



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/Jan-June *2335* Date 22/07/2019

RPAD

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: Submission Compliance report of Environment clearance for half-yearly

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

Dear Sir,

As per Environment clearance accorded, we are submitting Compliance report of Environment clearance for the period from **Jan-19 to June -19**.

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

Thanking You

For Gujarat industries power Co ltd.

Prakash Chand
22/07/19.
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



COMPLIANCE REPORT OF MANGROL – VALIA 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 3Nos. of siltation ponds and measuring 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.

M

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 ground before acquiring the 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 Ha area where as in Valia Block, 153509 trees have been planted in 95.5 Ha 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.	We have carried out Digital processing of the entire lease area using remote sensing techniques through Regional Remote Sensing Center west, Jodhpur to collect the Base line in data in June 2018 and will be submitted to the regional office MOEF Bhopal after getting report. The Land use pattern is monitored using remote sensing regularly once in 3 years & the report submitted to the Regional office MOEF, Bhopal.
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 the grazing land.

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 Ecosystem Resource Management , 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.

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 dozometer b) Digital lux meter c) High volume Dust sampler d) PDS (CIP – 10) e) Weight Balance (L.C. – mg) 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 surveillence 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, our occupational Health Center is equipped with 300 mA X -Ray machine, Spirometry and other equipment. Occupational health survillence programme is under taken periodically as per the Mines rule - 1955 (Annexure-VI)
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 annual budget the year wise expenditure is also reported to the MOEF Regional office, Bhopal vide our half yearly report.

Prakash Chand
22/07/19

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.

FORM - 4

[See Rule 5(6) and 22(2)]

Financial Year - 2017 - 18

Industry: Mangrol-Valia Lignite Mines of M/s Gujarat Industries Power Company Limited.

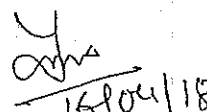
(GPCB ID - 29713)

FORM FOR FILLING ANNUAL RETURNS
BY THE OCCUPIER OR OPERATOR OF FACILITY

To be submitted by occupier/operator of disposal facility to state pollution control Board/pollution control committee by 30th June of every year for the preceding period April to March).

1	Name and address of the Generator of facility	: Mangrol-Valia Lignite Mine, Gujarat Industries Power Company Ltd. P.O- Nani Naroli, Taluka:- Mangrol, Dist:- Surat.394110			
2	Name and authorized person and full address with telephone and fax number	: Shri N.K.Purohit, C.G.M.(Mines) Gujarat Industries Power Company Ltd. P.O- Nani Naroli, Taluka:- Mangrol, Dist:- Surat.394110 Tel:- 02629-261087, Fax No- 02629-261112.			
	Description of hazardous waste	: Physical form with description		Chemical form	
		Waste/Used Oil in liquid form as a reject of the Hydraulic & lubricant oil used in Heavy Earth Moving Machinery deployed in Mines.			
4	Quantity of hazardous waste (in MTA)	: Type of hazardous waste		Quantity (In Tones/KL)	
		Waste/Used Oil in liquid form as a reject of the Hydraulic & lubricant oil used in Heavy Earth Moving Machinery deployed in Mines.		1.000 Te	
5	Description of storage	: Stored in closed Vessel/ Barrel.			
6	Description of treatment	: Sent to authorized recycler for disposal.			
7	Details of transportation	Name & address of consignee	Mode of packing	Mode of transportation	Date of transportation
		M/s S.R.LUBRICANTS Plot No- 22, Jaganath Maharaj Farm, Opp Sikandar Market, Danilimanda, Ahmedabad-28	Barrel	By Truck	01-12-2017 28-03-2018
3	Details of disposal of hazardous waste	Name & address of consignee	Mode of packing	Mode of transportation	Date of transportation
		As Above			
	Quantity of useful materials sent back to the manufacturer and others	: Name and type of materials sent back to			Quantity (In Tones/KL)
		Manufactures:-N/A			N/A
		Others:- N/A			N/A

Place: Mangrol-Valia
Date: 16-04-2018

Signature: 
Name: PRAKASH CHAND,
Designation: Addl. General Manager (Mines)



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

RPAD

SLPP/Mangrol-Valia Mine/ GPCB/Hazardous waste/ 1339

14th April 2018

To,

Environment Engineer (In Charge Surat Region)
Gujarat Pollution Control Board,
Paryawaran Bhavan, Sector-10 A,
Gandhinagar (Gujarat).-382043

Sub: Submission of Form -4 (Annual Return) in respect of Mangrol-Valia Lignite Opencast Mine, Surat region (GPCB ID-29713).

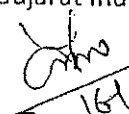
Dear Sir,

Kindly find enclosed herewith duly filled Form -4 (Annual Return), regarding disposal of hazardous waste of Mangrol-Valia Lignite Opencast Mine for the year 2017-18 duly signed by competent authority,

Hope you will find the statement in order.

Thanking you,

For, Gujarat Industries Power Company Limited (GIPCL)


16/04/18
PRAKASH CHAND

Addl. General Manager (Mines)

Encl: Form-4

: Hazardous Waste Disposal Statement

Cc: (1) Regional Officer, Surat R.O.

