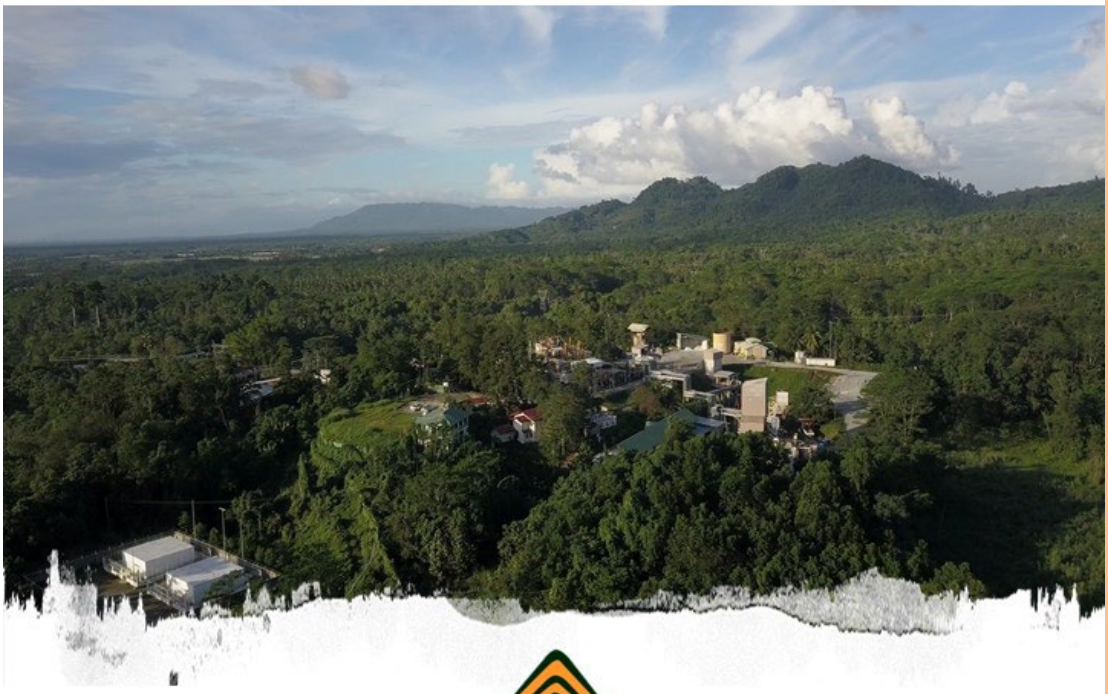
Executive Summary for the Public



PHILSAGA MINING CORPORATION

CO-O GOLD PROJECT

PHILSAGA MINING CORPORATION

1. Project Description

Name of Project	**Co-o Gold Project**
Location	Municipalities of Rosario and Bunawan, Agusan del Sur
Tenement No.	MPSA 262-2008-XIII and MPSA 299-2009-XIII MPP 001-2007-XII (2nd Renewal)
ECC Ref No.	0904-009-1010
Nature of Project	Resource Extractive Industries (Major Mining Project)
Brief Description of Current Project	The Co-o Gold Project of Philsaga Mining Corporation consists of underground mining operation with a maximum annual extraction rate of 912,500 MT and mineral processing operation of gold ore with 2,500 MTPD mill feed. The mining operations is within the 423.1562 hectares covered by Parcel 1 under MPSA No. 262-2008-XIII and 169-hectare portion of Parcel 1 under MPSA No. 299-2009-XIII, with a total mining area of 592.1562 hectares located at Brgy. Consuelo, Bunawan, Agusan del Sur. The mill complex is located at Brgy. Bayugan 3, Rosario, Agusan del Sur, with a total area of 95 hectares covered by MPP 001-2007-XIII. The processing plant uses Carbon-in-Leach to extract precious metal from the ore.
ECC Amendment Applied for	1. Increase in capacity and covered area of Tailing Storage Facility 5 (TSF 5) from 1,373,225 MT covering 10 hectares to 5,000,000 MT covering 25 hectares, respectively. 2. Construction of additional diversion channel for Shot Dili Creek 3. Installation of additional support facilities for the mill operations. 4. Revision in the frequency of conducting the Knowledge Attitude Practice (KAP) Evaluation from annual to every two (2) years.

2. Project Size and Components

The project area is within the approved MPP 001-2007-XIII 2nd renewal covering an area of 95 hectares. The processing plant has an allowable daily milling rate of 2,500 MTPD. The expansion of the Tailing Storage Facility 5 will cover 25 hectares. Also, the expansion of the diversion channel will traverse within the 25 – hectare expansion of the TSF. Presented in Figure 1 is the proposed location of the project site. While Table 1. Presents the existing and proposed project component.

Table 1. Summary of existing and proposed component of the project.

EXISTING COMPONENT		PROPOSED COMPONENT	
Description of Existing Component	**Municipality/ Barangay Location**	**Proposed Component**	**Municipality/ Barangay Location**
Underground Mining of Gold Ore Underground mining of Gold within the 423.1562 hectares covered by Parcel I of MPSA No. 262-2008-XIII and 169 hectares covered by MPSA 299-2009-XIII with total mining area of 592.1562 hectares	Brgy. Consuelo, Bunawan	No changes for the existing component	Brgy Consuelo, Bunawan, Agusan del Sur
Milling of Gold Ore the Carbon-In-Leach / Carbon-In-Pulp (CIL / CIP) process with a mill feed capacity 2500 MTPD The existing and operating mill plant will be enhanced by installing the ff: - Coarse and crushed ore bin apron feeders, conveyors, belt feeder and sump pumps - SAG mill with pumps, jaw crusher cyclones and pipings - Additional facilities for the existing gold room: two units of elution column, three to	Barangay Bayugan III, Municipality of Rosario	Upgrades of the existing plan facilities - Two (2) leach tanks, with each tank has a holding capacity of 1100m^3. - One (1) Vibrating trash screen with size of 1.2 m x 3.6 w and aperture of 0.8mm, to prevent trash materials entering the leach/CIL tanks. - Two (2) Chlorine Dosing Tanks with each tanks' capacity of 100 m^3. - One (1) unit, 8 – ton capacity coned shape holding tank c/w overflow launder.	Brgy. Bayugan 3, Municipality of Rosario

EXISTING COMPONENT		PROPOSED COMPONENT	
Description of Existing Component	**Municipality/ Barangay Location**	**Proposed Component**	**Municipality/ Barangay Location**
four units of Electrowinning cells with rectifier, new boiler, new solution pumps, carbon reactivation unit, and new gas scrubber - Cyanide detox facility - Reagent mixing and storage - Tailings Thickener			
Mine Surface Facilities • Mine Administrative Office • Staff House • Powerhouse • Warehouse • Fuel Depot • Lube Storage	Brgy. Consuelo, Bunawan, Agusan del Sur	Fuel Depot with 72 – m^3 diesel and 24 m^3 gasoline tanks. The additional fuel depot will support increasing consumption of fuel in the mining operation.	Brgy. Consuelo, Bunawan Agusan del Sur
Philsaga Mining Hospital A 10-bed primary health care facility that serves the health care needs of about 2,000 employees and the people living in the surrounding communities.		No proposed changes to the existing healthcare facility	Brgy. Consuelo, Bunawan, Agusan del Sur
Mill Site Buildings 1.6 hectares administration complex with conference room and workstations.	Barangay Bayugan III, Municipality of Rosario	No additional facilities for the existing component	Brgy. Bayugan 3, Rosario Agusan del Sur

EXISTING COMPONENT		PROPOSED COMPONENT	
Description of Existing Component	**Municipality/ Barangay Location**	**Proposed Component**	**Municipality/ Barangay Location**
- Administration Building - MEPEO/Safety Office/Clinic - Staff Houses - Motor pool - Powerhouse - Warehouse - Fuel Tank - Multi-purpose court - Fuel depot with 96 m^3 diesel and 4 m^3 gasoline capacity for fuel consumption			
Access Road A 12-kilometer road from the mill site to the mine site is regularly maintained by the company. It is used for hauling and transport of ore from the mine site to the mill site.	Brgy. Consuelo, Bunawan and Barangay Bayugan III, Municipality of Rosario	No additional/expansion of the existing access roads	Brgy. Consuelo, Bunawan and Barangay Bayugan III, Municipality of Rosario
Haul Roads Mine haul road shall be developed in the new mining areas initially following topographic surface contour.	Brgy. Consuelo, Bunawan and Barangay Bayugan III, Municipality of Rosario	No additional/expansion of the existing haul road	
Stockpile Area The company will maintain an ore stockpile area. Stockpile slope will be kept at low angle and height to minimize slumping. The proposed height of the	Brgy. Consuelo, Bunawan, Agusan del Sur	Additional Two (2) waste dumps areas for the Decline Project Waste dump 1 will cover 11,500 m2 with 25 – meter embankment height.	Brgy. Consuelo, Bunawan Agusan del Sur

