

I. ENVIRONMENTAL IMPACT MANAGEMENT AND MONITORING PLAN

Possible Environmental/ Social Impacts	Baseline Environment	Preventive/ Mitigating Measures	Monitoring Parameters/ Implementation	Remarks
		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
LAND				
<input checked="" type="checkbox"/> Consistency with land use	<p>Current land use w/in 1km radius (as per zoning ordinance):</p> <p><input type="checkbox"/> Residential</p> <p><input type="checkbox"/> Commercial/ Institutional</p> <p><input type="checkbox"/> Industrial</p> <p><input type="checkbox"/> Agricultural/ Recreational</p> <p><input type="checkbox"/> Protected Areas</p> <p><input type="checkbox"/> Others, specify</p> <p>Actual land uses w/in 1km radius:</p> <p><input type="checkbox"/> Residential</p> <p><input type="checkbox"/> Commercial/ Institutional</p> <p><input type="checkbox"/> Industrial</p> <p><input type="checkbox"/> Agricultural/ Recreational</p> <p><input type="checkbox"/> Protected Areas</p> <p><input type="checkbox"/> Others, specify</p>	<p>See attached proof of compatibility with land use</p> <p><input checked="" type="checkbox"/> with Coal Operating Contract (COC) or its equivalent</p> <p><input checked="" type="checkbox"/> Limit project activities to what is compatible to the land use</p> <p><input type="checkbox"/> Others, specify</p>		

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		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
<input type="checkbox"/> Land tenure / compatibility issue	Land tenure / compatibility issues: <input type="checkbox"/> CARP <input type="checkbox"/> CADC/ CADT/ CALC/ CALT <input type="checkbox"/> ROW <input type="checkbox"/> Informal settlers <input type="checkbox"/> Ecologically sensitive or protected area <input type="checkbox"/> Others, specify	<input type="checkbox"/> Obtain appropriate clearances/ permits from concerned agencies <input type="checkbox"/> Resettlement Plan prepared <input type="checkbox"/> Provide relocation/disturbance compensation packages <input type="checkbox"/> Ensure participation of IPs in consultations and dialogues <input type="checkbox"/> MOA prepared/signed <input type="checkbox"/> Provide adequate buffer <input type="checkbox"/> Others, specify	<input checked="" type="checkbox"/> Regularly monitor presence/absence of complaints <input checked="" type="checkbox"/> Regular coordination with LGU or appropriate agencies <input type="checkbox"/> Others, specify	
<input type="checkbox"/> Disturbance to wildlife due to vegetation clearing	Existing vegetation in the area: <input type="checkbox"/> Forestland <input type="checkbox"/> Marshland <input type="checkbox"/> Grassland <input type="checkbox"/> Mangrove <input type="checkbox"/> Wetland <input type="checkbox"/> Others, specify	<input checked="" type="checkbox"/> Comply with conditions of DENR/LGU SLUP, Tree Cutting Permit, ROW, PCA Permit <input checked="" type="checkbox"/> Limit land clearing as much as possible <input checked="" type="checkbox"/> Provide temporary fencing for vegetation that will be retained <input checked="" type="checkbox"/> Promote restoration of damaged or destroyed vegetation where possible (e.g., tree planting); <input type="checkbox"/> Others, specify	<input checked="" type="checkbox"/> Annual inspection of area replanted/ re-vegetated <input type="checkbox"/> Others, specify	