Gujarat Pollution Control Board,
338, Belgium square, Opp. Linear Bus Stand, Surat

(2) Regional Officer, Ankleswar R.O.

Gujarat Pollution Control Board,
Plot No-1501, GIDC Estate, Above ARAIL Ltd, Ankleswar.

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



Phone : EPABX (0265) 2232768/2213/015

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

Website : www.gipcl.com

Hazardous Waste Disposal Statements
QTY is in Metric Tonnes

Gujarat Pollution Control Board
Year : 2017 - 2018

Month	Year	Comman SLF/TSDF	Captive SLF/TSDF	Comman Incinerable	Captive Incinerable	Co-Processed / Co-Incineration	Qty Utilized	sent to Recyclers	Self Recycle/Reuse/Captive Utilization	To Other State	#Trucks
April	2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
June	2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
July	2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
August	2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
September	2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
October	2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
November	2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
December	2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
As Per Yearly Return	2016-2017	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500
January	2018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
February	2018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
March	2018	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000
		0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000

Authorised Signatory

Years Faithfully

29713-Mangrole Lignite Mine-Gujarat Industries Power Company Ltd.,

NANI NAROLI - 394110
 DIST : Surat, TAL : Mangrol, SIDC : Not In Gidc
 PHONE NO : 02629-261112

(Handwritten Signature)
 16/04/2018



FORM- O

(See Rule 29F (2), and 29L)

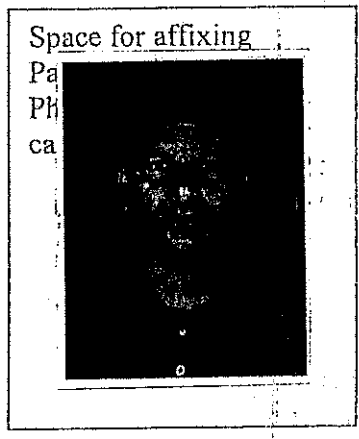
Report of medical examination under rule 29B

(The issued in triplicate)

Certificate No

Certified that Shri/Smt. Nikamsinh m. Raut.....employed as Dumper driver.....in Naliya mine.....mine, Form B No. 250.....has been examined for an initial/periodical medical examination. He/She appears to be 33.....years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri/Smt. Nikamsinh m. Raut.....

- a. is medically fit for any employment in mines.
 - b. is suffering from.....and is medically unfit for
 - (i) any employment in mine; or
 - (ii) any employment below ground; or
 - (iii) any employment or work.....
 - c. is suffering fromand should get this disability cuerd/controlled and should be again examined within a period of months. He/She will appear for re-examination with the result of test of.....and the opinion ofspecialist from
- He/She may be permitted/not permitted to carry on his duties during this period.



[Signature]
Signature of the examining authority
D. R. ASHOK PATEL
Name and designation in Block letters

Resident Medical Officer
GIFCL (SLPP)

Place:

Date:

FORM-O- Contd....

Report of the examining authority

(To be filled in for every medical examination whether initial or periodical or re - examination or after cure/control of disability)

Annexure to certificate No.....as a result of medical examination on.....

Identification mark.....



Left thumb impression of the candidate
Good/Fair/Poor

1. General development

2. Height.....163.....cms

3. Weight...59.....Kg

4. Eyes:

(i) visual acuity..... N 6/6 Distant vision (With and without glasses)
Right eye..... Left eye.....

(ii) any organic disease of eyes.

(iii) night blindness.

(iv) colour blindness.

(v) squint.

(to be tested in special case)

5. Ears:

(i) Hearing right ear..... N left ear..... N

(ii) any organic disease.

6. Respiratory system:

Chest measurement:

(i) after full inspiration.....95.....cms.

(ii) after full expiration.....90.....cms.

7. Circulatory system:

Blood Pressure: 122/80

Pulse: 80/min

8. Abdomen

Tenderness

Liver

Spleen

Tumour

NAD

**Report of Medical Examination as per the recommendation of National Safety
Conferences in Mines
(To be used in continuation with form O)**

Certificate No:

Name:

Identification Marks:

Nikam Singh M Rajput

1. Cardiological Assessment.

Auscultation	S1	<i>/ Normal</i>
	S2	
	Additional Sound	
Electrocardiograph (12 leads) findings:		Normal/Abnormal

Enclosed ECG

2. Neurological Assessment

Findings	Normal/Abnormal
Superficial Reflexes	<i>/ Normal</i>
Deep Reflexes	
Peripheral Circulation	
Vibrational Syndromes	

3. ILO Classification of Chest Radiograph:

Profusion of Pneumoconiotic	Grades	Types
Present/Absent		

Enclosed Chest Radiograph

4. Audiometry Findings:

Conduction Type	Left Ear	Right Ear
Ear Conduction	Normal/Abnormal	Normal/Abnormal
Bone Conduction	Normal/Abnormal	Normal/Abnormal

Report of Medical Examination under Mines Rule 29B
(To be used in continuation with form O)

Certificate No:

Name:

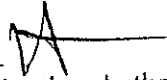
Identification Marks:

Mikhaingir M Rajput

Result of Lung Function Test (Spirometry)

