MINUTES OF 92nd MEETING OF EXPERT APPRAISAL COMMITTEE (INFRASTRUCTURE-2) HELD ON 4th JULY, 2022.

VENUE: Indus Hall, Ground Floor, Jal Wing, Indira Paryavaran Bhawan, Jor Bagh, Delhi – 110 003.

DATE: 4th July, 2022

PROCEEDINGS

91.1 Opening Remarks of the Chairman: The Chairman welcomed the Members and other participants of the meeting. Thereafter, the meeting was opened to start proceeding as per the agenda adopted for this meeting.

91.2 Confirmation of Minutes of 91st Meeting of Expert Appraisal Committee (Infrastructure-2) held on 30th June, 2022

The Expert Appraisal Committee (Infrastructure-2), hereinafter called the EAC (Infra-2), was informed by Member Secretary that no representation has been received regarding projects considered in 91st meeting. Minutes of 91st meeting of EAC (Infra-2) were confirmed. The typo errors, if any noticed during processing of these cases may be corrected in the light of facts and figures provided by the respective Project Proponent.

91.3 Consideration of Proposals: The EAC (Infra-2) considered proposals as per the agenda adopted for the 92nd meeting. The details of deliberations held and decisions taken in the meeting are as under:

AGENDA INTEM NO. 92.3.1

Environmental Clearance for the Sanitary Landfill at Tehsil Joshimath, Chamoli District, Uttarakhand by M/s Nagar Palika Parishad Joshimath – Environmental Clearance

IA/UK/MIS/280447/2021; F. No. 21-60/2022-IA.III

1. The Project Proponent (M/s Nagar Palika Parishad Joshimath) along with the EIA consultant (Amaltas Enviro Industrial Consultants LLP) made a presentation on above said proposal and the EAC (Infra-2) took note of following key parameters and salient features of the project as presented during the meeting as well as the details provided in the brief and application for this project:

i. The proposed sanitary landfill site is located in the Vishnu prayag Village of Chamoli District in Joshimath, Plot/Survey/Khasra No.5488, approximately 1 km kilometers in SW direction from Joshimath city.
ii. The project is new.

iii. Earlier, Terms of Reference has been issued to M/s Nagar Palika Parishad Joshimath for preparation of EIA/EMP report for said proposed activity by SEIAA-Uttarakhand vide letter dated 31.03.2021.

iv. Total area of project is 2000 sq. m.

v. Public hearing was conducted on 03.12.2021. Employment opportunity for the local people and mitigation measures of air pollution are major concerns raised by the public. Overall, the public welcomed this project as it is going to benefit the health and surrounding environment of the people living near the project site.

vi. No alternative site is proposed for development of the proposed landfill project. As per the SWM rules 2016, the selected site is fulfilling all the site selection criteria. Details as follows:

Sl. No.	**Criteria**	**Criteria distance**	**Available distance and direction from proposed SLF site**
1.	Distance from nearest River	100 m	Alaknanda River – Approx. 350 m in N direction Dhauli ganga River – Approx 600 m in E direction
2.	Distance from Nearest Pond	200 m	No pond near site
3.	Flood Plain	No landfill shall be constructed within a 100 year flood plain zone.	Not located in the flood plain zone.
4.	Distance from Nearest Highway	200 m	NH58 Rishikesh Badrinath 1.3 km in S direction
5.	Distance from nearest habitation	200 m	Vishnu Prayag 500 mtrs in NE direction
6.	Distance from nearest Public Parks	200 m	Indira Park 2.6 km in W Direction
7.	Distance from nearest Water supply wells	200 m	Distance from nearest water supply well is 5.6 km as per information received through email dated 09.07.2022.
8.	Critical Habitat Area	No landfill within the Critical habitat area. It is defined as the area in which 1 or more endangered species live	No critical habitat exist in study area,
9.	Distance from nearest Airports/Airbase	20 km	Jolly Grant Dehradun Airport139 km WSW Helipad Heliport Toli Gana Chahie – 6.8 km N
10	Coastal Regulation Zone (CRZ)	Should not be sited	Not applicable

vii. Total estimated coast of the project is ₹194.2 Lakhs.

viii. EMP Cost: Capital cost shall be ₹ 36 Lakh and recurring shall be ₹12.5 Lakh.
ix. Proposed Cost of the CER is ₹ 3, 88,400 (at least 2.00% of the project cost).
x. Water requirement during construction phase is 0.45 KLD, which will be sourced through private water tankers. During operation phase, water requirement is 04 KLD and the same will be met through Uttarakhand Jal Sansthan Joshimath.
xi. Leachate in the operation phase will include its collection and treatment shall be made.
xii. Total power requirement is 15 KW, which will be met through Uttarakhand Power Corporation Limited (UPCL).
xiii. Greenbelt has been planned in the periphery of the proposed project site. Total 144 trees will be planted under prescribed area i.e. 576 sq. m which will be cover ~30% of total proposed project area under plantation.
xiv. Forest clearance is not required
xv. NBWL Clearance is not required
xvi. Project site not located in Critically Polluted area
xvii. CRZ clearance is not required
xviii. No court case is pending against the project/project site.
xix. No environmental sensitive area like National park, Sanctuary, Biosphere reserve Wild life corridor, Tiger /Elephant reserve exists in the 10 Km radius.
xx. Employment potential: Development of project will provide employment opportunity to local skilled, unskilled & semiskilled people during construction phase.
xxi. Benefit of the project: Use of compost produced as manure to the crops and generation of revenue through the sale of compost produced from the MSW processing and disposal facility.

2. The project/activity is covered under category B of item 7(i) Common Municipal Solid Waste Management Facility (CMSWMF)' of the Schedule to the EIA Notification, 2006 and its amendments, and requires appraisal at State Level. However, due to non-existence of SEIAA in Uttarakhand, the proposal required appraisal at Central level by sectoral EAC.

3. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, **recommended** grant of environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity.

i. Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.

ii. Air pollution control device viz., gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bag-filter/ESP for removal of particulate matter; ventury scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to the incinerator. Online pollutant monitoring shall be provided as per CPCB guidelines for monitoring particulate matter, SO_2, NOx and CO from the incinerator stack. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out.

iii. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concern Authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Where the trees need to be cut/transplanted with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut/ non-survival of any transplanted tree) shall be done and maintained. Plantations to be ensured species (cut) to species (planted).

iv. Green Belt along the periphery in 3 tier. Project Proponent shall develop green belt in 576 sq. m area and at least 144 tree should be planted in the periphery of as committed.

v. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.

vi. Analysis of Dioxins and Furans shall be done through CSIR — National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram or equivalent NABL Accredited laboratory.

vii. Leachates to be collected and utilized within project after proper treatment. PP should submit the details regarding Leachate collection and treatment system to be installed to concerned Integrated Regional Office of the Ministry. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.

viii. No fresh water to be used except for potable use.

ix. Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the Delhi Pollution Control Committee/CPCB. Trend analysis of ground water quality shall be carried out each season and information shall be submitted to the SPCB and the Regional Office of MoEF&CC.

x. Ground water monitoring for Physico-Chemical parameters to be carried out and record maintained by providing piezometric wells along the flow channel (up and down).

xi. Ambient air quality monitoring shall be carried out in and around the landfill site at up wind and downwind locations.

xii. The depth of the land fill site shall be decided based on the ground water table at the site.

xiii. Environmental Monitoring Programme shall be implemented as per EIA report and guidelines prescribed by CPCB for hazardous waste

facilities. Periodical ground water/soil monitoring to check the contamination in and around the site shall be carried out.

xiv. The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.

xv. On line real time continuous monitoring facilities shall be provided as per the CPCB or State Board Directions.

xvi. Scrubber water, leachate water or wheel wash shall be treated properly and recycled to achieve zero liquid discharge.

xvii. Gas generated in the Land fill should be properly collected, monitored and flared.

xviii. Pre medical check-up to be carried out on workers at the time of employment and regular medical record to be maintained.

xix. Emergency plan shall be drawn in consultation with SPCB/CPCB and implemented in order to minimize the hazards to human health or environment from fires, explosion or any unplanned sudden or non sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water.

xx. Rainwater runoff from the landfill area shall be collected and treated in the effluent treatment plant.

xxi. Adequate covering arrangement in site should be done to prevent the runoff of rainwater in the project premises.

AGENDA INTEM NO. 92.3.2

Environmental Clearance for Establishment of Hazardous Waste Incineration Facility of capacity 500 kg/hrs at Plot No. 143/10, Badanguppe– Kellamballi Industrial (KIADB), Chamrajanagar, Karnataka by M/s Capital Eco Systems– Environmental Clearance

IA/KA/MIS/204375/2021; F. No. 21-31/2021-IA.III

1. The Project Proponent (M/s Capital Eco Systems) along with the EIA consultant (Samrakshan) made a presentation on above said proposal. The EAC (Infra-2) took note of following key parameters and salient features of the project as presented during the meeting as well as the details provided in the brief and application for this project:

i. The project site is situated at plot no.143/10, Karnataka Industrial Area Development Board's (KIADB), Badanaguppe-Kellamballi Industrial Area, Chamarajanagar, Karnataka State. Latitude: 11° 59' 00.83" N; Longitude: 76° 53' 51.63" E.

ii. The proposal is new.

iii. The project is proposed to be established over 4040 sq. m (1 Acre) of land with Incineration capacity of 500 kg/h.

iv. Land use details of proposed project activity as follows:

Sl. No.	Particulars	Area (sq. m)	(%)
1	Ground coverage area (total built up area)	2,020	50
2	Green belt	1,333	33
3	Hard paved area	687	17
	Total Plot Area	**4,040**	**100**

v. Site selection criteria of the proposed project as follows:

Sl. No.	Location Criteria	Proposed site
1.	**Lake or pond**: No landfill shall be constructed within 200 m of any lake or pond.	The nearest lake is Mariyala lake located at a distance of 4.2 km towards South East.
2.	**River:** No landfill shall be constructed within **100 m** of a navigable river/stream.	There is no river or stream within 100 m from the proposed site.
3.	**Flood plain**: No landfill shall be constructed within a 100-year flood plain.	The proposed site is not located in flood plain.
4.	**Highway**: No landfill shall be constructed within 500 m of the right way of any state or national highway.	State Highway 80 is at a distance of about 2.5 km towards South.
5.	**Habitation**: A landfill site shall be at least 500 m from a notified habituated area.	The nearest village is Kellamballi located at 1.5 km towards East.
6.	**Public parks:** No landfill shall be constructed within **500 m** of a public park.	There are no public parks in the vicinity
7.	**Critical Habitat Area**: No landfill shall be constructed within critical habitat area including reserved forest area.	No reserved forest and no critical habitat area.
8.	**Wetlands**: No landfill shall be constructed within wetlands.	There is no wetland in the site nor in industrial area.
9.	**Airports:** No landfill shall be constructed within a zone around airports as notified by the regulatory authority or the aviation authority.	Nearest airport is in Mysore which is at a distance of 38 km towards North East.
10.	**Water supply well**: No landfill shall be constructed within 500 m of any water supply well.	None within 500 m. Not applicable as the proposed project is not a landfill.
11.	**Coastal Regulation Zone**: No landfill shall be sited in a coastal regulation zone.	CRZ is not applicable for the proposed area
12.	**Ground water table level**: No landfill shall be located in area where the ground water table will be less than 2 m below the base of the landfill.	Not applicable as the proposed project is not a landfill facility. However, depth to water level is more than 2 m at the project site.

vi. Earlier, the ministry has granted standard ToR to the EIA study for the proposed project vide letter no. 21-31/2021- IA - III dated 5th May 2021.

vii. During operation phase, total water requirement of project is about 04 KLD, which will be sourced from KIADB water supply. Total wastewater generated will be 2.7KLD. Domestic sewage (0.7 KLD) will

be treated in Septic Tank and disposed to soak pit. Scrubber effluent, vehicle wash and floor wash (2 KLD) will be treated in ETP of capacity 5 KLD and reused for scrubbing.

viii. During the operation phase, the solid waste generated from project will be 3.6 kg/day. The organic solid Wastes (2.1 kg/day) generated will be collected and given to the local municipality. Inorganic solid waste (1.5 kg/day) will be given to authorized recyclers.

ix. Total power requirement is 50HP, which will be sourced from KIADB.

x. Solar panel on roof top for partial augmentation of power requirement of the plant is proposed (about 30 to 40% of energy cost savings is estimated).

xi. 33 % of the total land area i.e, 1,333 sq. m is reserved for green belt development. 320 number of native trees are proposed to be planted in the periphery of the site at the rate of 2500 trees per hectare. No trees cutting is involved.

xii. A tank of 20 KLD is proposed for storage of harvested rainwater and 13 cum/day of rainwater is proposed to be harvested.

xiii. Around 150 sq. m area is provided for parking.

xiv. Forest Clearance is not required.

xv. CRZ Clearance is not required.

xvi. NBWL Clearance is not required.

xvii. No court case is pending against the project/project site.

xviii. No environmental sensitive area like National park, Sanctuary, Biosphere reserve Wild life corridor, Tiger /Elephant reserve exists in the 10 Km radius.

xix. The project is not located in critically polluted area.

xx. The cost of the project is ₹2.5 crores.

xxi. ₹63 Lakhs is the capital cost including pollution control measures and ₹17 Lakhs is the recurring cost budgeted for the environment management and for monitoring.

xxii. Employment potential: Around 50 persons during construction phase; 18 persons during operation phase.

xxiii. Benefits of the project: Helps in scientific secured disposal of Hazardous waste generated in industries present in Karnataka and other states. Helps industries for timely disposal of the Hazardous waste in a common facility. Generation of organized employment.

xxiv. The project site is located in designated industrial area (Badanaguppe–Kellamballi, Chamarajanagar) developed by Karnataka Industrial Areas Development Board (KIADB) and the Industrial area (591 ha) is granted with prior EC from MoEF&CC, vide letter no. 21-58/2015-IA.III dated 5th September 2017. So public hearing is exempted for proposed project activity as per Notification no J-11011/321/2016-IA-II(I) dated 27th April, 2018.