EXISTING COMPONENT		PROPOSED COMPONENT	
Description of Existing Component	**Municipality/ Barangay Location**	**Proposed Component**	**Municipality/ Barangay Location**
stockpile will depend on the angle-of-repose of the material. This is to ensure that the maximum volume materials will be stockpiled without sacrificing safety. Angle of repose is the maximum angle of descent or of the stockpile slope relative to the horizontal plane.		Waste Dump 2 will cover 27,000m2 with 30 – meter embankment height	
Airstrip The company has its own helipad which is used primarily for bullion runs.	Barangay Bayugan III, Municipality of Rosario	No proposed changes to the existing airstrip	Brgy. Bayugan 3, Rosario Agusan del Sur
Pollution Control Structure **SETTLING POND** One (1) unit 5 – Chambered settling pond was installed for underground wastewater treatment. The wastewater treatment facility is equipped with filter press to mechanically separate suspended solid and clear water from the settling pond.	Brgy. Consuelo, Bunawan, Agusan Del Sur	One (1) unit 3 – chambered settling pond to treat wastewater from the Decline Project. One (1) unit 3 – chambered settling pond will be constructed separately from the old settling pond. The new settling pond will be solely used for wastewater treatment from the Decline Project	Brgy. Consuelo, Bunawan Agusan del Sur

EXISTING COMPONENT		PROPOSED COMPONENT	
Description of Existing Component	**Municipality/ Barangay Location**	**Proposed Component**	**Municipality/ Barangay Location**
- **Tailing Storage Facility** Four (4) Tailing Storage Facilities are established with TSF No. 5 as the operational containment dam	Barangay Bayugan III, Municipality of Rosario	The increase in impounding capacity and area of the existing TSF 5 will cater additional volume of tails from the mineral processing operation. Increase in capacity and covered area of Tailing Storage Facility 5 (TSF 5) from 1,373,225 MT covering 10 hectares to 5,000,000 MT covering 25 hectares, respectively. An area within the expansion of TSF 5 will used as borrow material for TSF 5 embankment raise – up.	Barangay Bayugan 3, Municipality of Rosario

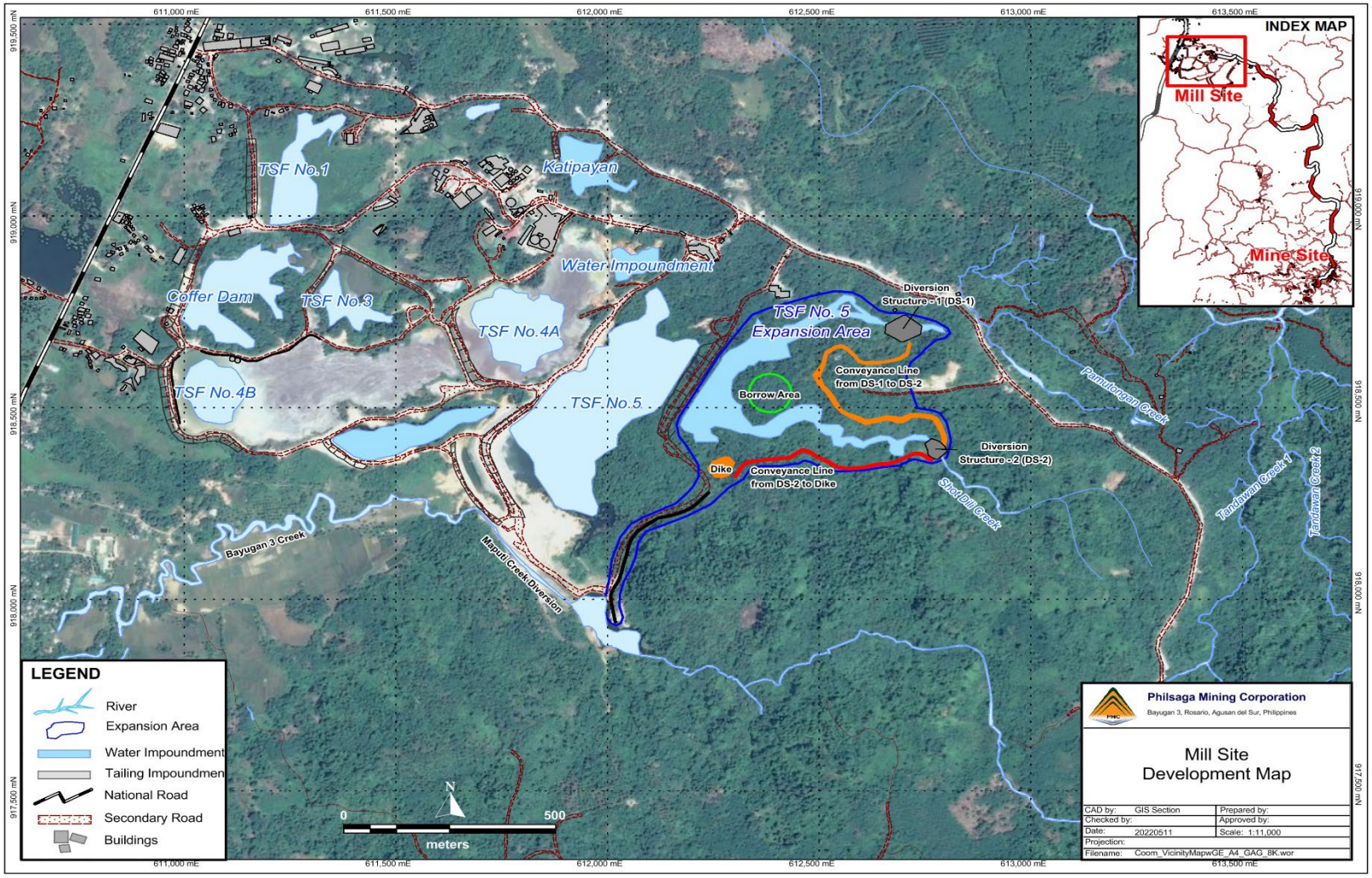
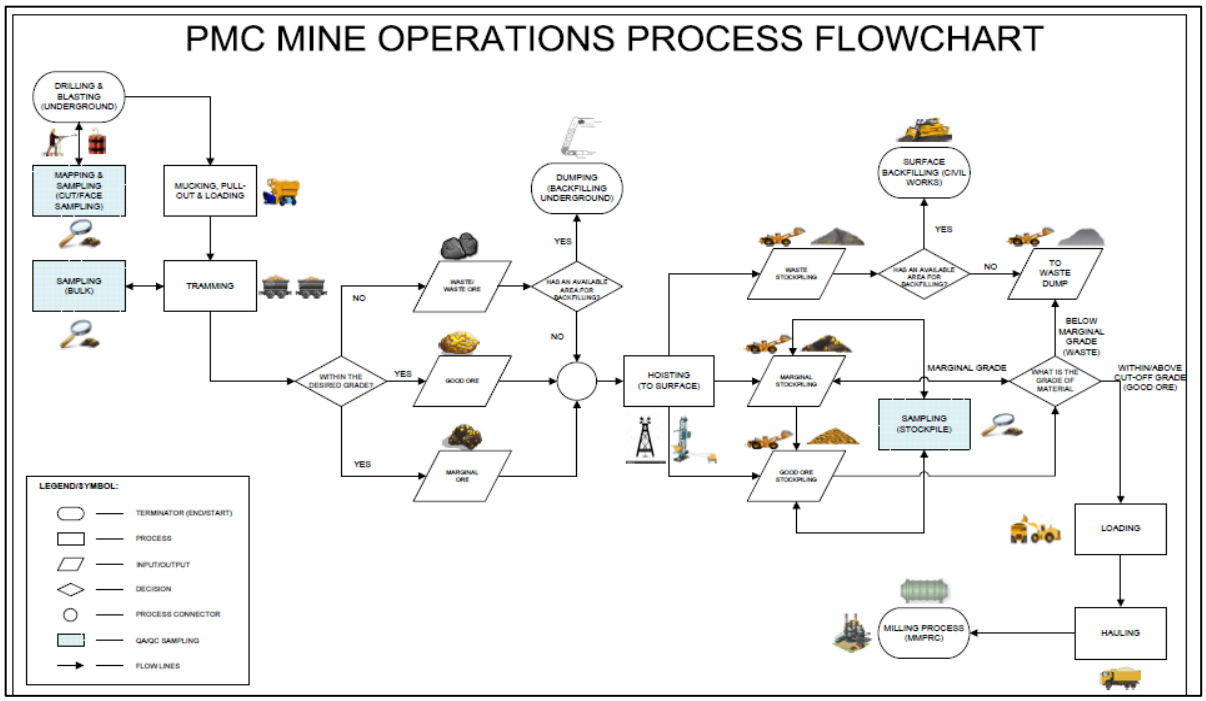


