changes would require modifications, including additions or removals, to the mitigation and follow-up program requirements included as conditions in the Decision Statement.

2.2.1 Proponent’s Assessment

The proponent is of the view that the construction and operation of the LNG power plant and the associated infrastructure including the distribution line, will cause a slight increase in the air and GHG emissions, noise and wildlife collisions. However, these changes are not likely to cause adverse transboundary effects, or adverse effects on the health or current use of lands and resources by Indigenous peoples for traditional purposes after taking into account the standard mitigation measures and measures already in place for the Project described in the Environmental Assessment Report and included as conditions in the Decision Statement. Additionally, all of the proposed project changes are within the study area assessed as part of the environmental assessment for the Project, and any environmental effects from the project changes will be temporary until a local or regional power supplier can meet the Project’s power demands.

TRANSBOUNDARY EFFECTS

Increase in GHG emissions

⁴ [Supplemental Impact Assessment Report for the Magino Gold Project](#)

The proposed project changes will generate increased GHG emissions. The proponent incorporated the additional GHG emissions from the proposed project changes into the environmental assessment, using conservative assumptions such as using estimates for four engines running in the power plant (whereas only three engines will be required for the operational needs for the Project). The revised assessment concluded that the project emissions would increase from 153 kt CO₂e to 181.3 kt CO₂e. According to Environment and Climate Change Canada (ECCC), the proponent's estimation of the changes to the Project's GHG emissions is appropriate. However, since the proposed project changes will increase the estimate of the Project's GHG emissions above the estimates in the environmental assessment, ECCC recommends that the proponent develop and implement a GHG Management Plan aimed at the continuous improvement regarding Project's GHG emissions, and minimize the potential for adverse transboundary effects. ECCC also recommends that the Proponent re-evaluate on an annual basis the alternatives to LNG power generation, including the feasibility of implementing the switch to grid electricity or other low-carbon alternatives, such as the incorporation of renewable natural gas.

HEALTH OF INDIGENOUS PEOPLES

Increase in air quality emissions

The proposed project changes will introduce additional sources of emissions to the Project, such as combustion of natural gas in the power plant, and particulates from increase in traffic and diesel combustion from trucking of LNG or compressed natural gas. The proponent incorporated these additional emission sources and conducted a revised assessment of air quality parameters⁵. The results indicated that all parameters would remain within 1.1 percent of the emissions calculated as part of the environmental assessment, with the exception of carbon monoxide (CO) and nitrogen dioxide (NO₂), which will increase by 10.6 percent and 8.5 percent, respectively. In the environmental assessment, CO was assessed to be a low magnitude effect whereas NO₂ was assessed as an effect of high magnitude. Both parameters were deemed not to cause an overall significant effect on the health of Indigenous peoples as the frequency and the geographic extent of the changes in air quality were limited.

The increased concentration of CO and NO₂ due to the proposed project changes are unlikely to change the health risks to Indigenous peoples as there are no permanent receptors located in the area where exceedances of air quality criteria would be most likely and due to the implementation of mitigation and follow-up program measures already in place as part of the environmental assessment. For example, condition 5.3 of the Decision Statement requires the proponent to monitor and develop a follow-up program for air contaminants, including monitoring of nitrogen dioxide.

CURRENT USE OF LANDS AND RESOURCES FOR TRADITIONAL PURPOSES

⁵ This assessment of air quality parameters assumes conservative scenarios, such as using US EPA Tier 2 and 3 emission standards for off-road vehicle fleet even though the proponent would meet US EPA Tier 4 emission standards, which are more stringent and would result in overall lower concentration of air quality parameters.

Increase in noise

Construction and operation of the proposed LNG power plant will introduce additional sources of noise to the Project including four power generators, exhaust stack and air intakes, and transportation of fuel. The power generators are acoustically designed such that noise thresholds are met outside of the generator enclosures, and silencers are installed on generator exhaust stacks and air intakes. In consideration of these design features, the proponent conducted a revised assessment of noise levels compared to the one conducted as part of the environmental assessment, and concluded that there will be no measurable change in the noise levels compared to the environmental assessment. The standard design features, as well as the key mitigation and follow-up program measures established as part of the environmental assessment will continue to manage potential effects from noise on current use of lands and resources by Indigenous peoples for traditional purposes.

Increase in wildlife collisions

During operations, fuel for the LNG power plant will be trucked into the site using trucks and trailers. This has the potential to increase chances for wildlife collisions compared to predictions included in the environmental assessment. Mitigation and follow-up program requirements established as part of the environmental assessment, including speed enforcement and staff training, will continue to be effective in minimizing potential wildlife collisions and manage impacts on the availability of wildlife species in the project area for use by Indigenous peoples for traditional purposes.