2. The EAC (Infra-2) noted that the above-mentioned project/activity is covered under category 'A' of item 7(d) 'Common hazardous waste treatment, storage and disposal facilities (TSDFs)' of the Schedule to the EIA Notification, 2006 and its subsequent amendments and required appraisal at Central level by sectoral EAC.

3. The EAC (Infra-2) observed shortcomings in respect of provision for three storage sheds within the premise, public liability insurance in the EMP budget and ETP sludge disposal and asked the PP to submit clarification in this regard. Accordingly, PP submitted the aforesaid information vide letter dated 04.07.2022.

4. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, **recommended** granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity.

i. The proponent should ensure that the project fulfills all the provisions of Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 and the 'Protocol for Performance Evaluation and Monitoring' for the same as published by the CPCB including collection, transportation, design etc.
ii. Guidelines for Common Hazardous Waste Incineration issued by CPCB shall be followed.
iii. Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.
iv. MoU shall be made with authorized recycler for disposal of spent/used oil/inorganic waste.
v. The proponent shall comply with the Environmental standards notified by Ministry of Environment & Forest for incinerators along with the technology/guidelines.
vi. Necessary provision shall be made for firefighting facilities within the complex.
vii. Project proponent should prepare and implement an on-site Emergency Management Plan.
viii. Employees shall be provided work specific PPE such as helmets, safety shoes, masks etc.
ix. Air pollution control systems such as Quenching, Bag filters, Forced Evaporation System, shall be implemented as proposed. Incinerator & DG Set shall be provided with a stack height meeting MOEF&CC Guidelines for proper dispersion of cleaned gases in atmosphere.
x. Ambient air quality monitoring shall be carried out at upwind and downwind locations. The parameters shall include Dioxins and Furan. Online real-time continuous monitoring facilities shall be provided as per the CPCB or State Board directions. Monitoring reports shall be submitted along with six monthly compliance report to the regional office of MoEF&CC.
xi. Project proponent should develop green belt all along the periphery of the TSDF with plant species that are significant and used for the pollution abatement. Total green area of 1333 sq. m (@33% of plot area) and at least 320 trees shall be maintained in the core area as proposed. The tree species shall be selected as suited to site conditions in consultation with concerned forest department.

xii. Fresh water requirement shall not exceed 04 KLD during operational phase.

xiii. PP shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.

xiv. Effluent Treatment Plant of 05 KLD capacity and septic tank and soak pit shall be provided as committed to treat the wastewater generated from the project. Treated water shall be reused within the project.

xv. A tank of 20 KLD shall be provided for storage of harvested rainwater as committed.

xvi. No non-hazardous wastes, as defined under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, shall be handled in the premises. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the MSW generated from project.

xvii. Project should ensure that the site is properly cordoned off from general movement and no unauthorized person or goods permitted to enter the premises. Necessary security provision should be made as a condition in the Authorization under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 to prevent unwanted access.

xviii. Traffic congestion near the entry and exit points from the roads adjoining the project site shall be avoided. Parking should be fully internalized and no public space should be utilized.

xix. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 2 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 2 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the PWD/Competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

xx. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/clearances under any other Acts/ Regulations or Statutes as applicable to the project.

AGENDA INTEM NO. 92.3.3

Environmental Clearance for Establishment of Common Biomedical Waste Treatment Facility at Plot No. D-17, Eldeco, SIDCUL Industrial Park, Sitarganj, Uttarakhand by M/s National Biomedical Waste Solutions – Environmental Clearance

IA/UK/MIS/272601/2021; F. No. 21-61/2022-IA.III

1. The Project Proponent (M/s National Biomedical Waste Solutions) along with the EIA consultant (Amaltas Enviro Industrial Consultants LLP) made a presentation on above said proposal. The EAC (Infra-2) took note of following key parameters and salient features of the project as presented during the meeting as well as the details provided in the brief and application for this project:

i. The proposed project is situated at Plot No. D-17, Eldeco SIDCUL Industrial Park, Sitarganj - 262405, Uttarakhand.
ii. The project is new.
iii. The project is proposed to be established over 4125 sq. m of land and it includes Incinerator (capacity of 250+100(stand by) kg/hr), autoclave (2MTD), shredder (200 kg/hr) and Effluent Treatment Plant (ETP) of 10KLD capacity.
iv. The proposed CBWTF will have 20' × 30' of storage area. The storage shed consists of different cells for storing different kinds of bio-medical waste including separate area for COVID -19 Wastes.
v. Land use details of proposed project activity as follows:

Sl. No.	Particulars	Area (sq. m)
1	Ground coverage area (total built up area)	1056
2	Green belt	1898
3	Road area/paved area	1171
	Total Plot Area	**4125**

vi. Earlier, SEIAA-Uttarakhand has granted standard ToR to the EIA study for the proposed project vide letter no. EC-07(24)/2021 dated 03rd November 2021.
vii. The total water requirement for the proposed facility is 10KLD (Domestic – 0.6 KLD; Green belt – 3 KLD; Scrubber, steam generation, floor washing, vehicle washing – 6.4 KLD). During operational phase water will be abstracted through groundwater with prior permission from regulatory authorities. Wastewater generation would be around 05 KLD which will be treated in ETP of 10 KLD capacity. The treated waste (04 KLD) shall be reused & recycled in the plant and maintaining plantation.
viii. Total power requirement will be 65 KVA, which will be sourced from Uttrakhand Power Generation Corporation Limited. In addition, Green

insulated DG set of capacity 65.0 KVA (01 No.) is proposed (Proposed DG set to be operated during emergency in case of power failure only).

ix. Total solid waste will be generated is 04kg/day. Of which, quantity of organic and inorganic waste will be 2.40kg/day and 1.60 kag/day respectively. Domestic wastes are segregated at source, collected in bins and composted.

x. Green belt will be developed over 46 % (1898 sq. m) area of the total site area. Approx. 300 no. of shrubs, 200 trees shall be planted.

xi. Roof water will be collected by adopting proper treatment (O&G Trap), the collected water will be used for various uses (dust suppression, floor washings, toiler flushing, greenbelt, etc.).

xii. Forest Clearance is not required.

xiii. CRZ Clearance is not required.

xiv. NBWL Clearance is not required.

xv. No environmental sensitive area like National park, Sanctuary, Biosphere reserve Wild life corridor, Tiger /Elephant reserve exists in the 10 Km radius.

xvi. The project is not located in critically polluted area.

xvii. No court case is pending against the project/project site.

xviii. The estimated cost of the Project is ₹ 3.02 crore

xix. Public hearing is exempted as this project falls under Category B in industrial area.

xx. Employment potential: The total direct employment potential of the existing industry would be about 20 people.

xxi. Benefits of the project: To control pollution and improvement of surrounding areas, Employment opportunity in direct and indirect ways & Royalty generation.

2. The EAC (Infra-2) noted that the above-mentioned project/activity is covered under category 'B' of item 7(da) 'Common Biomedical waste treatment facilities (CBWTF)' of the Schedule to the EIA Notification, 2006 and its subsequent amendments and required appraisal at state level. However, due to non-existence of SEIAA in Uttarakhand, the proposal required appraisal at Central level by sectoral EAC.

3. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, **recommended** granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity.

i. All the recommendation, mitigation measures, environmental protection measures and safeguards proposed in the EIA report of the project submitted by project proponent vide commitments during presentation before EAC (Infra-2) and proposed in the EIA report shall be strictly adhered to in letter and spirit.

ii. The unit shall strictly comply with the CPCB guidelines for setting up the Common Biomedical Waste Treatment Facilities (CBWTF).

iii. Proponent Shall strictly comply the design criteria for incinerator, autoclave, shredder and all other requirements including bar-cording etc., as per the CPCB guidelines.
iv. The unit gall strictly setup the dry technology system.
v. The unit shall strictly ensure mercury waste management at health care facility as per CPCB guidelines.
vi. The unit shall establish standard operation procedure (SOP) for waste collection, handling, transportation, treatment and disposal as per Biomedical Waste Management Rules, 2016.
vii. Zero liquid discharge (ZLD) status shall be maintained all the time
viii. The shall be no drainage connection from the treatment shed.
ix. The project proponent shall comply with the Environmental standards notified by MoEF&CC for incinerators along with the technology/guidelines.
x. The project proponent shals submit the schedule for training of various categories of employee involved in biomedical waste management at various levels of biomedical waste handling and treatment at biomedical treatment facility within next 3 months to concern IRO, MoEF&CC.
xi. Authorization from SPCB under Biomedical Waste (Management and Handling) Rule, 2016 shall be obtained.
xii. The unit shall develop 46.01% of plot area as green belt as committed at least 200 trees shall be maintained in the core area as proposed.
xiii. PP should install ETP capacity of 10KLD as committed for treatment and disposal and Zero discharge should be maintained.
xiv. Processed effluent and any wastewater should not be allowed to mix with storm water.
xv. Incinerator should be properly interlocked with venture scrubber to control air pollution.
xvi. Incinerated ash and ETP sludge shall be disposed at approved TSDF and MoU made in this regard shall be submitted to concern IRO, MoEF&CC.
xvii. Colour coding for handling waste shall be strictly followed as per BMW Rules, 2016.
xviii. PP should install continuous online monitoring system to monitor emissions from the stack. Periodical air quality monitoring in and around the site shall be carried out. The parameters shall include Dioxin and furan.
xix. Proper parking facility should be provided for employees & transport used for collection and disposal of waste materials.
xx. PP shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.
xxi. PP shall strictly follow the Plastic Waste Management (Amendment) Rules, 2022 for treatment and disposal of plastics.
xxii. Necessary provision shall be made for fire fighting within the complex.
xxiii. The project proponent will set up separate Environmental Management Cell for effective implementation of the stipulated environmental safeguards under the supervision of a senior Executive.

AGENDA ITEM NO. 92.3.4

Environmental Clearance for Passenger Ropeway Facility from Har-Ki-Pauri to Chandi Devi Temple in Haridwar City, Uttarakhand by M/s Uttarakhand Metro Rail, Urban Infrastructure and Buildings Construction Corporation Limited –Reconsideration for Environmental Clearance

IA/UK/MIS/202744/2021; F. No. 21-133/2021-IA-III

1. The EAC (Infra-2) noted the proposal has earlier appraised in its 80th meeting held during 20-21st January 2022; wherein the proposal was deferred and the project proponent was asked to revise and resubmit the EIA report with necessary checks and corrections.

2. Accordingly, the project proponent submitted the revised EIA report on 04.04.2022 and the same was considered by EAC (Infra-2) in its 86th meeting held during 19-20th April, 2022.

