# MCDR INSPECTION REPORT

Date of Inspection: 10.01.2025

#### General

S.	Particulars	Details	
N.			
1	Name of the Mine	Nuagoan Iron & Manganese Mine	
2	Total Lease Area (Ha) with breakup of Non-forest and	Non- forest 29.257	
	forest land	Forest Area 0.00	
3	Minecode	400RI13050	
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/135/2011	
5	Name of the lessee, Address, phone, email and fax number	Sri Prabodh mohanty, Weigh bridge road Barbil, Post: Barbil, Dist: Keonjhar, Odisha, pin -758035, Phone No.:9437197242 E-mail: snmbbl@gmail.com Fax No.: 06767275362	
6	Village	Nuagoan	
7	Taluka/Mandal	Koira	
8	District	Sundargarh	
9	Pincode	770048	
10	State	Odisha	
11	Post office	Koira	
12	Nearest police station	Koira	
13	Nearest Railway station	Barsuan	
14	Date of Grant of Mining Lease	Letter no-iii (B) SM - 14/95 - 4239 Dt. 06-06-98	
15	Date of Execution	11.05.1999	
16	Date of opening of Mine	11.05.1999	
17	Date of first Renewal, if applicable and its period & expiry	NA	
18	Date of second Renewal, if applicable and its period & expiry	NA	
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA	
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Sri Prabodh mohanty, Weigh bridge road Barbil, Post : Barbil, Dist: Keonjhar, Odisha, Pin -758035, Phone No.:9437197242 E-mail: <a href="mailto:snmbbl@gmail.com">snmbbl@gmail.com</a> Fax No.: 06767275362	
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Sri T.C. Sei Dt.19.3.2005 Barbil, Keonjhar, Odisha	
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Sri A. N. Prasad Koira, Sundergarh, Odisha Date of appointment-29/03/2011	
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Sri Subrat Kumar Patel, Post: Barbil, Dist: Keonjhar, Odisha, pin -758035, Phone No.:7437918084	
24	Name of the Geologist, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Sri Soukeen Mahanta, MSc. In applied Geology, Experience:8 years, post: Barbil, Dist: Keonjhar, Odisha, pin -	

		758035,
		Phone No.:9439873745
		E-mail: snmbbl@gmail.com
25	Whether Geologist and Mining Engineer appointed in	Yes,
	mines satisfy the rule 55& carrying out their duties as	Mining Engineer:
	per rule 56 & 57.	Sri Subrat Kumar Patel, Post: Barbil,
		Dist: Keonjhar, Odisha, pin -758035,
		Phone No.:7437918084
		Geologist:
		Sri Soukeen Mahanta, MSc. In applied
		Geology, Experience:8 years, post:
		Barbil, Dist: Keonjhar, Odisha, pin -
		758035,
		Phone No.:9439873745
		E-mail: snmbbl@gmail.com
26	Date of Approval of Mining Plan/Modified Mining	CAL/SG/Fe &Mn /MP-536 DT-
	Plan with five-year period and specific condition in	30.04.1998
	approval letter, if any.	MSM/OTF-MECH/49-ORI/BHU/2008-
27	Date of Approval of Scheme of Mining/Modified	09 DT-25.03.2009 MS/OTFM/29-ORI/BHU/2018-
27	Scheme of Mining with five-year period and specific	19/1963 on Dt 14.11.2018, FY-2019-
	condition in approval letter, if any.	20 to 2023-24
28	Mineral(s) granted in lease and proved for mining	Iron and Manganese
29	Method of Mining(Opencast, Underground)	Opencast
30	Category (Fully Mechanised, Others or Manual)	OTFM
31	Captive/Non Captive	Non Captive

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. (Duplication of information in existing TMIS data sheets and draft write up has been avoided.)

