

**Inspection report in the matter of Original Application no: 53 of
2024 filed at the Honourable National Green Tribunal
Western Zone (Pune)**

Kuldipsinh Khimji Sodha

Versus

Union of India & 08 Others.

1. Background.

- Kuldipsinh Khimji Sodha residing at Bhuj-Kutch has filled Original application no: 53 of 2023 in the Honourable National Green Tribunal, Western Bench Pune; challenges the continuous Pollution caused by the Kutch Lignite Thermal Power Plant in terms of Air and Water Pollution and thereby polluting the Kali River and Khanot Lake, nearby Residential area and water bodies. The Unit is extracting ground water using more than 35 Borewells without any permission from CGWA.
- In accordance with the petition; Following officials of Gujarat Pollution Control Board, Regional Office, Kutch (West) had carried out inspection of M/s. Gujarat State Electricity Corporation Limited (Kutch Lignite Thermal Power Station) (GSECL, KLTPS) and surrounding areas along with representative of petitioner name Shri Ratansinh Rathod Contact: 6351665934) on date: 07/03/2024.
 - Zeel K. Adhikari, Assistant Environment Engineer.
 - Yogesh V. Champaneri, Senior Scientific Assistant.

2. Company's profile & History of the case.

- M/s. Gujarat State Electricity Corporation Limited (Kutch Lignite Thermal Power Station) (GSECL, KLTPS) is located at Village: Panandhro, Taluka: Lakhpat, Dist: Kutch. It is engaged in Electricity Generation: 290 MW and has Consolidated Consent & Authorisation (CC&A) no: AWH-128069 Valid up to 23/05/2028.
- TPP has obtained Environmental Clearance for Unit-4 of 75 MW capacity vide letter no: J-13012/6/2002.IA-II (T) dated: 31/05/2005. It has also obtained EC-Amendment for change in water source from sea creek to brackish water (Borewells) vide letter no: J-13012/6/2000-IA. II(T) dated: 20/01/2009.
- It has 04 power generating unit out of which Unit-1 & 2 (70 MW each) are already decommissioned and Unit-3 (75 MW) & Unit-4 (75 MW) are operated by unit.
- This office has earlier received complaints of effluent discharge from KLTPS Thermal Power Plant to nearby River Kali and has inspected the same on date: 16/11/2021, 26/04/2022 and 06/09/2023 and observed that ash slurry pipelines are ruptured and spillages from dykes which is ultimately meets the River Kali.
- Accordingly, pertaining to the non-compliances observed during these visits dated: 16/11/2021, 27/04/2022 & 11/09/2023; Notice of Directions under the Section 31-A of the Air Act, 1981 dated: 15/12/2021, Notice of Directions under the Section 33-A of the Water Act, 1974 dated: 25/05/2022 and Notice of Directions under the Section 33-A of the Water Act, 1974 dated: 11/10/2023 were issued to the unit respectively.
- With respect to the Notice issued dated: 15/12/2021; below mentioned compliance submitted by unit:
 - *KLTPS is planning for retaining wall near dyke A& E to stop/ minimize the seepage, after construction of retaining wall and by making Pond*

inside retaining wall the collected water will be transferred/pumped into dyke A & E. Further, the collected water in dyke A & E will be transferred to ash Dyke-D by pumping. Estimate for transfer collected water from dyke A& E to Ash Dyke-D is under approval stage and same work will be completed up to March-22: Estimate for retaining wall is under preparation and same work will be completed up to June'22. Ash slurry is very erosive and corrosive as well as sticky in nature due to, this ash slurry, no leakage occurs and which is attended by replacing of new ash slurry pipe. All ash slurry pipes are 12-meter-long and it is replaced with help of machineries i.e. Hydra. At present damaged pipe replacement work started and all damaged ash slurry pipes will be replaced within a month i.e. Dec,21 end.

