8-Mar-17

L8937/2015/1 - Licence Amendment Application - Throughput Increase and Addition of Spodumene Ore - Environmental Risk Assessment

Environmental Risk Assessment Prepared by [redacted] - Environment Advisor, [redacted] Landside Operations Superintendent Port Hedland (Utah Point)

PILBARA PORTS AUTHORITY

Risk Title / Issue	Describe the Risk	Causes	Impact	Existing Control Measures	Control Effectiveness	Rating Basis	Consequence	Likelihood	Risk Rating	Maximum Probable Loss	Risk Owner	Treatment	Review
Identify the risk concisely	Describe the risk in further detail to ensure the risk is clearly understood	List the primary causes for the risk	List the key potential impacts of this risk	What controls (documented/communicated) are currently in place to manage / mitigate the risk	How effective do you believe the existing controls are in managing the Risk? Rate as per Control Effectiveness Criteria	Select from the Consequence Severity Criteria (note - you may list several areas - always rate on the highest consequence)	Rate as per Consequence Severity Criteria	Rate as per Likelihood Rating Criteria	Residual Risk automatically populates (based on Consequence and Likelihood)	Detail the likely maximum probable loss that could eventuate (note this may cover several areas)	Who within the organisation should manage this risk?	What additional treatments / actions / controls are required to manage / mitigate this risk?	Date for Review Refer to Tolerability Criteria
Throughput Increase													
Dust	Increased contribution to cumulative PM10 dust emissions in Port Hedland from the storage and handling of iron ore, manganese ore and chromite ore.	Storage and handling of material with moisture content below DEM. Hot, dry, windy weather conditions.	Public health (respiratory and cardiovascular) with short and long term exposure. Reduced life expectancy with long term exposure.	As per Schedule 3 of L8937/2015/1. Proposed new controls: • Additional watering of stockyard floors for FEL during reclaiming operations. • A reduction of 50% in the shiploading tonnage rate when the wind direction is between 247 and 267 degrees and the wind speed is greater than 2 m/s.	Satisfactory	Environment	Low	Possible	Moderate				
Noise	Increased contribution to cumulative noise in Port Hedland from the storage and handling of iron ore, manganese ore and chromite ore.	General Minesite operations including road trains unloading and braking, FEL's and product movement through conveyors and stackers and reverse alarms.	Amenity of people.	Site is located away from noise sensitive areas. Engineering design to reduce noise and vibrations. Use of equipment and machinery with lower noise emissions.	Good	Environment	Low	Unlikely	Low				
Discharge to waters	Material entering marine environment through contaminated stormwater and washdown water.	Infrastructure failures. Direct discharge during clean down.	Increased sediment load may impact receiving water quality. Sedimentation impacts to surrounding mangroves.	As per Schedule 3 of L8937/2015/1. No additional controls proposed.	Excellent	Environment	Low	Unlikely	Low				
Land infiltration to groundwater	Contamination of groundwater from infiltration of contaminated stormwater and hydrocarbons spills/leaks from mobile plant entering soils.	Failure of bentonite layer. Contaminants stored at incorrect stockpile. Mechanical failures of mobile pants.	Contaminated groundwater may impact receiving environment (mangroves).	Bentonite layer on south-eastern half of SY1 to prevent infiltration. Spill response process in place for hydrocarbon spills.	Good	Environment	Low	Unlikely	Low				
Addition of Spodumene ROM													
Dust	Increased contribution to cumulative PM10 dust emissions in Port Hedland from the storage and handling of Spodumene.	Storage and handling of material with moisture content below DEM. Hot, dry, windy weather conditions.	Public health (respiratory and cardiovascular) with short and long term exposure. Reduced life expectancy with long term exposure.	As per Schedule 3 of L8937/2015/1. Proposed new control: • Addition of Lithium to suite of metals monitored at HVAS monitors.	Satisfactory	Environment	Low	Possible	Moderate				
Noise	Increased contribution to cumulative noise in Port Hedland from the storage and handling of Spodumene.	General Minesite operations including road trains unloading and braking, FEL's and product movement through conveyors and stackers and reverse alarms.	Amenity of people.	Site is located away from noise sensitive areas. Engineering design to reduce noise and vibrations. Use of equipment and machinery with lower noise emissions.	Good	Environment	Low	Unlikely	Low				
Discharge to waters	Material entering marine environment through contaminated stormwater and washdown water. Contaminated stormwater may also discharge through stormwater infrastructure failure.	Infrastructure failures. Direct discharge during clean down.	Increased sediment load may impact receiving water quality. Sedimentation impacts to surrounding mangroves.	As per Schedule 3 of L8937/2015/1. No additional controls proposed.	Excellent	Environment	Low	Unlikely	Low				
Land infiltration to groundwater	Contamination of groundwater from infiltration of contaminated stormwater and hydrocarbons spills/leaks from mobile plant entering soils.	Failure of bentonite layer. Contaminants stored at incorrect stockpile. Mechanical failures of mobile pants.	Contaminated groundwater may impact receiving environment (mangroves).	Bentonite layer on south-eastern half of SY1 to prevent infiltration. Spill response process in place for hydrocarbon spills.	Good	Environment	Low	Unlikely	Low				