### Exploration

S.N.	Item	Proposals for,2023-	Actual work	Remark
		24	during 2023-24	
1a	Backlog of previous year	Nil	Nil	There was no
				proposal of
				exploration.
1b	Exploration over lease area for	No proposal	Nil	Already 21.33 ha.
	Geological axis 1 or 2.			Area explored
				under G1 level.
				Other 7.927
				hectare area is
				unexplored
				because it comes
				under tenant land.
1c	Exploration Agency &	NA	Nil	
	Expenditure in lakh Rupees			
	during the year			
1d	Balance area to be explored to	7.932 ha	Nil	7.927 hectare area
	bring Geological axis in 1 or 2			is unexplored
				because it comes
				under tenant land
				and no surface
				right available till

			date.		
1e	Balance reserves as per latest	Reserve of Iron:	Reserve as on		
	approved document	638054.00 tons	01.04.2024		
		Manganese:22181			
		5.00 tons			
1f	General remarks of inspecting	There was no exploration proposal during	g the reporting year		
	officer on geology, exploration	and accordingly no exploration was carried out within the			
	etc.	lease area during the reporting year FY 2023-24. As per			
		submitted AR of 2023-24 about 638054.00 tons of iron ore			
		and 221815.00 tons of reserve available	in the mine.		

## Development

S.N.	Item	Proposals for, 2023-24	Actual work during 2023-24	Remark
2a	Location of development w.r.t. lease area	233E -115to 260 N to 212S	231 E -115 W to 226 N-190S	The lessee has carried out the development well within the proposed area and could not achieved the proposed target due to grade constraint and less demand of low grade minerals in the market.
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Nil	Nil	
2c	Stripping ratio or ore to OB ratio	1: 3.9	1: 0.172	
2d	Quantity of topsoil generation in m3	Nil	Nil	Generation of top soil is Nil during the
2e	Quantity of overburden generation in m3	163260 m <sup>3</sup>	5843.800 m <sup>3</sup>	The lessee has carried out the development well within the proposed area and could not achieved the proposed target due to grade constraint and less demand of low grade minerals in the market. As the production and development is less generation is also very less against the proposal during

				the reporting year.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc	The lessee has carried proposed area and contoning to grade constraint at the market. As the generation is also we reporting year. Howe MCDR 2017 has be lessee in this regard.	ould not achieved the nd less demand of lo production and d ery less against the ever, a violation lette	proposed target due ow grade minerals in levelopment is less proposal during the r under rule 11(1) of

# Exploitation

S.N.	Item	Proposals for,	Actual work	Remark
		2023-24	during 2023-24	
3a	Number of pits proposed for	One	One	
	production			
3b	Quantity of ROM mineral	Iron –105705.00T	Iron – 33360.00	The lessee has
	production proposed	Mn.–13350.00T	tons	carried out the
			Mn. –480.00 tons	development
				well within the
				proposed area
				and could not
				achieved the
				proposed target
				due to grade
				constraint and
				less demand of
				low grade
				minerals in the
				market. Hence
				the production
				and development
				is less against
				the proposal
				during the
				reporting year.
Зс	Recovery of salable/usable	Iron- 60750.00 tons	Iron - 2508.78 tons	The lessee has
	mineral from ROM production	Mn 9256.00 tons	Mn 480.00 tons	carried out the
	•			development
				well within the
				proposed area
				and could not
				achieved the
				proposed target
				due to grade
				constraint and
				less demand of
				low grade
				minerals in the
				market. Hence
				the production
				and development
				is less against
				is less against 4

