

# **Action Taken Report of the Committee**

**Submitted in Reference to**

**Hon'ble National Green Tribunal (NGT) Principal  
Bench, New Delhi order dated 29.06.2020**

**In the Matter of**

**Original Application No.31 of 2020 (CZ)**

**Hiralal Bais**

**Vs.**

**Reliance Sasan Power Ltd. & Ors.**

## **Members of the Committee**

1. Rajiv Ranjan Meena, District Collector, Singrauli, MadhyaPradesh
2. Dr H V C Chary Guntupalli, Scientist-D, MoEF&CC, RO, Bhopal
3. Sunil Kumar Meena Scientist 'D', CPCB, Regional Directorate, Bhopal
4. S D Valmiki, Regional Officer, MPPCB, Regional Office, Singrauli

**Action Taken Report in compliance of Hon'ble NGT**  
**Principal Bench order dated 29<sup>th</sup> June 2020 in O.A. 31/2020**  
**(CZ) Hiralal Bais Vs. Reliance Sasan Power Ltd. & Ors.**

In compliance of the Hon'ble National Green Tribunal (NGT) Principal Bench (PB) order dated 29.06.2020 in the Original application (O.A.),31/2020 (CZ) Hiralal Bais Vs Reliance Sasan Power Ltd. & Ors., a joint committee comprising of following officers has undertaken the site visit during 14<sup>th</sup> and 15<sup>th</sup> July, 2020:

1. Rajiv Ranjan Meena, District Collector, Singrauli, MadhyaPradesh
2. Dr H V C Chary Guntupalli, Scientist-D, MoEF&CC, RO, Bhopal
3. Sunil Kumar Meena Scientist 'D', CPCB, Regional Directorate, Bhopal
4. S D Valmiki, Regional Officer, MPPCB, Regional Office, Singrauli

Following plant (Reliance Sasan Power Ltd) officials were present during the site visit & discussion:

1. Sh Anil Kumar Singh, Chief Executive Officer
2. Sh Sachin Mohapatra, Station Director
3. Sh Amitosh Verma, Assistant Vice President

Copy of the attendance sheets is enclosed as **Annexure-1**.

In compliance with the Tribunal order, the joint inspection committee carried out the site visit of breached fly ash pond during 14<sup>th</sup> & 15<sup>th</sup> July 2020 to verify the issues made by the applicant viz.

*“The applicant has raised the issue of the incident of collapsing of Fly ash pond constructed by Reliance Power's Ultra Mega Power Project's (UMPP) Singrouli (MP) on 10.04.2020 around 3 PM during COVID 19 pandemic, leading to flood of the toxic ash slurry located in adjoining*

*Harrhava village, washed away six persons, including three kids, a woman and two men living in the adjoining villages. All the Respondents are severely and jointly responsible for the loss of human and animal's lives as well as severe damages to the nearby rivulets Goiwahai, vegetations, biodiversity, fertile agricultural lands, due to their negligence. A substantial issue of environment has been raised.”*

### **1. The incidence & probable cause of its occurrence:**

Industry was disposing its fly ash in this Island 4 or C5 area (Geo-graphical location: 23.955383, 82.620307) since March 2019; the area of the low lying is 41.62 Hectares with average depth of 6.5mtrs. This provides effective volume of 27.06 Lakh M<sup>3</sup> to dispose the fly ash. Industry was discharging fly ash in High Concentration Slurry Disposal (HCSD) mode that has water to ash ratio 30:70. Based on the records, industry has disposed around 10 Lacs Ton fly ash slurry till the date of incidence i.e. 10.04.2020. Copy of the disposal records is enclosed as **Annexure-2**. To pump out the stagnated slurry water near retaining wall, pumping arrangement was provided by the industry.

