Appendix A: Activity/Facility-aspect-impact Registers

Appendix A All Phase Activities & Facilities

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Nr		Aspects associated with consumption of resources	Energy use	Water Resource	Use of Manufactured materials	Fuel consumption	Aspects Associated with waste/pollution generation	soil pollution	Emissions to surface water	Emissions to groundwater	Emissions to land	emissions to air	Aspects associated with noise and visual pollution	noise pollution	visual disturbance	Aspects relating to archaeology	Physical disturbance of archaeological resources	Aspects associated with ecosystems	physical disturbance of soil	physical disturbance of land	physical disturbance of biodiversity	physical disturbance of water courses or groundwater	Social issues and aspects associated with third party and animal safety
	Construction phase																						
C1	Borehole abstraction		Х	Х		Х																X	
C2	Borrow pits														Х								
C3	Building roads					Х						Х					Х		Х	Х	Х		
C4	Clearing and grubbing					Х						Х					Х		Х	Х	Х		
C5	Compacting bases					Х						Х					Х		Х	Х	Х		
C6	Construction of surface water containment and/or diversion infrastructure – berms, channels, dams.			х		х																x	
C7	Cranes														Х								
C8	Diesel generators					Х						Х											
C9	Dust fallout								Х														
C10	Earth moving equipment					Х								Х									
C11	Equipment servicing					Х			Х														
C12	Erecting power line		Х			Х															Х		
C13	Foundations														х								
C14	General building activities		х			Х		х	х		х	x		х					х	х	х		
C15	Generators		х			Х								х									
C16	Infrastructure establishment																х				х		
C17	Management of dirty water							х	х		х										х		
	Managing contractors (construction camp and drillers camp																						
C18	site)		Х			Х															Х		
C19	New construction activities																						
C20	Opening borrow pits and trenches					Х						Х					Х		Х	Х	Х		
C21	Pipelines														Х								
C22	Power lines		Х												х								
C23	Preparation of the foundations											Х					Х		Х	Х	Х		
C24	Roads														Х								
C25	Sanitation									Х													
C26	Scaffolding														Х								
C27	Security lights		Х																		Х		
C28	Servicing equipment		Х							Х											Х		
C29	Slope stabilization					Х						Х					х		Х	Х	Х		
C30	Soil stripping					Х						Х					х		х	Х	Х		
C31	Stockpiles														Х								
C32	Storage and handling of new and used materials and chemicals							х	х	х	х										х		

х

Dewatering of rivers	communication with stakeholders	Hazardous excavations and	infrastructure	Radiological issues	Job creation	Local economies	Inward migration
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х	х				
Λ		х			
	X X				
	Х				
	х	х			
	х				
	Х				
Х	Х				
	х				
Х	х	X X	Х	Х	Х
х	Х				
	Х				