3. The salient features of the project as presented during the meeting as well as the details provided in the brief and application for this project is as follows:

i. The project is located at Khasra No 7,17,18 and 22 of Laljiwala Pargana, Jwalapur Village, Haridwar Tehsil& District, Uttarakhand.
ii. The project is new.
iii. The proposal was issued Standard ToR vide File No. 21-32/2021-IA-III dated 05.05.2021.
iv. The proposed project is a Passenger Ropeway Facility from Har-Ki-Pauri to Chandi Devi Temple in Haridwar City. The project is 2,305 m long ropeway, covering an area of 6,210 sqm. (2900 sqm. of Forest Land and 3310 sqm. of Government Land) for the development of ropeway station and tower. The salient features of the project are as follows:
    - Length- 2,305 m
    - Area- 0.62 Hectares (6,210 sqm.)
    - Carrying Capacity- 1800 PPH
    - ROW- 10 m
    - Project components: Construction of Lower Terminal, Upper Terminal and 13 nos. of Towers

v. About 33 KLD of water will be required for each station which includes 11KLD fresh water and 22 KLD recycled water will be required for the purpose of flushing. Water will be supplied by Uttarakhand Jal Nigam. About 27 KLD of waste water will be generated from each station. Waste water generated will be treated in STPs of 30 KLD capacity. Treated water will be reused within the premise for flushing, cleaning etc.

vi. Total solid waste generation during operation will be 435 Kg per day. Segregated waste near the project site will be given to Municipal Corporation for treatment and disposal.

vii. Power requirement will be 15KW for Upper Terminal and 425KW for Lower Terminal. Power will be supplied by the Uttarakhand Power Corporation Ltd. During power failure02 Number of DG sets of Capacity 625 KVA for Lower Terminal and 25 KVA for Upper Terminal will be provided.

viii. Grid connected roof top solar PV of 135 KW at LTP and 15 KW at UTP has been proposed. Total power generated from the proposed SPV will be 1,84,254 KWH i.e. 10% of the total annual power requirement for operation of the ropeway.

ix. Pt. Deen Dayal Upadhyay parking has two levels of parking floor which will be extended to 4 levels in due course, increasing the current parking capacity of 1,000 to around 2,000cars. Traffic will be coming to Pt. Deen Dayal Upadhyay Marg from national highway and from interior roads of Haridwar which will be easy to manage due to huge parking lot at Har Ki Pauri.

x. Public Hearing for the proposed Ropeway project was organized on 12.11.2021, at C.C.R Bhawan (Mela Prashashan) Rodibelabala, Haridwar by the Uttarakhand State Pollution Control Board (UKSPCB).

xi. Total area of forest land involved in this project is 0.29 hectare andapproval for diversion of Forest land for use of non-forest purposes is under process. Stage–I Forest clearance has been received on 18.11.2021 from MoEF&CC Integrated Regional Office Dehradun.

xii. Raja Ji National Park, is located at 190 m from the project site. A letter dated 04.10.2021 has been received from Chief Wildlife Warden stating that the proposed project does not impact the section 29 and section 35 (6) of the Wildlife protection act 1972.

xiii. Irrigation/NMCG/District Level Approval is under process with the irrigation department for construction in Ganga River Basin.

xiv. 38 Trees will be felled. Compensatory Afforestation will be done on 0.58 hectare of degraded forest land.

xv. The project is not located in Critically Polluted area.

xvi. No court case is pending against the project.

xvii. CRZ Clearance is not required.

xviii. Expected timeline for completion of the project: 24 months

xix. Investment/Cost of the project is ₹149.70 Crores.

xx. Employment potential: 15 Number of staff will be directly employed during Operation. xxi. Benefits of the project - Since the ropeway is at Har Ki Pauri to Chandi Devi Mandir itself, so it will connect more people to reach at Maa Chandi Devi temple directly for the pilgrims reaching Haridwar and coming at Har ki Pauri. This will reduce the time and effort of the people in reaching Maa Chandi Devi Temple. It will generate local employment opportunities during construction and operation of the said project. Due to Har Ki Pauri to Chandi Devi ropeway project, there will be increase in tourism in State of Uttarakhand due to better connectivity.

4. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, decided to defer the proposal in its 86th meeting and asked the project proponent to provide the following additional information:

i. The EAC noted that 4 towers are located in the river bed as per the proposed alignment. Accordingly, a study should be carried out through a reputed institution such as IIT Roorkee and Central Water and Power Research Station (CWPRS), Pune on the environmental, hydrological as well as structural issues that may be associated with the proposed construction on the river bed.
ii. Explain the water treatment process (Advance Eco Reactor Technology) as proposed. The STP design should also take into consideration the location of the project in earthquake and flooding prone area.
iii. Impact of construction noise on fauna in Rajaji National Park should be clarified.

5. Accordingly PP submitted following replies to above queries on 01.07.2022 and same was considered by EAC (Infra-2) by its 92nd meeting held on 04.07.2022.

i. Submitted the hydrological study carried out by IIT Roorkee and it is concluded by the study that the effect of construction of the foundation of the Towers-1 to 4 on morphology of the Ganga river and the escape channel shall be negligible as the obstruction to the flow due to construction of the tower foundations is insignificant. Thus there are no environmental issues in the construction of foundations of Towers 1 to 5.
iv. Submitted the details of Sewage Treatment by Advance Eco Reactor Technology with reference to location of the project in earthquake and flooding prone area.
ii. Following noise mitigation measures are proposed to minimize the noise impact on the fauna of Rajaji Ji National Park by the proposed project.

- Construction will be carried out during daytime only.
- During construction phase, to reduce noise, air bubble curtain/ Cofferdam/ Noise barrier will be used.
- Noise monitoring will be carried out during construction, if noise level is exceeding the limits, then Environment Management Cell will review the measures and new measures will be implemented.

6. The EAC (Infra-2) noted that the project/activity is covered under item 7(g) 'Aerial Ropeways' of the Schedule to the EIA Notification, 2006. However, item 7(g) 'Aerial Ropeways' has subsequently been omitted from the EIA Notification, 2006 vide amendment notification S.O. 1953(E) dated

27.04.2022. Accordingly, the EAC (Infra-2) **recommended** that the proposal may be exempted from the requirement of Environmental Clearance subject to the environmental safeguards prescribed vide the Ministry's OM [F. No. 22- 17/2021-IA.III(Pt.)] dated 27.04.2022.

7. Further, EAC (Infra-2) directed the PP to get approval from CPCB for the proposed Advance Eco Reactor (AER) Technology for the use of sewage treatment.

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AGENDA ITEM NO: 92.4.1

Environmental Clearance for construction of Group Housing at 1,3 Cavalry Lane & 4 Chhatra Marg Near Vishwavidyalaya Metro Station, New Delhi by M/s Young Builders Pvt. Ltd. – Consideration in light of NGT Order dated 31.05.2022

1. The appeal No. 17 of 2021 has been filed by University of Delhi under section 16(h) of National Green Tribunal Act, 2010 against the EC granted by MoEF&CC to M/s Young Builder Private Limited for Construction of group housing project with built-up area of 1,37,879.64 sq. m at 1,3 Cavary Lane and 1 Chhatra Marg, Near Vishwavidhyalaya Metro station, New Delhi.

2. It has alleged that the EC has been granted without considering the carrying capacity of such massive project in that area and without addressing the issue of ground water, increased air pollution, non-adherence to the provision of EIA Notification for issuance of terms of Reference for preparation of EIA and EMP Reports, concealment of facts and data, incorrect traffic analysis, non-consideration of the area as silence zone, close proximity of Northern Ridge from the site in question not considered, impact on hydrograph beyond carrying capacity, socio-economic impact, project is in close vicinity of Najafgarh Drain which is a critically polluted area among others.

3. Issues dealt in the Appeal by the NGT are as follows:

Issue I: Whether appeal as a whole in respect to all the issues or some of the issues is barred by the principle of res-judicata as contented on behalf of PP?

Issue II: Whether PP has failed to disclose full, correct and complete information in Form I, Conceptual Plan or has withheld some information or disclosed wrong or incorrect information and is liable to face consequences as per provision of EIA 2006?

Issue III: Whether EAC/MoEF&CC have failed to consider relevant aspects/factors and failed to appraise project/activity of PP before grant of prior EC and it is vitiated on the ground of non-application of mind?

Issue IV: Whether EC in question is unsustainable and has been issued, without taking into consideration all relevant principles provided in law?

Issue V: What relief/order/direction, if any, need be passed in this appeal?

4. Now, the above appeal has been allowed and EC dated 21.05.2021 is quashed by the Hon'ble Tribunal. The relevant portions of the judgment are reproduced below:

"360. We, therefore, answer issues II, III and IV holding that the PP has failed to disclose correct and complete information, withheld relevant information and violated provisions and violated provisions of EIA 2006, hence is liable to face consequences as per the provisions of EIA, 2006, Further, EAC is making recommendation for grant of EC has failed to consider relevant aspect/ factors as also failed to appraise project/ activity by studying the impact on environment on various factors discussed above. Hence, it is a case where recommendation is without any proper application of mind on the part of EAC and mechanical exercise of MoEF&CC is granting EC also vitiates EC. Further, in view of the answer to question II and III above, EC is question is unsustainable and has been issued without considering relevant aspects and principles obligatory to be examined before grant of EC. Hence, EC is vitiated in law.

361. We accordingly, answer issue II, III and IV in affirmative i.e. in favour of appellant and against PP.

362. We may mention at this stage that PP has raised issue of bonafide of appellant, targeting PP selectively, etc. However, for deciding this statutory appeal, and examining validity of EC, we don not any relevance of those allegations.

363. Issue V: In view of our conclusion that EC has been granted without proper evaluation, project cannot be allowed without such proper evaluation about its sustainability or otherwise in the light of available data, a case is made for interference by this Tribunal. As discussed above, existing air and noise levels do not permit any further additive load in the area, particularly a high-rise building having adverse impacts on environment, including potential for fire incidents, adverse impact on micro climate due to wind funneling and turbulence around their bases, generation of particulate matter because of heavy machinery and equipment and waste management. There will be unmanageable impact on traffic density and adverse impact on flora and fauna and ground water regime of nearby pristine Ridge.

364. In view of the discussion, and answers to question II, III and IV above, issue V has to be answered in affirmative i.e. in favour of

appellant holding that appeal deserves to be allowed and EC in question is liable to be set aside.

365. We, therefore, answer issue V against PP.

366. In the result, Appeal is allowed. EC dated 21.05.2021 is quashed. Respondent-proponent is restricted from proceeding ahead with any construction activities pursuant to EC in question."

5. In the present meeting, the committee deliberated in detail on the orders of the NGT running to 268 pages and observations of the EAC (Infra-2) committee on the order are as under:

i. The Ministry is the first respondent and M/s Young Builders Private Limited (referred to as PP) is the Eleventh respondent in the case. Various other government departments are the other nine respondents. Only the Ministry and the PP were represented through their advocates.

ii. The advocate of PP has filed an elaborate response (231 paragraphs and 135 pages excluding the annexure to all the points raised by the appellant. Several responses made by the appellant finds place in the NGT order.

iii. Although, the Ministry was represented by its Advocate, the said NGT's order does not make any reference to affidavit (*Annexure 7*) filed by the MoEF&CC.

iv. The detailed filings of the counter by PP and its mentioning by the NGT in detail clearly reflects the efforts of EAC (Infra-2) in deliberating on the application of EC in the best interest of the environment as per current laws in force and mandate of the EAC.

v. The fact that the application of the PP was discussed in two EAC meetings and additional information were sought by the PP is a pointer to the seriousness in which EAC (Infra-2) evaluated the application in question.

vi. The Project in question is a **'category B project'** and in normal course would have been dealt by the State Environmental Impact Assessment Authority (SEIAA). In the present case the application came before the EAC (Infra-2), as the Delhi SEIAA was not in existence at the time of application.

vii. Earlier, the then SEIAA had granted the EC to the project on 13.08.2012.

viii. The M/s Young Builders Private Limited, i.e., PP had made an application for certain amendments to the EC granted earlier and the application was considered as a fresh proposal. SEIAA granted EC again on 23.03.2018.

ix. Appellant had challenged the EC granted to PP before the Hon'ble NGT, which constituted a Nine-member committee to evaluate the substantial question raised by the appellant and to guide the NGT in coming to a conclusion. This order of NGT was challenged in the

Hon'ble Supreme Court (SC) and the said order of NGT was set aside by the SC with direction to NGT to consider the case taking into consideration affidavits filed by the PP.

x. However, the Hon'ble NGT passed an order on 27.02.2020 and observed that the EC has been granted without application of mind and *prima facie* found the project not viable. The NGT constituted a new committee to independently evaluate the environmental impact.

xi. EAC (infra 2) noted that the said committee consisted of senior experts-Representatives of MoEF&CC, a scientist from Indian Council of Forestry Research and Education, Dehrudun, a scientist/engineer from Central Ground Water Board, New Delhi, a scientist/engineer from Central Pollution Control Board (CPCB), New Delhi, a representative of National Disaster Management Authority, New Delhi, a representative of School of Planning & Architecture, New Delhi, Senior scientists each from Wadia institute of Himalayan Geology, Dehradun, G.B. Pant National Institute of Himalayan Environment, Almora and Indian Institute of Technology, Kanpur with the Member Secretary of CPCB as the nodal agency for compliance and coordination.