				the proposal during the
3d	Quantity of mineral reject	Iron – 44955.00	Iron – 30851.22T	reporting year. The lessee has
	generation	Manganese –4094 T	Manganese –0.00T	carried out the development well within the proposed area and could not achieved the proposed target due to grade constraint and less demand of low grade minerals in the market. Hence the production and development is less against the proposal during the reporting year.
3e	Grade of mineral reject generation and threshold value declared	Mn- Mineral reject is 10%-25% Mn & threshold value is 10% of Mn content Fe- Mineral reject is 45-55% Fe & threshold value is 45% of Fe content.	Mn- Mineral reject is 10%-25% Mn & threshold value is 10% of Mn content Fe- Mineral reject is 45-55% Fe & threshold value is 45% of Fe content.	reporting year.
3f	Quantity of sub-grade mineral generation	Nil	Nil	
3g	Grade of sub-grade mineral generation	Nil	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual for manganese & mechanized methods are adopted for segregation of ROM of iron ore.	Manual for manganese & mechanized methods are adopted for segregation of ROM of iron ore.	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not proposed	No such analysis or beneficiation study carried out for sub- grade mineral and mineral reject by us.	
3j	Provision of drilling & blasting	Deep Hole drilling	Nonel type	

	in mineral benches	was proposed keeping depth 5.5 m, spacing up to 2.5m, burden 2m & blasting was proposed and few rock breakers will be used for hard Ore breaking.	detonator is used in the hole of depth 5-6 m with spacing 2.5m and burden 2m for blasting to control noise and for better fragmentation.	
3k	Provision of mining machineries in mineral benches	Deployment of mining machinery is proposed in mineral benches by Shovel Dumper Combination  ROM will be excavated and loaded in the 20T dumper by 0.9 m3 to 2.5 m3 excavators.	Deployment of mining machinery are being carried out in mineral benches by Shovel Dumper combination.  ROM is excavated and loaded in the 20T dumper by 0.9 m3 to 2.5 m3 excavators.	
31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes: 5 meter in manganese bench & 5 meter in iron bench	Yes: 5meter in manganese bench & 5 meter in iron bench	
3m	Total area covered	10.080 Ha.	9.930 Ha.	
3n	under excavation/pits  Ore to OB ratio for the pit/mine during the year	1: 3.9	1: 0.172	
30	Total area put in use under different heads at the end of year	Area under Mining: 10.080 Overburden/ Waste dumping: 5.200 Mineral Storage: 3.871 Infrastructure (Occupied by plants buildings & roads: 0.650 Reclaimed: 0.201	Area under Mining: 9.930 Overburden/ Waste dumping: 5.171 Mineral Storage: 3.871 Infrastructure (Occupied by plants buildings & roads: 0.650 Reclaimed: 0.201	

Зр	Production of ROM mineral	Iron Ore: (tons)	Iron Ore: (tons)	
	during last six-year period, as	2017-18:	2017-18: 9090.000	
	applicable	117600.000	2018-19: 4700.000	
		2018-19:	2019-20: 3000.000	
		125440.000	2020-21: 4000.000	
		2019-20:	2021-22: 7300.000	
		92655.000	2022-23:	
		2020-21:	33360.000	
		95918.000	Mn. Ore: (tons)	
		2021-22:	2017-18: Nil	
		100485.000	2018-19: Nil	
		2022-23:	2019-20: 360.000	
		105705.000	2020-21: 973.850	
		Mn. Ore: (tons)	2021-22: 310.000	
		2017-18: 5096.000	2022-23: 480.000	
		2018-19: 5642.000		
		2019-20:		
		10050.000		
		2020-21:		
		11025.000		
		2021-22:		
		12150.000		
		2022-23:		
		13350.000		
3q	General remarks of inspecting	The lessee has carrie	ed out the developmer	nt well within the
	officer on method of		uld not achieved the pr	
			nd less demand of low	
		_	production and dev	-
			ery less against the pr	•
		•	ever, a violation letter u	
			en issued vide dated	, ,
		lessee in this regard.	i i i i i i i i i i i i i i i i i i i	

