



GUJARAT INDUSTRIES POWER COMPANY LIMITED

(SURAT LIGNITE POWER PLANT)

At. Nani Naroli, Ta. Mangrol, Dist. Surat - 394 110

Phone : EPABX (02629) 261063 to 261072 Fax : (02629) 261073/74 E-mail : genslpp@gipcl.com

SLPP/ Mangrol-Valia Mines/Env Compliance/2019/1468

Date 15/05/2019

Speed Post

To
The Regional Director
Ministry of environment and forest
Regional Office, Western Region
Kendriya Paryavaran Bhavan
Link road No: 3,
E-5, Ravi Shankar Nagar
Bhopal-462016

Sub: Report of digital processing of the entire lease area using remote sensing techniques and **Compliance report of Environment clearance.**

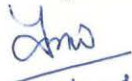
Ref: MoEF Environment clearance No: J-11015/38/99-IA-11 (M)- Dated 21/07/2003.

Dear Sir,

As per specific condition no: xii) of above referred Environment clearance accorded, we have carried out the digital processing of the entire lease area using remote sensing technique through the Regional Remote Sensing Centre (RRSC) – West, Jodhpur for monitoring Land use pattern of Mangrol-Valia Mine and adjoining areas and **Compliance report of Environment clearance for the period from July 18 to Dec 2018.**

The Reports are attached herewith for your kind information, please.

Thanking You
For Gujarat industries power Co ltd.


16/05/19.

Prakash Chand
AGM (Mines)
Valia Mine

Encl; as stated.

Registered Office & Vadodara Plant :
P.O.Petrochemical, Dist. Vadodara 391 346 Gujarat - INDIA



Phone : EPABX (0265) 2232768/2213/0159
Fax : 2231207 **E-mail :** genbaroda@gipcl.com

Website : www.gipcl.com
CIN No.: L99999GJ1985PLC007868

A MINE AS PER APPROVED MINING PLAN FOR 4.2 MTPA

Ref: - MoEF New Delhi Environment clearance No. -J-11015/38/33-IA.II (M) Dtd 21/07/2003

Sr.No	Condition	Compliance Status
SPECIFIC CONDITION AS PER MOEF		
i	Top Soil Should be stacked properly with proper slope at earmarked site (s) with adequate measure and should be used for reclamation and rehabilitation of mined out area.	Top soil comprises of black cotton soil and being stacked separately with proper slope with adequate measure. Separate dump area is earmarked.
ii	OB dumps of 204 ha in Mangrol Block and 107 ha of Valia Block would be made. OB should be stacked at earmarked dumpsite only. The total height of the dumps should not exceed 50 m in two stages of 25 m each. The overall slope should not exceed 28 degree. A stone masonry retaining wall will be constructed along the toe of the dump. Concurrent backfilling should be start from the 6 th year. Monitoring and Management of rehabilitated areas should be submitted to the Ministry of Environment & Forest and its Regional office located at Bhopal on years basis.	<ul style="list-style-type: none"> • In Mangrol block the overburden dumping has been done on the non mineral bearing area. The Overburden dump outside will be used for filling the void created during the mining of lignite as per approved mine plan in due course. The height of the dump is max 47 meters from the ground level & the overall slope is 16 degree. Retaining wall has been prepared all along the toe of the external dump by using stones. • Whereas in Valia block Overburden has been dumped on the mineral bearing area, which will be rehandled and will be used for backfilling the void created during mining in due course of time, as per approved mining plan. The height of the dump is max 32 meters from ground level & overall slope is 16 degree.
iii	<p>Catch drains and siltation ponds appropriate site should be constructed to arrest silt and sediment flows from soil. OB and minerals dumps. The water so collected should be utilized for watering the mine area, roads green belt development, etc. The drains should be regularly desilted and maintained properly.</p> <p>Garland drains (size, gradient & length) and sump capacity should be designed keeping 50 % safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mines site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.</p>	<p>In Mangrol Block Catch Drain of around 4500 mtrs length x 4 mtr wide & siltation ponds (4 Nos. , each of size 30 x 70 x 3.5 m3) and in Valia Block suitable drains along with 3 nos of siltation ponds admeasuring around 30X20X3 m3 have been constructed so as not to allow flow of debris, silt & sediment into the drainage channels. Collected water is used for plantation & water sprinkling.</p> <p>Garland Drain has been constructed for mine pit waste dumps which are de-silted and properly maintained.</p> <p>The dimensions of Garland drain suitable size has been constructed in and around the quarry area and the external dump with proper gradient to prevent the rain water decent into the active mine area.</p> <p>Sump capacity in Mangrol block 325000 M3 and in Valia block 250000 M3 has been designed considering Maximum rainfall and catchment area.</p>
iv	Dimension of retaining wall at the toe of dumps and OB benches the mine to toe check runoff and siltation should be based on the rainfall data.	The suitable retaining wall by using stones has been made considering the rainfall data.