As reported by plant official, the incidence of fly ash pond's retaining wall breach happened on 10<sup>th</sup> April 2020 at around 4.40PM in the low lying area called Island 4 or Compartment 5 (C5) inside the plant premise. One Poclain machine was on job of leveling soil on the top of the retaining wall; on moving back the machine, the machine lost its balance and slipped down towards the outer slope of the retaining wall. In order to prevent the slippage, the machine operator tried to anchor the bucket on the top soil of the retaining wall; However due to its own weight, it pulled down a big chunk of soil from the bund and further to stay up it kept on anchoring on

additional part of the bund. During the process, the operator damaged the wall significantly which initiated the break of the retaining wall. This resulted in huge quantum of fly ash with water gushed out through the breached wall in about 25mtrs width. Geo-graphical location of breach was 23.954105° Latitude, 82.623535° Longitude and 23.954335 ° Latitude, 82.623568° Longitude. On the day of site visit of the committee; continuous lean flow of water was observed in the low lying area; during discussion it was informed by industry representative that this flow of water is continuous from the day of incidence and it was also informed that a study was awarded to IIT-BHU to study the reason of breach in the embankment of ash disposal site. The report submitted by Prof Arun Prasad, Dept of Geotechnical Engineering, IIT BHU on 17.6.2020 after his site visit on 13.6.2020 reported the reason of embankment failure under point no. 12 as:

*“The failure of embankment was definitely initiated by slippage of Poclain. However the subsequent extent of damage of the bund was due to severe hydrostatic pressure on the upstream of the embankment. Through this damaged portion, dilute slurry started flowing leading to complete cutting of the retention wall. Accumulation of huge underground water had resulted into heavy flow of ash slurry causing serious consequences in the villages”.*

The copy of the IIT-BHU report is enclosed as **Annexure-3**. The reported hydrostatic pressure probably developed by the newly constructed check dam on a stream around May/June 2019 about 4mtrs lower elevation. Geo-graphical location of the check dam is 23.964515°Latitude, 82.611492° Longitude.

## 2. Nature of Damage

The breach of embankment/dyke caused severe damage to life of human & animal, property, agricultural fields, standing crops, motor pumps used in agriculture, water quality, macro-invertebrates etc. The flow of slurry was too forceful that it not only demolished the boundary wall as well as the adjacent private property but also flowed through the Goiwahai drain damaging the ash water recirculation pipeline of the industry and submerging the agricultural lands & summer season crops. The slurry travelled a path of about 6.5KMs in length; the average spread of slurry was 30mtrs wide with an average depth of 1mtr. Out of total 10 Lacs Ton ash deposits in Island 4 or C5 area, about 4 Lac Tons slurry breached out from about 11 Ha area with average 3mtrs depth which spread in nearby area, Goiwahai drain and on agricultural lands. The collected ash from C5 area and Goiwahai drain and agricultural land is dumped near Island 3 or Compartment C1 to C4 (Low lying area filled with fly ash), Ash dyke 1 & 2 for raising & bund strengthening. Based on the number of hyva, trucks, tractor, loader engaged and their trips, it was informed by industry representative that; Out of total 10 Lacs Ton ash; about 3.57 Lacs Ton fly ash excavated from C5 area and used in Island 3 bund strengthening, about 2.67 Lacs Ton ash collected from Goiwahai drain and agricultural land is used to strengthen the Ash dyke 1 & 2. Still around 2.15 Lacs Ton is lying in C5 area and about 1.5 to 2 Lacs Ton fly ash is deposited in drain. Document related to ash quantity removed is enclosed as **Annexure-4**. On the day of field visit, the committee observed deposits of dried fly ash in few agricultural fields viz (GPS location 23.969297, 82.634512; 23.969559, 82.635288 and 23.974791, 82.636981). The committee was of the opinion

that an appropriate direction needs to be issued to occupier to expedite the cleaning work so as to avoid further flow of ash towards Rihand reservoir. Accordingly, Regional Officer, MPPCB issued advisory in this regard to the occupier; copy of the direction issued is enclosed as **Annexure-5**.