### **Solid Waste Management-Dumping**

S.N.	Item	Proposals for, 2023-	Actual work during	Remark
		24	2023-24	
4a	Separate dumping of topsoil, OB	Separate dumping of	Separately dumping	
	& mineral reject (Rule 33, 37)	topsoil, OB &	of OB, & mineral	
		mineral reject was	reject done as per	
		proposed for the	proposal during the	
		reporting year.	reporting year FY	
			2023-24.	
4b	Location of topsoil, OB & mineral	OB-38E-139W, 5N-	OB- 38E-139W, 5N-	
	reject dumps	184S,	184S,	
		Mineral reject-123E-	Mineral reject-123E-	
		56W, 315N-276N	56W, 315N-276N	
4c	Number of dumps within lease	One	One	
	area and outside lease area			
4d	Location of dumps w.r.t. ultimate	OB-38E-139W, 5N-	OB- 38E-139W, 5N-	
	pit limit	184S	184S	
4e	Number of active & alive dumps	One active Dump	One active Dump	
4f	Number of dead dumps	Nil	Nil	

4g	Number of dumps stabilized	One Dump	One Dump is partly stabilized by 3000 m <sup>2</sup> coir matting.	
4h	Whether Retaining wall or garland drain all along dumps are there	Maintenance of existing retaining wall garland drains have been proposed. Maintenance of 575 mtr. retaining wall and 150 mtr. garland drain has been proposed in the reporting year.	Maintenance of existing retaining wall garland drains have been proposed.  Maintenance of 575 mtr. retaining wall and 150 mtr. garland drain has been carried out in the reporting year FY 2023-24.	
4i	Length of Retaining wall or garland drain all along dump	Maintenance of existing retaining wall garland drains have been proposed. Maintenance of 575 mtr. retaining wall and 150 mtr. garland drain has been proposed in the reporting year.	Maintenance of existing retaining wall garland drains have been proposed.  Maintenance of 575 mtr. retaining wall and 150 mtr. garland drain has been carried out in the reporting year FY 2023-24.	
4j	Number of settling ponds	Nil	Nil	
4k	Specific comments of inspecting officer on waste dump management	partially within the p to achieve the propo- grade constraint and the market. The lessee 575mtr of retaining proposal of 150mtr during the reporting	d out the development and production or oposal but the lessee could not ablus all during the reporting year due to less demand of low grade minerals is the has carried out maintenance of about wall and garland drains against of retaining wall and garland drain year. However, a violation letter under 2017 has been issued vide date the entities of the country of the	le to in ut a is

## **Solid Waste Management-Backfilling**

S.N.	Item	Proposals for,	Actual work during	Remark
		2023-24	2023-24	
5a	Status on part or full extraction of	Not proposed	Nil	
	mineral from mined out area before			
	starting backfilling			
5b	Area under backfilling of mined out	Not proposed	Nil	
	area			
5c	Concurrent use of topsoil for	Not proposed	Nil	
	restoration or rehabilitation of			
	mined out area (Rule 36)			
5d	Total area fully reclaimed &	Not proposed	Nil	
	rehabilitated			

5e	General remarks of inspecting officer on backfilling, reclamation etc	There was no such proposal for backfilling of waste material during the reporting year. Only proposal for waste dumping and its protective measures during the reporting year. Lessee has carried out Solid Waste Management as per the proposal in the approved document during FY 2023-24.
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## **Progressive Mine Closure Plan**

S. N.	Item	Proposals for, 2023-24	Actual work	Remark
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2).	As per Rule 26(2) Annual PMCP report to be submitted before 1st day of July of Every Year.	during 2023-24  The lessee has submitted Annual PMCP report as per Rule 26(2) of MCDR 2017 within the stipulated period during the reporting year FY 2023-24.	
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	i. Nil ii. Nil iii. Nil iv. Nil v. Nil vi. Nil	i. Nil ii. Nil iii. Nil iv. Nil v. Nil vi. Nil	
6c 6d	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	i. Nil. ii. Nil iii. Nil iv. Nil v. Nil  i) 250 nos of saplings ii) Area: 0.10 Ha. iii) Plantation with 85 % survival	i. Nil ii. Nil iii. Nil iv. Nil v. Nil  i) 750 nos of saplings during reporting year and cumulatively 48050 sapplings ii) Area: 0.25 Ha. iii) Plantation with 80 % survival	
6e	Compliance of Environmental	Environmental	Environmental	