x x

C33	Trenches											х						
C 24	Use of vehicles and equipment that may leak lubricants and fuel						v		~							v		
C34	Vehicle movement				v	Х	Х		Х				~		v	Х		
C35	Vehicle movement and exhaust fumes				Х					V	Х		Х	Х	Х			
C36	Vehicle movement on access roads, internal roads and off road									Х								
C37																Х		
C38	Waste management (non-mineralised)					Х	Х	Х	Х							Х		
	Operations phase																	
01	Backfill of mine voids and the possibility of settlement		Х		Х												Х	
02	Borehole abstraction	Х	Х		Х												Х	
03	Buildings and equipment											Х						
04	Construction of water containment and/or diversion infrastructure – berms, channels, dams.	х	х		х												х	
05	Conveyors	X								х								
06	Crushing and screening	X								x	х							
07	Diesel Generators	^			х					x	^							
08	Dirty water management and related facilities				Λ			х		Λ								
09	Drilling and blasting				Х			~		Х	х							
010	Dust fallout				~		х			Λ	^							
010	Earth moving equipment				Х		~				х							
011	Existing and proposed operational activities	х			X						^							
012	Exploration	^			^ X									х	х	х		
013 014	General materials handling	х		v	~					Х				^	~	~		
014 015	General operational activities			X X						^	v							
	Generators	X		~	V						X							
016	Management of dirty process water/effluent	Х			Х	v	V		v		Х					v		
017	Management of dirty water					X	X		X							X		
018	Material handling	v				Х	х		Х							X		
019	material tipping	Х														Х		
020	Mine development							v			Х		~		v	v		
021	Mine development							Х					Х	Х	Х	Х		
022	Non-mineralised waste product																	
023																		
024	Open pits											Х						
025																		
026	Ore processing	Х		Х				Х								Х		
027	Overburden removal				Х					Х								
028	Pipelines							Х				Х						
029	Pit dewatering		Х														Х	
030	Placement of stockpiles		Х		Х												Х	
031	Power lines	Х										Х						
032	product																	
033	Sanitation							Х										
034	Security lights	Х														Х		
035	Servicing equipment	Х				Х	Х	Х	Х							Х		
O36	Soil management activities									Х								
037	Soil stripping				Х					Х								
038	Stockpile development				Х			Х		Х			Х	Х	Х	Х		
O39	Stockpiles											Х						
O40	Storage and handling of new and used materials and chemicals			х		v	х	х	v							х		
040 041	Surface subsidence			^		^	^	^	^			х				^		
041												^						

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042	Trenches											х						
042	TSF development				Х							~		х	х			
043 044	TSFs				Λ							х		^	~			
044	Use of vehicles and equipment that may leak lubricants and fuel											Λ						
045																Х		
O46	Vehicle movement				Х					Х	Х		Х	Х	Х	Х		
047	Vehicle movement and exhaust fumes									Х								
O48	Vehicle movement on access roads, internal roads and off road									х						Х		
049	Voids									Λ		х				Λ		
050	Waste management (mineralised and non-mineralised)					х	x	х	x	х		Λ	х			х		
051	Water dams					^	Λ	~	~	Λ		х	^			Λ		
031	Decommissioning phase											Λ						
D1	Backfill of mine voids and the possibility of subsidence		Х		х												Х	
D2	Borehole abstraction	х	X		X												X	
D3	Clearing and grubbing				Х									х	Х			
	Construction of water containment and/or diversion																	
D4	infrastructure – berms, channels, dams.		Х														Х	
D5	Cranes				Х							Х						
D6	Diesel generators				Х					Х								
D7	Dirty water management and related facilities							Х										
D8	Decommissioning activities	Х		Х	Х													
D9	Dust fallout						Х											
D10	Earth moving equipment				Х						Х							
D11	Equipment servicing	Х				Х	Х		Х							Х		
D12	General building activities	Х				Х	Х		Х	Х				Х	Х	Х		
D13	Generators	Х			Х						Х							
D14	Management of dirty water					Х	Х		Х							Х		
D15	Material handling			Х						Х						Х		
D16	Material movement												х	Х	Х	Х		
D17	Material tipping										Х							
D18	Mineralised waste																	
D19	Non mineralised waste																	
D20	Open pits											Х						
D21	Ore																	
D22	Piles of scrap											Х						
D23	Piles of rubble											Х						
D24	Pipelines											Х						
D25	Pit dewatering		Х														Х	
D26	Power lines	Х										Х						
D27	Removal of infrastructure				Х					Х			х			Х		
D28	Sanitation							Х										
D29	Scaffolding											Х						
D30	Security lights	Х														Х		
D31	Servicing equipment							Х										
D32	Slope stabilization							Х		Х			Х	Х	Х	Х		
D33	Soil management activities									Х								
D34	Soil stripping				Х									Х	Х			
D35	Stockpiles							-				Х						
D36	Stockpiles and waste facilities							Х										
D37	Storage and handling of new and used materials and chemicals			х		х	х	х	Х							Х		