Parameters	Predicted Value	Performed Value	% Of Predicted
Forced Vital Capacity (FEV)	3.20	2.72	85
Forced Vital Capacity IFEV	2.70	2.47	91
FEV1/FVC	84.33	90.82	108
Peak Expiratory Flow	8.60	4.88	57

Spirometry Report enclosed


Signature of Examination Authority

Resident Medical Officer
(GIPCL (SLPP))

*Report of Medical Examination under Mines Rule 29B
(To be used in continuation with form O)*

Certificate No:

Name:

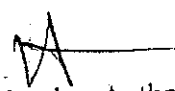
Identification Marks:

Mikraingir M Rajput

Result of Lung Function Test (Spirometry)

Parameters	Predicted Value	Performed Value	% Of Predicted
Forced Vital Capacity (FEV)	3.20	2.72	85
Forced Vital Capacity IFEVI	2.70	2.47	91
FEV1/FVC	84.33	90.82	108
Peak Expiratory Flow	2.60	4.88	57

Spirometry Report enclosed


Signature of Examination Authority

Resident Medical Officer
(GIPCL (SLPP))

9. Nervous System:
History of fits or epilepsy.
Mental health

NAD

10. Locomotor system:

(No)

11. Skin

12. Hernia

NAD

13. Hydrocele

14. Any other abnormality

No

15. Urine

Reaction

Albumin

Sugar

16. Skiagram of chest.

NAD

17. Any other test considered necessary by the examining authority.

18. Any opinion of specialist considered necessary.

Signature of the examining authority

Place:

Resident Medical Officer
GIPCL (SLPP)

B009	6/20/2019 14:00	2.94	-8.90E+00	28.2	997.2
B009	6/22/2019 14:00	2.93	-9.27E+00	28.3	995.5
B009	6/24/2019 14:00	2.93	-8.26E+00	28.3	996.5
B009	6/26/2019 14:00	2.93	-8.53E+00	28.3	996
B009	6/28/2019 14:00	2.93	-8.51E+00	28.3	995
B009	6/30/2019 14:00	2.93	-7.93E+00	28.3	995.4
B009	7/2/2019 14:00	2.93	-8.11E+00	28.2	994.9

ANNEXURE - II

Sub: Expenditure made for the Environmental Management Plan with item wise & year wise break-up.
(All figures are in Lac Rs.)

Year → →	Particulars of the activities	2015	2016	2017	2018	2019 (Jan to June)
Development of Peripheral Green Belt	Green Belt development along lease boundary of Mangrol - Valia Mine using Forest Species & Seeding	17.95	6.05	---	---	---
Maintenance & protection of Greenbelt	Maintenance & protection of Greenbelt (Along lease boundary of Valia Mine & Lignite Transport Road)	31.7	20.34	---	---	---
Dump plantation & maintenance	Plantation on black cotton at External Dump	3.7	0.96	---	---	---
Preparation, cleaning of settling pond, catch drains, Garland drains etc	Plantation through seeding at External Dump	---	---	---	---	---
Monitoring of Environmental parameter	Silting pond for settlement of suspended solids from the discharge mine water, being pumped out during the monsoon season.	32.65	6.90	26.4	12.39	2.45
	Monitoring of Environmental parameters viz. Air quality (SPM, SOx, NOx, CO), Water quality (Physical, Chemical & Biological tests), Noise survey & Dust fall measurement in villages peripheral to the mining lease area & Micro meteorological monitoring of the season/quarter.	3.46	4.22	2.81	2.47	0.27
Dust suppression measures in mines	Round the clock water spraying and road grading prevents formation & emission of Dust	137.7	81.0	67.5	55.6	37.4
Remote sensing of the region.	Three year stage remote sensing to monitor the changes in the land use pattern and related impacts due to mining.	1.90	-	---	3.26	-
Ground water quality monitoring	Ground water level & quality monitoring in the core as well as buffer zone	1.98	0.67	---	0.65	-
Total...		231.04	120.14	96.71	75.37	40.27
Total		884.21	1004.35	1101.06	1221.8	1252.07


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

ANNEXURE - I

PLANTATION ACTIVITY FROM 2011 TO JUNE. - 2019

S.No.	Year	Code	Location	Area (Ha)	No. of trees
(A)	Peripheral green belt development				
1	From	GBD-MA	Both side of alternative Shah Road & Lignite Transport Road & Out plant stockyard	11.0	16410
2	to	GBD-MB	Both side of Lignite Transport Road	9.5	15344
3	year	GBD-MC	Lease Boundary of Mangrol Pit	5.0	12437
4	2012	GBD-MD	Lease Boundary of Mangrol Pit	2.4	3400
	to	GBD-VA	Lease Boundary around Valia Pit	95.5	153509
	June				
	2018			121.0+2.4	197700+3400
			TOTAL(A)		
(B)	Dump Plantation				
1	2012		External dump	-	-
©	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
4	2015		Along OB dump benches of Valia Mine	05.0	05 Kg
5	2018		Along periphery of Mangrol Mine	-	-
6	2019		Along OB dump benches of Valia Mine	-	-