Figure 1. Location of the Proposed Project Site

3. Process/technology

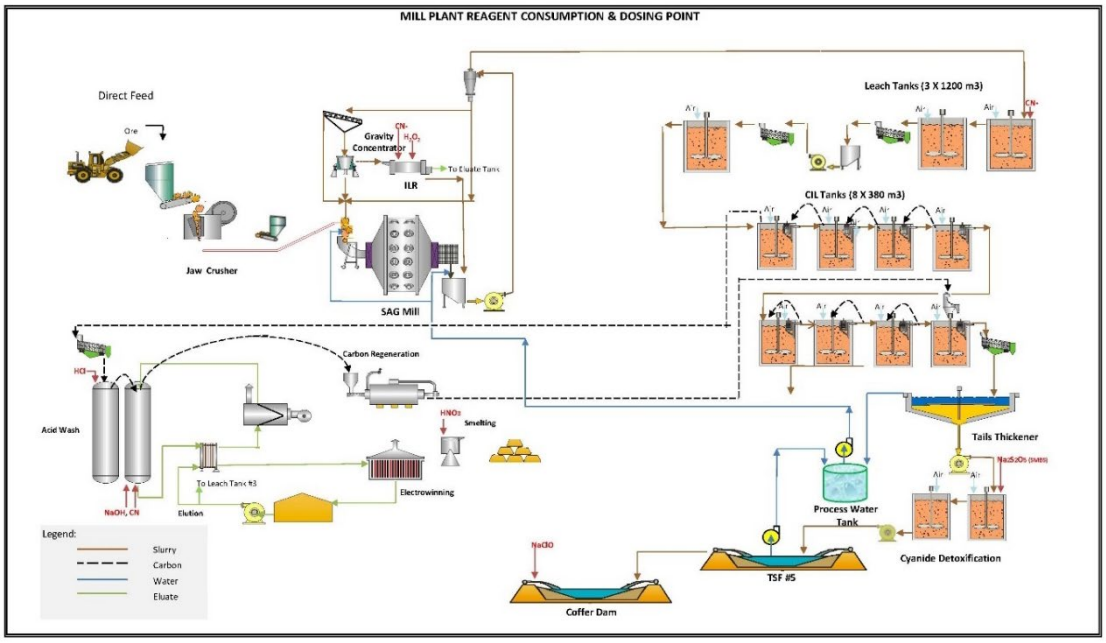
Mining Operation

The project employs shrinkage stoping for veins dipping above 50° where dilution can be reasonably controlled. In this method ore is extracted in horizontal slices starting from the bottom of the stope breaking upwards. The blasted ore will serve as a working platform for the miners. Since the blasted ore consumes 30% more space compared to its in-situ volume, this volume of ore will be pulled-out to provide adequate working space for the miners. When the stope breaking is done, the remaining ore in the stope will be harvested in its pull-out cleaning stage.



Milling Process

The 2500-TPD Processing plant uses cyanidation with pre-gravity concentration process in the extraction of gold from ore. The plant design is based around conventional jaw crushing, screening and SAG mill grinding. The processing includes leaching/CIL and tails thickening, detoxification circuit, carbon plant and gold refinery, reagents and water system and Tailing Storage Facility (TSF).



4. Resource Utilization

4.1. Water

The Katipayan Creek and Shot Dili Creek located 1.2 kms and 0.3 kms south of the mill plant, respectively, provides for the raw water requirement of the plant especially in the elution process and treated as potable water supply. The raw water is pumped from Katipayan Creek and stored a raw water raw water tank adjacent. The Creek can approximately cater up to 10.0 m^3/h enough to supply the mill raw water requirement.

On the other hand, process water is stored in two storage tanks, a 430 m^3 and 392 m^3 mild steel storage tanks. Distribution of the process water from the tank is achieved by duty and standby centrifugal water pumps and a piping distribution network that reticulates water to all process areas as required. Process water makeup comes from the tails thickener overflow and decant water pumps installed at the Coffer dam. The process water requirement is approximately 140 to 160 m^3/hr.

4.2. Energy

The project has an estimated power demand of 55,080.87 kW-hr per day. A local cooperative, Agusan del Sur Electric Cooperative Incorporated (ASELCO) will continually supply electricity to the project. Any deficiency in the power supplied by ASELCO will be supplemented by diesel engine generator sets.

5. Project Site Alternative

The project also identified the following alternatives for the increase in the impounding of the TSF 5 such as:

1. Raising of TSF 4 – TSF 4 is a 7m-high and 147m-long homogenous impervious clay fill dam with a rock fill downstream slope protection completed in July 2012. The option to raise the facility by 3m to 5m is considered to increase its impounding capacity;
2. Raising of the existing TSF 5 – TSF 5 is a 25m-high zoned earth fill embankment dam. Raising the facility itself from 3m to 5m is also considered to increase its impounding capacity.

The expansion of the existing TSF 5 by increasing its area will support the mining operation with its projected life of mine. The non-realization of this project will cause sudden stoppage of the mining and milling operation which will significantly affect local economy, decline in local revenue, non-continual of social development and environmental project, and decline in employment rate in the impact and neighboring communities.

The dam raise options are based on the topographic limitations and geological condition of the abutments surrounding the proposed expansion of TSF 5. The boreholes at the abutments show that bedrock is shallow at 2.6 m to 5.2 m from natural ground level. Visual inspections through topographic survey were utilized in aid of generating viable schemes.

Different schemes such as upstream raise, downstream raise, and centerline raise have been considered in the concept design. Also, an alternative option, such as retaining wall installation was also considered.

The TSF 5 expansion area impounding capacity was evaluated for the following options:

A. Without Raising the Water Diversion Dam. Impounding capacity: 541,655 m^3
B. Downstream Raise. Impounding capacity: 824,286 m^3
C. Center Raise. Impounding capacity: 882,873 m^3
D. Upstream Raise. Impounding capacity: 902,396 m^3

These options was subjected to structural modelling and analysis to determine the integrity of the scheme, and then be subjected to quantity, and cost estimates for comparison and evaluation of the schemes. Based on the above technical design

criteria, ease of construction methodology, project timeline constraints, project cost and tailings impounding capacity and other relevant project parameters, the upstream dam raise was the selected option.

6. Project Timeframe

Mobilization works will start after the after approval of this ECC, Tree Cutting and Earthballing Permit and other required local permits and clearances. The projected schedule of activities is tallied in the table below.