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v	All efforts should be made by the project proponent to exclude acquisition of 25 Ha of grazing land, if not found feasible, extra land should be acquired in non mineralized area for development of an alternate grazing ground.	Suitable alternate land will be provided for development of an alternate grazing land.
vi	A detailed mine commissioning plan should be submitted to the Ministry of Environment & forest 5 years in advance of approval.	Mining Plan approved by Ministry of coal has been submitted.
vii	A Green belt of adequate width should be raised for suppression of dust by planting the native plant species around ML area, along ML boundary, roads, OB dumps sites, etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per ha. At the end of 20 th year, plantation should cover <ul style="list-style-type: none"> a) Backed fill area – 1038.16 Ha b) External OB dumps – 311 Ha c) 50 Ha of topsoil dump, and 328.84 Ha green belt. 	We are implementing the program of plantation through M/s DEEP Trust (an NGO promoted by GIPCL.) Till date, in Mangrol block, 47591 trees have been planted in 27.5 Hec area where as in Valia Block, 153509 trees have been planted in 95.5 hec area. Thus, total greenbelt development on 123.4 Hectares of peripheral mining lease area comprising of 201100 no. trees have been developed. (annexure-I)
viii	Regular Monitoring of Ground water level & quality should be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring should be done four times a year in pre – monsoon (may), Monsoon (August) post – monsoon (November) and winter (January) season. Data thus collected should be submitted to the Ministry of Environment and Forests and the Central Ground Water Board Ahmadabad quarterly within 1 month monitoring.	Ground water level monitoring is being carried out through piezometer installed in Mangrol Valia block. Ground water quality monitoring is being carried out by M/s Eco system Environment. (annexure –II)
ix	Project authorities should furnish ground water resource estimation either block or buffer zone wise and also assess impact on ground water regime accordingly and submit report Ground water resources estimation report submitted MOEF CGWA, Delhi, within six months.	M/s M.G. Science institute Ahmadabad, carried out the initial survey of Ground water level and has submitted their report.
x	The project authorities should meet water requirement of nearby village(s) in case the villages wells go dry due to dewatering of the mine.	Till date there is no case of wells going dry in the nearby villages, due to mining activities. In future if this happens, we will meet the water requirement of the nearby villages.
xi	Sewage Treatment Plant should be installed for the colony. ETP should also be provided for workshop and CHP wastewater.	STP is installed in the colony (common for plants & Mines). The STP is used for Plantation.
xii	Digital processing of the entire lease area using remote sensing techniques should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and its Regional Office Bhopal.	Digital processing of the entire lease area using remote sensing techniques through Regional Remote Sensing Center west, Jodhapur has been carried out. The report has been enclosed herewith. (Annexure-III)
xiii	Efforts will be made to exclude acquisitions of 25 ha Grazing Land. If Found feasible extra land will be acquired in non –mineralized area for development of an alternate grazing land.	Suitable alternate land will be provided for development of an alternate grazing land.