	х					
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D38	Stripping of buildings and equipment		х						Х							
D39	Surface Subsidence									х						
D40	Trenches									х						
D41	TSFs									х						
	Use of vehicles and equipment that may leak lubricants and fuel															
D42	Vehicle movement		Х	х	Х		Х						.,	Х		
D43	Vehicle movement		Х						Х		х	Х	Х	Х		
D44	Vehicle movement and exhaust fumes							Х								
D45	Vehicle movement on access roads, internal roads and off road													х		
D46	Voids									Х						
D47	Waste management (mineralised and non mineralised)			Х	х	Х	Х	Х								
D48	Waste management (non-mineralised)													Х		
D49	Waste management (mineralised)							Х								
D50	Water dams									х						
	Closure phase															
Cl1	Aftercare and maintenance activities															
Cl2	catchment dams and TSF				х											
Cl3	Erosion of final land forms											х		Х		
Cl4	Final voids (if any)									х						
Cl5	Mineralised and radioactive contaminated non-mineralised waste															
Cl6	Other waste				Х											
Cl7	Permanent stockpiles									х						
CI8	Permanent TSF									х						
Cl9	Permanent water dams									х						
Cl10	Placement of final land forms with associated water containment and/or diversion infrastructure – berms, channels, dams	х												Х	(
	Remaining infrastructure – surface water management system, TSFs, other mineralised stockpiles and other wastes															
Cl11	Connecto from remaining stackwillog, established down and TCC					Х		Х								
Cl12	Seepage from remaining stockpiles, catchment dams and TSF			х										Х		
Cl13	Seepage, runoff and dust fallout from remaining mineralised stockpiles,				х											
CI14	Settlement in backfilled areas	х												Х	(
Cl15	Surface subsidence	~								х					-	
Cl15	Vegetation establishment and maintenance							х		~						
0110	-							~								

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Appendix A		pact	ts				-	-					
	Human (3rd party) and animal health & safety impacts	Disturbance/destruction of vertebrates, invertebrates and/or vegetation	Loss of soil resources & functionality	Loss of ecosystem functionality	Surface water pollution	Groundwater pollution	Nuisance impacts	Loss of natural resources - Impacts on 3rd parties	Impacts on tourists (tourism)/ visitors to the Naukluft National Park	Disturbance/destruction of aerchaelogoca, resources & landscapes	Impatc on Erongo regional economy and Namibian economy	General social impacts	Social well-being impacst
Aspects													
Aspects associated with consumption of	+	┣───											
resources													
Energy use								Х					
Water Resource	х	х	х	Х				X					
Use of Manufactured materials	-	<u> </u>									х		
Fuel consumption	-										X		
Aspects Associated with waste/pollution													
generation													
soil pollution		х	Х	х									
Emissions to surface water	Х	х	Х		Х			х					
Emissions to groundwater	Х							Х					
Emissions to land		х	Х	Х	Х								
emissions to air	Х						Х		Х		Х		
Aspects associated with noise and visual													
pollution													
noise pollution							Х		Х		Х		
visual disturbance							Х		Х		Х		
Aspects relating to archaeology													
Physical disturbance of archaeological													
resources	_								Х	Х	Х		
Aspects associated with ecosystems		 											
physical disturbance of soil	Х	х	Х	Х									
physical disturbance of land	Х	Х	Х	Х									
physical disturbance of biodiversity	_	х	Х	Х					Х		Х		
physical disturbance of water courses or													
groundwater	Х	Х	Х	Х									
Social issues and aspects associated with													
third party and animal safety		┣───						~					
Dewatering of rivers communication with stakeholders		┣───						Х				v	v
communication with stakeholders		├───										Х	Х
Hazardous excavations and infrastructure	v												
Hazardous excavations and infrastructure Radiological issues	X X	╂────											
Job creation	_^	───									Х	х	х
	┥───	┣───											^
Local economies Inward migration	┥───	┣───									X X	X	v
											٨	Х	Х