		2022												2023											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1.0	**GENERAL ITEMS**																								
1.1	Land Acquisition	Start of land acquisition was conduct in 2017. All the areas were already acquired by PMC in 2109																							
1.2	STCP application and approval																								
2.0	**ACCESS ROAD**																								
2.1	Clearing																								
2.2	Construction of access road																								
3.0	**DIVERSION SYSTEM**																								
3.1	Construction of Diversion Structure-2 (DS-2)																								
3.2	Construction of Conveyance Line from DS2 to Dike																								
3.3	Construction of Diversion Structure-1 (DS-1)																								
3.4	Construction of Conveyance Line from DS1 to DS1																								
4.0	**TSF 5 Expansion Site Embankment Raise Up**																								
4.1	Dewatering of impounded water																								
4.2	Construction of main embankment																								
4.3	Construction of spillway																								
4.4	Construction of decant structure																								

7. Stakeholders

1. National Agencies

   Department of Environment and Natural Resources – Regional Office XIII
   Environmental Management Bureau – Regional Office XIII
   Mines and Geosciences Bureau – Regional Office XIII
   Biodiversity Management Bureau – Regional Office XIII
   Ecological Research and Development Bureau – Regional Office XIII
   Provincial Environment and Natural Resource Office – Agusan del Sur
   Community Environment and Natural Resources Office – Bunawan, ADS

2. Local Government Unit

   Barangay Local Government Unit

   Hon. Michael Rhay Hambala
   Brgy. Captain
   Barangay Local Government Unit Brgy Bayugan 3 (Host Community)

   Hon. Arlene Villena
   Brgy Captain, Brgy. Wasian, Rosario Agusan del Sur (Neighboring barangay)

   Hon. Gregorio B. Maloloy – on, Sr.
   Brgy. Captain, Brgy. Consuelo, Bunawan Agusan del Sur (Neighboring Barangay)

Municipal Local Government Unit

Hon. Jose T. Cuyos
Municipal Mayor, Rosario Agusan del Sur (Host Municipality)

Hon. Slyvia B. Elorde
Municipal Mayor, Bunawan Agusan del Sur (Neighboring Municipality)

Provincial Government of Agusan del Sur

Hon. Santiago B. Cane
Provincial Governor, Agusan del Sur

3. Academe

Host Community:

Marilou A. Laurencio
Principal II, Bonifacio Elementary School, Brgy. Bayugan 3, Rosario, Agusan del Sur

Mary Christ Dequia
Principal III, Philsaga Highschool Foundation Inc., Brgy. Bayugan 3, Rosario, Agusan del Sur

Neighboring Community:
Mr. Philip Trillana
DepEd Rosario, District 2 Representative

Mr. Larry Marcos
DepEd Bunawan, District Representative

4. Religious Group

Pastor Wennie Decena
Chairman, Bunawan Religious Organization

Pastor Benjamin Gubalani
Chairman, Consuelo Religious Organization

Pastor Hilario S. Macabasa
Rosario Evangelical Churches Ministries Asso.

5. Women's Organization

Ms. Janice M. Rodrigo
WOMENS President, Bayugan 3, Rosario Agusan del Sur

6. Youth Organization

Mr. Ricky A. Alcazar
SK Chairman, Purok 5 Bayugan 3, Rosario, ADS

Mr. Alvarado Rodrigo
Katipunan ng Kabataan President) – Purok 5, Bayugan 3 Rosario, ADS

7. Indigenous People's Organization

Mr. Diony T. Oliver
Tribal Chieftain, Cabantao Maligaya Marfil Pamintigan Caulishan Maputi Masabong – Ancestral Domai Tribal Asso., Inc. (CAMMPACAMM- ADMTAI)

Mr. Rolito Peñaloga Sr.
Tribal Chieftain
Bunawan Manobo Ancestral Domain Management Council Inc. (BMADCI)

8. Summary of Impacts and Mitigation and Proponents Financial Commitments

The company has set up the Rehabilitation Cash Fund (RCF), Monitoring Cash Fund (MTF) and Environmental Monitoring Fund (ETF). The company has also set – up the Final Mine Rehabilitation and Decommissioning Fund (FMRDF) to guarantee implementation of Final Mine Rehabilitation and Decommissioning Plan when the scenarios cited in DAO 2010 - 21 will be encountered by the company. In 2013, the mining and milling operations has implemented its separate Environmental Protection and Enhancement Program addressing all environmental impacts in land, air and water resources present in both operations. The revised EPEP was approved on February 22, 2019 and March 01, 2019, denominated as COA 140 2019 02 and COA 143 2019 05, for mine and mill operations, respectively.

Fund Description	Account #.	Amount deposited
Monitoring Trust Fund (MTF)		
Mine operation	4511-0003-14	152,352.35
Mill operation	0845-034399-160	152,648.62
Rehabilitation Cash Fund (RCF)		
Mine operation	4511- 0003-06	5,494,895.76
Mill operation	0845-034400-160	5,278,468.69
Environmental Monitoring Fund (ETF)		
Mine operation	4511-0003-22	50,169.84
Mill operation	0845-039958-160	50,866.42
Final Mine Rehabilitation and Decommissioning Fund (FMRDF)		
Mine operation	4511-0003-03	159,144,538
Mill operation	0845-039643-160	78,201,674.60

The processing plant operates its Tailing Storage Facility to impound the tails generated from the processing plant. In compliance to DAO 2010 – 21, Section 189 Mine Waste and Tailings Fee Reserve Fund, the Company, in a semi-annual basis provide payment for the tails

contained by milling operation. While the mine wastes were utilized as backfilling materials underground, surface filling for access road maintenance of filling material for installation of bio engineered slope stabilization structures.

Upon approval of the ECC the proponent shall revise its Environmental Protection and Enhancement Program and Final Mine Rehabilitation and Decommission Plan based on its project impact, mitigating measure and abandonment plant covering the proposed area for expansion.

9. Summary of Impacts and Mitigation and Proponents Financial Commitments

Presented below is the summary of the projected impacts and proposed mitigation with its corresponding financial commitment.

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
Pre-construction and Construction				
LAND				
Removal trees during site preparation for expansion of TSF 5, Diversion Channel expansion and Borrow area preparation	Land topography	Increased soil erosivity due to direct exposure of soil to rainfall impact and alteration of topography	1. Conduct of slope stabilization measure. During stripping of the vegetation ensure that the buffer area is well benched in preparation for progressive rehabilitation. 2. After the mobilization phase, benched area will be immediately planted with grasses as pioneer species for rehabilitation to decelerate soil erosion. 3. Tree species will be planted in such a way that it will not add density to the benched area. Shrubs will be also considered to be used in rehabilitation.	Included in the Operating cost Included in the AEPEP budget
Excavation for construction of diversion channel and borrow area	Topography of the excavated area and soil erodibility	Siltation during heavy rainfall and alteration of topography	1. Use of silt fences or sediment trap and install temporary canvass to cover exposed area during heavy rains 2. Provision of temporary drainage for surface run off. Sump will be likewise installed to cater turbid surface run off and allow settling of suspended solids prior to 3. Plan earthworks activities taking into consideration the weather condition. 4. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. Water sampling for analyses of heavy metals will be in a monthly basis while analyses including organics and inorganics will conducted quarterly.	Included in the Operating cost Included in the AEPEP budget
	Soil quality	Soil contamination due to accidental spills or leaks of oil from equipment and vehicles	1. Conduct daily inspection checklist of the equipment to ensure operability of the equipment. 2. Conduct regular preventive maintenance of the equipment. 3. Generator will collect and temporarily store the waste in the designated and appropriate area before turning over to Environment Department. 4. Ensure proper segregation of hazardous waste according to its chemical properties and waste type if multiple classification of hazardous wastes are stored at a facility. 5. The Environment Department shall facilitate the disposal of wastes to an EMB recognized transporter/treat following mandatory procedure and guidelines in the transport/treatment and disposal of the Environmental Management Bureau. 6. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. Water sampling for analyses of heavy metals will be in a monthly basis while analyses including organics and inorganics will conducted quarterly.	Included in the AEPEP budget
		Soil contamination from generated solid waste of the workers	1. Generated solid waste shall be segregated at source according to its classification at the provided segregation bins. 2. Segregated solid wastes shall be collected by General Services Department and disposed at designated disposal facilities for non-biodegradable and storage facility for recyclables prior to disposal. 3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. Water sampling for analyses of heavy metals will be in a monthly basis while analyses including organics and inorganics will conducted quarterly.	Included in the AEPEP budget
Filling of earth materials for embankment raise up for TSF 5 expansion area	Topography of the original ground being backfilled	Alteration of topography	1. Conduct of slope stabilization measure. During stripping of the vegetation ensure that the buffer area is well benched in preparation for progressive rehabilitation. 2. After the mobilization phase, benched area will be immediately planted with grasses as pioneer species for rehabilitation. 3. Tree species will be planted in such a way that it will not add density to the benched area. Shrubs will be also considered to be used in rehabilitation.	Included in the Operating cost Included in the AEPEP budget