- With respect to the Notice issued dated: 25/05/2022; below mentioned compliances were submitted by unit:
 - *Proposal for (1) lifting and shifting of ash from River Kali to ash Dyke-D (2) Ash lifting from bund area at ash Dyke-D to avoiding overflow of ash slurry (3) Running work order for ash slurry line maintenance (4) Proposal for O&M of unit-3 ash slurry line maintenance work (4) Proposal for replacement of damage ash slurry pipe (5) Proposal for replacement /erection of new ash slurry line were given.*
 - *Bund barrier was built by providing sand embarkment to avoid further passage of ash slurry water to the River Kali.*
 - *Channel also built near bund barrier to Dyke-D to move any accidental leakages water to Dyke-D.*

- With respect to the Notice issued dated: 11/10/2023; below mentioned compliances were submitted by unit:
 - *However, collection system (pump and collection facility) was there to collect that water and disposed of again in dyke. Order of the same is given vide letter dated: 17/08/2021.*
 - *Work order no: 4575 dated: 04/10/2023 cost Rs. 20.0 Lacs for 345-meter new pipeline erection of ash slurry disposal.*
 - *Tender no: ME-106 @ cost Rs. 1.20 Crore for new pipeline having length 3.2 KM will be on web tender*
 - *New proposal for Rs.4.18 Crore of pipeline having length of 10.8 KM will be under approval*
 - *Chain-link fencing tender for area of dykes at GMDC mines will be under tenderization and having cost of Rs. 2.20 Lacs.*

3. Observation during visit.

- During visit, TPP is observed not in operation. As informed Unit-3 is not operated from 11/01/2024 due to annual overhauling and Unit-4 is not operated from 06/07/2023.
- Along with complainer; we had first visited the ash slurry pipelines. During inspection, it is observed that these are the fly ash slurry lines which come from

TPP to Dyke-D. There are total 03 nos. of 6” inch diameter MS Pipelines from TPP to Dyke-D. During visit, no live discharge observed in River Kali. Unit has also built bund barrier to stop the further passage of effluent to River kali. It has provided arrangement that leakage water from ash slurry line can be directed to Dyke-D. Photographs attached.

- Complainers also claims that, the seepage outside the unit’s premises; through natural flow meets to River Kali. During visit, stagnant water accumulation outside unit’s premises is observed. **However, as mentioned in compliance submitted by unit for notice dated:11/10/2023; still seepage is observed outside unit’s premises.**
- In compliance of fly ash reached to River Kali through ruptured pipelines; TPP has submitted that; **they have completed work for lifting and shifting of ash from river kali to Dyke-D with work amount of Rs. 29,99,728.00**

3.1 Air Pollution Control & Management.

- TPP has installed Boiler-3 of 330 TPH capacity and CFBC Boiler-4 of 315 TPH capacity with Electrostatic precipitator as an APCM and 190-meter stack height with each boiler. Lignite is utilised as fuel in boiler. TPP has provided lime dosing system with Boiler no: 4.
- It has provided online monitoring system analysers for PM, SO_x and NO_x with stack attached to Unit-3 & Unit-4. As informed, SO_x and NO_x analysers are under maintenance.
- In coal crushing area, unit has provided wind breaking wall and water sprinkling system for control of dusting.

3.1.1 Fly ash Management & Disposal.

- For fly ash disposal, unit has provided Dyke A and Dyke-E within premises. Unit has also developed GMDC mines area as Dyke-C & Dyke-D where slurry of waste water with fly ash is disposed.
- At present, Dyke-E is proposed for setting up 35 MW solar plant with battery backup system. No seepage from Dyke-A is observed.
- There are total 03 nos. of 6” inch diameter MS Pipelines from TPP for disposal of ash slurry into Dyke-D. At present, unit is utilising only Dyke-d for ash slurry disposal.
- During the financial year 2023-24; 135465.43 MT of fly ash is generated which is disposed at abandoned mines i.e. Dyke-D through converting ash into slurry and disposed.
- Fly ash dumps near coal yard and outside unit’s premises are observed.