Madhya Pradesh Pollution Control Board (MPPCB) Regional Office, Singrauli and Zonal Office Rewa carried out joint effluent sampling on 12<sup>th</sup> April 2020 from 5 locations; the details are as tabulated below:

S.No.	Location & Geo-graphical coordinates	pH	Total Solids (TS)	Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)
1.	Goiwahai drain near Sasan Power Plant (23.977775, 82.638136)	6.5	13098	918	12916
2.	Rihand river before mixing of Goiwahai drain (23.985756, 82.655558)	7.5	266	85	181
3.	Rihand Reservoir, Near Sasan Pump House (24.038930, 82.673119)	7.5	330	104	226
4.	Rihand river after mixing of Goiwahai drain (24.007186, 82.653735)	7.5	606	724	476
5.	Goiwahai drain before mixing with Rihand River (23.991117, 82.651948)	7.5	1518	614	1368

All units are in mg/l except pH. Copy of the Analysis report is enclosed as **Annexure-6**.

The analysis report clearly status that the Total solids load in Goiwahai drain reduced from 13098 mg/l to 1518mg/l before mixing in Rihand River which reveals that in the travel path of about 6.5KMs majority of solids got deposited in Goiwahai drain only. Further after mixing the drain in Rihand River the total solids load increased from 266mg/l to 606mg/l. In this way, the breach incidence has significantly deteriorated the water quality in

Rihand river w.r.t. the Total solids. The resultant deposition of solids at the bottom of Goiwahai drain might have resulted in loss of benthic macro invertebrates.

### **3. Action Taken by District Administration**

Following actions were initiated by District Administration, Singrauli immediately after the ash dyke breach:

- i. National Disaster Response Force (NDRF) team was engaged to carry out rescue, relief work. With the effort of NDRF team and district administration, the bodies of the 6 deceased were recovered from the ash spread area/drain.
- ii. Immediate relief was provided through M/s Sasan Ultra Thermal Power Plant to the families to the affected villagers in the form of food, water, shelter, fodder etc.
- iii. Initiated survey to assess the damage to agricultural fields, crop, livestock etc.
- iv. The injured persons were immediately shifted to the Nehru hospital, NCL Jayant, Singrauli for proper treatment.
- v. District Collector, Singrauli has ordered a magisterial enquiry on the breakage of this retaining wall vide order 452/RDM/2020 dated 11.4.2020. Police Department has also registered an F.I.R. under relevant section of I.P.C. against the industry.
- vi. Considering the damage to environment, life & property due to embankment breach and precautionary measure to adopt for the stability of another low-lying area, district magistrate had communication with Principal Secretary, Environment Department on 15.4.2020 vide letter no. 466/RDM/2020 for necessary direction to M/s Sasan Thermal Power

Plant. Copy of the letter is enclosed as **Annexure-7**. Energy Department, Govt of Madhya Pradesh vide letter No. F-3/16/2009/13 (Vol. XVIII) dated 4<sup>th</sup> May 2020 asked unit to take immediate action to get ash dykes repaired. Copy of the letter is enclosed as **Annexure-8**.

#### 4. Action Taken by Madhya Pradesh Pollution Control Board (MPPCB)

- i. Joint inspection of the breach site & sample collection was conducted jointly by MPPCB Zonal & Regional Office Rewa and Singrauli respectively on 12<sup>th</sup> April 2020. Looking into the grave danger to environment, life & property; directions under section 33 A of the Water (Prevention and Control of Pollution) Act, 1974 vide letter no. 23/MPPCB/MS/TS Singrauli/2020, Bhopal Dated 13/04/2020 were issued to repair, restore the breached area, remove the fly ash spread, assess environmental damage & deposit interim damage cost pending the assessment of actual damage & Copy of the direction is enclosed as **Annexure-9**.
- ii. Subsequently, MPPCB granted permission vide letter No. ENDT.43/MPPCB/MS/TS-Singrauli/2020 dated 28/04/2020 to industry to accommodate fly ash recovered from the ash breach area within the plant premises and adjoining affected area in to the identified total 9.825 Ha area of low lying area around the existing ash dyke 1 & 2 w.r.t. the units application vide Letter No. SPL/2020-21/11 dated 21/04/2020. Copy of the MPPCB letter is enclosed as **Annexure-10**.
- iii. Earlier, MPPCB vide its letter dated 13.2.2018 granted permission to M/s Sasan Thermal Power Plant to dispose the fly ash only in Compartment 1 (C1) of 6.09 Ha following the guideline prepared by Orissa Pollution