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
	Soil erodibility of the backfilled material	Soil erosion	1. Weather condition will be considered prior to conduct of filling of earth materials for the TSF 5 expansion embankment. Rainy weather will result to soil erosion and siltation to the receiving waterbody. 2. Silt fences will be installed during mobilization preparatory stage of the project. Sumps will also be installed to ensure that silted runoff will have retention time for settling of suspended solids prior to discharge into the receiving water body which is the Bayugan 3 Creek. 3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis.	Included in the operating cost and AEPEP budget
	Soil quality	Soil contamination due to accidental spills or leaks of oil from equipment and vehicles	1. Conduct daily inspection checklist of the equipment to ensure operability of the equipment. 2. Conduct regular preventive maintenance of the equipment. 3. Generator will collect and temporarily store the waste in the designated and appropriate area before turning over to Environment Department. 4. Ensure proper segregation of hazardous waste according to its chemical properties and waste type if multiple classification of hazardous wastes are stored at a facility. 5. The Environment Department shall facilitate the disposal of wastes to an EMB recognized transporter/treater following mandatory procedure and guidelines in the transport/treatment and disposal of the Environmental Management Bureau. 6. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis.	Included in the AEPEP budget
		Soil contamination from generated solid waste of the workers	1. Generated solid waste shall be segregated at source according to its classification at the provided segregation bins. 2. Segregated solid wastes shall be collected by General Services Department and dispose at designated disposal facilities for /storage facilities. 3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis.	Included in the AEPEP budget
BIODIVERSITY				
Removal trees during site preparation for expansion of TSF 5, Diversion Channel expansion and Borrow area preparation	Terrestrial Ecosystem	Loss of vegetation	1. Comply conditions stipulated on the issued Tree Cutting and Earthballing Permit 2. Plantation maintenance will be conducted in a quarterly basis. Round weeding or stripping brushing will conducted to weed out unwanted grasses that may suppress growth of the planted seedlings. Fertilizer application will be likewise conducted when necessary.	Included in the AEPEP
		Wildlife Habitat fragmentation	1. Continually conduct immediate progressive rehabilitation to open areas not affected by the progress of the expansion. 2. Use of plant species that originally thrive in the area to replicate original habitat as much as possible. 3. Plantation maintenance will be conducted in a quarterly basis. Round weeding or stripping brushing will conducted to weed out unwanted grasses that may suppress growth of the planted seedlings. Fertilizer application will be likewise conducted when necessary.	Included in the AEPEP
		Displacement of Wildlife		Included in the AEPEP
		Disturbance of wildlife from the noise generated from the equipment	1. Conduct daily inspection checklist to ensure operability of the equipment and check abnormalities of the equipment that potentially generate loud noise. 2. Continually conduct immediate progressive rehabilitation to open areas not affected by the progress of the expansion to serve vegetation as sound barriers.	Included in the AEPEP cost
	Aquatic Flora and Fauna	Silt deposition due to soil erosivity that may alter aquatic fauna habitat and alter food chain	1. Continual undertaking of progressive rehabilitation. Use grasses as pioneer species and will serve as ground cover.	Included in the AEPEP cost

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
			2. Provision of temporary drainage for surface run off. A sump is also provided to cater turbid surface run-off and allow settling of suspended solids prior to discharge to the receiving waterbody. 3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis.	
		Generated hazardous waste may contaminate water body that may alter water aquatic ecosystem	1. Generator will collect and temporarily store the waste in the designated and appropriate area before turning over to Environment Department. 2. Ensure proper segregation of hazardous waste according to its chemical properties and waste type if multiple classification of hazardous wastes are stored at a facility. 3. The Environment Department shall facilitate the disposal of wastes to an EMB recognized transporter/treater following mandatory procedure and guidelines in the transport/treatment and disposal of the Environmental Management Bureau. 4. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis.	Included in the AEPEP Cost
		Generated solid waste may produce leachate contaminate water body that may alter water aquatic ecosystem	1. Generated solid waste shall be segregated at source according to its classification at the provided segregation bins. 2. Segregated solid wastes shall be collected by General Services Department and dispose at designated disposal facilities for /storage facilities. 3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis. 4. Continual monitoring of aquatic flora and fauna through the conduct of annual aquatic ecosystem monitoring by a third-party environmental monitoring service provider.	Included in the AEPEP cost
Construction of diversion channel, filling of TSF 5 expansion area embankment, excavation at borrow area	Terrestrial Ecosystem	Loss of vegetation	1. Comply conditions stipulated on the issued Tree Cutting and Earthballing Permit 2. Earthballed seedlings shall be planted at a designated site within the tenement, 80% survival will be achieved, however, if the sampling's mortality rate is high, it shall be replaced with 1:100 seedlings ration. 3. Seedling for replacement of the trees cut will be planted at the area designated/recommended by the DENR Regional Office XIII if there will be no ample area for replanting or enhancement planting within the tenement due to the advancement of the operation. 4. The areas planted shall be monitored by PMC in coordination with the CENRO or PENRO concerned to ensure atleast 80% survival of the seedling replacement. 5. Progressive rehabilitation within the tenement shall be regularly maintained atleast quarterly. Areas planted will be stripped brushed or round weeded to ensure liberation of the planted seedlings. Fertilizer application will be also conducted as needed depending on the growth performance of the planted seedlings. 6. Mortality of the planted seedlings will be immediately replaced.	Included in the AEPEP cost
		Wildlife Habitat fragmentation	1. Continually conduct immediate progressive rehabilitation to open areas not affected by the progress of the expansion. 2. Use of plant species that originally thrive in the area to replicate original habitat as much as possible. 3. Plantation maintenance will be conducted in a quarterly basis. Round weeding or stripping brushing will conducted to weed out unwanted grasses that may suppress growth of the planted seedlings. Fertilizer application will be likewise conducted when necessary. 4. Continual monitoring of terrestrial flora and fauna through the conduct of annual Ecosystem Monitoring conducted by third party environmental service provider.	Included in the AEPEP cost
		Displacement of Wildlife		Included in the AEPEP cost

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
		Disturbance of wildlife from the noise generated from the equipment	1. Conduct daily inspection checklist to ensure operability of the equipment and check abnormalities of the equipment that potentially generate loud noise. 2. Continually conduct immediate progressive rehabilitation to open areas not affected by the progress of the expansion to serve vegetation as sound barriers. 3. Continually conduct of weekly noise level monitoring in all identified sampling stations including nearby community.	Included in the AEPEP cost
Construction of diversion channel, filling of TSF 5 expansion area embankment, excavation at borrow area	Aquatic Flora and Fauna	Silt deposition due to soil erosivity that may alter aquatic fauna habitat and food chain	1. Continual undertaking of progressive rehabilitation. Use grasses as pioneer species and will serve as ground cover. 2. Provision of temporary drainage for surface run off. A sump is also provided to cater turbid surface run-off and allow settling of suspended solids prior to discharge to the receiving waterbody. 3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis. 4. Continually monitor aquatic flora and fauna through the conduct of aquatic ecosystem monitoring by third party environmental monitoring service provider.	Included in the AEPEP cost
		Generated hazardous waste may contaminate water body that may alter water aquatic ecosystem	1. Generator will collect and temporarily store the waste in the designated and appropriate area before turning over to Environment Department. 2. Ensure proper segregation of hazardous waste according to its chemical properties and waste type if multiple classification of hazardous wastes are stored at a facility. 3. The Environment Department shall facilitate the disposal of wastes to an EMB recognized transporter/treater following mandatory procedure and guidelines in the transport/treatment and disposal of the Environmental Management Bureau. 4. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis. 5. Continually monitor aquatic flora and fauna through the conduct of aquatic ecosystem monitoring by third party environmental monitoring service provider.	Included in the AEPEP cost
		Generated solid waste may produce leachate contaminate water body that may alter water aquatic ecosystem	1. Generated solid waste shall be segregated at source according to its classification at the provided segregation bins. 2. Segregated solid wastes shall be collected by General Services Department and dispose at designated disposal facilities for /storage facilities. 3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis. 4. Continual monitoring of aquatic flora and fauna through the conduct of annual aquatic ecosystem monitoring by a third-party environmental monitoring service provider.	Included in the AEPEP cost
WATER				
Removal of Trees for preparation of TSF 5 expansion, diversion channel and borrow area	Water quality	Increase in silt deposition due to direct exposure of soil to rainfall impact during heavy rains	1. Install temporary sump to cater turbid runoff as catchment facility prior to discharge to receiving waterbody. 2. Conduct regular desilting of the installed temporary sump to ensure efficiency of sediment settlement. 3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis	Included in the AEPEP cost
Excavation for diversion channel foundation and Filling of earth	Water quality	Increase in silt deposition at the waterbody	1. Install temporary sump to cater turbid runoff as catchment facility prior to discharge to receiving waterbody. 2. Conduct regular desilting of the installed temporary sump to ensure efficiency of sediment settlement.	Included in the AEPEP Cost

