

STEP 1 - HAZARD IDENTIFICATION & RISK ASSESSMENT (HIRA)

No	Process/ Operation/ Job/ Area	Ref No	Critical Tasks	Ref. No	Hazards (Refer to app.1 Hazard Description)	Hazard Detail (description)	Risk Identified (Pure Risk)	Type of Risk	Risk Calculation				Risk Rank	Existing Control	Effectiveness of Controls		
									Consequence		Frequency				Description	%	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1	Quarry	1.1	Land Clearing														
		1.1.1	Penebangan pohon	1.1.1	Kayu tumbang, Terlalu dekat dengan lokasi penebangan, Diserang serangga penyengat	Fatality, cidera, luka gigitan, tersengat serangga	Safety	One fatality	4	More than once a year (Frequently)	7	28	TBM, Pengawasan	LESS THAN 50% IN PLACE	40%	17	
		1.1.2	Pembersihan semak dan pohon dengan bulldozer	1.1.2	Di serang hewan liar atau serangga, Terlampaui ranting pohon	Cidera, Gigitan serangga, property damage	Safety	Lost workday case	3	More than once a year (Frequently)	7	21	TBM, Pengawasan	LESS THAN 50% IN PLACE	40%	13	
		1.1.3	Pengumpulan kayu dengan excavator	1.1.3	Diserang serangga, Lokasi kerja tidak rata	Property Damage dan loss time, cidera, gigitan serangga	Safety	Lost workday case	3	Once per year (Likely)	6	18	TBM, Pengawasan	LESS THAN 50% IN PLACE	40%	11	
		1.1.4	Loading kayu	1.1.4	Lokasi kerja sempit, Jarak antar unit, kayu gelondongan, operator tidak kompeten	Property Damage, Cidera, Kesenggol unit lain	Safety	Lost workday case	3	Once per year (Likely)	6	18	TBM, Pengawasan	LESS THAN 50% IN PLACE	40%	11	
		1.2	Soil Removal														
		1.2.1	Loading Soil	1.2.1	Front loading jelek, Area front sempit, tidak ada tanggul, Berm, operator tidak kompeten	Property Damage, Cidera, tyre side cut	Safety	Lost workday case	3	More than once a year (Frequently)	7	21	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	13	
		1.2.2	Hauling soil	1.2.2	Kondisi jalan, Jarak antar unit, ban pecah, Pengaturan Kecepatan unit, material jatuh, operator tidak kompeten, Road condition, Berm	Property Damage, Cidera, Fatality	Safety	One fatality	4	More than once a year (Frequently)	7	28	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	17	
		1.2.3	Dumping Soil	1.2.3	Jarak antara unit, Front disposal, Jenjang disposal, Longsor, salah dumping, Road condition, Berm, operator tidak kompeten	Property Damage, Cidera, Fatality	Safety	Lost workday case	3	More than once a year (Frequently)	7	21	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	13	
		1.2.4	Dozing & Spreading Material	1.2.4	Front disposal, Pandangan terbatas, operator tidak kompeten	Property Damage	Safety	Lost workday case	3	More than once a year (Frequently)	7	21	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	13	
		1.3	Drill And Blast														
		1.3.1	Cleaning Area	1.3.1	Lokasi kerja yang tidak rata, material keras, lokasi sempit	Property damage, Cidera	Safety	Medical treatment or Restricted workday case	2	More than once a year (Frequently)	7	14	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	8	
		1.3.2	Kegiatan Pengeboran	1.3.2	Berdebu, lemparan material bor, material keras, lokasi lembek	Property damage, sesak napas (PAK), Mata perih terkena material, lost time	Health	Reversible confirmed health effects, Occupational Disease	3	More than once a year (Frequently)	7	21	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	13	
		1.3.3	Penyambungan Batang Bor	1.3.3	Coupling, Extention rod	Menimpa kaki, Terpapar panas, property damage	Safety	Medical treatment or Restricted workday case	2	More than once a year (Frequently)	7	14	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	8	