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		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
<div><input type="checkbox"/> Change in surface landform/ topography/ terrain/slope</div> <div><input type="checkbox"/> Soil Erosion</div>	<div>Slope:<div><input type="checkbox"/> flat (0-3%)</div><div><input type="checkbox"/> gently sloping to rolling (3-18%)</div><div><input type="checkbox"/> steep (>18%)</div></div> <div>Is the project site located in an area identified by MGB/ PAG-ASA/ PHIVOLCS as hazard prone?</div> <div><div><input type="checkbox"/> Yes</div><div><input type="checkbox"/> No</div></div>	<div>Considering the natural hazards and climate projections in the area:</div> <div><input type="checkbox"/> Provide erosion control and slope protection measures</div> <div><input type="checkbox"/> Designate a Spoils Storage Area, with topsoil set aside for later use and allow maximum re-use of spoils</div> <div><input type="checkbox"/> Stabilize embankment with grasses or other soil cover</div> <div><input type="checkbox"/> Conduct Engineering Geological and Geo-hazard Assessment (EGGA) and implement corresponding recommendation</div> <div><input type="checkbox"/> Others, specify</div>	<div><input type="checkbox"/> Regular inspection of slope protection measures in erosion-prone areas</div> <div><input type="checkbox"/> Regular inspection for new eroded areas near the site</div> <div><input type="checkbox"/> Others, specify</div>	
<div><input type="checkbox"/> Soil/Land contamination due to materials leakage</div> <div><input checked="" type="checkbox"/> Depletion of soil nutrient content/soil</div>	<div>Existing soil/land type in the expansion area:</div> <div><div><input type="checkbox"/> sandy</div><div><input type="checkbox"/> clay</div></div>	<div><input type="checkbox"/> Secondary containment (pls specify :</div>	<div><input type="checkbox"/> Regular inspection for leakage of materials that can cause land/soil contamination.</div>	

Possible Environmental/ Social Impacts	Baseline Environment	Preventive/ Mitigating Measures	Monitoring Parameters/ Implementation	Remarks
		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
productivity/Change in acidity/alkalinity of soil	<div><input type="checkbox"/> sandy-loam</div> <div><input type="checkbox"/> concrete/cement</div> <div><input type="checkbox"/> Others, specify</div> <div>Soil acidity/alkalinity</div> <div><input type="checkbox"/> acidic</div> <div><input type="checkbox"/> basic</div> <div>Conduct of soil test/analysis for the following parameters relevant to the potential source of contamination:</div>	<div><input type="checkbox"/> Engage third party company for waste collection</div> <div><input type="checkbox"/> Others, specify</div>	<div><input type="checkbox"/> Monitoring of soil physical and chemical properties</div>	

Possible Environmental/ Social Impacts	Baseline Environment	Preventive/ Mitigating Measures	Monitoring Parameters/ Implementation	Remarks
Building of Structure and Improper solid waste disposal leading to : <input type="checkbox"/> Impairment of visual aesthetics <input type="checkbox"/> Devaluation of land values	Solid Waste Management Scheme in the area: <input type="checkbox"/> SLF <input type="checkbox"/> MRF <input type="checkbox"/> Composting <input type="checkbox"/> Regular Collection of Solid Wastes Presence of visually significant landforms/landscape/structures? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost <input checked="" type="checkbox"/> Implement recovery re-use and recycling of waste materials <input checked="" type="checkbox"/> Provide receptacles / bins for solid wastes <input type="checkbox"/> Composting of Organic Wastes <input type="checkbox"/> Coordinate with the municipal / city waste collectors <input type="checkbox"/> Implement landscaping and other beautification measures <input type="checkbox"/> Provide adequate buffer <input type="checkbox"/> Compensate adjacent property owners <input type="checkbox"/> Others, please specify	<input checked="" type="checkbox"/> Daily inspection of waste handling including segregation in waste/recycling bins <input checked="" type="checkbox"/> Weekly inspection of waste accumulation and disposal <input type="checkbox"/> Regular inspection of landscaping and other beautification activities <input type="checkbox"/> Regular monitoring of buffer zones <input checked="" type="checkbox"/> Regular monitoring of presence/absence of complaints from adjacent property owners <input type="checkbox"/> Others, specify	
WATER				
<input type="checkbox"/> Increased siltation due to project activities	Specify nearest water body:	<input checked="" type="checkbox"/> Set up proper and adequate sanitary facilities <input checked="" type="checkbox"/> Ensure strict observance of proper waste handling and disposal and proper	<input type="checkbox"/> Regular (ocular) inspection of:	

