

FOR NON-FOOD MANUFACTURING PROJECTS
ENVIRONMENTAL MANAGEMENT PLAN

POTENTIAL IMPACT PER PROJECT ACTIVITY PER PROJECT PHASE	MITIGATING MEASURES	RATING/ PERFORMANCE OF MITIGATING MEASURES
A. Construction Phase		
A.1 Site Development		
Generation of spoils such as excess fill materials from grading and excavation activities	<ul style="list-style-type: none"> Excess spoils to be hauled by third party hauler for proper disposal Trucks should be thoroughly washed before leaving the project site to avoid the transfer of mud/dirt in the road Hauling trucks should be fully covered to avoid spillage of spoils generated from the grading and excavation activities Proper onsite storage of spoils 	100% no spoil materials will be left unattended
Degradation of surface water quality due to contamination from domestic wastewater	<ul style="list-style-type: none"> Provision of portalets for construction workers <p><i>Note: at least one (1) portalet for 60 workers where the number of male workers exceeds 500 (as per IRR-Industrial Hygiene, PD 856 Amending Administrative Order 111 Series of 1991)</i></p> <p><i>Note: at least one (1) portalet for 25 workers where the number of male workers exceeds 100 (as per IRR-Industrial Hygiene, PD 856 Amending Administrative Order 111 Series of 1991)</i></p> <ul style="list-style-type: none"> Provision of temporary septic tank or wastewater collection system for workers Collection of wastewater from portalets/septic tanks by third party shall be covered by a licensed/permit from LGU and with valid Discharge Permit for the wastewater treatment facility 	100% no discharge of domestic wastewater to nearby bodies of water, soil, and subsoil
Potential siltation of nearby water bodies due to soil erosion	<ul style="list-style-type: none"> Provision of drainage systems to minimize and control infiltration of sediments to the nearby water bodies Provision of engineering intervention such as silt traps, etc. and/or environmental measures to control the rate of erosion and siltation 	100% no siltation that might be brought by the site development
Generation of dust from site preparation	<ul style="list-style-type: none"> Maintain a misty access road surface within project site by sprinkling of water at least (2x) twice a day during dry season 	100% no dust generated
A.2 Construction of Manufacturing Facilities		

Generation of noise due to construction activities	<ul style="list-style-type: none"> • Equip mufflers and silencers to heavy equipment facilities for construction • Construction activities shall be done during daytime only 	100% compliance to NPCC MC 02 Series of 1980
Emission from delivery trucks	<ul style="list-style-type: none"> • Use of properly maintained delivery trucks 	100% compliance with RA 8749
B. Operational Phase		
B.1 Delivery and transfer of raw materials and finished goods		
Generation of noise from delivery trucks	<ul style="list-style-type: none"> • Use of mufflers and exhaust silencers 	100% compliance to NPCC MC 02 Series of 1980
B.2 Operation and maintenance of facilities		
Pollution of surface water from untreated process wastewater	<p>Provision of adequate Wastewater Treatment Facility with the following treatment:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Primary (e.g. sedimentation pond, aeration basin, skimmer etc.) <input type="checkbox"/> Secondary (e.g. coagulation and flocculation tanks) <input type="checkbox"/> Tertiary (e.g. activated sludge treatment, ozonation, chlorination, etc.) 	<p>100% no discharge of wastewater to nearby bodies of water, soil, and subsoil</p> <p>100% compliance to RA 9275</p>
Generation of domestic wastewater	<p>Provision of sewage treatment plant with capacity based on the total personnel/workers in the plant</p> <ul style="list-style-type: none"> <input type="checkbox"/> Hygienic septic tank (for 212 occupants or less – DILG MC 2019-62) with regular desludging by third party contractor (the contractor must have a valid discharge permit of its treatment facility) <input type="checkbox"/> Wastewater treatment facility (for more than 212 occupants – DILG MC 2019-62) <p>Note: For 98L per person per day water consumption; 80% will become wastewater – hence for 300 persons; at least 23.52 cubic meter per day WTF capacity shall be installed and operated</p>	100% compliance to RA 9275
Generation of gas emissions from point sources, such as boilers, generator sets	<p>Use any of the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> baghouse filter <input type="checkbox"/> electrostatic precipitator (ESP) <input type="checkbox"/> fabric filter with teflon membrane <input type="checkbox"/> multicyclone <input type="checkbox"/> gas and particulate absorption tank equipped with filter medium <input type="checkbox"/> wet scrubber or limestone slurry injection in the flue gas to control SOx emission 	100% compliance to RA 8749

	<input type="checkbox"/> air and temperature control, flue gas recirculation or provision of catalytic converter to control NOx emission <input type="checkbox"/> use any adequate air pollution control facilities Provision of any of the following: <input type="checkbox"/> For emissions above 7500 tons per day, provide CEMS to transmit data to RO (DAO 2000-81)	
Generation of hazardous materials (eg. used oil from motorpool, mfg plant, oil/grease from skimmer/grease/trap, busted fluorescent bulb, used batteries etc.)	<ul style="list-style-type: none"> • Provision of storage facility/area and transport & treatment by hazardous wastes DENR accredited third party transporter and treater • Provide oil containment system (i.e. ring canal, grease traps) for fuel tanks/ motorpool/ maintenance areas 	100% compliance to RA 6969
Generation solid wastes (e.g. expired raw materials/ product rejects/ products returned by customers, and domestic solid wastes)	<ul style="list-style-type: none"> • Provision of Materials Recovery Facility (MRF) • Segregation of wastes with proper labelling. • Collection of solid wastes/domestic wastes by third party contractor with permit/clearance from LGU for proper disposal of wastes 	100% compliance to RA 9003
Generation of effluents due to wastewater generation	<ul style="list-style-type: none"> • Monitoring of the following significant effluent quality parameters: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Temperature <input checked="" type="checkbox"/> pH <input checked="" type="checkbox"/> BOD <input checked="" type="checkbox"/> Total Suspended Solids 	100% compliance with DENR effluent standards (RA 9275); (i.e.DAO 2016-08 and DAO 2021-19)