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B. GENERAL CONDITION AS PER MOEF		
i	No change in mining technology and Scope of working should be made without prior approval of the Ministry of Environment and Forests.	In case of any change, we will intimate and take necessary approval from MOEF.
ii	No change in the calendar plan including excavation, quantum of mineral, coal and waste should be made.	Will be done as per approved Mining Plan.
iii	Four Ambient air quality monitoring station should be establish I the core zone as well as in the buffer zone for RPM, SPM, SO ₂ , NO _x and CO monitoring. Location of the station should be decided based on the meteorological data, topographical feature and ecology sensivity targets in consultation with the Gujarat State Pollution Control Board.	Complied Regular air quality monitoring is being carried out by M/s Ecochem, Surat as per the guidelines of GPCB.
iv	Data on ambient air quality (RPM, SPM, SO ₂ , NO _x and CO) should be regularly submitted to the Ministry including its Regional Office at Bhopal and the Gujarat State Pollution Control Board and the Central Pollution Control/ Board.	The data on the ambient air quality is regularly submitted to the Regional office MOEF, Bhopal & the Gujarat State Pollution Control Board.
v	Drill Should be wet operated or with dust extractors and controlled Blasting Should be practiced.	Drilling & Blasting is not practiced at our mine & hence the condition is not applicable.
vi	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading dump trucks (loading & unloading) points should be provided and properly maintained.	Dust emission at the faces, haulroads & loading/unloading points are controlled by the effective water sprinkling system. We uses total 4 Nos of water sprinklers capacity ranging from 12 KL to 20 KL. The dust emission is regularly monitored by portal to portal & static monitoring system & the record is maintained properly.
vii	Adequate measure should be taken for control of noise level below 85 dBA in the work environment. Workers engaged in blasting and drilling operation, operations of HEMM, etc Should be provided with ear plug/muffs.	Adequate measure have been taken to control the work noise level within stipulated limit Some of the measure are- <ul style="list-style-type: none"> • Mining equipment is provided with Noise proof cabins. • Regular maintenance of noise generating machinery. • Development of green belt along the roads. Workmen engaged in HEMM operation are provided with ear plugs/muffs.
viii	Industrial waste (workshop & waste water from the mine) should be properly collected, treated so as to confirm to the standard prescribe under GSR 422 (E) dated 19 th May 1933 and 31 st December 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	No waste from the mine is discharged outside. Used oil quantity to the tune of 1200 ltr/ annum and discarded container quantity of 06 nos given to the registered refiners/ recyclers (Annexure – IV)
ix	Vehicular emissions should be kept under control and regularly monitored.	All vehicles in the mine have been checked and pollution under control Certificates has been taken by Govt authorized Vendor.
x	Acid mine water, if any, has to be treated and disposed of after conforming to the standard prescribe by the competent authority.	No mine water has been allowed to become acidic. However if so needed water will be treated to keep it under prescribed limit of the GPCB.

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xi	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the Gujarat State Pollution Control Board.	Environmental laboratory has been established having following pollution monitoring & analysis equipments. a) Noise level monitoring dozemeter b) Digital lux meter c) High volume Dust sampler d) PDS (CIP – 10) e) Weight Balance (L.C. – 1mg) etc.
xii	Person working in dusty areas should wear protective respiratory devises and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillane program of the worker should be under taken periodically to observe any contraction due to exposure to dust and take corrective measure if needed.	Dust mask has been provided to all workmen working in the dusty areas and the necessary training has been imparted at our Vocational training center. For periodical Occupational health check up in connection to dust related disease, Occupational health survillane programme is under taken periodically as per the Mines rule – 1955. The sample medical report has been enclosed herewith. (Annexure-V)
xiii	A separate Environmental Management Cell with suitable qualified personnel should be set up under the controller of Senior Executive, who will report directly to the Head of the company.	Environment Management cell has been set up.
xiv	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other propose. Year –wise expenditure should be reported to the Ministry and its Regional Office located at Bhopal.	Separate financial provisions for environmental protection allocated in every year's annual budget. The year wise expenditure is also reported to the MOEF Regional office, Bhopal vide our half yearly report.

Prakash Chand
16/05/19

Prakash Chand
Addl. General Manager (mines)
Valia Lignite Opencast Mine
Surat Lignite Power Plant,
Gujarat Industries Power Company Ltd,
P.O- Nani Naroli, Taluka- Mangrol,
Dist- Surat, - 394110
Gujarat.



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BY RPAD

SLPP/Mangrol- Valia Mine/ENV. Return/ 381

24th Feb 2019

To,
Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (WZ),
E-5, Kendriya Paryavaran Bhawan,
E-5 Arera Colony, Link Road-3,
Ravishankar Nagar,
Bhopal - 462016, (MP)

Sub :-	Report of monitoring the implementation of environmental safeguards in data sheet, Part - I in respect of Mangrol-Valia Lignite Mines, of M/s Gujarat Industries Power Company Ltd, for the period from July. To Dec - 2018.
Ref :-	1. Environmental Clearance accorded vide letter no J-11015/38/99-IA. II (M) dated 21st July 2003.