Handwritten signature and date: 18/10/2019

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



Medical Examination Report

Workers Name		VIKRAMSINH M RAJPUT		Age	33		
Company Name		P C PATEL INFRA PVT LTD		Sex	M		
Company ID	0	Job Profile	DUMPER OPERATOR	Blood Group	A+VE		
Promed ID	18101101-88			Form B No:	PCP/0250		
Height	163	cm		BMI	22	Chest (Ins) cm	95
Weight	59	kg				Chest (Exp) cm	90
Pulse	80	/min		BP	122/80		mm Hg
Vision							
	Glasses	Right - Left		Colour Vision	ACCEPTABLE		
Distant Vision	NO	6/6, 6/6			Night Blindness	NO	
Near Vision	NO	N6 - N6					
Physical Examination							
General Examination		NAD					
Respiratory System		Clear AEBE					
Cardiovascular System		S1 S2 - Normal					
Per Abdomen		NAD					
Neurologic System		NAD					
Motor System		Normal					
Hernia Hydrocele		Not Any					
Investigations							
Hemoglobin	15.9	g/dL (12-17)		S. Cholesterol	125.8	mg/dL (<240)	
Total Count	5700	/cmm (4000-10500)		S. Triglyceride	85.3	mg/dL (<200)	
Platelets	266000	/cmm (150000-450000)		S. Creatinine	1.17	mg/dL (0.6-1.40)	
ESR	10	(0-20)		Blood Urea	24.5	mg/dL (10-40)	
Fasting Sugar	90.2	mg/dL (65-110)		Post Prandial Sugar	126.6	mg/dL (65-110)	

5. Pathological/Microbiological Investigation


S.No	Tests	Findings
1.	Blood- Tc, Dc, Hb, ESR, Platelets	WNL/Abnormal
2.	Blood Sugar-Fasting & PP	WNL/Abnormal
3.	Lipid profile	WNL/Abnormal
4.	Blood Urea, Creatinine	WNL/Abnormal
5.	Urine Routine	WNL/Abnormal
6.	Stool Routine	WNL/Abnormal

Enclosed Investigation Reports.

6. Special Tests for Mn Exposure

Behavioral Disturbances		Present/ Not Present
Neurological Disturbances	Speech Defect	Present/ Not Present
	Tremor	Present/ Not Present
	Adiadocokinesia	Present/ Not Present
	Emotional Changes	Present/ Not Present

7. Any other Special Test Required:



Signature of Examination Authority

Resident Medical Officer
GIPCL (SLPP)

18101101-88- VIKRAMSIN RAJPUT 33 YRS

X-RAY CHEST: 15,10.2018

LUNG FIELDS REVEAL NORMAL LUNGS

HEART REVEALS NORMAL CONFIGURATION WITH NORMAL AORTA.

NO PLEURAL EFFUSION SEEN.

COMMENTS : NORMAL LUNGS, HEART & BONY CAGE

(CF



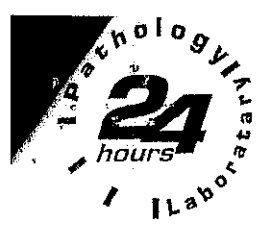
Urine Examination			Stool Examination		
Pus Cells	1_2	3-4/hpf	Pus Cells	0_1	3-4/hpf
Casts	NIL	NIL	Ova	NIL	NIL
Red Blood Cells	NIL	NIL	Occult Blood	NEGATIVE	NIL
Other Tests					
Audiometry	NORMAL AUDIOMETRY		ECG	WNL	
PFT	NORMAL PFT		Xray	WNL	

FITNESS: FIT

Advise: NIL

Kalra
 Doctor's Signature & Stamp

DR. KALRAV THAKKAR
 (MBBS;PGCIH) G-45981
 Occupational Health Specialist
 PROMED OCCUPATIONAL HEALTH CENTRE



TEST REPORT

Reg. No : 1810101714
Name : VIKRAMSINH M RAJPUT (18101101-88)
Age : 33 Years Sex : Male
Ref. By :
Location :
Disp. At :

Reg. Date : 11-Oct-2018
Collected On : 11-Oct-2018

Parameter	Result	Unit	Biological Reference Interval
-----------	--------	------	-------------------------------

STOOL EXAMINATION

GROSS EXAMINATION

Colour	Yellow
Consistency	Semi Solid
Adult Worm/Parasite	Not Present
Blood	Not Present
Pus	Absent
Mucus	Absent

CHEMICAL EXAMINATION

Occult Blood	Negative
Reaction	Acidic
Reducing Substance	Absent

MICROSCOPIC EXAMINATION

Pus Cells	0-1
Red Cells	Not Present
Epithelial Cells	Not Present
Vegetable Cells	Not Present
Trophozoites	Not Present
Cysts	Not Present
Ova	Not Present
Neutral Fat	Nil