Control Board, Bhuvneshwar and C-FARM, New Delhi “Technology & methodology manual for reclamation of low lying area/abandoned queries/Literate mines etc. with pulverized fuel ash, July 2010. Copy of the same is enclosed as **Annexure-11**. MPPCB team during its visit to plant on 4.1.2019, observed non-compliance of the conditions like liner, partition, disposal in dry form & others stipulated in earlier permission issued on 13.2.2018 for disposing fly ash in low lying area. In this regard, MPPCB has issued a show cause notice to industry on 30.3.2019. Copy of the same is enclosed as **Annexure-12**. Industry replied the show cause notice vide letter SPL/EMG/2019-20/03 dated 22.4.2019 w.r.to the liner, soil permeability, ash transportation, high concentration slurry disposal etc. Copy of the same is enclosed as **Annexure-13**. It was informed by industry representative that as no further directions/Notice were issued from MPPCB after their reply to the show cause; unit has started disposing the ash in High Concentration Slurry Disposal (HCSD) in the areas C2 to C5, which was in accordance with their submission dated 22.04.2019. However, no prior permission was obtained from MPPCB for ash filling in compartments C 2 to C5, an embankment was made and ash in slurry form was filled above the ground level, which is in contravention to the permission granted by MPPCB on 13.2.2018 and was similar to creating an ash dyke and was opposed to the norms of ash filling in low lying areas. The industry kept filling the ash despite the consent renewals granted by MPPCB on 05.04.2019 and 08-03-2020 under the provisions of Water (P&CP) Act, 1974 and Air (P & CP) Act, 1981, in which it was clearly specified that for disposal of ash in low lying area/mine for void filling prior permission from the Board be obtained, and conditions stipulated therein shall be followed.. The consent renewal letters are

enclosed as **Annexure 14A** and **Annexure 14B**. MPPCB vide letter dated 26.5.2020 granted permission to Regional Officer, Singrauli to initiate legal action against the occupier under Water (Prevention & Control of Pollution) Act 1974 and Environment Protection Act, 1986. Copy of the same is enclosed as **Annexure-15**.

#### 5. Action Taken by M/s Sasan Ultra Thermal Power Plant, Singrauli

Action w.r.to the immediate repair of breached embankment, restoration, assessment of the environmental damage & dyke stability, compensation towards loss of life, property & others, removal of ash from compartment C5 etc. are as below:

- i. The restoration of ash spread area through earth moving and transporting equipment is under progress at multiple locations e.g., agricultural fields, nearby nalla with proper access. However, earlier unit faced constraints on large scale resource mobilization due to COVID 19 national lockdown. Out of total 10 Lacs Ton ash; about 3.57 Lacs Ton fly ash excavated from C5 area and used in Island 3 bund strengthening, about 2.67 Lacs Ton ash collected from Goiwahai drain and agricultural land is used to strengthen the Ash dyke 1 & 2. Still around 2.15 Lacs Ton is lying in C5 area and about 1.5 to 2 Lacs Ton fly ash is deposited in drain. Proper spreading and compaction of filled ash is carried out using dozer and compactors. Compaction testing at the ash filling site is carried out regularly conforming to the standards.
- ii. Repair work of damaged retention wall (at C5 area) up to a suitable height has been completed after provision made below the re-instated retention wall for safe passage of water flowing from the area to avoid