2.2.2 Agency's Analysis and Conclusions

The Agency agrees with the advice provided by ECCC regarding re-evaluation of alternatives to LNG power plant and the addition of a GHG management plan for the Project to minimize the GHG emissions from the Project and the potential for adverse transboundary effects. The Agency is recommending new conditions related to that effect in the Decision Statement (see Table 1).

The Agency agrees with the proponent's conclusions that the proposed project changes will not result in adverse effects on Indigenous health or current use of lands and resources by Indigenous peoples for traditional purposes beyond those that were identified in the environmental assessment. In addition, the environmental effects from the proposed project changes will be temporary, until a local or regional power supplier can meet the Project's power requirements.

Condition 1.7 of the Decision Statement relies on the description of project components and activities presented in section 2 of the Environmental Assessment Report. The Agency recommends an amendment to condition 1.7 of the Decision Statement to incorporate the proposed project changes (see Table 1).

2.3 Rights of Indigenous Peoples

An analysis of adverse effects of changes to the environment on current use of lands and resources for traditional purposes, health of Indigenous peoples, physical and cultural heritage, and biophysical resources informed the assessment of impacts on the exercise of rights of Indigenous Peoples as recognised and affirmed in section 35 of the *Constitution Act, 1982* during the environmental assessment for the Project.

Mitigation and follow-up program requirements were developed and included in the Decision Statement as enforceable conditions.

The following is an analysis of whether the proposed project changes would cause any additional adverse impacts to the exercise of rights by Indigenous groups beyond the effects described in the Environmental Assessment Report, and whether the proposed project changes would impact the exercise of rights of other Indigenous groups not identified in the Decision Statement.

2.3.1 Proponent's Assessment

The proponent has been engaging with Michipicoten First Nation, Missinabie Cree First Nation, Métis Nation of Ontario, Batchewana First Nation, Red Sky Métis First Nation, Garden River First Nation and Pic Mobert First Nation regarding the proposed project changes since 2021, and concludes that the mitigation and follow-up program measures already established as part of the environmental assessment, including standard mitigation measures, will mitigate any adverse effects from the proposed project changes.

2.3.2 Views Expressed

Michipicoten First Nation, Missinabie Cree First Nation, Métis Nation of Ontario, Batchewana First Nation, Garden River First Nation and Red Sky Métis First Nation expressed concerns regarding potential changes in air quality and GHG emissions, vibration and noise from the operation of the LNG power plant and the associated activities and infrastructure. The proponent conducted a revised assessment and concluded that there will be no measurable effects on Indigenous groups from changes in air and GHG emissions, noise and vibration due to the proposed project changes.

Michipicoten First Nation, Métis Nation of Ontario, Garden River First Nation, and Red Sky Métis First Nation expressed concerns related to increased risk of accidents and malfunctions, including traffic-related incidents and spills. The proponent plans to implement measures such as speed enforcement to minimize the potential for wildlife collisions, and prepare an accident and malfunction response plan in consultation with Indigenous groups.

2.3.3 Agency's Analysis and Conclusions

The proposed project changes are unlikely to cause adverse environmental effects and impacts to the exercise of rights of Indigenous Peoples beyond those assessed in the environmental assessment, and therefore no changes are required to the mitigation or follow-up program requirements that were described in the Environmental Assessment Report. The Agency recommends an update to the definition of Designated Project in the Decision Statement, to ensure that the conditions established in the Decision Statement also apply to the proposed project changes (see Table 1).

The Agency notes that there are no new adverse environmental effects or impacts to the exercise of rights by Indigenous Peoples from the proposed project changes that would extend into the local and regional assessment areas identified in the Environmental Assessment Report, and therefore, there will be no expected impact on the exercise of rights of other Indigenous groups not identified in the Decision Statement.

3. Consultation and Engagement

3.1 Proponent's Engagement with Indigenous Groups

The proponent indicated that engagement took place with the following groups on the proposed project changes:

- Michipicoten First Nation;
- Missanabie Cree First Nation;
- Métis Nation of Ontario;
- Batchewana First Nation;
- Red Sky Métis First Nation;
- Garden River First Nation; and
- Pic Moberg First Nation.

Missanabie Cree First Nation and Métis Nation of Ontario provided letters of support to the proponent on the proposed LNG power plant. Pic Moberg First Nation indicated to the proponent in May 2022 that they would not require further engagement on the Project.