3.2 Water and Waste Water Management.

- Source of water is through Bore-wells (38 nos. as informed). Unit is extracting ground water without CGWA Permission; earlier unit has applied for permission but was rejected by the CGWA. As informed, unit has initiated work for modelling study and impact assessment of ground water and will re-apply after the study.
- During the financial year 2023-24; average daily water consumption is 4207.5 m³ and Water is required for Boiler, Cooling tower and domestic purpose. During the financial year 2023-24; average daily waste water generation from DM plant reject, RO reject, Boiler blow down is 1104.8 m³ which is treated in provided primary ETP. Online monitoring system is provided in ETP which is not in operation as TPP is under annual overhauling. Treated water is used in dust suppression within premises. Cooling tower bleed-off is directly utilized for fly ash slurry preparation.
- Natural nallah outside unit premises near Gate no: 3 is also verified which is observed dry at the time of visit. Also, no flow outside unit's premises near cooling tower area is observed as TPP is not in operation. Photographs attached.

4. Conclusions.

- TPP has obtained EC-Amendment for change in water source from sea creek to brackish water (Bore-wells) vide letter no: J-13012/6/2000-IA.II(T) dated: 20/01/2009.
- During visit, stagnant water accumulation outside unit's premises is observed. **However, as mentioned in compliance submitted by unit for notice dated:11/10/2023; still seepage is observed outside unit's premises.**
- TPP has carried out work with cost of Rs. 29,99,728.00 to lift fly ash which was earlier released by pipes leakages. During inspection no leakages are observed as plant was not in operation.
- SO_x and NO_x analysers are under maintenance. In coal crushing area, unit has provided wind breaking wall and water sprinkling system for control of dusting.
- Fly ash dumps near coal yard and outside unit's premises are observed.
- Natural nallah outside unit premises near Gate no: 3 is observed dry and no flow outside units premises near cooling tower area is observed as plant is not in operation.

5. Recommendations.

- TPP shall ensure and carry out preventive measures to avoid spillages/leakages from ash slurry lines.
- TPP shall obtain CGWA Permission for extraction of ground water.

- TPP shall lift the ash outside the premises and will dispose as per the fly ash notification.
6. Photographs taken during visit are attached as Annexure-A.



Yogesh V. Champaneri
Senior Scientific Assistant
Regional Office, Kutch West
Gujarat Pollution Control Board

Date: 07/03/2024



Zeel K. Adhikari
Assistant Environment Engineer
Regional Office, Kutch West
Gujarat Pollution Control Board

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Annexure-A
Photographs taken during visit



Coal yard with water sprinkling system



Fly ash slurry lines from TPP to Dyke-D

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Annexure-A
Photographs taken during visit



Area after and before of bund barrier. It is constructed to obstruct the flow of ash slurry in to river.



TPP has made arrangement that slurry leakage can be directed in to dyke-D.

70
Annexure-A
Photographs taken during visit



Stagnant accumulation of water outside units premises is observed.



Natural nallah outside units premises near Gate no: 3 which is dry.