----- End Of Report -----

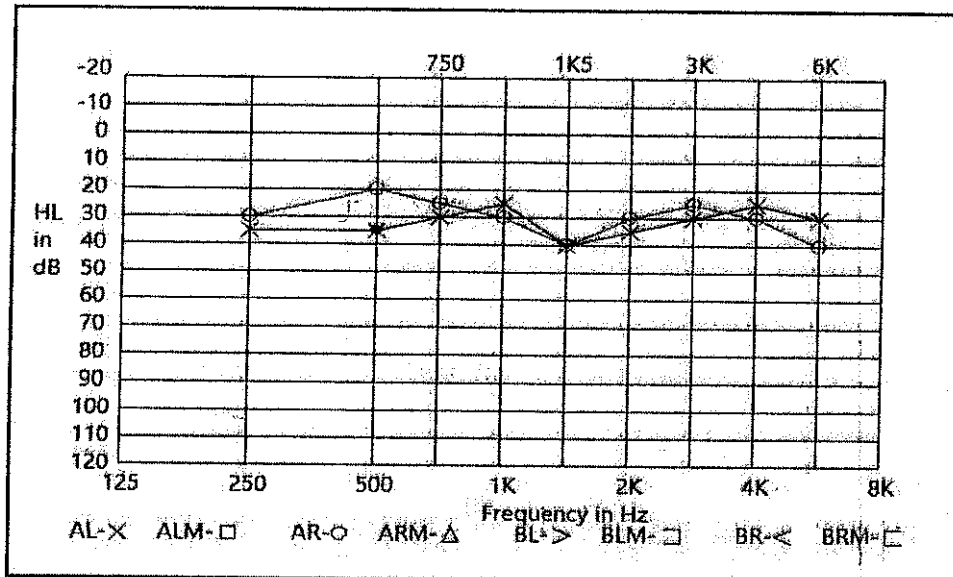
Dr. Tushar Sonaiya

MD

AUDIOMETRY REPORT

Name	Case No.	Age	Sex
VIKRAMSINH M RAJPUT	88	33	M
Address		Phone No.	

Date	Referred By
12-Oct-18	PROMED OHC

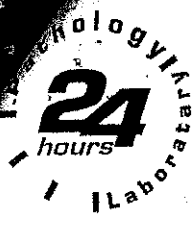


Interpretation

NORMAL AUDIOMETRY

Kalra
DR. KALRAV THAKKAR
(MBBS;PGCIH) G-45981
Occupational Health Specialist
PROMED OCCUPATIONAL HEALTH CENTRE

PROMED OCCUPATIONAL HEALTH CENTER
(A Unit of P S Healthcare)



TEST REPORT

Reg. No : 1810101714 Reg. Date : 11-Oct-2018
Name : VIKRAMSINH M RAJPUT (18101101-88) Collected On : 11-Oct-2018
Age : 33 Years Sex : Male
Ref. By :
Location :
Disp. At :

Parameter	Result	Unit	Biological Reference Interval
BIO - CHEMISTRY			
Fasting Blood Sugar (FBS)	90.2	mg/dL	65 - 110
Post Prandial Blood Sugar (PP2BS)	126.6	mg/dL	65 - 140
Creatinine	1.17	mg/dL	0.6 - 1.40
UREA	24.5	mg/dL	10 - 40

----- End Of Report -----

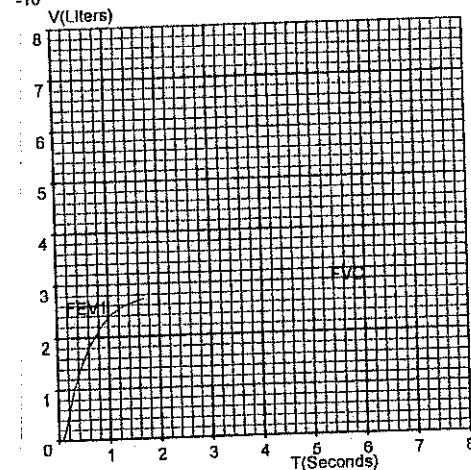
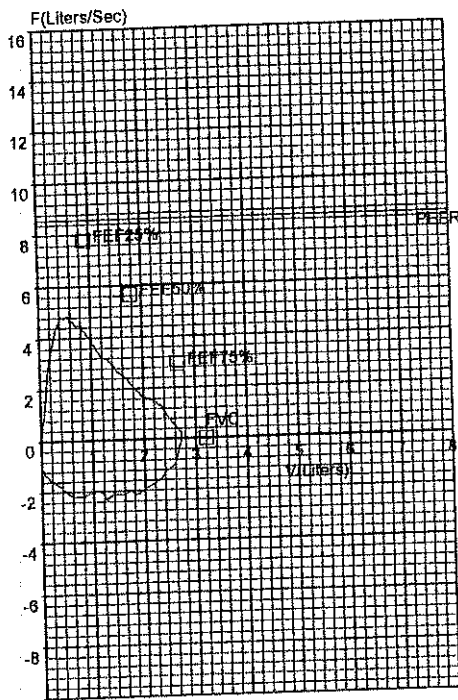
Dr. Tushar Sonaiya

MD

88 - VIKRAMSINH RAJPUT
33 Years / Male / Ht 163 Cms / 59 Kgs / Non-Smoker

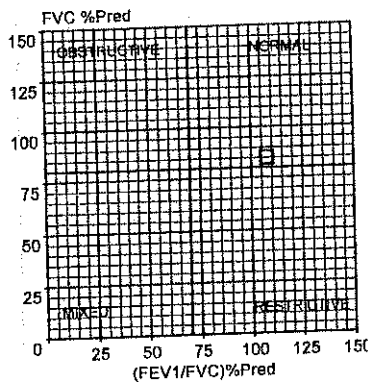
FVC TEST
Date: 11-10-2018 (T1)