		1.3.4	Pencampuran ANFO	1.3.4	Fuel/solar campuran AN, ceroboh	Pencemaran lingkungan, cidera	Environmental	First Aid or No injury	1	More than once a year (Frequently)	7	7	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	4	
		1.3.5	Pengawasan Unit Handak dari gudang ke lokasi blasting	1.3.5	Kondisi jalan licin/berdebu, jarak antar unit dengan pengawal terlalu dekat	Terpapar bahan kimia, cidera, property damage	Safety	Lost workday case	3	More than once a year (Frequently)	7	21	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	13	
		1.3.6	Aktifitas Charging	1.3.6	Pengisian AN terlalu padat, ceroboh, lubang kolap, penempatan accessories	Fatality, cidera, surface delay putus	Safety	More than 10 fatalities	6	More than once a year (Frequently)	7	42	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	25	
		1.3.7	Proses Peledakan (Blasting)	1.3.7	Miss fire, flying rock, jarak seller terlalu dekat (<100m)	Fatality, cidera	Safety	More than 10 fatalities	6	More than once a year (Frequently)	7	42	Safety Induction, TBM, Rambu, Blokir Peledakan, Pengawasan	LESS THAN 50% IN PLACE	40%	25	
		1.3.8	Pengecekan pasca peledakan	1.3.8	Material hasil blasting, kabel blasting	Cidera	Safety	More than one fatality	5	More than once a year (Frequently)	7	35	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	21	
		1.4	Lime Stone Removal														
		1.4.1	Lime Stone Loading	1.4.1	Front loading sempit, Jarak antar unit, debu, Road condition, Berm, operator tidak kompeten	Sesak napas (PAK), Property Damage	Safety	Lost workday case	3	More than once a year (Frequently)	7	21	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	13	
		1.4.2	Lime Stone Hauling	1.4.2	Kondisi jalan licin/berdebu, Jarak antar unit terlalu dekat, ban pecah, overspeed, Mengantuk, Road condition, Berm, operator tidak kompeten	Potensi Fatality, Property damage	Safety	More than one fatality	5	More than once a year (Frequently)	7	35	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	21	
		1.4.3	Lime stone Dumping	1.4.3	Front dumping lembek, jarak antar unit, Road condition, Berm, operator tidak kompeten	Property damage, Cidera	Safety	More than one fatality	5	More than once a year (Frequently)	7	35	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	21	
		1.4.4	Pemeliharaan Jalan	1.4.4	Jarak antar unit, komunikasi antar unit, Road condition, Berm, operator tidak kompeten	Property damage, Cidera	Safety	Lost workday case	3	More than once a year (Frequently)	7	21	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	13	
		1.5	Reklamasi & Revegetasi														
		1.5.1	Loading Stock Soil	1.5.1	Front loading sempit, Jarak antar unit, debu, Berm, operator tidak kompeten	Sesak napas (PAK), Property Damage	Health	Lost workday case	3	More than once a year (Frequently)	7	21	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	13	
		1.5.2	Hauling Stock Soil	1.5.2	Kondisi jalan licin/berdebu, Jarak antar unit terlalu dekat, ban pecah, overspeed, Mengantuk, Road condition, Berm, operator tidak kompeten	Potensi Fatality, Property damage	Safety	More than one fatality	5	More than once a year (Frequently)	7	35	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	21	
		1.5.3	Dumping Stock Soil	1.5.3	Front dumping lembek, jarak antar unit, Road condition, Berm, operator tidak kompeten	Property damage, Cidera	Safety	More than one fatality	5	More than once a year (Frequently)	7	35	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	21	
1.5.4	Perapihan Area Reklamasi	1.5.4	Front disposal, Pandangan terbatas	Property Damage	Safety	Lost workday case	3	More than once a year (Frequently)	7	21	Safety Induction, TBM, Rambu, Pengawasan	LESS THAN 50% IN PLACE	40%	13			