71
Annexure-A
Photographs taken during visit

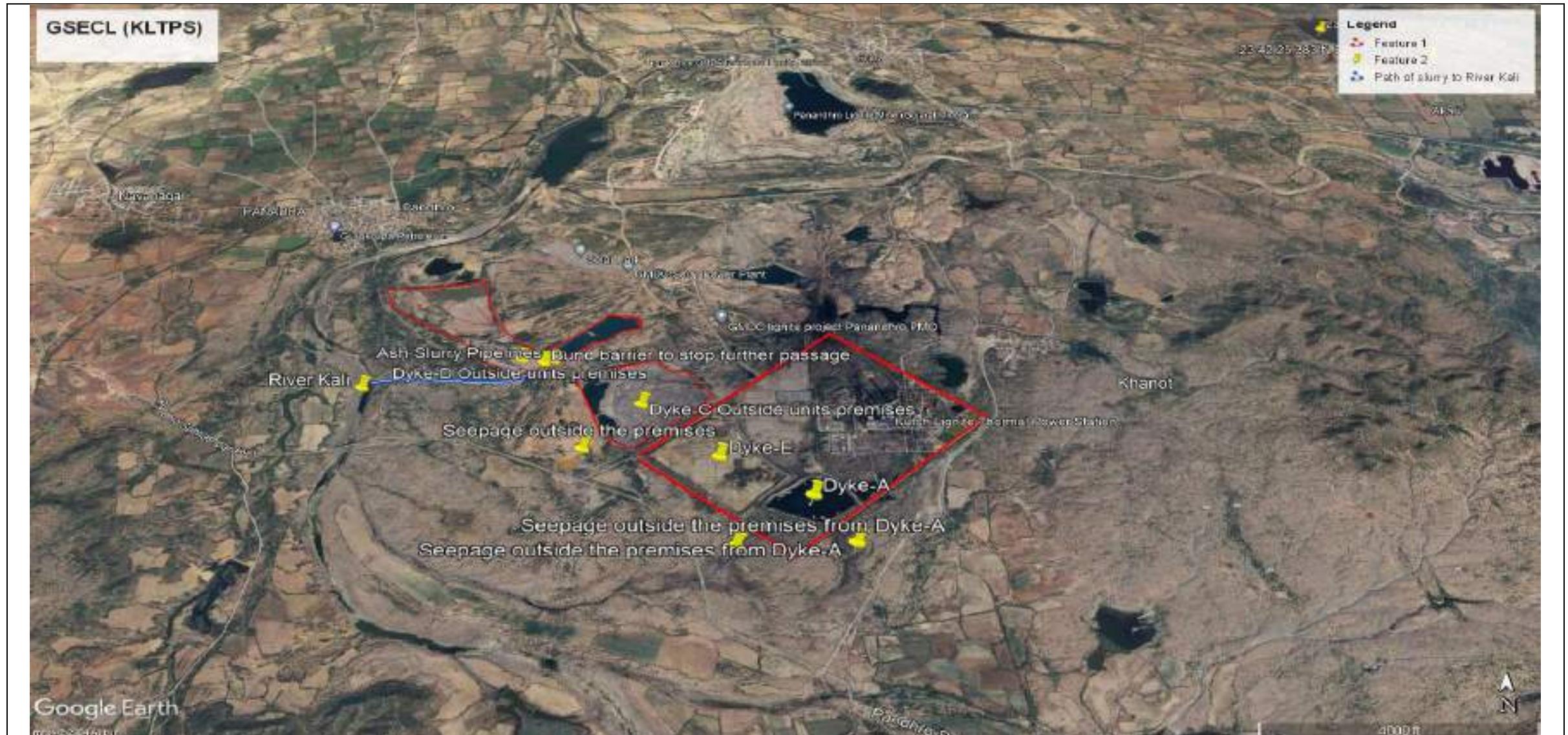


No flow from cooling tower outside unit's premises is observed.



Fly ash dumps near coal yard and outside unit's premises is observed.

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Annexure-A
Photographs taken during visit



Google image showing plant area, dyke area inside and outside the premises in red colour, path of leakages/spillages to River Kali in blue colour and points showing spillages/leakages outside units premises due to dyke-A and C.

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Annexure-A
Photographs taken during visit



Gujarat Pollution Control Board

PCB Id: 17838

(Inspection Report) - Air, Water, Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

1 Industry Details G.S.E.C.L(Kltps)panandhro

Outward No: 28393-17/03/2024

Email : PLOT NO: 236P,255P,
cekltps.gsecl@gebmail.com KUTH LIGNITE THERMAL POWER STATION, PANDANDHRO,
Panandhro - 370601
Telephone : DIST : Kutch West, TAL : Lakhpat , SIDC : Not In Gide
02839 262452
Inspection Id : 775308 (Others/Higher Authority) Ro Name : Kutch West

2 Type / Scale / Sector / Status : RED / LARGE / Thermal Power Plants / In Operation

3 Inspection Dt & Time : 07/03/2024 11:41 / Air , Water , Hazd Person Contacted : Mr. HT Bhatvar, Cheif Engineer

4 Env Audit Detail : Sch : 1 , Darshan Institute of Engineering , Year : 2017 , On Dt :

Commissioned Dt : 29/03/1990 Production Start Dt : 29/03/1990 Applicability of CRZ Rules : No