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
materials for embankment raise up.			3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis.	
		Generated solid waste may produce leachate contaminate water body that may degrade water quality	1. Generated solid waste shall be segregated at source according to its classification at the provided segregation bins. 2. Segregated solid wastes shall be collected by General Services Department and dispose at designated disposal facilities for /storage facilities. 3. Water quality sampling will be conducted in the daily basis for pH and Total Suspended Solids. While water sampling for analyses of heavy metals will be in a monthly basis. 4. Continual monitoring of aquatic flora and fauna through the conduct of annual aquatic ecosystem monitoring by a third-party environmental monitoring service provider.	Included in the AEPEP Cost
		Oil and Grease contamination from equipment and vehicles used	1. Continual implementation of Hazardous Waste Management Program where all generate hazardous wastes will be collected and temporarily stored in hazardous waste bins. Collected hazardous wastes shall be segregated according to its classification. 2. Temporary storage shall be operated will emergency spill kit in case of accidental spill of the contained hazardous wastes. 3. Temporarily stored hazardous wastes will be turned over to Environment Department for storage transport and disposal to DENR – EMB recognized transporter/treater of hazardous wastes. 4. Continual water quality sampling will be conducted monthly for analysis of Oil and Grease. Heavy metals, inorganics and organics will be also analyzed in a quarterly basis.	Included in the AEPEP Cost
		Generated other hazardous waste may contaminate water body	1. Continual implementation of Hazardous Waste Management Program where all generate hazardous wastes will be collected and temporarily stored in hazardous waste bins. Collected hazardous wastes shall be segregated according to its classification. 2. Temporary storage shall be operated will emergency spill kit in case of accidental spill of the contained hazardous wastes. 3. Temporarily stored hazardous wastes will be turned over to Environment Department for storage transport and disposal to DENR – EMB recognized transporter/treater of hazardous wastes. 4. Water quality sampling is conducted on a monthly for analysis of heavy metals, inorganics and organics is analyzed in a quarterly basis.	Included in the AEPEP Cost
AIR AND NOISE				
Removal of Trees during preparation for TSF 5 expansion, diversion channel construction and borrow area	Air quality	Removal of natural sound barrier and carbon sink	1. Comply conditions stipulated on the issued Tree Cutting and Earthballing Permit 2. Earthballed seedlings shall be planted at a designated site within the tenement, 80% survival will be achieved, however, if the sampling's mortality rate is high, it shall be replaced with 1:100 seedlings ratio. 3. Areas planted will be stripped brushed or round weeded to ensure liberation of the planted seedlings. Fertilizer application will be also conducted as needed depending on the growth performance of the planted seedlings. 4. Mortality of the planted seedlings will be immediately replaced. 5. Continually conduct ambient air quality monitoring within the project site and its adjacent community.	Included in the AEPEP Cost
Construction of diversion channel	Air Quality	Air quality degradation from generated dust	1. Conduct of water spraying at the access roads and working area when possible. 2. Continually conduct progressive rehabilitation and enhancement area at buffer zones that will serve as natural filters for dust emission.	Included in the EPEP and SHP cost. Preventive maintenance cost of the equipment is

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
			3. Planted vegetation will be regularly monitored and maintained through conduct of strip brushing, round weeding, and fertilizer application. 4. Seedling mortality will be immediately replaced. 5. Conduct of quarterly ambient air quality monitoring in all established sampling stations in the mill site and nearest impact community.	included in the operating cost.
	Air Quality	Air quality degradation from greenhouse gas emission	1. Conduct of regular preventive maintenance of the equipment and vehicles used. 2. Conduct of quarterly ambient air quality monitoring in all established sampling stations in the mill site and nearest impact community.	Maintenance is included in the operating cost while the ambient air quality monitoring is charged to AEPEP cost.
	Noise level	Increase of noise level from working equipment during construction	1. Regulate working hours of noise producing heavy equipment. 2. Conduct regular preventive maintenance servicing to all noise generating equipment. 3. Conduct noise level monitoring within the mill premise and its adjacent communities	Included in the EPEP and SHP cost. Preventive maintenance cost of the equipment is included in the operating cost.
Excavation at borrow area and hauling of barrow material	Air Quality	Air quality degradation from dust emission during hauling and unloading or earth material	1. Conduct of water spraying at the access roads and working area when possible. 2. Conduct of quarterly ambient air quality monitoring in all established sampling stations in the mill site and nearest impact community.	Included in the EPEP and SHP cost. Preventive maintenance cost of the equipment is included in the operating cost.
		Air quality degradation from greenhouse gas emission	1. Conduct of regular preventive maintenance of the equipment and vehicles used. 2. Conduct of quarterly ambient air quality monitoring in all established sampling stations in the mill site and nearest impact community.	
	Noise Level	Increase of noise level from working equipment during construction	1. Regulate working hours of noise producing heavy equipment. 2. Conduct regular preventive maintenance servicing to all noise generating equipment. 3. Conduct noise level monitoring within the mill premise and its adjacent communities	
		Increase of noise level	4. Regulate working hours of noise producing heavy equipment. 5. Conduct regular preventive maintenance servicing to all noise generating equipment. 6. Conduct noise level monitoring within the mill premise and its adjacent communities	
	Traffic	Increase in traffic	1. Utilization of company – maintained access and haul roads. 2. Installation of traffic signs.	Included in the Annual Safety and Health Program and AEPEP budget.
	Employment	Increased in local employment	Implementation of local's first hiring policy.	-
	Local Economy	Influx of migrants		-
	Waste Management	Generation of solid wastes from employees residing outside company premise	1. Provision of temporary accommodation for contract-based workers. 2. Implementation of solid waste management program	Included in the operating cost and AEPEP.
	Safety and Health	Possible health issues concern from migrants such as spread of contagious disease	1. Ensure all workers for the project will be subjected to thorough medical examination. 2. Implementation of Management of Infectious Waste in the Workplace COVID 19.	Included in the Annual Safety and Health Program
Milling Operation – Stockpiling of Ore	Land Resource	Possible percolation of acidic run off from the ore	1. Installation and maintenance of drainage system. 2. Monitoring and Evaluation. In-house Water Sampling.	Included in AEPEP