xii. The committee filed its report "Rapid Indicative Environment Assessment" on 10.12.2020. Several suggestions were made. It recommended restriction on number of basements-instead of two to restrict to one basement. **The committee did not recommend the scrapping of the project.**

xiii. PP filed an application before NGT to withdraw the EC dated 23.03.2018 and accordingly NGT disposed of the case as infructuous due to the withdrawal of the impugned order.

xiv. PP as the SEIAA was not in force at that point of time, applied afresh for EC on 15.02.2021 before EAC (Infra-2). The application was deliberated by EAC (Infra-2) in its 62nd meeting and sought clarifications by the PP on the following points:

a. Clarification regarding the two basements that the Project Proponent still proposed even though the recommendation of the committee constituted by the Hon'ble Tribunal had recommended for a single basement.

b. Resubmission of conceptual plan and water balance chart.

c. Air Pollution management in context of Graded Action Plan.

d. Point-wise reply to the representation dated 02.03.2021 made by the Appellant herein.

xv. EAC discussed in detail the response of the PP to the clarifications sought in its 64th meeting on 13.04.2021. After due deliberations and on evaluating several points, EAC recommended grant of EC.

xvi. The Petitioner (DU) challenged the EC granted by the Ministry before the NGT and the present order is in disposal of the case.

xvii. The EAC after going through the contents of the orders feels that NGT's observation that the EC granted is without the application of

mind is not correct. The NGT has not gone through the issues, brought out in 360 and 363 of the order, which have been considered in depth by EAC in its two meetings and had ensured compliance of all issues, through requirements with respect to all environmental concerns, regulatory provisions and codes/standards and with safeguard mitigation measures for all concern areas. The NGT has failed to appreciate the committee's deliberations in detail and the clarifications sought from the PP before recommending the EC to the project and the conditions imposed. The NGT's order itself quotes several observations of the EAC (Infra-2) (based on the detailed filings of the counter) in its order.

xviii. EAC (Infra-2) observed that the petitioner (DU) has really gone on a fishing expedition while filing the petition. Many of the contentions raised were general in nature, which has been evaluated by the expert committee constituted by the NGT.

xix. The NGT has not taken into consideration several observations of the Hon'ble Supreme Court in its judgment in Central Vista case.

xx. NGT has also not taken into consideration statutory permissions/ approval of several governmental agencies for the project and the recommendations of the expert committee appointed by it in evaluating the petition.

xxi. In the order, setting aside of EC granted to the PP, NGT has gone into very broad environmental considerations including "Precautionary Principle', Sustainable development etc.

xxii. Certain wrong observations have also made in the order e.g.

a. In-spite of PP mentioning that GW will not be abstracted either during construction/ operations, comments have been made on impact of GW abstraction;

b. Reference to air pollution caused by construction activity ignoring the observation of various Hon'ble high courts - "Construction project is a onetime project and not a perpetual on-going polluting industry. SC's observation in Central Vista case ***that the subject project is an independent building and construction project wherein one-time construction activity is to be carried out. It is not a perpetual or continuous activity like a running industry.***

xxiii. If the present order of the NGT is accepted, because it is based on broad general aspects on the Delhi ridge stability, precautionary principles, air pollution by building activities, increase in traffic etc. there can **be no further developmental activities in the NCR region.**

Hence the committee recommended to file an appeal against the present NGT orders in the appropriate appellate court by engaging Solicitor General/ASG or a senior advocate.

AGENDA ITEM NO. 92.4.2

Common Hazardous Waste Treatment Storage & Disposal Facility at Village Juna Kataria and Lakadia, District Kutch, Gujarat by M/s Detox Private Limited (DIPL) – Transfer of Environmental Clearance – PP need not to attend the meeting.

(IA/GJ/MIS/262295/2022; F. No. 21-47/2022- IA.III; M/s Saurashtra Enviro Projects Private Limited)

(IA/GJ/MIS/262113/2022; F. No. 21-46/2022-IA-III; M/s Detox India Private Limited (DIPL))

The abovementioned proposal for partial transfer and amendment of Environmental Clearance dated 30.07.2020 has been examined by the Expert Appraisal Committee (Infra-2) in its 86th meeting held on 19-20 April, 2022 and recommended by EAC (Infra-2).

2. Chronology of the instant matter as follows:

EC Description	**EC Grant Details**	**Capacity**
Original EC issued to M/s SEPPL (Total area – 62 acres)	Issued by MoEF vide letter no. 10-45/2007-IA-III issued dated 15.04.2008.	1. Secured Landfill - 12,00,000 MT (1.2 MMT) 2. Incineration - 10 million Kcal/hr. 3. Temporary storage – 10,000 MT 4. ETP - 100 m^3/day
EC for Expansion issued to M/s SEPPL (expansion within above mentioned 62 acres)	Issued by MoEF&CC vide letter no. 10-36/2016-IA-III dated 16.04.2018.	Secured Landfill - 11,00,000 MT (1.1 MMT)
Transfer of EC from M/s SEPPL to M/s ACPTCPL	Issued by MoEF&CC vide letter no. 10-36/2016-IA-III dated 29.11.2018.	1. Secured Landfill - 23,00,000 MT (2.3 MMT) 2. Incineration - 10 million Kcal/hr. 3. Temporary storage – 10,000 MT 4. ETP - 100 m^3/day.
Name change from M/s ACPTCPL to M/s DIPL	Issued by MoEF&CC vide letter no. 10-36/2016-IA-III dated 30.07.2020.	1. Secured Landfill - 23,00,000 MT (2.3 MMT) 2. Incineration - 10 million Kcal/hr. 3. Temporary storage – 10,000 MT 4. ETP - 100 m^3/day.

3. The details of the proposed amendment and partial transfer are given as follows:

Total Granted	**DIPL Ownership Post Amendment**	**SEPPL Ownership Post Partial Transfer**
1. Secured Landfill - 23,00,000 MT (2.3 MMT). 2. Incineration - 10 million Kcal/hr. 3. Temporary storage – 10,000 MT.	1. Secured Landfill - 14,55,000 MT (1.455 MMT). 2. Temporary storage – 10,000 MT.	1. Secured Landfill - 8,45,000 MT (0.845 MMT permanently closed and capped). 2. Incineration - 10 million Kcal/hr.
Area - 62 acres	Area - 40 acres	Area - 22 acres
Survey no. 383, 384, 385, 386/2, 387, 388, 389, 400, 401, 402, 403, 408, 409/2, 410, 411, 412/1, 412/2, 413, 414/2, 416, 418, 419, 174, 178, 179, 182, 181/1, 181/2, 386/1, 409/1, 414/1, 415 & 417	Survey no. 383, 384, 385, 386/2, 387, 388, 389, 400, 401, 402, 403, 408, 409/2, 410, 411, 412/1, 412/2, 413, 414/2, 416, 418, 419, 174, 178, 179, 182, 181/1 and 181/2.	Survey no. 386/1, 409/1, 414/1, 415 and 417.

4. The EAC (Infra-2) also observed that, after the proposed amendment and partial transfer, M/s Detox India Private Limited (DIPL) shall only be engaged in landfilling activity, which is covered under category 'B' of item 7(d) 'Common hazardous waste treatment, storage and disposal facilities (TSDFs)'of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, M/s. Saurashtra Enviro Projects Private Limited (SEPPL) shall be engaged in incineration and landfilling activities, which is covered under category 'A' of item 7(d) 'Common hazardous waste treatment, storage and disposal facilities (TSDFs)'of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at Central level by sectoral EAC. Due to the close proximity and nature of BTA existing between the projects, the Committee was of the opinion that there should not be a change in category of the TSDF in possession of M/s Detox India Private Limited (DIPL), which was also accepted by the project proponents.

5. Accordingly, EAC (Infra-2) recommended the proposal with following specific conditions:

i. Due to the close proximity and nature of Business Transfer Agreement existing between the project components owned by M/s Detox India Private Limited (DIPL) and M/s. Saurashtra Enviro Projects Private Limited (SEPPL), the project shall continue to be considered under category 'A' of item 7(d) 'Common hazardous waste treatment, storage and disposal facilities (TSDFs)' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and shall require appraisal at Central level by sectoral EAC.

ii. The project proponents shall jointly put in place the following common utility services and arrangements for operation and maintenance of the project as per the cost sharing agreement already in place between them for allocation of the costs:

Sl. No.	Type of Service/Item
1.	Ash from incineration of SEPPL to be landfilled by DIPL
2.	Leachate from closed landfill of SEPPL to be treated in FES by DIPL
3.	Security expenses and housekeeping
4.	DG set of DIPL (as required)
5.	Fire hydrant network
6.	Laboratory expenses
7.	Store shed
8.	Raw water and STP
9.	Admin expenses including printing and stationary expenses, electricity, IT infra, etc.
10.	Electricity expenses (mutually agreed by both companies)

iii. Due to the close proximity and nature of Business Transfer Agreement existing between the project components owned by M/s Detox India Private Limited (DIPL) and M/s. Saurashtra Enviro Projects Private Limited (SEPPL), M/s. DIPL and M/s. SEPPL shall be jointly responsible for any unforeseen events including onsite emergencies and compliance of environmental laws.

iv. All other terms and conditions (both specific and general conditions) stipulated in the earlier environmental clearances issued to the project shall remain unchanged.

6. However, specific conditions in the EC dated 16.04.2018 has not been segregated between the entities with respect to instant partial transfer and amendment. So, the matter was deliberated further by EAC (Infra-2) in its 92nd meeting and the EAC (Infra-2) and **recommended** following specific conditions wrt instant partial transfer and amendment.

Sl. No.	Specific Conditions	SEPPL	DIPL
1.	No objection Certificate from Gujarat State Pollution Control Board shall be obtained before initiation the project	Yes	Yes
2.	No ground water shall be tapped for project	Yes	Yes
3.	The proponent should ensure that the TSDF fulfils all the provisions of Hazardous Wastes (Management and Handling) Rules, 2016.	Yes	Yes
4.	The TSDF should only handle the waste generated from the member units.	Yes	Yes
5.	As proposed, air pollution control device viz. gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bagfilter/ESP for removal of particulate	Yes	Yes

Sl. No.	Specific Conditions	SEPPL	DIPL
	matter; ventury scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to the incinerator. Online pollutant monitoring shall be provided as per CPCB guidelines for monitoring particulate matter, S02, NOx and CO from the incinerator stack. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out.		
6.	Analysis of Dioxins and Furans shall be done through CSIR — National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram or equivalent NABL Accredited laboratory.	Yes	Yes
7.	The project proponents shall adhere to all conditions as prescribed in the Protocol for 'Performance Evaluation and Monitoring of the Common Hazardous waste treatment, storage and disposal facilities' published by the CPCB in May, 2010.	Yes	Yes
8.	Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.	Yes	No
9.	Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the State Pollution Control Board / CPCB. Trend analysis of ground water quality shall be carried out each season and information shall be submitted to the SPCB and the Regional Office of MoEF&CC.	Yes	Yes
10.	Ambient air quality monitoring shall be carried out in and around the landfill site at up wind and downwind locations.	Yes	Yes
11.	The depth of the land fill site shall be decided based on the ground water table at the site.	Yes	Yes
12.	Environmental Monitoring Programme shall be implemented as per EIA report and guidelines prescribed by CPCB for hazardous waste facilities. Periodical ground water/soil monitoring to check the contamination in and around the site shall be carried out.	Yes	Yes
13.	The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals	Yes	No
14.	On line real time continuous monitoring facilities shall be provided as per the CPCB or State Board Directions	Yes	No
15.	No non hazardous wastes, as defined under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, shall be handled in the premises.	Yes	Yes
16.	Gas generated in the Land fill should be properly collected, monitored and flared.	Yes	Yes
17.	Project Proponent shall develop green belt with native plant species that are significant and used for the pollution abatement. At least 10 m thick greenbelt shall	Yes	Yes

Sl. No.	Specific Conditions	SEPPL	DIPL
	be developed in the periphery of hazardous waste facility.		
18.	Project should ensure that the site is properly cordoned off from general movement and no unauthorized person or goods permitted to enter the premises. Necessary security provision should be made as a condition in the Authorization under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 to prevent unwanted access.	Yes	Yes
19.	Pre medical check-up to be carried out on workers at the time of employment and regular medical record to be maintained	Yes	Yes
20.	Emergency plan shall be drawn in consultation with SPCB/CPCB and implemented in order to minimize the hazards to human health or environment from fires, explosion or any unplanned sudden or non sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water.	Yes	Yes
21.	Rain water runoff from the landfill area and other hazardous waste management area shall be collected and treated in the effluent treatment plant.	Yes	Yes
22	The Project proponent shall not store the Hazardous Wastes more than the quantity that has been permitted by the CPCB/GPCB.	Yes	Yes
23	No objection Certificate from Gujarat State Pollution Control Board shall be obtained before initiation the project	Yes	Yes

AGENDA ITEM NO: 92.4.3

Site inspection report on proposal for Terms of Reference for Solid Waste Management and Disposal Facility at Kotdwar, District Pauri Garhwal, Uttarakhand by Nagar Palika Parishad, Kotdwar.