Possible Environmental/ Social Impacts	Baseline Environment	Preventive/ Mitigating Measures	Monitoring Parameters/ Implementation	Remarks																						
<input type="checkbox"/> Water quality degradation <input type="checkbox"/> Others, specify	Distance to nearest water body: <input type="checkbox"/> 0 to less than 0.5 km <input type="checkbox"/> 0.5 to 1 km <input type="checkbox"/> More than 1 km Classification of nearest water body: <table border="1" data-bbox="439 758 745 1109"> <tr> <td><input type="checkbox"/> Freshwater</td> <td><input type="checkbox"/> Marine/ coastal water</td> </tr> <tr> <td><input type="checkbox"/> AA</td> <td><input type="checkbox"/> SA</td> </tr> <tr> <td><input type="checkbox"/> A</td> <td><input type="checkbox"/> SB</td> </tr> <tr> <td><input type="checkbox"/> B</td> <td><input type="checkbox"/> SC</td> </tr> <tr> <td><input type="checkbox"/> C</td> <td><input type="checkbox"/> SD</td> </tr> <tr> <td><input type="checkbox"/> D</td> <td></td> </tr> </table> Current Water Use: <input type="checkbox"/> Fishery <input type="checkbox"/> Tourist Zone / Park <input type="checkbox"/> Recreational <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural	<input type="checkbox"/> Freshwater	<input type="checkbox"/> Marine/ coastal water	<input type="checkbox"/> AA	<input type="checkbox"/> SA	<input type="checkbox"/> A	<input type="checkbox"/> SB	<input type="checkbox"/> B	<input type="checkbox"/> SC	<input type="checkbox"/> C	<input type="checkbox"/> SD	<input type="checkbox"/> D		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost sanitation including by the contractors and its workers (if any) <input checked="" type="checkbox"/> Provide wastewater treatment facility (e.g., septic tank, oil and water separator, etc.) <input type="checkbox"/> Set up silt trap/settling ponds to minimize downstream siltation <input type="checkbox"/> Provide ring canals around fuelling tanks/ motor pool/ maintenance areas <input type="checkbox"/> Others, specify	<input type="checkbox"/> Drainage/canal systems <input type="checkbox"/> Water treatment facility (i.e., mine tailings facility, grease trap, septic tank, etc.) <input type="checkbox"/> Regular (ocular) inspection of water body for: <input type="checkbox"/> Turbidity and/or silted condition <input type="checkbox"/> Floating wastes or debris <input type="checkbox"/> Regular monitoring of surface/ groundwater for the following: <table border="1" data-bbox="1391 681 1709 1236"> <thead> <tr> <th>Parameter</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> pH</td> <td> <input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly </td> </tr> <tr> <td><input type="checkbox"/> TSS</td> <td> <input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly </td> </tr> <tr> <td><input type="checkbox"/> Oil & Grease</td> <td> <input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly </td> </tr> <tr> <td><input type="checkbox"/> Hg</td> <td> <input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly </td> </tr> </tbody> </table>	Parameter	Frequency	<input type="checkbox"/> pH	<input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly	<input type="checkbox"/> TSS	<input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly	<input type="checkbox"/> Oil & Grease	<input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly	<input type="checkbox"/> Hg	<input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly	
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		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
	<input type="checkbox"/> Others, specify: Distance of project area to the nearest well used: <input type="checkbox"/> 0 to less than 0.5 km <input type="checkbox"/> 0.5 to 1 km <input type="checkbox"/> More than 1 km Use of nearest well: <input type="checkbox"/> Drinking/Domestic <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Others, specify			
<input type="checkbox"/> Competition in water use <input type="checkbox"/> Depletion of water resources	Size of population using proposed water source/s: <input type="checkbox"/> ≤ 1,000 persons <input type="checkbox"/> >1,000 and ≤ 5,000 persons <input type="checkbox"/> >5,000 persons	<input type="checkbox"/> Implement rainwater harvesting, community ponds and/OR similar measures as an alternative source of water <input type="checkbox"/> Observe water conservation measures <input type="checkbox"/> Carefully select project site to avoid disruption of traditional water uses <input type="checkbox"/> Obtain Water Permit from NWRB <input type="checkbox"/> Improve efficiency of water supply and distribution system	<input checked="" type="checkbox"/> Regular monitoring for presence/absence of complaints <input checked="" type="checkbox"/> Regular coordination with concerned agencies <input checked="" type="checkbox"/> Regular monitoring for occurrences of water shortages <input type="checkbox"/> Others, specify	