	monitoring (core zone & buffer	monitoring in Core	monitoring in Core
	zone)	zone and buffer	zone and buffer
		zone will be as per	zone were carried
		MOEFCC and	out as per
		SPCB guidelines.	MOEFCC and
			SPCB guidelines
			during the
			reporting year FY
			2023-24.
6f	General remarks of inspecting officer on PMCP compliance & progressive closure operations	monitoring as per the lessee has carried of 0.25 Ha. @ 80% of 2023-24. There is swaste material dur	rried out afforestation and environmental he proposal during the reporting year. The out plantation of 750 nos of saplings over survival rate during the reporting year FY such proposal for backfilling of generated ing the reporting year. PMCP proposals lessee are more or less in order w.r.o. the

#### **Mineral Conservation**

	Item	Proposals for,	Actual work during	Remark
S.N.		2023-24	2023-24	
7a	ROM Mineral dispatch or	Manganese Ore:	Manganese Ore:	
	grade-wise sorting within	Saleable Ore: +25	Saleable Ore: +25 %	
	lease area	% Mn,	Mn,	
		Mineral Reject:-	Mineral Reject:- +10	
		+10	to 25% Mn	
		to 25% Mn	<u>Iron Ore:</u>	
		<u>Iron Ore:</u>	Saleable Ore: +54 %	
		Saleable Ore: +54	Fe,	
		% Fe,	Mineral Reject:- +45	
		Mineral Reject:-	to 54% Fe are being	
		+45	carried out.	
		to 54% Fe were		
		proposed.		
7b	Method of grade-wise	Both manual &	Both manual &	
	mineral sorting i.e. manual or	Mechanize	Mechanize is adopted	
	mechanical		for sorting.	
7c	Different grade of mineral	Manganese Ore:	Manganese Ore:	
	sorted out at mines	Saleable Ore: +25	Saleable Ore: +25 %	
		% Mn,	Mn,	
		Mineral Reject:-	Mineral Reject:- +10	
		+10	to 25% Mn	
		to 25% Mn	<u>Iron Ore:</u>	
		<u>Iron Ore:</u>	Saleable Ore: +54 %	
		Saleable Ore: +54	Fe,	
		% Fe,	Mineral Reject:- +45	
		Mineral Reject:-	to 54% Fe are being	
		+45	carried out.	
		to 54% Fe were		
		proposed.		
7d	Any beneficiation process at	Nil	Nil	No Such
	mines			proposal

		during the
		reporting year.
7e	General remarks of	Manganese Ore: Saleable Ore: +25 % Mn, Mineral Reject:-
	inspecting officer on Mineral	+10 to 25% Mn
	conservation & beneficiation	Iron Ore: Saleable Ore: +54 % Fe, Mineral Reject:- +45 to
	issues	54% Fe are being practised. Further no beneficiation process
		was proposed during the reporting year.

#### Environment

Environ	ment			
S.N.	Item	Proposals for, 2023-24	Actual work during 2023-24	Remark
8a	Separate removal and utilization of topsoil (Rule 36)	No such proposal for the reporting year.	Incidental occurrence of very small amount of clay soil have been generated and concurrently utilized for plantation purpose till the date of inspection during the reporting year.	
8b	Concurrent use or storage of topsoil	No such proposal for the reporting year.	Incidental occurrence of very small amount of clay soil have been generated and concurrently utilized for plantation purpose till the date of inspection during the reporting year.	As the ML area is totally degraded because of different mining activity and no vegetated (Forest) land is currently present within ML area, so there is no chance of regeneration of top soil. So no use or storage of top soil at mine site.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 37)	Separate dumps for overburden and mineral reject stacks, waste rocks are proposed.	Separate dumps for overburden and mineral reject stacks, waste rocks are maintained.	mine site.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	
8e	Phased restoration,	No proposal	Nil	

	reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)			
8f	Baseline information on existence of plantation & additional Plantation done	About 250 nos of saplings over 0.10 Ha. area were proposed to be planted d @ with 90% survival rate.	About 750 nos of saplings over 0.25 Ha. area were planted @ with 80 % survival rate during reporting year and cumulatively 48050 saplings were planted within the lease area.	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling by water tanker over haul roads has been carried out during the reporting year.	Water sprinkling by water tanker and mobile water sprinklers over haul roads has been carried out by using 2 nos of water tankers during the reporting year.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The lessee has planted 750 no of saplings over 0.25 with a survival rate of 80 % & cumulatively 48050 sapl		saplings y water pads to ve dust

## **Compliance of Rule 45**

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		present during the inspection.		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under Mining: 9.930  Overburden/ Waste dumping: 5.171  Mineral Storage: 3.871  Infrastructure (Occupied by plants buildings & roads: 0.650  Reclaimed: 0.201	Area under Mining: 9.930  Overburden/ Waste dumping: 5.171  Mineral Storage: 3.871  Infrastructure (Occupied by plants buildings & roads: 0.650  Reclaimed: 0.201	
9d	Scrutiny of Annual return on afforestation	About 750 nos of saplings over 0.25 Ha. area were planted @ with 80 % survival rate during reporting year and cumulatively 48050 saplings were planted within the lease area.	About 750 nos of saplings over 0.25 Ha. area were planted @ with 80 % survival rate during reporting year and cumulatively 48050 saplings were planted within the lease area.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Manganese Ore: Saleable Ore: +25 % Mn, Mineral Reject:- +10 to 25% Mn  Iron Ore: Saleable Ore: +54 % Fe, Mineral Reject:- +45 to 54% Fe are being practised.	Manganese Ore: Saleable Ore: +25 % Mn, Mineral Reject:- +10 to 25% Mn  Iron Ore: Saleable Ore: +54 % Fe, Mineral Reject:- +45 to 54% Fe are being practised.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Manganese Ore: Opening Stock: Nil Production: 480.000 tons Closing Stock: Nil Iron Ore: Opening Stock: Nil Production: 33360.000 tons	Manganese Ore: Opening Stock: Nil Production: 480.000 tons Closing Stock: Nil Iron Ore: Opening Stock: Nil Production: 33360.000 tons Closing Stock: Nil	

		Closing Stock : Nil		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Cost of production Rs. 3025.28/- furnished in submitted Annul Return for FY 2023-24.	Cost of production Rs. 3025.28/- furnished in submitted Annul Return for FY 2023-24.	
9i	Scrutiny of Annual return on fixed assets	Fixed Asset: Rs.286716/-, furnished in the annual return of the reporting year.	Fixed Asset: Rs. 286716/-, furnished in the annual return of the reporting year.	286716
9k	Scrutiny of Annual return on mining machineries	BACK HOE 0.900 CUM 1 Non Electrical Opencast  ROCK DRILL (NON-ELEC.) 100.000 MM 1 Non Electrical Opencast  AIR COMPRESSOR 6.000 CUM/MN 1 Non Electrical Opencast  DUMPER 10.000 TONNE 4 Non Electrical Opencast  WATER TANKER 8000.000 LITRE 1 Non Electrical Opencast	BACK HOE 0.900 CUM 1 Non Electrical Opencast  ROCK DRILL (NON- ELEC.) 100.000 MM 1 Non Electrical Opencast  AIR COMPRESSOR 6.000 CUM/MN 1 Non Electrical Opencast  DUMPER 10.000 TONNE 4 Non Electrical Opencast  WATER TANKER 8000.000 LITRE 1 Non Electrical Opencast	