IA/UK/MIS/260357/2022; F. No. 21-35/2022-IA-III

The Member Secretary, EAC (Infra 2) circulated the site inspection report by the sub-committee of EAC (Infra-2) on proposal Terms of Reference for Solid Waste Management and Disposal Facility at Kotdwar, District Pauri Garhwal, Uttarakhand by Nagar Palika Parishad, Kotdwar to other members of EAC (Infra-2) for further comments. (*Annexure 8*).

2. Based on the observation during the site inspection and considering the environmental issues that may emerge from the continued use of the existing dump site and the fact that the hilly terrain with limited revenue land available, although the proposed site does not meet all the requirements of MSW site criteria, the sub-committee recommends the use of the 'proposed site' as an interim measure to process MSW scientifically with the following stipulations:

a) The authorities shall use the proposed site as a MSW processing site and landfill site as per MSW rules by adopting all safety measures.
b) No dry waste/recyclable waste shall be mixed in the waste.
c) The authorities shall identify and establish a scientifically managed processing and landfill facility on non-forestry land with a life expectancy of 25 years within the next 1-2 years and develop the new site within 5 years.
d) The proposed site at the 'end of life', shall be properly capped as per rules, establish green cover, and return the land to the forest department.
e) This recommendation shall not be a precedent for approvals of other MSW facility.

3. Based on the detailed deliberations, the EAC (Infra-2) concurred with the findings of sub-committee and **recommended** the proposal for the grant of standard ToR along with additional specific conditions stipulated in para 2 above and also mentioned below:

i. Procedure/process of bio-mining for legacy waste and detailed Conceptual Reclamations Plan shall be explicitly mentioned in the EIA/EMP report.
ii. A sensitivity analysis of the site shall be carried out as per the MoEF&CC criteria and form part of the EIA report.
iii. The EIA would include a separate chapter on the conformity of the proposals to the Municipal Solid Waste Management Rules, 2016 and the Construction & Demolition Waste Management Rules, 2016 including the sitting criteria therein.
iv. Characteristics and source of waste to be handled and methodology for remediating the project site, which is presently being used for open dumping of garbage.
v. Details of storage and disposal of pre-processing and post-processing rejects/inerts.
vi. List of proposed end receivers for the rejects/inerts should be provided. MoUs to be submitted in this regard.
vii. Details of various waste management units with capacities for the proposed project. Details of utilities indicating size and capacity to be provided.
viii. The EIA would also examine the impacts of the existing landfill site and include a chapter on the closure of the exiting site including disposal of accumulated wastes and capping.
ix. The project proponents should consult the Municipal solid waste Management manual of the Ministry of Urban Development, Government of India and draw up project plans accordingly.
x. Waste management facilities should maintain safe distance from the nearby water bodies.
xi. Layout maps of proposed solid waste management facilities indicating storage area, plant area, greenbelt area, utilities etc.
xii. Details of air emission, effluents generation, solid waste generation and their management.

xiii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).
xiv. Process description along with major equipment's and machineries, process flow sheet (quantitative) from waste material to disposal to be provided.
xv. Hazard identification and details of proposed safety systems.
xvi. Details of Drainage of the project upto 5 km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided.
xvii. Details of effluent treatment and recycling process.
xviii. Action plan for measures to be taken for excessive leachate generation during monsoon period.
xix. Detailed Environmental Monitoring Plan.
xx. Timeline for implementation of the project shall be included in the EIA Report.
xxi. Report on health and hygiene to be maintained by the sanitation workers at the work place.
xxii. A tabular chart with index for point wise compliance of above ToRs.

AGENDA ITEM NO. 92.4.4

Amendment in Environmental Clearance for Installation of Common Hazardous Waste Incinerator of capacity 10 MT/day at Plot No. D-26, UPSIDC, Sikandrabad Industrial Area, District Bulandshahar, Uttar Pradesh by M/s Sheetala Waste Management – Consideration with reference to site visit report.

IA/UP/MIS/256070/2022; F. No: 21-26/2022-IA-III

The Member Secretary, EAC (Infra 2) circulated the site inspection report by the sub-committee of EAC (Infra-2) on Installation of Common Hazardous Waste Incinerator of capacity 10 MT/day at Plot No. D-26, UPSIDC, Sikandrabad Industrial Area, District Bulandshahar, Uttar Pradesh by M/s Sheetala Waste Management to other members of EAC (Infra-2) for further comments. (*Annexure 9*).

2. Based on the observation during the site inspection, the sub-committee is of the view that there is adequate space to install and run a 10 TDP Common Hazardous Waste Incinerator facility in the plot area of the size 1875 sq. m along with other necessary paraphernalia activities while abiding by all the relevant regulatory provisions.

3. Based on the detailed deliberation, the EAC (Infra-2) concurred with the findings of sub-committee and recommended the proposal for the grant of amendment in EC issued vide Ministry letter no. 10-84/2018-IA-III dated 07.02.2020 as already recommended by EAC (Infra-2) in its 83rd meeting held during 28th February and 2nd March, 2022 with additional specific conditions mentioned below:

i. No activity except common Hazardous Waste incineration shall be carried out at project site.

ii. The PP shall use only two DG sets of 1.25 KVA and 2.15 KVA capacity at the project site and convert both DG sets into green fuel (CNG/PNG) sets in next two years. The information in this regard shall be provided to the concerned Regional Office of the Ministry within three months of the said conversion.

iii. PP shall undertake plantation inside the plant periphery as well as on the available roadside land outside his premises with the permission of concerned local authorities.

EAC (Infra-2) further **recommended** to revoke the suspension of EC dated 07.02.2020 subject to compliance of all conditions stipulated in para 3 above as well as those stipulated in EC dated 07.02.2020 shall remain unchanged.

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LIST OF PARTICIPANTS OF EAC (INFRASTRUCTURE-2) IN 92nd MEETING OF EAC (INFRA-2) HELD ON 4th JULY, 2022

S. No.	Name	Designation	Attendance 04.07.2022	Remarks
1.	Dr. N. P. Shukla	Chairman	Present	Physical
2.	Dr. H. C. Sharatchandra	Member	Present	Physical
3.	Shri V. Suresh	Member	Present	Physical
4.	Dr. V. S. Naidu	Member	Present	Physical
5.	Shri B. C. Nigam	Member	Present	Physical
6.	Dr. Manoranjan Hota	Member	Present	Virtual
7.	Dr. Dipankar Saha	Member	Present	Physical
8.	Dr. Jayesh Ruparelia	Member	Present	Virtual
9.	Dr. (Mrs.) Mayuri H. Pandya	Member	Present	Virtual
10.	Dr. M. V. Ramana Murthy	Member	Absent	-
11.	Prof. Dr. P.S.N. Rao	Member	Absent	-
12.	Dr. Ragavan P, Scientist 'B', MoE&FCC	Special Invitee	Present	Physical
14.	Dr. Ashish Kumar	Additional Director & Member Secretary	Present	Physical

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ANNEXURE-1

Standard EC Conditions for Project/Activity 7(a): Airport

I. Statutory compliance:

i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.

ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).

iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

vi. Clearance from Directorate General of Civil Aviation (DGCA) and Airports Authority of India (AAI) for safety and project facilities shall be obtained.

vii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.

viii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.

II. Air quality monitoring and preservation:

i. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the airport area at least at four locations (one within and three outside the plant area at an angle of 120˚each), covering upwind and downwind directions.

ii. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG

sets may be decided with in consultation with State Pollution Control Board.

iii. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

iv. Soil and other construction materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet

v. The excavation working area should be sprayed with water after operation so as to maintain the entire surface wet.

vi. Excavated materials shall be handled and transported in a manner that they do not cause any problems of air pollution.

vii. The soil/construction materials carried by the vehicle should be covered by impervious sheeting to ensure that the dusty materials do not leak from the vehicle.

III. Water quality monitoring and preservation:

i. Run off from chemicals and other contaminants from aircraft maintenance and other areas within the airport shall be suitably contained and treated before disposal. A spillage and contaminant containment plan shall be drawn up and implemented to the satisfaction of the State Pollution Control Board.

ii. Proper drainage systems, emergency containment in the event of a major spill during monsoon season etc. shall be provided.

iii. The runoff from paved structures like Runways, Taxiways, can be routed through drains to oil separation tanks and sedimentation basins before being discharged into rainwater harvesting structures.

iv. Storm water drains are to be built for discharging storm water from the air-field to avoid flooding/water logging in project area. Domestic and industrial waste water shall not be allowed to be discharged into storm water drains.

v. Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Rain water harvesting structures shall conform to CGWA designs. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.

vi. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.

vii. Sewage Treatment Plant shall be provided to treat the wastewater generated from airport. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression

viii. A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.

ix. A detailed drainage plan for rain water shall be drawn up and implemented.

IV. Noise monitoring and prevention:

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

ii. Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment's.

iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

iv. During airport operation period, noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.

v. Where construction activity is likely to cause noise nuisance to nearby residents, restrict operation hours between 7 am to 6 pm.

V. Energy Conservation measures:

i. Energy conservation measures like installation of LED/CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.

VI. Waste management:

i. Soil stockpile shall be managed in such a manner that dust emission and sediment runoff are minimized. Ensure that soil stockpiles are designed with no slope greater than 2:1 (horizontal/vertical).

ii. The project activity shall conform to the Fly Ash notification issued under the E.P. Act of 1986.

iii. Solid inert waste found on construction sites consists of building rubble, demolition material, concrete; bricks, timber, plastic, glass, metals, bitumen etc shall be reused/recycled or disposed off as per Solid Waste Management Rules, 2016 and Construction and Demolition Waste Management Rules, 2016.

iv. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.

v. The project proponents shall implement a management plan duly approved by the State Pollution Control Board and obtain its permissions for the safe handling and disposal of:

a. Trash collected in flight and disposed at the airport including segregation, collection and disposed.
b. Toilet wastes and sewage collected from aircrafts and disposed at the Airport.
c. Wastes arising out of maintenance and workshops
d. Wastes arising out of eateries and shops situated inside the airport complex.
e. Hazardous and other wastes

vi. The solid wastes shall be segregated as per the norms of the Solid Waste Management Rules, 2016. Recycling of wastes such as paper, glass (produced from terminals and aircraft caterers), metal (at aircraft maintenance site), plastics (from aircrafts, terminals and offices), wood, waste oil and solvents (from maintenance and engineering operations), kitchen wastes and vegetable oils (from caterers) shall be carried out. Solid wastes shall be disposed in accordance to the Solid Waste Management Rules, 2016 as amended.

vii. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.

viii. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

VII. Green Belt:

i. Green belt shall be developed in area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the Air Port.

ii. Top soil shall be separately stored and used in the development of green belt.

VIII. Public hearing and Human health issues:

i. Construction site should be adequately barricaded before the construction begins.

ii. Traffic congestion near the entry and exit points from the roads adjoining the airport shall be avoided. Parking should be fully internalized and no public space should be utilized.

iii. Provision of Electro-mechanical doors for toilets meant for disabled passengers. Children nursing/feeding room to be located conveniently near arrival and departure gates.

iv. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

v. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

vi. Occupational health surveillance of the workers shall be done on a regular basis.

IX. Miscellaneous:

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular languagewithin seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

v. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholder's / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

x. The criteria pollutant levels namely; PM_{10}, $PM_{2.5}$, SO_2, NOx (ambient levels) shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

xi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

xii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

xiii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

xiv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xv. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xvi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xvii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xviii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.

xix. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts/NGT and any other Court of Law relating to the subject matter.

xx. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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ANNEXURE-2

Standard EC Conditions for Project/Activity 7(d): Common hazardous waste treatment, storage and disposal facilities (TSDFs)

I. Statutory compliance:

i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.

ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)

iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

v. The Project proponent should ensure that the TSDF fulfils all the provisions of Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016.

vi. The project proponents shall adhere to all conditions as prescribed in the Protocol for 'Performance Evaluation and Monitoring of the Common Hazardous waste treatment, storage and disposal facilities' published by the CPCB in May, 2010.

vii. Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.

viii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

ix. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.

x. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities

II. Air quality monitoring and preservation:

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier

specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120˚each), covering upwind and downwind directions.

iv. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.

v. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

vi. Appropriate Air Pollution Control (As proposed, air pollution control device viz. gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bag filter/ESP for removal of particulate matter; venturi scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to the incinerator) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

vii. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out. Analysis of Dioxins and Furans shall be done through CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram or equivalent NABL Accredited laboratory

viii. Gas generated in the Land fill should be properly collected, monitored and flared

ix. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 02 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 02 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation

of components of the plan which involve the participation of these departments.

III. Water quality monitoring and preservation:

i. The project proponent shall install continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the State Pollution Control Board / CPCB. Trend analysis of ground water quality shall be carried out each season and information shall be submitted to the SPCB and the Regional Office of MoEF&CC.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. No discharge in nearby river(s)/pond(s).

v. The depth of the land fill site shall be decided based on the ground water table at the site.

vi. The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.

vii. All leachates arising from premises should be collected and treated in the ETP followed by RO. RO rejects shall be evaporated in MEE. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.

viii. The Company shall review the unit operations provided for the treatment of effluents, specially the sequencing of MEE after tertiary treatment, the source of permeate when no R.O. is recommended and the treatment of MEE condensate. The scheme for treatment of effluents shall be as permitted by the Pollution Control Board/Committee under the provisions of consent to establish.

ix. Scrubber water, leachate water or wheel wash effluent shall be treated in the effluent treatment plant followed by RO to achieve zero liquid discharge.

x. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.

xi. Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused within the project.

xii. A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.

xiii. Rain water runoff from hazardous waste storage area shall be collected and treated in the effluent treatment plant.

IV. Noise monitoring and prevention:

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures:

i. Energy conservation measures like installation of LED/CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.

VI. Waste management:

i. The TSDF should only handle the waste generated from the member units.
ii. Periodical soil monitoring to check the contamination in and around the site shall be carried out.
iii. No non-hazardous wastes, as defined under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, shall be handled in the premises.
iv. The Project proponent shall not store the Hazardous Wastes more than the quantity that has been permitted by the CPCB/SPCB.
v. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
vi. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
vii. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.

VII. Green Belt:

i. Green belt shall be developed in an area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the project site.
ii. Top soil shall be separately stored and used in the development of green belt.

VIII. Public hearing and Human health issues:

i. Traffic congestion near the entry and exit points from the roads adjoining the project site shall be avoided. Parking should be fully internalized and no public space should be utilized.
ii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical

health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

iv. Occupational health surveillance of the workers shall be done on a regular basis.

IX. Miscellaneous:

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular languagewithin seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

v. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms /conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

x. The criteria pollutant levels namely; $PM_{2.5}$, PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

xi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

xii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

xiii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

xiv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xv. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xvi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xvii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xviii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xix. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts/NGT and any other Court of Law relating to the subject matter.

xx. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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ANNEXURE-3

Standard EC Conditions for Project/Activity 7(da): Bio-Medical Waste Treatment Facilities

I. Statutory compliance:

i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.

ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)

iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

v. Transportation and handling of Bio-medical Wastes shall be as per the Bio-Medical Waste Management Rules, 2016 including the section 129 to 137 of Central Motor Vehicle Rules 1989.

vi. Project shall fulfill all the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 including collection and transportation design etc. and also guidelines for Common Hazardous Waste Incineration - 2005, issued by CPCB Guidelines of CPCB/MPPCB for Bio-medical Waste Common Hazardous Wastes incinerators shall be followed.

vii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

viii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.

ix. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities

II. Air quality monitoring and preservation:

i. The project proponent shall install emission monitoring system including Dioxin and furans to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier

specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. Periodical air quality monitoring in and around the site including VOC, HC shall be carried out.

iii. Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, so as to achieve Total Organic Carbon (TOC) content in the slag and bottom ashes less than 3%, or their loss on ignition is less than 5% of the dry weight of the material.

iv. Venturi scrubber (alkaline) should be provided with the incinerator with stack of adequate height (Minimum 30 meters) to control particulate emission within 50mg/Nm^3.

v. Appropriate Air Pollution Control (APC) system shall be provided for fugitive dust from all vulnerable sources, so as to comply prescribed standards. All necessary air pollution control devises (quenching, Venturi scrubber, mist eliminator) should be provided for compliance of emission standards.

vi. Masking agents should be used for odour control.

III. Water quality monitoring and preservation:

i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. Waste water generated from the facility shall be treated in the ETP and treated waste water shall be reused in the APCD connected to the incinerator. The water quality of treated effluent shall meet the norms prescribed by State Pollution Control Board. Zero discharge should be maintained.

iii. Process effluent/any waste water should not be allowed to mix with storm water.

iv. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.

v. Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused within the project.

vi. A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point should be obtained.

vii. The leachate from the facility shall be collected and treated to meet the prescribed standards before disposal.

viii. Magnetic flow meters shall be provided at the inlet and outlet of the ETP & all ground water abstraction points and records for the same shall be maintained regularly.

ix. Rain water runoff from hazardous waste storage area shall be collected and treated in the effluent treatment plant.

IV. Noise monitoring and prevention:

i. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures:

i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
ii. Provide LED lights in their offices and residential areas

VI. Waste management:

i. Incinerated ash shall be disposed at approved TSDF and MoU made in this regard shall be submitted to the Ministry prior to the commencement.
ii. The solid wastes shall be segregated as per the norms of the Solid Waste Management Rules, 2016.
iii. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
iv. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016
v. No landfill site is allowed within the CBWTF site
vi. The Project proponent shall not store the Hazardous Wastes more than the quantity that has been permitted by the CPCB/SPCB.

VII. Green Belt:

i. Green belt shall be developed in area as provided in project details, with native tree Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.

VIII. Public hearing and Human health issues:

i. Feeding of materials/Bio-medical waste should be mechanized and automatic no manual feeding is permitted.
ii. Proper parking facility should be provided for employees & transport used for collection & disposal of waste materials.
iii. Necessary provision shall be made for fire-fighting facilities within the complex.
iv. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
v. Emergency plan shall be drawn in consultation with SPCB/CPCB and implemented in order to minimize the hazards to human health or environment from fires, explosion or any unplanned sudden or gradual release of hazardous waste or hazardous waste constituents to air, soil or surface water.
vi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical

health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

vii. Occupational health surveillance of the workers shall be done on a regular basis.

IX. Miscellaneous:

i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular languagewithin seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

v. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/ conditions and / or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

x. The criteria pollutant levels namely; $PM_{2.5}$, PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

xi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

xii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

xiii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

xiv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xv. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xvi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xvii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xviii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.

xix. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts/NGT and any other Court of Law relating to the subject matter.

xx. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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ANNEXURE-4

Standard EC Conditions for Project/Activity 7(h): Common Effluent Treatment plants (CETPs)

I. Statutory compliance:

i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.

ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)

iv. The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

vi. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.

vii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

II. Air quality monitoring and preservation:

i. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Diesel generating sets shall be installed, in the downwind directions.

ii. Appropriate Air Pollution Control (APC) system shall be provided for fugitive dust from all vulnerable sources, so as to comply prescribed standards.

III. Water quality monitoring and preservation:

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
iii. There shall be flow meters at inlet and outlet of CETP to monitor the flow. Suitable meters shall be provided to measure the quantity of effluent received, quantity of effluent recycled/reused and discharged.
iv. The units and the CETP will maintain daily log book of the quantity and quality of discharge from the units, quantity of inflow into the CETP, details of the treatment at each stage of the CETP including the raw materials used, quantity of the treated water proposed to be recycled, reused within the Industrial park/units, quantity of the treated effluent discharged. All the above information shall be provided on- line of the web site exclusively prepared for the purpose by the CETP owner. The website shall be accessible by the public. The financial and energy details of the CETP will also be provided along with details of the workers of the CETP.
v. The CETP operator will maintain an annual register of member units which will contain the details of products with installed capacities and quality and quantity of effluents accepted for discharge. This will form a part of the initial and renewal applications for consent to operate to be made before the State Pollution Control Board.
vi. No changes in installed capacity, quality or quantity of effluents as agreed upon in the initial MOU between the operator and the member units, addition of any new member units shall be carried without prior approval of the ministry
vii. The Unit shall inform the State Pollution Control Board at least a week prior to undertaking maintenance activities in the recycle system and store/dispose treated effluents under their advice in the matter.
viii. The unit shall also immediately inform the Pollution Control Board of any breakdown in the recycling system, store the effluents in the interim period and dispose effluents only as advised by the Pollution Control Board.
ix. The MoU between CETP and member units shall indicate the maximum quantity of effluent to be sent to the CETP along with the quality.
x. The unit shall maintain a robust system of conveyance for primary treated effluents from the member units and constantly monitor the influent quality to the CETP. The Management of the CETP and the individual member shall be jointly and severally responsible for conveyance and pre-treatment of effluents. Only those units will be authorized to send their effluents to the CETP which have a valid consent of the Pollution Control Board and which meet the primary treated standards as prescribed. The CETP operator shall with the consent of the State Pollution Control Board retain the powers to delink the defaulter unit from entering the conveyance system.
xi. The effluent from member units shall be transported through pipeline. In case the effluent is transported thorough road, it shall be transported through CETP tankers only duly maintaining proper manifest system. The vehicles shall be fitted with proper GPS system.

xii. Before accepting any effluent from member units, the same shall be as permitted by the SPCB in the consent order. No effluent from any unit shall be accepted without consent from SPCB under the Water Act, 1974 as amended.

xiii. Treated water shall be disposed on land for irrigation. An irrigation management plan shall be drawn up in consultation with and to the satisfaction of the State Pollution Control Board.

xiv. The Project proponents will build operate and maintain the collection and conveyance system to transport effluents from the industrial units in consultation with and to the satisfaction of the State Pollution Control Board and ensure that the industrial units meet the primary effluent standards prescribed by the State Pollution Control Board.

xv. The State Pollution Control Board will also evaluate the treatment efficiency of the Effluent Treatment Plant (ETP) and its capability of meeting the prescribed standards. The final scheme of treatment would be such as is approved by the Pollution Control Board in the Consent to Establish.

xvi. The project proponents will create an institutional arrangement for the involvement of individual members in the management of the CETP.

IV. Noise monitoring and prevention:

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

ii. Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment's.

iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Waste management:

i. ETP sludge generated from CETP facility shall be handled and disposed to nearby authorized TSDF site as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

ii. Non-Hazardous solid wastes and sludge arising out of the operation of the CETP shall be adequately disposed as per the Consent to be availed from the State Pollution Control Board. Non-Hazardous solid wastes and sludge shall not be mixed with Hazardous wastes.

iii. The CETP shall have adequate power back up facility, to meet the energy requirement in case of power failure from the grid.

iv. The site for aerobic composting shall be selected and developed in consultation with and to the satisfaction of the State Pollution Control Board. Odour and insect nuisance shall be adequately controlled.

v. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.

vi. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.

VI. Energy Conservation measures:

i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
ii. Provide LED lights in their offices and residential areas

VII. Green Belt:

i. Green belt shall be developed in area as provided in project details, with native tree Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.

VIII. Public hearing and Human health issues:

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
ii. Adequate infrastructure, including power, shall be provided for emergency situations and disaster management.
iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
iv. Occupational health surveillance of the workers shall be done on a regular basis.

IX. Miscellaneous:

i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
v. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest /wildlife norms /conditions. The company shall have defined system of reporting infringements/deviation/violation of the

environmental/forest/wildlife norms /conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

x. The criteria pollutant levels or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

xi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of operation by the project.

viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full

cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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ANNEXURE-5

Standard EC Conditions for Project/Activity 7(i): Common Municipal Solid Waste Management Facility (CMSWMF)

I. Statutory compliance:

i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.

ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)

iv. The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/Committee.

v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

vi. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.

vii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.

II. Air quality monitoring and preservation:

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (for projects involving incineration).

ii. As proposed, air pollution control device viz. gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bag filter/ESP for removal of particulate matter; venturi scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to

the incinerator. Online pollutant monitoring shall be provided as per CPCB guidelines for monitoring particulate matter, SO_2, NOx and CO from the incinerator stack. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out.

iii. Analysis of Dioxins and Furans shall be done through CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram or equivalent NABL Accredited laboratory.

iv. Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.

v. Gas generated in the Land fill should be properly collected, monitored and flared.

vi. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120˚ each), covering upwind and downwind directions.