Pred Eqn : CLARITY Eth.Corr : 100 Temp : 100
Ref By : NONE



Parameter	Pred	Pre	Pre%	Post	Post%	Imp%
FVC	[L]	3.20	2.72	85	--	--
FEV1	[L]	2.70	2.47	91	--	--
FEV.5	[L]	--	1.80	--	--	--
FEV3	[L]	3.10	--	--	--	--
FEV6	[L]	--	--	--	--	--
PEFR	[L/s]	8.60	4.88	57	--	--
FEF25-75	[L/s]	4.12	3.05	74	--	--
FEF75-85	[L/s]	--	1.51	--	--	--
FEF.2-1.2	[L/s]	7.01	4.09	58	--	--
FEF25%	[L/s]	7.78	5.18	67	--	--
FEF50%	[L/s]	5.65	3.38	60	--	--
FEF75%	[L/s]	2.91	1.61	55	--	--
FEV.5/FVC	[%]	--	66.16	--	--	--
FEV1/FVC	[%]	84.33	90.82	108	--	--
FEV3/FVC	[%]	97.00	--	--	--	--
FEV6/FVC	[%]	--	--	--	--	--
FEV1/FEV6	[%]	--	--	--	--	--
FET	[S]	--	1.58	--	--	--
ExpTime	[S]	--	0.20	--	--	--
LungAge	[Y]	33.00	36.00	109	--	--
FIVC	[L]	--	2.87	--	--	--
PIFR	[L/s]	--	2.30	--	--	--
FIF25%	[L/s]	--	5.18	--	--	--
FIF50%	[L/s]	--	3.30	--	--	--
FIF75%	[L/s]	--	1.64	--	--	--
FIV.5	[L]	--	0.57	--	--	--
FIV1	[L]	--	1.61	--	--	--
FIV3	[L]	--	--	--	--	--
FIV.5/FIVC	[%]	--	19.75	--	--	--
FIV1/FIVC	[%]	--	55.98	--	--	--
FIV3/FIVC	[%]	--	--	--	--	--

- Pre Medication Report :
Early Small Airway Obstruction. Spirometry within
Normal range as FVC% >= 80 And FEV1/FVC% > 70



- Doctor's Comments :
NORMAL PFT

Kalrau
DR. KALRAV THAKKAR
(MBBS;PGCIH) G-45981
Occupational Health Specialist
PROMED OCCUPATIONAL HEALTH CENTRE

DR KALRAV THAKKAR

Note: The results may be clinically correlated.



TEST REPORT

Reg. No : 1810101714
Name : VIKRAMSINH M RAJPUT (18101101-88)
Age : 33 Years Sex : Male
Ref. By :
Location :
Disp. At :

Reg. Date : 11-Oct-2018
Collected On : 11-Oct-2018

Parameter	Result	Biological Reference Interval
-----------	--------	-------------------------------

URINE ROUTINE EXAMINATION

PHYSICAL EXAMINATION

Quantity : 10 cc
Colour : Pale Yellow
Clarity : Clear

CHEMICAL EXAMINATION (BY REFLECTANCE PHOTOMETRIC METHOD)

pH : 7.0 (4.6 - 8.0)
Sp. Gravity : 1.005
Protein : Nil
Glucose : Nil
Ketone Bodies : Nil
Urobilinogen : Nil
Bilirubin : Nil
Nitrite : Nil
Blood : Nil

MICROSCOPIC EXAMINATION (MANUAL BY MICROSCOPY)

Leucocytes (Pus Cells) : 1-2/hpf
Epithelial Cells : 1-2/hpf
Erythrocytes (Red Cells) : Nil
Amorphous Material : Nil
Casts : Nil
Crystals : Nil
Bacteria : Nil

----- End Of Report -----

Dr. Tushar Sonaiya
MD



TEST REPORT

Reg. No : 1810101714
 Name : VIKRAMSINH M RAJPUT (18101101-88)
 Age : 33 Years Sex : Male
 Ref. By :
 Location :
 Disp. At :

Reg. Date : 11-Oct-2018
 Collected On : 11-Oct-2018

Parameter	Result	Unit	Biological Reference Interval
-----------	--------	------	-------------------------------

LIPID PROFILE
SPECIMEN: SERUM SAMPLE

Cholesterol	125.8	mg/dL	Desirable : < 200.0 Borderline High: 200-239 High : >240
Triglyceride	85.3	mg/dL	Normal : < 150.0 Borderline : 150-199 High : 200-499 Very High : > 500.0
VLDL	17.06	mg/dL	7 - 40
LDL	64.14	mg/dL	Optimal : < 100.0 Near / above optimal : 100-129 Borderline High : 130-159 High : 160-189 Very High : >190.0
HDL Cholesterol	44.6	mg/dL	Low : < 40 High : > 60
Cholesterol /HDL Ratio	2.82		0 - 5.0
LDL / HDL RATIO	1.44		0 - 3.5