Dear Sir,

Please find enclosed the report, in data sheet Part - I, monitoring of the implementation of environmental safeguards in respect of Mangrol-Valia Lignite Mines, M/s Gujarat Industries Power Company Ltd, for the period from **July -Aug. -2018.**

This is for your kind information.

Thanking you,

Yours faithfully,
For, Gujarat Industries Power Co. Ltd.

Prakash Chand
05/02/2019
Prakash Chand

Addl. General Manager (Mines)
Mangrol-Valia Lignite mine
Surat Lignite Power Plant
P.O. - Nani Naroli, Taluka- Mangrol.
Dist. - Surat, 394110

Encl :-	1. Data Sheet Part - I along with Piezometer Reading.
	2. Six Monthly Environmental Monitoring & Analysis Report for the period of July -Dec. 2018.
cc :-	Regional Officer, Surat R.O. Gujarat Pollution Control Board, 338, Belgium square, Opp. Linear Bus Stand, Surat.
	Regional Officer, Ankleshwar R.O. Gujarat Pollution Control Board, Plot No-1501, GIDC Estate, Above ARAIL Ltd, Ankleshwar,

Registered Office & Vadodara Plant :
P.O. Petrochemical, Dist. Vadodara 391 346 Gujarat - INDIA

AN IMS
COMPANY

Phone : EPABX (0265) 2232768/2213/0159
Fax : 2231207 E-mail : genbaroda@gipcl.com

Website : www.gipcl.com

GIN No. : 10000001005010007288



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BY RPAD

SLPP/Mangrol- Valia Mine/ENV. Return/ **382**

14th Feb 2019

To,
Regional Officer, Surat RO
Gujarat Pollution Control Board,
338, Belgium square,
Opp. Linear Bus Stand, Surat.

Sub :-	Report of monitoring the implementation of environmental safeguards in data sheet, Part - I in respect of Mangrol-Valia Lignite Mines, of M/s Gujarat Industries Power Company Ltd, for the period from <u>July. To Dec - 2018.</u>
Ref :-	1. Environmental Clearance accorded vide letter no J-11015/38/99-IA. II (M) dated 21st July 2003.

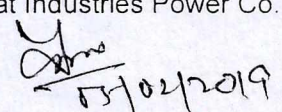
Dear Sir,

Please find enclosed the report, in data sheet Part - I, and monitoring of the implementation of environmental safeguards in respect of Mangrol-Valia Lignite Mines, M/s Gujarat Industries Power Company Ltd, for the period from July. To Dec - 2018.

This is for your kind information.

Thanking you,

Yours faithfully,
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Prakash Chand

Addl. General Manager (Mines)
Mangrol-Valia Lignite mine
Surat Lignite Power Plant
P.O. - Nani Naroli, Taluka- Mangrol.
Dist. - Surat, 394110

Encl :-	1. Data Sheet Part - I. along with Piezometer Reading.
	2. Six Monthly Environmental Monitoring & Analysis Report for the period of <u>July. To Dec - 2018</u>

Registered Office & Vadodara Plant :
P.O.Petrochemical, Dist. Vadodara 391 346 Gujarat - INDIA

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CIN No. : L99999GJ1985PLC007262



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BY RPAD

SLPP/Mangrol- Valia Mine/ENV. Return/ 382

14th Feb 2019

To,
Regional Officer,
Ankleshwar R.O. Gujarat Pollution Control Board,
Plot No-1501, GIDC Estate, Above ARAIL Ltd
Ankleshwar.

Sub :-	Report of monitoring the implementation of environmental safeguards in data sheet, Part – I in respect of Mangrol-Valia Lignite Mines, of M/s Gujarat Industries Power Company Ltd, for the period from July. To Dec - 2018.
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This is for your kind information.

Thanking you,

Yours faithfully,
For, Gujarat Industries Power Co. Ltd.