- any water accumulation within this low lying area. About 3.57 Lacs Ton fly ash excavated from C5 area and used in Island 3 bund strengthening. Simultaneously, soil cover is being provided over the C5 low lying area.
- iii. M/s Sasan Power Ltd has issued letter of intent (LOI) & Work Order (WO) on 21.4.2020 & 2.6.2020 respectively to IIT-BHU for studying the ash dyke stability. Copy of the LOI & WO is enclosed as **Annexure-16**. Preliminary report submitted by IIT-BHU on 17.6.2020. The report states that *“The failure of embankment was definitely initiated by slippage of Poclain. However the subsequent extent of damage of the bund was due to severe hydrostatic pressure on the upstream of the embankment. Through this damaged portion, dilute slurry started flowing leading to complete cutting of the retention wall. Accumulation of huge underground water had resulted into heavy flow of ash slurry causing serious consequences in the villages”*.
- iv. A Letter of Intent (LOI) issued on 21.4.2020 to National Environmental Engineering Research Institute (NEERI), Nagpur for the assessment of the environmental damage. Work order (WO) was issued on 5<sup>th</sup> June 2020 in favor of NEERI. However, due to COVID19 & lockdown; NEERI has not carried out site visit till date. It was informed that regular follow-up is being made with NEERI to expedite the visit. Copy of the LOI & WO is enclosed as **Annexure-17**.

**v. Details of compensation, relief measures & others**

**a. Compensation to families lost their members**

M/s Sasan Power Ltd had compensated financially in **Rs. 125.3 Lakhs** to the dependent family members of **06** deceased persons as per the district

administration instructions & guidelines. Lifelong Monthly Sustenance Allowance was also extended to 6 Dependents of deceased ones @8275/month. Employment was provided to 03 members of the deceased persons. The details are as below:

1) Deceased person : **Dinesh Kumar Shah S/O Bisahulal Shah (Age 32 yrs)**

Following compensation was paid to his dependents Mrs. Reena Shah (Wife), Smt Rudani (Mother), Sh Bisahulal Shahu (Father)

- One Time Settlement amount- **Rs. 10.00 Lakh**
- Employment in Company with monthly Salary **Rs. 15000/-** to Smt. Reena Shah W/O Late Shri Dinesh Kumar Shah.
- Lifelong **Monthly Sustenance Allowance** to Mother Rudani W/O Bisahulal Sahu (67 yrs) & Father Sh. Bisahulal Shahu S/O Anantram Shahu (69 Yrs) @ **Rs. 8275/- (Each)** (Revised every six month as per GoMP Minimum wage guidelines) annual financial implication at today's rate= Rs. 8275x12X2 members=**Rs.198600/annum**
- Cremation Support of **Rs. 30,000/-**

2) Deceased person : **Master Ankit S/O Late Dinesh Kumar Shah (Age 3 yrs)**

Following compensation was paid to Mrs. Reena Shah (Mother)

- One Time Settlement amount-**Rs. 10.00 Lakh**

3) Deceased person : **Choon Kumari Shah W/O Bhayyaram Shah (Age 28 yrs)**

Following compensation was paid to dependent **Bhayyaram Shah (Husband)**

- One Time Settlement amount-**Rs. 10.00 Lakh**

4) Deceased person : **Seema D/O Bhayyaram Shah (Age 10 yrs)**

Following compensation was paid to Sh Bhayyaram Shah (Father)

- One Time Settlement amount-**Rs. 10.00 Lakh**

5) Deceased person : **Abhishek S/O Bhayyaram Shah (Age 8 yrs)**

Following compensation was paid to Sh Bhayyaram Shah (Father)

- One Time Settlement amount-**Rs. 10.00 Lakh**

Following compensation and relief was also given to Sh Bhayyaram Shah whose wife & 02 kids lost their life in this ill-fated incidence

- Cremation Support of **Rs. 50,000/-**
- Lifelong **Monthly Sustenance Allowance** to Mother Golari S/O Rambaran Shahu 48 Yrs & Father Rambaraan Shahu S/O Khulluram Shahu (52 Yrs) @ **Rs. 8275/- (Each)** (Revised every six month as per GoMP Minimum wage guidelines) annual financial implication on today's rate= Rs. 8275x12X2 members=**Rs.198600/annum**
- **Permanent Job** to Sh Bhayyaram Shah in Civil department of M/s Sasan Power Limited on the post of Technician.
- **Compensation of House** (Rs. 10.00 Lakh) , **Household items** (Rs. 10.00 Lakh), **property** (Rs. 8.00 Lakh)
- **Constructed House** of 5 room at Makrohar Road (Rs. 25 Lakhs Approx Valuation)