3.2 Agency's Planned Consultation on Proposed Project Changes

The Agency will engage with Indigenous groups identified in section 3.1 to verify that the proponent informed and provided an opportunity to provide comments, and to validate whether the Indigenous groups wish to share anything further with the Agency.

The Agency will also seek comments from federal authorities, provincial ministries and the public on the proposed project changes, to provide advice to the Minister of Environment and Climate Change on a final recommendation for potential amendments to the Decision Statement.

4. Conclusion

The Agency is of the view that the proposed project changes will largely be managed by the existing mitigation and follow-up program measures identified as conditions in the Decision Statement. Given that the proposed project changes will increase the GHG emissions from what was initially proposed in the environmental assessment, the Agency recommends that the proponent develop and implement a GHG Management Plan and re-evaluate low-carbon alternatives to the LNG power plant every three years from the commencement of operations. The Agency is also of the view that the proposed project changes will not cause any additional adverse environmental effects and impacts to the exercise of rights of the Indigenous groups identified in the Decision Statement other than the effects described in the Environmental Assessment

Report. The proposed project changes will not impact any Indigenous groups that are not identified in the Decision Statement for the Project.

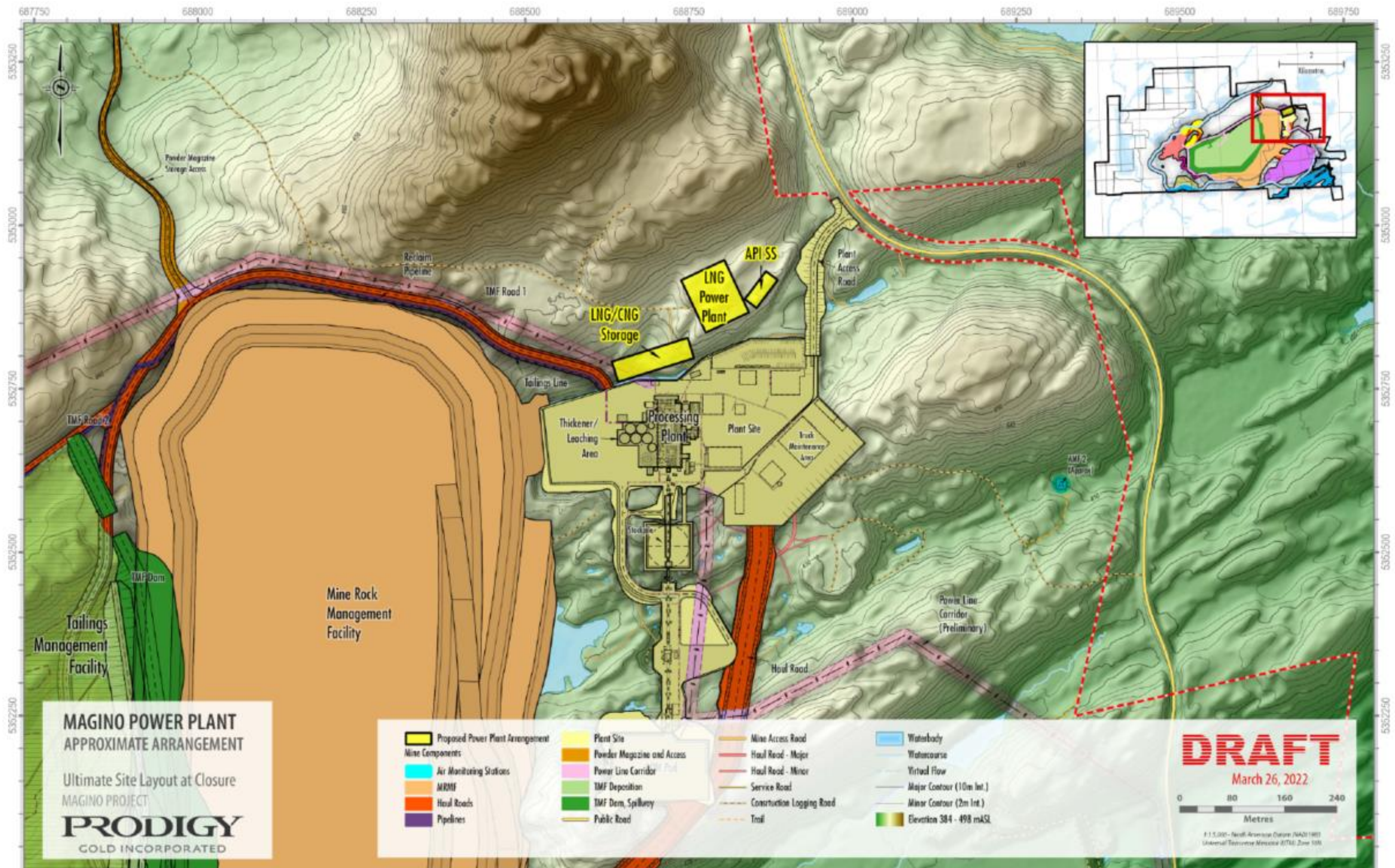
Given that the proposed project changes would not be captured by the definition of the Designated Project as currently written in the Decision Statement, the Agency recommends that the definition of Designated Project be updated, to include the LNG power plant and the associated infrastructure as described in the proponent's document titled, "Supplemental Impact Assessment Report for the Magino Gold Project"⁴. This update, provided in the table below, will ensure that the Agency's ability to enforce the Decision Statement is not impeded.