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
Milling operation – Crushing and Grinding of ore		1. Possible contamination of acidic ore to ground when there are drippings. 2. Possible chemical contamination of soil from generated contaminated trash such as woodchips and sack strips at Leach and CIL areas	1. Dosing mixing of lime during feeding of ore to the crusher. 2. Regular undertaking of scheduled maintenance of the installed trash screen. Trash collected are harvested and contained in chamber with impermeable flooring provided with bund walls. 3. Trash contained in the area are hauled to TSF 2 and backfilled to beach along the embankment. 4. Surface water/run off from TSF 2 is treated with chlorine prior to discharge to the coffer dam to ensure water quality of the effluent.	Included in AEPEP
Milling operation – Refinery	Land Resource	Mill tails from possible tank leakage may contaminate the ground.	1. Regular plant maintenance shutdown to ensure efficiency and operability of the mill equipment 2. Conduct mill tails treatment prior to discharge to TSF.	Included in the AEPEP and operating cost
Tailing Storage Facility Operation	Land Resource	Possible cyanide contamination on the soil	1. Continual operation of Detoxification Facility at the mill site to ensure treatment of mill tails.	Included in the AEPEP and operating cost
		Possible overtopping of tails may contaminate the ground.	1. Continual conduct of TSF monitoring and maintain 1-meter free board.	
		Possible ground deformation due to embankment load	1. Conduct checking of embankment crest, walls, bench and spill way conditions. 2. TSF personnel conducts regular monitoring of phreatic surface within embankment especially dam movement. Immediately report to TSF Supervisor for possible slumping/collapse of the embankment.	
TSF Operation – Wastewater Management	Land Resource	1. Possible percolation of cyanide contaminated wastewater.	1. Continual operation of Detoxification Facility to ensure treatment of mill tails. 2. Continual dosing of chlorine to neutralize cyanide in the wastewater.	Included in the AEPEP and operating cost
		2. Possible overtopping of wastewater at the Coffer Dam	1. Continual monitoring of water level in the coffer dam using installed meter stick. 2. Continual monitoring of pontoon pumps that redistribute the wastewater to the mill operation as process water. 3. When the water reaches to threshold level, stopper board installed in the coffer dam spillway will be opened to release more water into the marsh area. 4. Continual operation of Detoxification Facility and dosing of Chlorine to ensure compliant effluent when released to receiving waterbody.	
		Loss of Soil strength, settlement, damage to overlying structure in case of earthquake	1. Conduct regular site inspection at the facility and its nearby structure. 2. Install appropriate instrument to determine possible ground movement in case of earthquakes	
		Ground rupture in case of earthquake	1. Conduct regular site inspection at the facility and its nearby structure. 2. Install appropriate instrument to determine possible ground movement in case of earthquakes	
Diversion Channel	Land resource	Possible scouring of riverbank	1. Conduct immediate planting of appropriate grass species along the slopes to prevent soil erosion and eventually scour the riverbank. 2. Install revetment of the dike to secure the riverbank.	Included in the AEPEP
BIODIVERSITY				
Milling operation – Grinding and crushing operation	Terrestrial fauna	Disturbance of wildlife due to generated noise from the equipment	1. Continual undertaking of regular plant maintenance shutdown activities to eliminate noise generated due to wear and tear of the equipment. 2. Continual undertaking or progressive rehabilitation along the buffer areas to establish noise barrier through planting of trees.	Included in the AEPEP
	Aquatic ecosystem	Possible release of hazardous waste to the receiving water bodies from the wastes generated in the grinding and crushing processes such as lime, caustic, SMBS and other	1. Ensure proper segregation of hazardous waste according to its chemical properties and waste type if multiple classification of hazardous wastes are stored at a facility. 2. Generated hazardous wastes shall be turned over to Hazardous Waste Storage Facility managed by Environment Department.	Included in the AEPEP

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
		chemical packaging used in the operation.	3. The Environment Department shall facilitate the disposal of wastes to an EMB recognized transporter/treat following mandatory procedure and guidelines in the transport/treatment and disposal of the Environmental Management Bureau. 4. Conduct of Aquatic Ecosystem Monitoring	
TSF Operation	Aquatic ecosystem	Possible release of cyanide contaminated wastewater to Bayugan 3 Creek that may affect aquatic ecosystem	1. Continual operation and ensure efficiency of the Detoxification Facility. 2. Continual dosing of Chlorine at spillway of TSFs to neutralize treated wastewater. 3. Water quality sampling is conducted on a monthly for analysis of heavy metals, inorganics and organics is analyzed in a quarterly basis. 4. Conduct of Aquatic Ecosystem Monitoring	Included in the AEPEP and operating cost
Mill Operation – Smelting	Terrestrial Ecosystem	1. Possible release of GHG to the air that may be detrimental to nearby wildlife	1. Continual operation and ensure efficiency of the installed NOx Scrubber. 2. Continual undertaking of Stack emission sampling in all APSI and APCI in the smelting process. 3. Continual undertaking of Ambient Air Quality sampling at mill site. 4. Identify additional ambient air sampling station to cater areas within the TSFs. 5. Conduct of Terrestrial Ecosystem Monitoring	Included in the AEPEP
WATER				
Milling Operation – Stockpiling of Ore	Water Quality	Possible acidic run off	1. Installation of sump and conduct regular desilting of the same. 2. Conduct Water Quality Sampling.	Included in AEPEP
Milling operation – Crushing and Grinding of ore		Possible residue dripping	1. Continual operation of the installed sump to cater wash water from the refinery. 2. Continually conduct pH monitoring of the contained wash water prior to discharge to the drainage outside the refinery.	Included in AEPEP
Milling operation – Refinery		Water contamination from chemicals used in the refinery and increase in pH level due to usage of HCl	1. Continual operation and enhancement of Detoxification facility and wastewater treatment at identified stations at the Tailing Storage facility. 2. Conduct of regular water quality sampling	Included in AEPEP
Tailing Storage Facility Operation		Cyanide contamination to immediate waterbody	1. Continual operation and enhancement of Detoxification facility and wastewater treatment at identified stations at the Tailing Storage facility. 2. Continually conduct daily water quality sampling and analysis for cyanide.	Included in the operating cost and AEPEP
TSF Operation – Wastewater Management		1. Overtopping of wastewater from the cofferdam	1. Continual reuse of supernatant water as process water. 2. Continual monitoring of water level. 3. Identify other usage of the supernatant water to reduced impounded volume	Included in operating cost
		2. Cyanide contamination to immediate waterbody	1. Continual operation and enhancement of Detoxification facility and wastewater treatment at identified stations at the Tailing Storage facility. 2. Continually conduct per shift water sampling and in situ cyanide analysis.	Included in the operating cost and AEPEP
Milling operation (Support Services – Office Works)	Water resources	Water pollution from leachate of the generated solid wastes	1. Implementation of programs for reduction of solid waste disposal such as reusing and upcycling. 2. Installation of filter cloth or appropriate filter material to the discharge point of the leachate. 3. Identify leachate treatment methods	Included in the AEPEP
	Water resources	Water pollution from the generated domestic wastewater	1. Installation and maintenance of Sewage Treatment Facility. 2. Monitoring and Evaluation. In-house Water Sampling. 6.3 Monitoring and Evaluation. In-house Water Sampling.	Included in the AEPEP
		Water pollution from the generated hazardous wastes in all processes and operation	1. Maintenance of existing pollution control facilities such as sump and Oil and Water Separator. 2. Implementation of Hazardous Waste Management Program	Included in the AEPEP

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
AIR and NOISE				
Ore Hauling	Air Quality	Dust emission from the hauling trucks along the haulage/access road.	1. Strict implementation by Safety Department in setting up of canvass to cover the ore while transporting from mine to mill sites. 2. Driver's awareness on the effect of vehicular speed on dust generation will be instigated. 3. Conduct of road maintenance such as grading, compaction, and reshaping. 4. Continually conduct road water spraying. 5. Continual establishment of additional buffer zones planted with trees to reduce windblown losses of dust	Included in the AEPEP
	Air Quality	Emission of greenhouse gases (GHG) such CO, Sox, NOx from the hauling trucks.	1. Continual implementation of the scheduled Preventive Maintenance Service of the hauling truck to prevent heavy GHG emission caused by poor maintenance of the vehicle. 2. Continual implementation in the conduct of emission test required by Land Transportation Office	Included in the AEPEP
Milling Operation – Stockpiling of Ore	Air Quality	Possible emission of dust from lime at the stockyard and dust during unloading of ore during dry season.	1. Conduct water spraying of ore prior to dumping when necessary. 2. Continually plant trees along the buffer zones as natural dust filters. 3. Continually conduct ambient air quality monitoring.	Included in the AEPEP
Milling operation – Crushing and grinding of ore	Air Quality	Possible emission of lime particulates.	1. Haul lime from storage area and directly feed to ROM bin. Ensure that lime is mixed with ore and bin is not empty before charging to avoid spread of dust. 2. Conduct of ambient air quality monitoring.	Included in the AEPEP
	Noise Level	Occurrence of higher noise level from SAG Mill	1. Heavy equipment will be appropriately muffled. 2. Conduct regular preventive maintenance to all mobile and stationary noise generating equipment based on its manufacturer's manual. 3. Establishment of sound barriers such as tree plantation. 4. Conduct regular ambient noise level monitoring	Included in the AEPEP
Milling operation – Smelting	Air Quality	Possible emission of toxic fumes and smoke from operation of fire steam Boiler, Thermal heater, Acid reactor, smelting furnaces and carbon regen kiln Air pollutant emission from NOx Scrubbers at the refinery Air pollutant emission from Lead and Acid Scrubbers at QA/QC Laboratory.	1. Continually conduct regular preventive maintenance services to all pollution sources in the mill process. 2. Continually conduct pre – startup inspection checklist. 3. Continually conduct semi - annual stack emission sampling conducted by DENR – EMB recognized environmental monitoring service provider. 4. Continually conduct quarterly ambient air quality monitoring in the mill site identified sampling station. The ambient air quality monitoring is conducted by DENR-EMB recognized environmental monitoring service provider. 5. Establishment of additional carbon sink through revegetation and reforestation	Included in the AEPEP
	Noise Level	Occurrence of higher noise level from pumps, compressors, and furnaces.	1. Heavy equipment will be appropriately muffled. 2. Conduct regular preventive maintenance to all mobile and stationary noise generating equipment based on its manufacturer's manual. 3. Establishment of sound barriers. 4. Conduct regular ambient noise level monitoring	Included in the AEPEP and operating cost
Tailing Storage Facility Operation	Noise Level	Increase in noise level from pumps used in tails distribution	1. Conduct regular preventive maintenance to all noise generating equipment based on its manufacturer's manual.	Operating cost
TSF Operation – Wastewater Management	Air quality	Possible chlorine fumes emission from chlorine dosing facility	1. Maintenance of dosing port to prevent chlorine fumes from emitting into the ambient air.	Operating cost
	Noise level	Possible generation of noise from pumps in the Wastewater Chlorine Dosing Facility	1. Conduct regular preventive maintenance service to all pumps and equipment. 2. Continual establishment of natural sound barriers	Included in the AEPEP and operating cost