 End Of Report



TEST REPORT

Reg. No : 1810101714 Reg. Date : 11-Oct-2018
 Name : VIKRAMSINH M RAJPUT (18101101-88) Collected On : 11-Oct-2018
 Age : 33 Years Sex : Male
 Ref. By :
 Location :
 Disp. At :

Parameter	Result	Unit	Biological Reference Interval
-----------	--------	------	-------------------------------

COMPLETE BLOOD COUNT (CBC)
SPECIMEN: EDTA BLOOD

Hemoglobin (SLS method)	15.9	g/dL	12.0 - 17.0
RBC Count (Electrical Impedance)	5.22	million/cmm	4.6 - 6.5
Hematocrit- HCT (Electrical Impedance)	48.7	%	35 - 54
WBC Count (Flowcytometry)	5700	/cmm	4000 - 10500
Platelet Count (Electrical Impedance)	266000	/cmm	150000 - 450000
MCV (Calculated)	93.3	fL	80 - 96
MCH (Calculated)	30.5	Pg	27 - 33
MCHC (Calculated)	32.6	%	32 - 36

DIFFERENTIAL WBC COUNT (Manual By Microscopy)

Neutrophils (%)	63	%	45 - 75
Lymphocytes (%)	33	%	20 - 40
Monocytes (%)	02	%	1 - 10
Eosinophils (%)	02	%	1 - 4
Basophils (%)	00	%	0 - 1