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		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
	Available/nearest water source. <input type="checkbox"/> Deepwell <input type="checkbox"/> Water district/LGU <input type="checkbox"/> Surface water <input type="checkbox"/> Others, specify	<input type="checkbox"/> Increase, when practical, storage capacities of water supply structures for resilience to greater climate variations and extremes <input type="checkbox"/> Others, specify		
<input type="checkbox"/> Increased occurrence of flooding	Is the project site located in an area identified by MGB/ PAG-ASA as flood prone? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Use appropriate design for project facilities <input type="checkbox"/> Implement appropriate drainage system <input type="checkbox"/> Regularly remove debris and other materials that may obstruct water flow <input type="checkbox"/> Use appropriate technology (e.g., raised hand-pumps) to protect drinking water from flood contamination <input type="checkbox"/> Others, specify	<input checked="" type="checkbox"/> Regular monitoring for presence/absence of complaints <input checked="" type="checkbox"/> Regular coordination with concerned agencies <input checked="" type="checkbox"/> Regular monitor of increased frequency of flooding <input type="checkbox"/> Others, specify	

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		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost										
AIR / NOISE												
Air quality degradation	Distance to nearest community: <input type="checkbox"/> 0 to less than 0.5 km <input type="checkbox"/> 0.5 to 1 km <input type="checkbox"/> More than 1 km Is the wind direction blowing towards the nearest community most of the year? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Properly operate and maintain all emission sources (e.g. vehicles, power generator, etc.) <input type="checkbox"/> Install, when applicable, the appropriate air pollution control device/s <input type="checkbox"/> Strictly enforce good housekeeping practices <input type="checkbox"/> Control vehicle speed to lessen suspension of road dust <input type="checkbox"/> Conduct water spraying to suppress dust sources and minimize discomfort to nearby residents <input type="checkbox"/> Use covered delivery vehicles/ covered coal yard that may generate dust <input type="checkbox"/> Others, specify	<input checked="" type="checkbox"/> Regular monitoring for presence/absence of complaints Regular (ocular) inspection of: <input checked="" type="checkbox"/> Absence of white or black smoke from vehicles, heavy equipment and generator <input checked="" type="checkbox"/> Presence of truck cover during deliveries <input checked="" type="checkbox"/> Presence of coal yard cover Monitoring of ambient air for the following: <table border="1" data-bbox="1391 775 1695 1281"> <thead> <tr> <th>Parameter</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> PM10</td> <td> <input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly </td> </tr> <tr> <td><input type="checkbox"/> TSP</td> <td> <input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly </td> </tr> <tr> <td><input type="checkbox"/> Hg</td> <td> <input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly </td> </tr> </tbody> </table>	Parameter	Frequency	<input type="checkbox"/> PM10	<input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly	<input type="checkbox"/> TSP	<input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly	<input type="checkbox"/> Hg	<input type="checkbox"/> Annual <input type="checkbox"/> Semi-annual <input type="checkbox"/> Quarterly	
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		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