5 Water Consumption in Kilo Lts Per Day Ind : 36100.000 Dom : 120.000 Borewells: 35

6 Waste Water generation / Discharge (klpd) : Ind : 19240.000 Dom : 72.000 Tubewells: 0

7 Consumer No.(Electric Meter): Source of Water Supply: Borewells

8 Disposal Mode of Industrial / Domestic : Zero Discharge / Irrigation

9 Discharge Pt / Final Receiving Body (Ultimate): There is no discharge of W/w. / No generation of industrial wastewater

10 Status of water consent Under the Water Act,1974: AWH-128069-23/05/2028 Last Inward:281410-08/06/2023[GRT]

11 Effluent Treatment plant (ETP) : Units, if provided and status :

ETP Details : P-Equalization Tank,Primary

12 Whether Industry is a member of CETP ? No

13 Boilers=4 , DG Sets=0 , Flue Gas =4, Process =0 , ETP Cap = 431 , Capacity of All =

APCM Details : E.S.P

Fuel Used : Lignite

Stack Attached to : Boiler

14 TSDF Name : Nandesari Enviro Cntl Ltd.BARODA [22333]

15 Lab Charges Pending : NIL Water Cess Charges Pending : NIL

16 Last Env. Form V : 2015-2016 Water Cess Return : 2017-2018 HW Monthly Return : 2024-01

17 Last 3 Legal Action :

Insp Dt	Act	Leg Dt	For	Insp ID	IR-Leg	Type	Out No
11/09/2023	NOT	11/10/2023	33A,,	751916	NOT	COM	755712
07/06/2023	NOT	20/07/2023	31A,,	740145	NOT	APP	748365
07/06/2023	NOT	20/07/2023	31A,,	740145	NOT	APP	748363

Monthly Patrak Data : Last Return : 202401 HAZD Waste Disposal : 0.000 (0 Trucks)

Electricity Units Consumed in month	Water Consumed in month	Effluent Discharged in month
Production - 2051, ETP - 0, APCM - 25	Meter Reading - 0, Kilo Litre - 52878	Meter Reading - 0, Kilo Litre - 16380

17/03/2024

1/5 (Through XGN)



Gujarat Pollution Control Board

PCB Id: 17838

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

General Observation

a	- Is the Industry in Operation ??	No.	Due to annual overhauling
a	- R.O File No	17838	
b	- Industry Operating without CCA	No.	
c	- Has Production exceeded (last 3 MTHs) than CCA-Qty	No.	
d	- Any products-NOT in CCA, manufactured-Last 3 MTHs	No.	
e	- Foul Odour/Fugitive Emission/Bye Pass in Premises ??	No.	
f	- Industry Name CHANGED in recent times ??	No.	
g	- Has Regn with CETP or TSDF expired ??	N.A	
h	- Seperate Energy Meter for A.P.C.M ?	N.A	
h	- Provision of any STAND-BY Pump ??	N.A	

Air Related

a	- Fuel Type confirmitive with CCA ?	Yes	
b	- Av. Fuel Consumption EXCEEDING CCA limits	No.	
c	- APC Measures confirmitive with CCA conditions ??	Yes	
d	- ALL APCMs are in operation	No.	Not in operation due to annual overhauling
e	- SMF availability	Not Reqd	
f	- Thick Smoke observed in Flue Gas/Processes ??	No.	
g	- ph of Scrubbing Media as per requirement ??	Yes	Not applicable
h	- Ultimate Disposal of Scrubbing Media	N.A	
i	- Nos of Samples : Stack & Ambient	0, 0	