III. Water quality monitoring and preservation:

i. The project proponent shall install continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the State Pollution Control Board / CPCB. Trend analysis of ground water quality shall be carried out each season and information shall be submitted to the SPCB and the Regional Office of MoEF&CC.

iii. The depth of the land fill site shall be decided based on the ground water table at the site.

iv. Rain water runoff from the landfill area and other hazardous waste management area shall be collected and treated in the effluent treatment plant.

v. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.

vi. The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.

vii. All leachates arising from premises should be collected and treated in the ETP followed by RO. RO rejects shall be evaporated in MEE. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.

viii. Scrubber water, leachate water or wheel wash effluent shall be treated in the effluent treatment plant followed by RO to achieve zero liquid discharge.

ix. Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused within the

project.

x. A certificate from the competent authority for discharging treated effluent/untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point should be obtained.

IV. Waste management:

i. No non-hazardous wastes, as defined under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, shall be handled in the premises.

ii. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.

iii. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.

iv. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.

V. Transportation:

i. Project should ensure that the site is properly cordoned off from general movement and no unauthorized person or goods permitted to enter the premises. Necessary security provision should be made as a condition in the Authorization under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 to prevent unwanted access.

ii. Traffic congestion near the entry and exit points from the roads adjoining the project site shall be avoided. Parking should be fully internalized and no public space should be utilized.

iii. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 02 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 02 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

VI. Green belt:

i. Green belt shall be developed in an area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the project site.

ii. Top soil shall be separately stored and used in the development of green belt.

VII. Public hearing and Human health/safety issues:

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
ii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
iii. Occupational health surveillance of the workers shall be done on a regular basis.

IX. Miscellaneous:

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently. (for projects involving incineration)
ii. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed (For projects involving only Landfill without incineration)
iii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
iv. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
v. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/ conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

ix. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

x. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

xi. The criteria pollutant levels namely; $PM_{2.5}$, PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain (in case of incineration involved).

xii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

xiii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

xiv. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

xv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xvi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xvii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xviii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xix. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xx. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

xxi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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ANNEXURE-6

Standard EC Conditions for Project/Activity 8(a/b): Building and Construction projects/Townships and Area Development projects

I. Statutory compliance:

i. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
ii. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
iii. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
iv. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
v. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
vi. The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
vii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
viii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
ix. The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.
x. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.

II. Air quality monitoring and preservation:

i. Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
ii. A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the

main pollutants released (e.g. PM_{10} and $PM_{2.5}$) covering upwind and downwind directions during the construction period.

iv. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.

v. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.

vi. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.

vii. Wet jet shall be provided for grinding and stone cutting.

viii. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.

ix. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules 2016.

x. The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.

xi. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.

xii. For indoor air quality the ventilation provisions as per National Building Code of India.

III. Water quality monitoring and preservation:

i. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.

ii. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.

iii. Total fresh water use shall not exceed the proposed requirement as provided in the project details.
iv. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
v. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
vi. At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
vii. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
viii. Use of water saving devices/fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.
ix. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
x. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
xi. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.
xii. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.
xiii. All recharge should be limited to shallow aquifer.
xiv. No ground water shall be used during construction phase of the project.
xv. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.

xvi. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.

xvii. Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.

xviii. No sewage or untreated effluent water would be discharged through storm water drains.

xix. Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.

xx. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.

xxi. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

IV. Noise monitoring and prevention:

i. Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

ii. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures:

i. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.

ii. Outdoor and common area lighting shall be LED.

iii. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.

iv. Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.

v. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.

vi. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

VI. Waste Management:

i. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.

ii. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.

iii. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.

iv. Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.

v. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.

vi. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

vii. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environment friendly materials.

viii. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended

as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.

ix. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.

x. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

VII. Green Cover:

i. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).

ii. A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.

iii. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.

iv. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

VIII. Transport

i. A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
   a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
   b. Traffic calming measures.
   c. Proper design of entry and exit points.
   d. Parking norms as per local regulation.

ii. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

iii. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved

upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

IX. Human health issues:

i. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

ii. For indoor air quality the ventilation provisions as per National Building Code of India.

iii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

v. Occupational health surveillance of the workers shall be done on a regular basis.

vi. A First Aid Room shall be provided in the project both during construction and operations of the project.

X. Miscellaneous:

i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

v. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report

viii. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

ix. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

x. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

xi. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP reportand also that during their presentation to the Expert Appraisal Committee.

xii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).

xiii. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xiv. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xvi. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full

cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xvii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

xviii. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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BEFORE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

APPEAL NO. 17 of 2021

IN THE MATTER OF

UNIVERSITY OF DELHI APPELLANT

VERSUS

MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE & ORS RESPONDENTS

INDEX

Dated :- 18.01. 2022
New Delhi

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BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

IN

APPEAL NO. 17 OF 2021

IN THE MATTER OF:-

UNIVERSITY OF DELHI ....APPLICANT

VERSUS

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE AND ORS .....RESPONDENTS

REPLY ON BEHALF OF MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

MOST RESPECTFULLY SHOWETH:-

I, Dr. Dharmendra Kumar Gupta, working as Scientist "F" in the Ministry of Environment, Forest and Climate Change (MoEF&CC), at New Delhi the deponent herein do hereby solemnly affirm and state on oath as under:-

1. That, I am competent to swear the present counter affidavit on behalf of MoEF&CC and I am aware of the facts and circumstances of the case based on record.

2. That, I have perused the contents of the above captioned application filed by the applicant and I am duly authorized to depose by way of the present affidavit.

3. That, the Ministry is not replying to the present appeal in para-wise manner, however, craves leave to file a detailed affidavit as and when necessary and required by this Hon'ble Tribunal.

4. The present appeal has been filed by the University of Delhi against the Environment Clearance (EC) dated 21.05.2021 granted to M/s Young Builder Private Limited (Project Proponent) for the construction of Group Housing with Built up area of 1,37,879.64 sq.mtr. at 1,3 Cavlry Lane & 4 Chattra Marg Near Vishwavidyalay Metro Station, New Delhi by the answering respondent. (The project/activity is covered under category B of Item 8(a) Building and Construction Project of the schedule).

5. That, the answering respondent has issued an Environmental Impact Assessment Notification number S.O. 1533 E dated 14, September 2006 superseding the Environmental Impact Assessment Notification 1994. The EIA Notification, 2006 regulates developmental projects provided in the schedules.

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6. That, the EIA Notification, 2006 covers 39 project/activity in its Schedule which inter-alia, includes different types of infrastructure projects viz. Airports, Ports, Highways, Building & Construction Projects etc. as specified and categorized in the said schedule.

7. That, as per the EIA Notification, 2006, the projects or activities, as given in the schedule to the said notification, shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment, Forest and Climate Change for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule.That the EIA Notification, 2006 also specifies that a SEIAA shall be constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 comprising of three Members including a Chairman and a Member–Secretary; to be nominated by the State Government or the Union Territory Administration concerned. The Member-Secretary shall be a serving officer of the concerned State Government or Union Territory administration familiar with environmental laws.

8. It is submitted that under the provisions of the EIA Notification, 2006, Environment Clearance for Building and Construction Projects & Township and Area Development Projects are covered under entry 8 (a) & (b) of the Schedule to the EIA Notification, 2006. The entry 8(a) and 8(b) of the Schedule of EIA Notification 2006 provides as follows;

> "8(a): Building and Construction projects - ≥ 20000 sq. mtrs and < 150000 sq. mtrs of built-up area require EC.
>
> 8(b): Townships and Area Development projects - Covering an area ≥ 50 ha. and or built up area >150000 sq. mtrs of built up area require EC

9. That, the aforementioned entries under item 8(a) and 8(b) are qualified as category 'B' projects under the EIA Notification, 2006 and requires appraisal by the State Level Expert Appraisal Committees (SEACs) and approved by the State Level Environment Impact Assessment Authorities (SEIAAs). It is further submitted that under the provisions of the EIA Notification, 2006 as amended time to time, if the total built up area is 20,000 sq. mtrs. or more prior Environmental Clearance is required to be obtained from concerned SEIAA. Further, that as per the EIA Notification, 2006, in the absence of a duly constituted SEIAA/SEAC, a category 'B' project shall be considered at the Central Level as category 'B' project.

10. That the project in question is covered under category 'B' of item 8 (a) Building and Construction projects of the schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State Level. However, as stated in para 9 above, due to the non-existence of SEIAA in Delhi, the proposal require appraisal at Central Level by Sectoral EAC.

11. That the Appellant University of Delhi had previously filed an Appeal No. 112 of 2018 before the NGT, PB, ND against the EC Dated 23.02.2018 given by the SEIAA Delhi to the M/s Young Builders. Wherein, the Hon'ble Tribunal vide its order dated 27.02.2020 had constituted a committee for independent evaluation to ascertain the viability of the project vis-a-vis its environmental impact and Member Secretary CPCB was directed to be the nodal agency for compliance and coordination. In compliance of this, the Committee filed its report titled "Rapid Indicative Environment" and suggested the following measures for implementation:

- The project proponent must ensure that all necessary approvals have been obtained and are valid.
- It is noted that the project proponent has calculated the proposed STP capacity as 200 KLD based on the assumption of @4 persons per household. However, based on Census data, 2011,

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Delhi's average population density is @4.75 persons per household (range 4.6 – 4.9). Thus, the corresponding sewage generation of 225 KLD during the occupancy phase will exceed the proposed STP capacity. Therefore, the project proponent is advised to upgrade STP capacity to 225 KLD or restrict water supply so that peak sewage generation must not exceed 200 KLD.

- Considering that the project area is part of groundwater discharge zone, it is advised to restrict construction to only one underground basement and one stilt parking, instead of the proposed two. The parking plan may accordingly be revised and necessary approvals obtained.
- An undertaking may be submitted that no groundwater will be extracted during the construction phase.
- NOC may be obtained from the District Advisory Committee on Ground Water of Govt. of NCT Delhi before de-watering during construction.
- An inlet digital flow meter shall be installed at DJB freshwater supply line.
- All environmental norms should be strictly adhered to during construction and occupancy phase of the project.

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In view of the impact analysis, the project seems viable as environmental impacts, including impact on traffic congestion and urban infrastructure/services, are minimal/nominal.

That the same has been disposed of on 20.01.2021 as the the matter became infructuous due to withdrawal of the impugned EC dated 23.03.2018. The order dated 20.01.2021 is reproduced below:

> *"That the said report alongwith the objections to the said report of the Appellant was taken up by this Hon'ble Tribunal, however, the counsel of Project Proponent submitted that they are withdrawing their EC dated 23.03.2018. Considering the same this Hon'ble Tribunal passed its final order wherein all the contention raised the Appellant herein were recorded and the matter was disposed of an becoming infructuous due to withdrawal of the Impugned EC. However, it was clarified by that the appeal is being disposed of without prejudice to the rights and remedies of the parties in accordance with law."*

12. In this regard, the project proponent i.e. M/s Young Builders Pvt. Ltd., 43, Babar Road, Near Bengali Market, New Delhi, Delhi-110001 had applied vide proposal No. IA/DL/MIS/197084/2021 dated 15th February, 2021 for grant of Environmental Clearance with

Answering Respondent. The proposal has been discussed and appraised by the Expert Appraisal Committee (Infrastructure-II) in its 62nd meeting held on 1st March, 2021 **(A Minutes of Meeting dated 1st March, 2021 is Annexed herewith as Annexure-1).** The EAC recommended defering the decision on the project and asked the Project Proponent to furnish the following information:

i. Clarification for the proposal of 2 basements with reference to recommendation of the committee constituted by NGT and Supreme Court order.

ii. Analyse the discrepancies and resubmit the conceptual plan after making the necessary revisions. Water balance flowchart needs to be revised.

iii. Air Pollution Management in the context of graded action Plan for Delhi & NCR.

iv. Point-wise replies to representation made by Delhi University.