<input type="checkbox"/> Nuisance due to noise generation	Distance to nearest community: <input type="checkbox"/> 0 to less than 0.5 km <input type="checkbox"/> 0.5 to 1 km <input type="checkbox"/> More than 1 km	<input type="checkbox"/> Properly operate and maintain all noise sources (e.g., vehicles, pumps, generator, etc.) <input type="checkbox"/> Install appropriate noise control device/s (e.g., mufflers, silencer, sound barriers, etc.) <input type="checkbox"/> Implement appropriate operating hours <input type="checkbox"/> Provide adequate buffer and/or planting of trees <input type="checkbox"/> Others, specify	<input type="checkbox"/> Regular monitoring for presence/absence of complaints <input type="checkbox"/> Regular monitoring of buffer zones <input type="checkbox"/> Quarterly monitoring of noise level <input type="checkbox"/> Others, specify	
PEOPLE				
<input type="checkbox"/> Displacement of residents including indigenous people in the project site and within its vicinity <input type="checkbox"/> Enhanced employment and/or livelihood opportunities <input type="checkbox"/> Reduced employment and/or livelihood opportunities <input type="checkbox"/> Increased revenues for LGU	Size of population of host barangay/s: <input type="checkbox"/> ≤ 1,000 persons <input type="checkbox"/> >1,000 and ≤ 5,000persons <input type="checkbox"/> >5,000person <input type="checkbox"/> Indigenous People Size:	<input type="checkbox"/> Provide relocation/disturbance compensation packages <input checked="" type="checkbox"/> Prioritize local residents for employment <input checked="" type="checkbox"/> Promptly pay local taxes and other financial obligations <input checked="" type="checkbox"/> Regular coordination with LGU <input type="checkbox"/> Prior consultation and coordination to minimize disruption of daily domestic activities <input type="checkbox"/> Ensure participation of IPs in consultations and dialogues & consider IP rights and cultural practices in the	<input checked="" type="checkbox"/> Presence/Absence of complaints <input checked="" type="checkbox"/> Regular coordination with LGU <input type="checkbox"/> Others, specify	

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		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
<div><input type="checkbox"/> Impacts on community health and safety</div> <div>Safety Risks</div> <div><input checked="" type="checkbox"/> Fire / Spontaneous combustion</div> <div><input checked="" type="checkbox"/> Mine/Coal Dusts Explosion</div> <div><input type="checkbox"/> Release of toxic materials</div>	<div>Source of risks please specify)</div> <div><input type="checkbox"/> Explosives, please specify</div> <div><input type="checkbox"/> Flammable substances, please specify</div> <div><input type="checkbox"/> Toxic substances, please specify</div>	<div><input checked="" type="checkbox"/> Regular coordination with LGU, DOE, DOH</div> <div><input type="checkbox"/> Provide appropriate warning signs, lighting and barricades, whenever practicable</div> <div><input checked="" type="checkbox"/> Observe proper housekeeping</div> <div><input type="checkbox"/> Adequate ventillation (tunnel)</div> <div><input type="checkbox"/> Provide on-site medical services for any emergency.</div> <div><input type="checkbox"/> Participate in public awareness programs on health and safety</div> <div><input type="checkbox"/> Implement appropriate safety programs for both community and workers</div> <div><input checked="" type="checkbox"/> Strictly comply with fire, safety and similar regulatory requirements</div> <div><input checked="" type="checkbox"/> Strictly comply with requirements of RA 6969</div> <div><input type="checkbox"/> Others, specify</div>	<div><input checked="" type="checkbox"/> Regularly monitor presence/absence of complaints</div> <div><input type="checkbox"/> Regular monitoring of buffer zones</div> <div><input checked="" type="checkbox"/> Regular coordination with LGU</div> <div><input checked="" type="checkbox"/> Regular submission of reports to concerned agency</div> <div><input type="checkbox"/> Others, specify</div>	