GEM

18	- Where Authorization Under BMW Rules 2016 obtained ? Provide Authorization No. / Date	Yes	
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Haz Waste Related

a	- Haz waste Catg confirmitive with CCA	Yes	
b	- H.W generation exceeding CCA limits	No.	
c	- Collection, Storage, Treatmnt, Disposal Facility Adequate ??	Yes	
d	- Reusing or Recycling of Haz Waste by Industry ?	No	
e	- LogBook / XGN Manifests / Disposal Records TALLYING ??	Fully	
f	- Stock of Haz-Waste @ premises/Whether EXCESS ?	-----	
g	- Recycler/ Actual user has valid Authorization under rules 6 or 9 of HOWR-2016?	Yes	
h	- Installed capacity of the plane based on machinery installed (Capacity of Machine,No. of Batch/Day,Annual Capacity)	-----	
i	- Technical capability and equipment complying with the SOP/Guideline?	Yes	
j	- Is unit complying the conditions gives in SOP/Guidelines?	Yes	
k	- Facility is adequate for the applied process	Yes	
l	- Passbook is maintained?	Yes	
m	- Details of PLI, if applicable	-----	
n	- Details of safety specs provided by the facility	-----	
o	- Seperate storage area for Haz. Waste for the utilization or generation from the process is provided?	Yes	
p	- Quantity of Hazardous waste procured as per CCA?	Yes	

Water Parameter

b	- Source of Water Supply	Borewells	
c	- W.W.G is EXCEEDING the CCA Limits	No.	

17/03/2024

2/5 (Through XGN)



Gujarat Pollution Control Board

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(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

d	-	W.W Disposal as per the Consent Conditions ?	Yes	
e	-	Was the ETP in operation ?	No	
f	-	Treatment System ADEQUATE to handle existing effluent	Adequate	
g	-	Did u observe ANY ILLEGAL Discharge ??	No.	
h	-	Nos of Samples collected	0	

Remarks :

Note: EIA 2006 / SEIAA / E.C / MOEF Applicable : Yes

Site Observations during Inspection , PCB-ID: (17838)

Inspection Crux:

Water Observation:

----- [4738]-14/03/2024

Air Observation:

----- [4738]-14/03/2024

Hazard Observation:

----- [4738]-14/03/2024

General Observation:

Kuldipsinh Khimji Sodha residing at Bhuj-Kutch has filled Original application no: 53 of 2023 in the Honourable National Green Tribunal, Western Bench Pune; challenges the continuous Pollution caused by the Kutch Lignite Thermal Power Plant in terms of Air and Water Pollution and thereby polluting the Kali River and Khanot Lake, nearby Residential area and water bodies. The Unit is extracting ground water using more than 35 Borewells without any permission from CGWA. In accordance with the petition; this office had carried out inspection of M/s. Gujarat State Electricity Corporation Limited (Kutch Lignite Thermal Power Station) (GSECL, KLTPS) and surrounding areas along with representative of petitioner name Shri Ratansinh Rathod Contact: 6351665934) on date: 07/03/2024. Detailed inspection report is attached herewith..... [4738]-14/03/2024

~ RO Comments/Reply :Direction may be issued as still non compliance were observed -17/03/2024

I recommend : g. Recommend Strict Action

Point to point reason of recommendation for this action

AS mentioned in the visit report still non compliance were observed w.r.to NOD was issued earlier .

W.C Notings: -----[4738-AEE]~

Specific Instructions given to Industry at the time of visit , for Pt to Pt Compliance

17/03/2024

3/5 (Through XGN)



Gujarat Pollution Control Board

PCB Id: 17838

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

1. આપના દ્વારા ground water વાપરવામાં આવે છે તે માટે CGWA ની મંજૂરી રજૂ કરવી.
2. કાળી નદીમાં માંથી વેસ્ટ વોટર આપનાં દ્વારા ના જાય તે માટે time bound action plan બનાવવામાં આવેલ રજૂ કરવું
5. છેલ્લા ત્રણ માસના ઉત્પાદન, કાચામાલના, બળતણ, પાણી વપરાશ તેમજ hazardous Waste generation/Disposal/Stock વિગેરેની માહિતી દિન-3 માં અત્રેની કચેરીએ રજૂ કરવી.
3. મુલાકાત સમયે plant બંધ જોવા મળેલ, ચીમની સાથે લગાડેલ OCEMS નાં calibration report રજૂ કરવા.
૪. coal yard ની બાજુમાં અમુક જગ્યા fly ash નાં ઢગલા premises ની બહાર જોવા મળેલ છે, જેનો નિયમોનુસાર નિકાલ કરવો

Compliance Observed in this Inspections.