14/02/2019
Prakash Chand

Addl. General Manager (Mines)
Mangrol-Valia Lignite mine
Surat Lignite Power Plant
P.O. - Nani Naroli, Taluka- Mangrol
Dist. - Surat, 394110

Encl :-	1.	Data Sheet Part – I. along with Piezometer Reading.
	2.	Six Monthly Environmental Monitoring & Analysis Report for the period of July. To Dec - 2018.

Registered Office & Vadodara Plant :
P.O.Petrochemical, Dist. Vadodara 391 346 Gujarat - INDIA

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COMPANY

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Fax : 2231207 E-mail : genbaroda@gipcl.com

Website : www.gipcl.com

CIN No : L99900G11085210007268

MONITORING THE IMPLEMENTATION OF ENVIRONMENTAL SAFEGUARDS
MINISTRY OF ENVIRONMENT AND FOREST (MOEF)
REGIONAL OFFICE (W), BHOPAL
MONITORING REPORT
PART - I
DATA SHEET

No.		
1	Project type: River/valley/Mining/Industry/ thermal/ nuclear/other /specify	: Mining
2	Name of the project	: Mangrol - Valia Lignite Mine
3	Clearance letter (s) OM no. and date	: Environmental Clearance accorded vide Letter no. J-11015/38/99-IA. II (M) dated 21st July 2003
4	a) District	: Surat
	b) State	: Gujarat
	c) Latitude/Longitude	: Latitude- 21 ^o 25' to 21 ^o 31' Longitude: 73 ^o 06' to 73 ^o 09'
5	Address for correspondence	
	a) Address of concerned Project Chief with pin code and Telephone/Telex/Fax No.	: Sri N.K.Purohit Chief General manager (Mines) Mangrol Lignite Opencast Mine Surat Lignite Power Plant Village: Nani Naroli, Tal: Mangrol, Dist.: Surat – 394 110 Phone: 02629-261087 Fax: 02629-261112
	b) Address of concerned Engineer with pin code and telephone/Telex/Fax No.	: Shri P.C.Goyal, Additional General Manager (Mines) Valia Lignite Opencast Mine Surat Lignite Power Plant Village: Nani Naroli, Taluka: Mangrol, Dist.: Surat – 394 110. Phone –(M) 9978937702 Fax: 02629-261112
6	Salient Features	
	a) of the project	: This mining project is linked to Surat Lignite Power Plant under the same management to supply lignite as fuel for captive 4 X 125 MW Power Plant.
	b) of Environmental Management Plan	: I. Greenbelt development on 25.5+2.4 Ha of peripheral mining lease area comprising of 44191+3400 no trees has been developed till date. II. Greenbelt development on 95.50 Ha of peripheral mining lease boundary around Valia Pit comprising of 153509 no trees has been developed till date. III. Plantation of Waste dump: Plantation activity on plane & sloping surface of the waste dump was carried out since the beginning of the mining activities. This was planned for dump stability & also to curb the run-off of loose soil from the external Overburden Dumps. IV. A brief endeavor of the work done is given in Annexure – I.

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	c) of Environmental Management Plan	:	a) Environmental monitoring for SPM, NOx, SOx, CO emission are being carried out as per the condition of Environmental Clearance vide letter no. J-11015/38/99-IA. II (M) dated 21st July 2003. The detail environmental monitoring report is enclosed herewith
7	Break up of the project area a) Submergence area: Forest & Non forest b) Others	:	There is no forest land in and around of this project.
8	Break up of project affected population with enumeration of those losing houses/dwelling units only, agriculture land only, both dwelling unit and agricultural land. a) Scheduled Cast b) Scheduled Tribe c) Others Please indicate whether these figures are based on any systematic survey carried out or only provisional figures. If any survey is carried out give details and year of survey.	:	The most of the mining lease land was previously used for agricultural purpose. There were no dwelling units/ houses previously existing in such area.
9	Financial Details a) Project cost as originally planned and subsequent revised estimates and the year of price reference. b) Allocation made of environmental Management Plan with item wise & year wise break up. c) Benefit cost ratio/internal rate of return and the year of assessment. d) Whether (c) includes the cost environment management as shown in the above. e) Actual Expenditure incurred so far on the project. f) Actual expenditure incurred on EMP so far in 2018	:	Project cost is 325 Crores based on price reference of the year 2009. The details are provided in Annexure – II with this data sheet. Rate of return for the Mangrol- Valia Mining Project is @9.42 % for the year 2017-18. Environmental Management cost included. 325.00 Crores 1221.8 Lacs for Green belt development & maintenance, Dump plantation & maintenance, preparation & cleaning of silting ponds, catch drains, garland drains, Environmental Monitoring instruments, dust suppression measures, remote sensing imaginaries, Groundwater quality monitoring. A brief endeavor of the work done is given in Annexure – II.
10	Forest Land requirement a) The status of approval for diversion of forestland for non-forestry use. b) The Status of clear felling c) The status of compensatory aforestation, if any d) Comments on viability and sustainability of compensatory aforestation program in the light of actual field experience so far.	:	NA NA NA NA