ERYTHROCYTE SEDIMENTATION RATE

ESR (After 1 hour)	10	mm/hr	0 - 20
--------------------	----	-------	--------

By Fully Automated 5 Part Differential Cell Counter Sysmex XN 350

Blood Group
 ABO : 'A'
 Rh (D) : Positive

----- End Of Report -----

Dr. Tushar Sonaiya
 MD

ID: 1810110188

11-10-2018 12:20:27 CUF1

Diagnosis Information

Sinus Rhythm

Normal ECG

Male

Years

HR 55 bpm

P ms

PR 154 ms

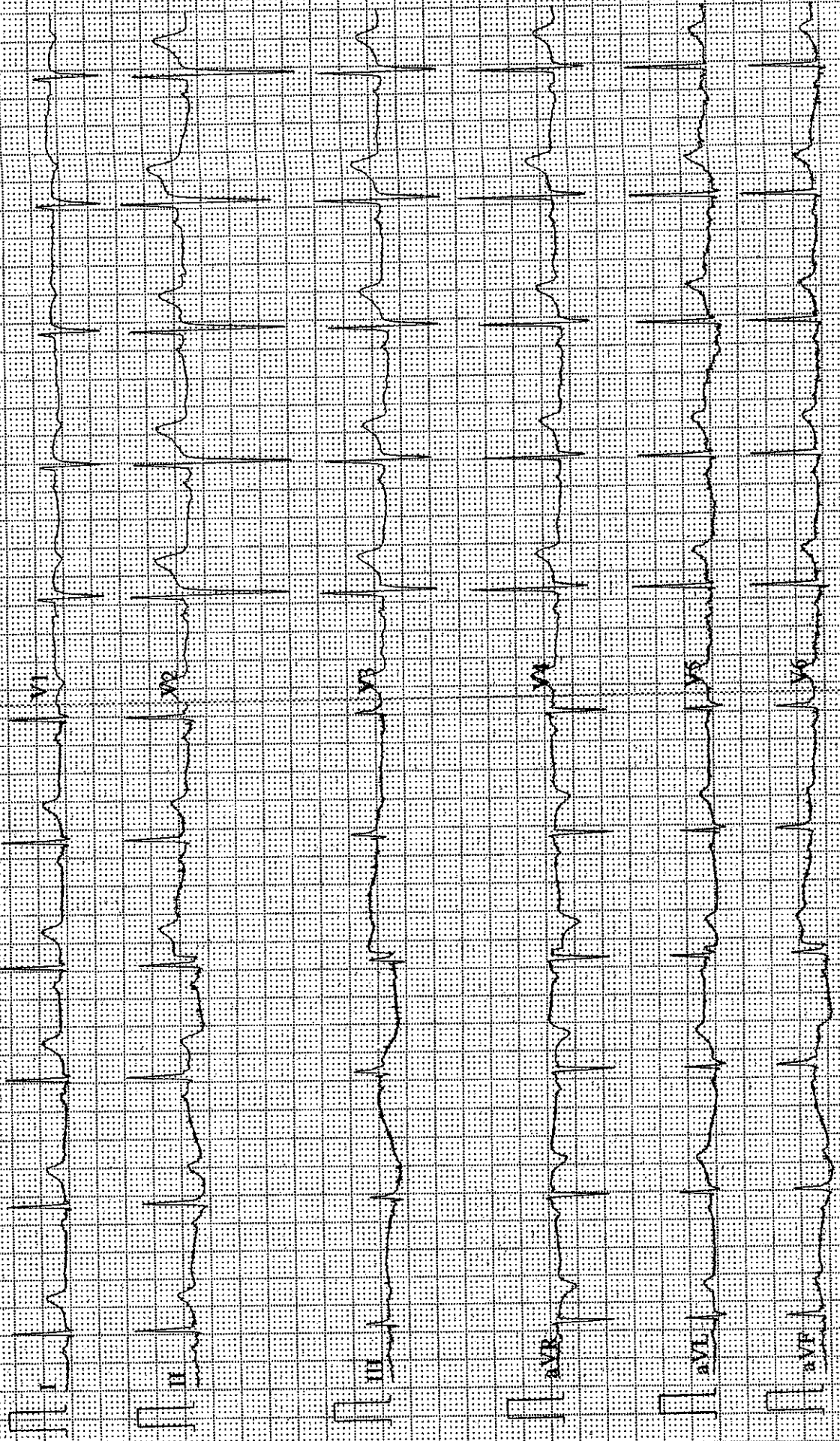
QRS 97 ms

QT/QTc 392/408 ms

PQRSAT 15744/66

RV5SV1 12200/823 mV

Report Confirmed by:



0.67 100Hz AC50 25mm/s 10mm/mV 2:508 65 V2.2 SEMIF V181

EPL



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

BY RPAD

SLPP/Mangrol- Valia Mine/ENV. Return/ 2297

18th July 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 Jan-June - 2019.
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 **Jan-June - 2019.**

This is for your kind information.

Thanking you,

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

Prakash Chand
18/07/19

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 Jan-June - 2019..
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



Phone : EPABX (0265) 2232768/2213/0159

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

Website : www.gipcl.com

CIN No.: L99999GJ1985PLC007868

ANNEXURE – IV

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 ⁰ 25' to 21 ⁰ 31' Longitude: 73 ⁰ 06' to 73 ⁰ 09'
5	Address for correspondence		
	a) Address of concerned Project Chief with pin code and Telephone/Telex/Fax No.	:	Sri N.K.Purohit 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, Dy. 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.

	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 2019.	:	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 @ 9.40% for the year 2018-19 Environmental Management cost included. 325.00 Crores Lakhs 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.
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 a 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

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.

Handwritten mark

Handwritten signature and date
18/07/15.

P.C. Goyal
General Manager (Mines)

ANNEXURE - I

PLANTATION ACTIVITY FROM 2011 TO June. - 2019

S.No.	Year	Code	Location	Area (Ha)	No. of trees
(A) Peripheral green belt development					
1	From 2012 to June 2018	GBD-MA	Both side of alternative Shah Road & Lignite Transport Road & Out plant stockyard	11.0	16410
2	Year 2012 to June 2018	GBD-MB	Both side of Lignite Transport Road	9.5	15344
3		GBD-MC	Lease Boundary of Mangrol Pit	5.0	12437
4		GBD-MD	Lease Boundary of Mangrol Pit	2.4	3400
		GBD-VA	Lease Boundary around Valia Pit	95.5	153509
TOTAL(A)				121.0+2.4	197700+3400
(B) Dump Plantation					
1	2012	----	External dump	-	-
(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
4	2015	----	Along OB dump benches of Valia Mine	05.0	05 Kg
5	2018	-	Along periphery of Mangrol Mine	-	-
6	2019	-	Along OB dump benches of Valia Mine	-	-

[Signature]

18/07/19,

P.C.Goyal

Addl. General Manager (Mines)

ANNEXURE - II

Sub: Expenditure made for the Environmental Management Plan with item wise & year wise break-up.
(All figures are in Lac Rs.)

Year → →	Particulars of the activities	2015	2016	2017	2018	2019 (Jan to June)
Development of Peripheral Green Belt.	Green Belt development along lease boundary of Mangrol - Valia Mine using Forest Species & Seeding	17.95	6.05	-----	-----	-
Maintenance & protection of Greenbelt	Maintenance & protection of Greenbelt (Along lease boundary of Valia Mine & Lignite Transport Road)	31.7	20.34	-----	-----	-
Dump plantation & maintenance	Plantation on black cotton at External Dump	3.7	0.96	-----	-----	-
Preparation , cleaning of settling pond, catch drains, Garland drains etc	Plantation through seeding at External Dump					-
Monitoring of Environmental parameter	Sitting pond for settlement of suspended solids from the discharge mine water, being pumped out during the monsoon season.	32.65	6.90	26.4	12.39	2.46
Dust suppression measures in mines	Monitoring of Environmental parameters viz. Air quality (SPM, SOx, NOx, CO), Water quality (Physical, Chemical & Biological tests), Noise survey & Dust fall measurement in villages peripheral to the mining lease area & Micro meteorological monitoring of the season/quarter.	3.46	4.22	2.81	2.47	0.27
Remote sensing Imageries of the region.	Round the clock water spraying and road grading prevents formation & emission of Dust	137.7	81.0	67.5	56.6	37.4
Ground Water quality monitoring	Three year stage remote sensing to monitor the changes in the land use pattern and related impacts due to mining.	1.90	-	-----	3.26	-
Total....	Ground water level & quality monitoring in the core as well as buffer zone	1.98	0.67	-----	0.65	-
Total		231.04	120.14	96.71	75.37	40.27
		884.21	1004.35	1101.06	1221.8	1262.07

Shree
S/14/18/11

P.C. Goyal
General Manager (Mines)