6) Deceased person : **Rajjad Ali S/O Jabbar Ali (Age 29 yrs)**

Following compensation were paid to dependent Mrs. Reshma Khatoon (Wife)

- One Time Settlement amount- **Rs.5.00 Lakh** to Smt. Reshma Khatoon w/o Late Shri Rajjad Ali.
- **Employment to 1 member** through outsourcing based on qualification
- One Time Settlement amount- **Rs.5.00 Lakh** to Shri Jabbar Ali F/o Late Shri Rajjad Ali
- Lifelong **Monthly Sustenance Allowance** to Mother Julekhaa Begum W/O Jabbar Ali (49 Yrs) & Father Jabbar Ali S/O Inshaa Mohammad (52 Yrs) @ Rs. 8275/- (EACH) (Revised every six month as per GoMP Minimum wage guidelines). Annual financial implication on today's rate= Rs. 8275x12X2 members= **Rs.198000/annum**
- Support for Cremation **Rs. 20000/-**
- Payment to be made to the nominees of worker under workmen compensation act (Amount deposited in Labour court) – **11.03 Lakhs**

Elaborated details of the compensation offered to families who lost their members are enclosed as Annexure-18.

**b. Compensation for Cattle, Motor, pump, well, poultry farm etc.**

Based on the survey of district administration, compensation was provided to affected villagers against their loss of livestock, motor, pump, water source, poultry farm etc. The details are as below:

- Affected villagers of 03 villages of Tehsil Singrauli as per SDM Singrauli Letter 165/SDO/RE-3/2020 dtd. 29.05.2020 – **INR 70.59 Lakhs**
- Affected villagers of 01 villages of Tehsil Mada as per SDM Mada Letter 541/SDO/RE-1/2020 dtd. 26.05.2020 - **INR 9.84 Lakhs**

Details of the compensation for Cattle, Motor, pump, well, poultry farm etc. are enclosed as **Annexure-19**.

**c. House Damage, Crop Compensation, House hold items**

About 566 sufferers of Sidhikala, Sidhikhurd, Harrahawa & Jhanjitola villages were recorded by the M/s Sasan Power Ltd. The details are as below:

<b>Affected</b>	<b>Total Numbers</b>	<b>Details of affected persons, property etc.</b>
Farmers	549	Siddhikala – 21 Sidhikhurd – 133 Harrahawa – 321 Jhanjitola - 74
House	14	House includes both Kaccha & pakka
Household items	03	-

**Details of the compensation are as below:**

- Support for Ration/Household damage to 11 families of Sidhi Khurd – **1.78 Lakhs**
- Compensation towards, house damage, crop, household materials (566 nos.) - **85.07 Lakhs**

Details of the compensation to House Damage, Crop Compensation, House hold items are enclosed as **Annexure-20**.

d. **Medical Support to Injured (Nehru Hospital)**

The insured persons were provided medical treatment to Nehru Hospital, Northern Coalfield (NCL), Jayant, Singrauli. Medical support of total Rs. 2.36 Lakhs was provided to Smt Reena Shah W/O Late Dinesh Shah and Golari Devi W/O Sh. Rambaran Shah.

Details of the Medical Support to Injured (Nehru Hospital) are enclosed as **Annexure-21**.

e. **Support for food to affected families**

M/s Sasan Power Ltd extended support for food, maintenance of electric & civil work to affected families. The following expenditure was incurred by the unit:

Support for fooding to affected families through our canteen – **1.5 Lakhs**

Support for civil, electrical maintenance and ration to main family – **1.5 Lakhs**

f. **Provision of drinking water to families and Cattle**

Unit has made drinking water supply provisions in the affected area.

The details of work done and expenditure incurred are as below:

- Provision of 570 nos drums of 100 ltr capacity for cattle - 1.14 Lakhs
- Installation of Hand-pump to families affected by accidents (8 nos) - 6.4 Lakhs
- Drinking water supply through tanker - 0.45 Lakhs

Details of the Provision of drinking water to families and Cattle are enclosed as **Annexure-22**.