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11	The experience of clear felling in non forest area (Such as submergence area of reservoir, approach road) if any with quantitative information.	:	Area where active mining work is in progress contains no such vegetation and there are no such cases of clear felling.
12	Status of construction a) Date of commencement (actual or planned) b) Date of completion (Actual/Planned)	:	22.05.2010 (Actual) for Mangrol Pit and 25.10.2012 for Valia Pit of Mangrol- Valia Lignite Mine. Project is planned for 30 years.
13	Reason for delay if the project is yet to start	:	NA
14	Dates of site visits a) The dates on which the project was monitored by Regional Office on previous occasion if any, b) Dates of site visit for this monitoring	:	----- -----
15	The monitoring report may contain the details of all the letters issued so far (vide the letters as mentioned)	:	• Environmental Clearance accorded vide Letter no. J-11015/38/99-IA. II (M) dated 21st July 2003.

P.C. Goyal
05/02/2019

P.C.Goyal
Addl. General Manager (Mines)

ANNEXURE -1

PLANTATION ACTIVITY FROM 2011 TO DEC. - 2018

S.No.	Year	Code	Location	Area (Ha)	No. of trees
(A) Peripheral green belt development					
1	Fro m	GBD-MA	Both side of alternative Shah Road & Lignite Transport Road & Outplant stockyard	11.0	16410
2	Year	GBD-MB	Both side of Lignite Transport Road	9.5	15344
3	2012	GBD-MC	Lease Boundary of Mangrol Pit	5.0	12437
4	to	GBD-MD	Lease Boundary of Mangrol Pit	2.4	3400
	June	GBD-VA	Lease Boundary around Valia Pit	95.5	153509
	2018				
TOTAL(A)				121.0+2.4	197700+3400
(B) Dump Plantation					
1	2011	---	External dump(Mangrol)	5	8000
(C) Seed Spraying					
1	2012	----	External dump	02.0	100 Kg
2	2013	----	Vastan north pit dump	05.0	200 Kg
3	2014	----	Along periphery of Mangrol Mine	08.0	100 Kg
			Along OB dump benches of Valia Mine	05.0	05 Kg
4	2015	----	Along periphery of Mangrol Mine	-	-
			Along OB dump benches of Valia Mine	-	-
5	2018	-		-	-

P.C. Goyal
05/02/2019

P.C. Goyal
Addl. General Manager (Mines)

ANNEXURE - II

**Sub: Expenditure made for the Environmental Management Plan & Environmental Impact Assessment (EMP & EIA)
With item wise & year wise break-up. (All figures are in Lac Rs.)**

Year →	2015	2016	2017	2018 (Jan. - Dec)
Item ↓	Particulars of the activities			
Development of Peripheral Green Belt.	17.95	6.05	-----	-----
Maintenance & protection of Greenbelt	31.7	20.34	-----	-----
Dump plantation & maintenance	3.7	0.96	-----	-----
	Plantation through seeding at External Dump			
Preparation , cleaning of settling pond, catch drains, Garland drains etc	32.65	6.90	26.4	12.39
Monitoring of Environmental parameter	3.46	4.22	2.81	2.47
Dust suppression measures in mines	137.7	81.0	67.5	56.6
Remote sensing Imageries of the region.	1.90	-	-----	3.26
Ground Water quality monitoring	1.98	0.67	-----	0.65
Total....	231.04	120.14	96.71	75.37
Cumulative Total (From 2015 to 2018 (Jan. to June)	884.21	1004.35	1101.06	1221.8

Addl. General Manager (Valia Mine)

Prakash Chand

Prakash Chand
15/10/2019