Instructions in Previous Visits and Reply	Insp Det	Instruction Status
1. કાળી નદીના કેચમેન્ટ તથા નદીના એક્ષણ અવશેષ જોવા મળેલ છે.; Already reply submitted vide letter within 10 days of visit but due to xgn issue, same was not updated in reply section. (20/12/2023)	751916(11/09/23)	Pending !! Reminded AGAIN
૨. ફ્લાય એશ ને dyke સુધી લઇ જતી pipeline માં અમુક જગ્યાય લીકેજ જોવા મળેલ છે; Reply already submitted vide letter within 10 days of visit but due to xgn technical error same was not updated in reply section. (20/12/2023)	751916(11/09/23)	Pending !! Reminded AGAIN
3. Fly ash notification 2023 મુજબ fly ash નો નિકાલ કરવાનો રહેશે; Reply already submitted vide letter within 10 days of visit but due to xgn technical error same was not updated in reply section. (20/12/2023)	751916(11/09/23)	Pending !! Reminded AGAIN

17/03/2024

4/5 (Through XGN)



Gujarat Pollution Control Board

PCB Id: 17838

(Inspection Report) - Air,Water,Hazardous

(Under Section 23 of The Water Act 1974, Under Section 24 of The Air Act 1981 and Under Section 10 of EP Act 1986)

Annexure Details - Air,Stack,Hazardous Waste & Samples PCB-ID: (17838)

A Sample Details

B Process Stacks

C Flue gases Stacks

Sr	Stack attached to	Mts	Remark	SMF	APCM	Fuel	Consp-Unit	Insp Remk
1	Boiler	110	Boiler (Unit-IV)	YES	ESP	Lignite	777600 MT	in operation
2	Boiler	190	Boiler (Unit-III)	YES	ESP	Lignite	640000 MT	not in o/p
3	Boiler	230	Boiler(Unit-II)	YES	ESP	Lignite	640000 MT	in o/p
4	Boiler	230	Boiler(Unit- I)	YES	ESP,	Lignite	640000 MT	not in o/p

D Details about Hazardous Waste Management :

Sr	Source of Hazardous Waste	Catg	Qty/Year	HW Disposal Management
1	Used or Spent Oil	I -5.1	30.000-M.T	COL,DSS,STO
2	Wastes or residues containing oil	I -5.2	0.200-M.T	COL,DST,STO,TRA
3	Spent ion exchange resin containing toxic metals	I -35.2	10.000-M.T	COL,DST,STO,TRA
4	Discarded Asbestos	I -15.2	0.500-M.T	COL,DST,STO,TRA
5	cargo residue, washing water and sludge containing oil	I -3.1	0.050-M.T	COL,DST,STO,TRA
6	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	I -33.1	0.500-M.T	COL,DST,STO
7	Insulated Copper Wire Scrap/copper with PVC sheathing including ISRI-code material namely 'Druid'	IV -7	5.000-M.T	RRE

E Products :

Sr	Product Name	NOC Qty	CCA Qty	Applied Qty	Inspection Remark
1	electricity(power)	208800.000	363600.000 - MWH	208800.000	Total 4 units- U#1&2 are of 70MWH and U#3&4 are of 75 MWH capacity.

F Raw material :

Sr	Raw Material Name	Capacity - Unit / Month
1	lignite	0.000 - M.T

G Water Consumption & Generation Break up

Sr	Water Code (Qty in klpd - Kilo Ltr per Day)	WC : 36220.000	WWG : 19312.000	Water Source	Remark
1	Cooling Water	14210.000	0.000	Borewell	
2	Mnfg Process	8200.000	3250.000	Borewell	
3	Others	13690.000	15990.000	Borewell	

H Solid Waste

Inspection Team : MS. ZEEL KIRANBHAI ADHIKARI - Y.V.Champaneri,JSA

I hereby affirm, that all the PDF, Data mentioned above, fees paid has been checked & certified.

Signature By(MS. ZEEL KIRANBHAI ADHIKARI)

17/03/2024

5/5 (Through XGN)