**vi. Interim compensation for the environmental damage**

MPPCB vide letter dated 13.4.2020 directed M/s Sasan Power Ltd to deposit an amount of Rs 10 Crore towards interim environmental compensation. M/s Sasan Power Ltd has deposited only Rs. 2 Crore to the account of MPPCB (Member Secretary Environment Protection Fund) on 26.5.2020. Details of the Interim compensation for the environmental damage are enclosed as **Annexure-23.**

**6. Action Taken by Ministry of Environment, forest & Climate Change (MoEF&CC)**

MoEF&CC, New Delhi issued a Show Cause notice vide office order no. J-13011/15/2006-IA-II (T) dated 21.05.2020 under Section 5 of Environment (Protection) Act, 1986. Project Proponent vide e-mail dated 04.06.2020 submitted a reply in response to the said show cause notice. Subsequently, MoEF&CC, New Delhi vide letter dated 13.07.2020 requested the project proponent to provide the concrete action taken and or being taken by the company to achieve 100% fly ash utilization. Simultaneously, MPPCB has been requested to furnish action taken by the Board as well as the remedial measures taken by M/s. Sasan Power Ltd. Copies of the same are enclosed as **Annexure-24.**

**7. Specific observations of the joint committee**

- i. Continuous flow of water contaminated with fly ash is seen flowing down the Hume pipe laid by the project proponent in the breach area, wherein the Project Proponent needs to take appropriate control measures to prevent the fly ash from reaching the Goiwahai drain and finally the Rihand river.

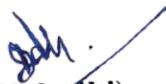
- ii. In spite of the efforts of the project proponent to remove fly ash from the Goiwahai drain, significant quantities of Fly ash between 1.5 to 2 Lacs Ton is seen spread on the banks of Goiwahai drain over a stretch of 6.5 km till its confluence with the Rihand River. Slower progress in fly ash removal due to constraints in resource mobilization due to covid-19 lockdown was noticed and the industry needs to expedite the fly ash recovery from the banks of Goiwahai drain.
- iii. In spite of the financial aid /compensation paid by the company to the affected people, the grievances of some of the affected people are still to be addressed by the company in co-ordination with local authorities.
- iv. The project proponent has engaged CSIR-NEERI to assess the cost of environmental restoration and IIT-BHU to assess the ash dyke stability study and others.

Google image of the site of the incidence and photographs taken during the field visit are enclosed as **Annexure- 25**.

## 8. Recommendations

1. To check the strength of the bunds created around the dykes/low lying areas quarterly and one time especially before the on-set of the monsoon through expert agencies of repute and to submit Action Taken Reports to regional offices of MPPCB, CPCB & MoEF&CC periodically.
2. To expedite the ash cleaning work from Goiwahai drain to ensure that the resultant environment contamination is minimized and resources should be channelized to complete the task within 1 month and to submit Action Taken Reports to regional offices of MPPCB, CPCB & MoEF&CC on weekly basis.

3. To take appropriate control measures to prevent the fly ash from reaching the Goiwahai drain and finally the Rihand River.
4. In spite of the financial aid /compensation paid by the company to the affected people, the grievances of some of the affected people near Tola Badi village, Harrahawa are still to be addressed by the company in co-ordination with local authorities. The CSR cell of the company in co-ordination with the local administration shall set-up grievance redressal camps in each of the affected villages along the Goiwahai drain.
5. To obtain prior permission from MPPCB before any disposal of fly ash / bottom ash in the low lying areas and ensure disposal as per the CPCB guideline.
6. To expedite the studies to be undertaken by IIT-BHU to assess the impact of aquifers in the fly ash breach.
7. To expedite the environmental damage assessment studies with CSIR-NEERI so as to ensure the actual impact of fly ash breach on environment is assessed holistically.

  
**(S D Valmiki)**  
**Regional Officer**  
**MPPCB, Singrauli**

  
**(Sunil Kumar Meena)**  
**Scientist-D**  
**CPCB, Regional Directorate Bhopal**

  
**(Rajeev Ranjan Meena)**  
**District Collector**  
**Singrauli**

  
**(Dr. H VC Chary Guntupalli)**  
**Scientist-D**  
**MoEF&CC, RO Bhopal**