Table 1 – Recommended amendments to the Decision Statement

Original Decision Statement (January 24, 2019)	Recommended amendment to the Decision Statement
<p>Not applicable</p>	<p>New condition 11:</p> <p>11.1 The Proponent shall develop in consultation with Environment and Climate Change Canada and any other relevant authorities, and implement within six months of the commencement of operations and until the end of decommissioning, a greenhouse gas management plan to reduce the Designated Project’s greenhouse gas emissions. The Proponent shall take into account applicable provincial and federal greenhouse gas reduction strategies when developing and implementing the plan. As part of the development of the plan, the Proponent shall:</p> <p>11.1.1 identify the sources of greenhouse gas emissions applicable to the Designated Project covered by the greenhouse gas management plan;</p> <p>11.1.2 for each source of emissions identified pursuant to condition 11.1.1, identify feasible alternatives, including the best available technologies and best environmental practices (BAT/BEP) applicable to that source to be implemented as mitigation measures. All feasible alternatives shall consider emerging technologies and practices at a sufficiently advanced stage of technological development to become technically and economically feasible over the life of the Designated Project, taking into account the BAT/BEP determination process as described in the Government of Canada’s Strategic Assessment of Climate Change and other available guidance documents issued by Environment and Climate Change Canada;</p> <p>11.1.3 establish greenhouse gas emission targets that aim to reduce the Designated Project’s overall emissions, taking into account the emission of greenhouse gases from the on-site liquid natural gas power plant and the implementation of alternatives identified pursuant to condition 11.1.2; and</p> <p>11.1.4 reassess on an annual basis, the feasibility of acquiring as much electricity from the grid, or using other lower-carbon alternatives as possible, until the electricity</p>

	<p>produced by the on-site liquefied natural gas power plant is fully replaced by grid electricity or other low-carbon alternatives.</p> <p>11.2 The Proponent shall review the plan developed pursuant to condition 11.1, every three years from the commencement of operations and until the end of decommissioning. The Proponent shall provide any updated plan to the Agency and Environment and Climate Change Canada within 30 days of any revision of the plan.</p>
<p>Condition 1.7:</p> <p><i>Designated Project</i> means the Magino Gold Project as described in section 2 of the environmental assessment report prepared by the Canadian Environmental Assessment Agency (Canadian Environmental Assessment Registry Reference Number 80044).</p>	<p>Revised condition 1.7:</p> <p>Designated Project means the Magino Gold Project as described in section 2 of the environmental assessment report prepared by the Canadian Environmental Assessment Agency (Canadian Environmental Assessment Registry Reference Number 80044; Document Number 46), and the Supplemental Impact Assessment Report for the Magino Gold Project prepared by Prodigy Gold Incorporated (Canadian Environmental Assessment Registry Reference Number 80044; Document Number 60).</p>

Figure 1 – Site layout with the proposed project changes



**MAGINO POWER PLANT
APPROXIMATE ARRANGEMENT**

Ultimate Site Layout at Closure
MAGINO PROJECT
PRODIGY
GOLD INCORPORATED

- | | | | |
|----------------------------------|----------------------------|---------------------------|--------------------------|
| Proposed Power Plant Arrangement | Plant Site | Mine Access Road | Waterbody |
| Air Monitoring Stations | Powder Magazine and Access | Haul Road - Major | Watercourse |
| MRMF | Power Line Corridor | Haul Road - Minor | Virtual flow |
| Haul Roads | TMF Deposition | Service Road | Major Contour (10m Int.) |
| Pipelines | TMF Dam, Spillway | Construction Logging Road | Minor Contour (2m Int.) |
| | Public Road | Trail | Elevation 384 - 498 mASL |

DRAFT
March 26, 2022

0 80 160 240
Metres

1:15,000 - North American Datum (NAD 1983)
Universal Transverse Mercator (UTM) Zone 18S