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
			3. Continually conduct ambient noise level monitoring	
Borrow Area	Air quality	Emission of dust from hauling and unloading of earth material	1. Conduct water spraying at the access roads and working areas when necessary.	Included in the AEPEP
		Emission of GHG from vehicles used during loading and unloading	1. Conduct daily inspection for hauling trucks 2. Conduct of ambient air quality monitoring 3. Subject all vehicles to emission test	Included in the AEPEP and operating cost
Milling operation (Support Services – Office Works)	Air quality	Emission of GHG from vehicles and Generators	1. Continual implementation of preventive maintenance servicing to vehicles. 2. Continual undertaking in the conduct of emission testing of vehicle by LTO 3. For generator sets, continually conduct preventive maintenance servicing 4. Continually conduct semi – annual stack emission testing by 3rd Party environmental monitoring service provider. 5. Continually conduct ambient air quality monitoring in the mill and its nearest impact community.	Included in the AEPEP and operating cost
PEOPLE				
Milling operation	Employment	Increased in local employment	Locals will be prioritized during hiring of employees for the project	No cost will be incurred for hiring activities
	Local Economy	Influx of migrants	Continual implementation of SDMP's livelihood programs suitable for community's need	No cost will be incurred for hiring activities
		Boost in local economy due to increase of consumer of basic needs		Included in the SDMP
	Waste Management	Generation of solid wastes from employees residing outside company premise	1. Provision of temporary accommodation for contract-based workers. 2. Implementation of solid waste management program	Included in AEPEP
	Safety and Health	Possible health issues concern from migrants such as spread of contagious disease	1. Ensure all workers for the project will be subjected to thorough medical examination. 2. Strict implementation of COIVD – 19 health protocol.	Included in the ASHP
		Possible increase in number of respiratory related illness due to dust emission	1. Conduct of regular dust suppression activities. 2. Provision of Personal Protective Equipment	Included in the AEPEP and ASHP.
LAND				
Demolition of Mill Facilities such as Tanks, SAG Mill and other structures	Land Resource	Change in topography during demobilization	Conduct phase by phase demolition	Included in FMRDF
		Possible generation of solid wastes such debris from demolition	Continuous implementation of Solid Waste Management	Included in FMRDF
		Possible soil contamination of oil from demolition equipment	Regular checking of equipment to prevent leaking of oil direct to the ground	Included in FMRDF
		Possible increase in vegetation density due to absence of development works	Continual maintenance of the established rehab and reforestation sites within the tenement	Included in FMRDF
		Increase in vegetation density and diversity due to absence of development works		Included in FMRDF
Final Mine Rehabilitation	Land Use	Increased in carbon sink	1. Continual monitoring of rehabilitation areas until relinquishment. 2. Conduct Landscape Management Assessment	Included in FMRDF
BIODIVERSITY				
Decommissioning/removal of structure	Flora and fauna	Reintroduction of wildlife	1. Continual monitoring of rehabilitation areas.	Included in FMRDF

Project Phase / Environmental Aspect	Environmental Component Likely to be Affected	Potential Direct Impact	Options for Prevention or Mitigation* or Enhancement	Guarantee / Financial Arrangements
Final Mine Rehabilitation		Increase in species density and reintroduction of wildlife	2. Conduct of Biodiversity Assessment	
Decommissioning (removal of structures)	Water resources	Water pollution from demolition works (solid and hazardous wastes leachates)	1. Continually conduct maintenance of drainage system. 2. Continuous implementation of solid and hazardous waste management	Included in FMRDF
		Water pollution from continuous run-off from tailings storage facility and mill materials	1. Continual operation of the neutralization/chlorine treatment. 2. Conduct regular water quality sampling	Included in FMRDF
Final Mine Rehabilitation	Water resources	Improvement of Water quality due to minimal operational works	1. Continuous monitoring of water quality until relinquishment	Included in FMRDF
Decommissioning (removal of structures)	Air quality	Generation of dust and greenhouse gases from demolition works	1. Conduct water spraying along access roads to minimize dust emission during equipment mobilization. 2. Conduct of Ambient Air Quality monitoring	Included in FMRDF
	Noise level	Generation of noise from equipment used during demolition	1. Conduct regular preventive maintenance servicing to all noise generating equipment. 2. Regulate working hours. 3. Conduct of noise level monitoring	Included in FMRDF
Final Mine Rehabilitation	Air Quality	Reduced dust and greenhouse gas emission due to minimal mobilization activities	1. Conduct water spraying along necessary areas 2. Conduct of preventive maintenance to all mobile and stationary pollution sources.	Included in FMRDF
PEOPLE				
Decommissioning	Employment	Loss of employment	Monitoring of livelihood established by SDMP for possible transfer of employment for the locals.	Included in FMRDF
	Local economy	Decline in economic activity	Monitoring of sustainability of established livelihood program of SDMP to keep up economic loss	Included in FMRDF

10. Information for EPRMP Copy

Copy of this document is accessible in hard copies at the Municipal Information Office and Barangay Hall of Barangay Bayugan 3, Rosario, Agusan del Sur. While the electronic copy is accessible at DENR – EMB website at emb.gov.ph.

SWORN STATEMENT OF ACCOUNTABILITY OF THE PROPONENT

This is to certify that all the information and commitments in this **ENVIRONMENTAL PERFORMANCE REPORT AND MANAGEMENT PLAN** for the ***CO-O GOLD* PROJECT** are accurate and complete to the best of our knowledge, and that an objective and thorough assessment of the Project was undertaken in accordance with the dictates of professional and reasonable judgment. Should I/we learn of any information which would make this **ENVIRONMENTAL PERFORMANCE REPORT AND MANAGEMENT PLAN** inaccurate, I shall immediately bring the said information to the attention of DENR-EMB.

I hereby certify that no DENR-EMB personnel was directly involved in the preparation of this **ENVIRONMENTAL PERFORMANCE REPORT AND MANAGEMENT PLAN** other than to provide procedural and technical advice consistent with the guidelines in the DAO 03-30 Revised Procedural Manual.

I hereby bind myself to answer any penalty that may be imposed arising from any misrepresentation or failure to state material information in this **ENVIRONMENTAL PERFORMANCE REPORT AND MANAGEMENT PLAN.**

In witness whereof, I hereby set my hand this JUL 14 2021 day of _____ at SAN FRANCISCO, ADS.

ATTY. RAUL C. VILLANUEVA
President
Philsaga Mining Corporation

SUBSCRIBED AND SWORN TO before me this JUL 14 2021 day of _____ 2021, affiant exhibiting his/her Community Tax Certificate No. _____ issued at _____ on _____.

ATTY. LYNDON J. ROMERO
NOTARY PUBLIC
UNTIL DECEMBER 31, 2022
PTR NO. 9177091/01-05-2021/PADS
IBP NO.1068285 / 01-04-2021/PADS
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