That, the aforesaid recommendations of the Expert Committee were duly checked in the in 64th Meeting held on 12-13 April, 2021, the same may be shown in the tabular chart given below:

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Rapid Indicative Environment Assessment'	On 64th Meeting held on 12-13 April, 2021 the queries asked to PP.
1. The project proponent must ensure that all necessary approvals have been obtained and are valid.	The EAC found the response to the queries as satisfactory.
2. It is noted that the project proponent has calculated the proposed STP capacity as 200 KLD based on the assumption of @4 persons per household. However, based on Census data, 2011, Delhi's average population density is @4.75 persons per household (range 4.6 – 4.9). Thus, the corresponding sewage generation of 225 KLD during the occupancy phase will exceed the proposed STP capacity. Therefore, the project proponent is advised to upgrade STP capacity to 225 KLD or restrict water supply so that peak sewage generation must not exceed 200 KLD.	As proposed, waste water shall be treated in an onsite STP of total 210 shall be recycled and re-used for flushing (52 KLD), gardening (12 KLD, etc. PP shall reuse of excess treated water for horticulture use in nearby areas or HVAC cooling etc. No wastewater shall be discharge into the sewer line, common online monitoring system shall be installed in the STP and data for its quality and quantity shall be shared and linked with DPCC.
3. Considering that the project area is part of groundwater discharge zone, it is advised to restrict construction to only one underground basement and one stilt parking, instead of the proposed two. The parking plan may accordingly be revised and necessary approvals obtained.	The project proponent shall obtain suitable measures for controlling ground water backing up around the basements as committed.
4. An undertaking may be submitted that no groundwater will be extracted during the construction phase. 5. NOC may be obtained from the District Advisory Committee on Ground Water of Govt. of NCT Delhi before dewatering during construction.	The Project Proponent shall obtain the necessary permission for dewatering of ground water from Central Ground Water Authority (CGWA).

6. An inlet digital flow meter shall be installed at DJB freshwater supply line.	Fresh water requirement from DJB shall not exceed 158 KLD during operational phase.
7. All environmental norms should be strictly adhered to during construction and occupancy phase of the project.	The Environmental Clearance to the project is issued under the provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/ clearances under any other Acts/Regulations or Statutes as applicable to the project.
8. In view of the impact analysis, the project seems viable as environmental impacts, including impact on traffic congestion and urban infrastructure/services, are minimal/nominal.	A detailed Traffic Management and Traffic decongestion plan shall be drawn and implemented to ensure that service of the roads near project site ma not get adversely impacted after the implementation of the project. The plan should stipulate, inter-alia, the path and appropriate time for the movement of vehicles to and from site. The plan shall be vetted by concerned Agency in the State Government.

Thereafter, in the 64th Meeting held on 12-13 April, 2021 **(A Minutes of Meeting dated 12-13 April, 2021 is Annexed herewith as Annexure-2).** The EAC after detailed deliberations, during the meeting, recommended the project for grant of Environment Clearance with Specific and General conditions.

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13. It is submitted that the Answering Respondent upon recommendation of EAC, granted the Environmental Clearance vide letter dated 21.05.2021 to M/s Young Builders Pvt. Ltd., 43, Babar Road, Near Bengali Market, New Delhi, Delhi-110001 subject to stipulation of various environmental safeguards. **A copy of Environmental Clearance dated 21.05.2021 is annexed as Annexure-3.**

14. It is submitted that the project proponent is obligated to comply with the specific conditions. The compliance of these conditions is strictly assessed/ evaluated/monitored by the concerned authorities at the State and Central level. The project proponent has to submit status of compliance report every six months which will be published on the website and monitored by the Ministry. If there is any non–compliance of the Environmental Clearance conditions, effective action in accordance with law is taken by the Competent Authorities against the project proponent.

15. It is submitted that the Environmental Clearance dated 21.05.2021 for the projects in question has been granted by the Ministry in accordance with law and this Answering Respondent has followed the due procedure for appraisal of the Project as prescribed under the EIA

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Notification, 2006 and subsequent amendments and subject to stipulation of various environmental safeguards

16. It is submitted that the present counter affidavit may kindly be taken on record and into consideration and the Hon'ble Tribunal may pass appropriate Order(s), direction(s) as deemed fit and proper under the facts and circumstances of the present case.

17. That other/ancillary issues raised in the appeal under reply do not pertain to the answering respondent. The Answering Respondent seeks leave to make additional submissions, if required, during the course of the proceedings.

DEPONENT

(Dr. DHARMENDRA GUPTA)
वैज्ञानिक 'एफ'/Scientist 'F'
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Min of Environment,Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

VERIFICATION

Verified at New Delhi on 17/01/2022 this day of January, 2022 that the contents of the above affidavit are correct to my knowledge and belief based on official records and nothing material has been concealed therefrom.

DEPONENT

(Dr. DHARMENDRA GUPTA)
वैज्ञानिक 'एफ'/Scientist 'F'
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Min of Environment,Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

MINUTES OF 62nd MEETING OF EXPERT APPRAISAL COMMITTEE (INFRASTRUCTURE-2) HELD ON1st March, 2021.

VENUE: Through Video Conferencing

DATE: 1st March, 2021

PROCEEDINGS

62.1 Opening Remarks of the Chairman: The Chairman and Members extended warm welcome to each other and other participants of the meeting. Thereafter, the meeting was opened to start proceeding as per the agenda adopted for this meeting.

62.2 Confirmation of Minutes of 61st Meeting of Expert Appraisal Committee (Infrastructure-2) held on 8th February, 2021.

The Expert Appraisal Committee (Infrastructure-2), hereinafter called the EAC, was informed that Secretariat in the Ministry did not receive any representation from the project proponents of projects considered in 61st meeting. Minutes of 61stMeeting of EAC held on 8th February, 2021 were confirmed. The typo errors, if any noticed during processing of these cases may be corrected in the light of facts and figures provided by the respective Project Proponent.

62.3 Consideration of Proposals: The EAC considered proposals as per the agenda adopted for the 62nd meeting. The details of deliberations held and decisions taken in the meeting are as under:

AGENDA ITEM NO. 62.3.1

Construction of Group Housing with built up area of 137879.64 Sqm at 1,3 Cavalry Lane & 4 Chhatra Marg Near Vishwavidyalaya Metro Station New Delhi by M/s Young Builders Pvt. Ltd. - Environment Clearance

(IA/DL/MIS/197084/2021; F. No. IA3-21/15/2021-IA.III)

1.The PP (M/s.Young Builders Pvt. Ltd.) along with his consultant 'M/s. Ind Tech House Consult' made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The Committee took note of the following key parameters and salient features of the project presented during the meeting and as provided in the brief and application for this project:

i. The project is located at 28°41'39.79" N Latitude and 77°12'52.00" E Longitude.
ii. The project is a New project.
iii. The total plot area is 20000 sqm, FSI area is 49976.12 sqm and total construction (Built-up) area of 137879.64 sqm. The project will comprise of 05 Nos. Buildings/ blocks. Total 446 flats shall be

developed. Maximum height of the building is 145.3 m. The details of building are as follows:

S. No.	Buildings Blocks	Max. No. of Floors
1	Block-A	2 Podium + Stilt + 2 Fire Check Floors + 38
2	Block-B	2 Podium + Stilt + 2 Fire Check Floors + 38
3	Block-C	2 Podium + Stilt + 2 Fire Check Floors + 38
4	EWS	Ground +1 Fire Check Floors + 28
5	Community Block	Lv. 1 & 2
6	No. of Basement	02

iv. During construction phase, total water requirement is expected to be approx. 280 million litre which will be met by treated water from tanker supply. During the construction phase, soak pits and septic tanks will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labour force.

v. During operational phase, total water demand of the project is expected to be 222 KLD and the same will be met by 158 KLD fresh water from Delhi Jal Board (DJB) and 64 KLD Recycled Water. Wastewater generated (175 KLD) will be treated in 01 STP of total 210 KLD capacity. 64 KLD of treated wastewater will be recycled and reused (52 KLD for flushing, 12 KLD for gardening etc.). About 96 KLD will be disposed in to municipal drain.

vi. About 1.40 TPD solid waste will be generated in the project. The biodegradable waste (0.85 TPD) will be processed in OWC and the non-biodegradable waste generated (0.55 TPD) will be handed over to authorized local vendor.

vii. The total power requirement during construction phase is 500 KW and will be met from Tata Power Delhi Distribution Limited (TPDDL) and total power requirement during operation phase is 2791 KW and will be met from TPDDL.

viii. 06 Nos. of RWH pits are proposed for ground water recharge.

ix. The ground water depth in the project site varies from 8.45 m to 10.20 m below ground level (as per soil test report by Ground Engineering Limited – March 2018). Construction of basement will lead to excavation up to a depth of 12.45 m below ground level. Dewatering will be required up to a depth of additional 1.0 m i.e., total depth 13.45 m BGL.

x. Parking facility for 860 is proposed to be provided against the requirement of 858 ECS (according to local norms).

xi. Proposed energy saving measures would save about approx. 4.46% of power.

xii. The project is not located in Critically Polluted area.

xiii. The project is not located within 10 km of Eco Sensitive areas.NBWL Clearance is not required.

xiv. Forest Clearance is not required.

xv. Court case pending against the project: At present no case is pending against the project. Earlier case details are given as below:

Writ PetitionNo.	Name of Court	Status of court case
3135/2010	Hon'ble Delhi High Court	Writ Petition No. 3135/2010 was disposed-off on 18.05.2011 allowing 200 FAR and no height restriction to the project.
2743/2012	Hon'ble Delhi High Court	Writ Petition No. 2743/2012 was dismissed in Hon'ble Delhi High Court on 27.04.2015. Follow through LPA No. 89/2018 was again dismissed by the Delhi High Court on 29.10.2018. SLP No. 5581/2019 finally dismissed by Hon'ble Supreme Court on 17.12.2019
8675/2011	Hon'ble Delhi High Court	Association of Metro Commuters challenged land auction by DMRC on ground of parking requirements at Vishwavidyalaya Metro Station - Writ Petition No. 8675/2011 was dismissed in Delhi High Court on 14.12.2011
6624-6625/2012	Hon'ble Delhi High Court	Lessee's challenged land auction by DMRC on ground of wrongful acquisition/public purpose - Writ Petition No. 6624-6625/2012 was dismissed in Delhi High Court on 10.09.2013. Follow through SLP No. 5014/2014 was also dismissed by the Hon'ble Supreme Court on 14.02.2014.
112 of 2018	Hon'ble NGT, New Delhi	Appeal No. 112 of 2018 was dismissed on 20.01.2021. YBPL requested to seek fresh EC approval due to change in overall project layout because of certain change in Unified Building Bye Law (UBBL) 2016. Hon'ble NGT dismissed the appeal as infructuous and directed YBPL to make a fresh application as per law.

xvi. Tree cutting is not involved in this project. 6113 sqm area is earmarked for green belt development.

xvii. Undertaking to the effect that no activity has since been taken up- Affidavit in this regard is submitted to EAC (Infra-II).

xviii. Expected timeline for completion of the project- 31.12.2024

xix. Investment/Cost of the project is Rs. 494.2 Crore (land + Construction cost)

xx. Employment potential: The project is leading to development of the area by providing employment of the local people during construction and operation phase. 300 Laborers will be employed during the construction phase of the project.

xxi. Benefits of the project: The project is leading to development of the area by providing employment of the local people during construction phase. Providing Housing facility for all sections of the society including Economically weaker section.

2. The EAC (Infra-2) noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Delhi, the proposal is appraised at Central level by sectoral EAC.

3. The EAC observed that the PP has earlier obtained EC twice for the same project vide letter no. DPCC/SEAC/50/SEIAA/1/2012 dated 13/08/2012 and vide letter no. SEIAA-D/C-353/EC-350/2018 dated 23/03/2018 due to increase in FAR area of the project and revision in the project planning. Now, the PP has re-applied for EC in connection with order passed by Hon'ble NGT, Principle Bench, Delhi on 20.01.2021 on Appeal no. 112/2018 in the matter of University of Delhi vs MoEF&CC.

4. The EAC noted certain discrepancies in the Conceptual plan submitted by the PP regarding the disposal of treated water. In the Conceptual plan, as per the section on Environmental Management Plan, the PP has proposed that entire treated sewage will be reused for toilet flushing and horticulture, while as per the water balance diagram and table on water requirement, it has been stated that about 96 KLD will be disposed in to municipal drain. Also, the PP has not provided any information on the dewatering required for basement construction in the Conceptual Plan.

5. The EAC also noted that a Committee was appointed in terms of order of NGT dated 27.2.2020 and the Hon'ble Supreme Court vide its order dated 10.06.2020, and has given its report dated 10.12.2020. One of the suggestions of the Committee was that, 'considering that the project area is part of groundwater discharge zone, it is advised to restrict construction to only one underground basement and one stilt parking, instead of the proposed two. The parking plan may accordingly be revised and necessary approvals obtained.' However, the PP has still proposed 2 basements in the current proposal.

6. During processing, Ministry is in receipt representation dated 02.03.2021 from the Pro-Vice-Chancellor, University of Delhi expressing concerns on the construction of building in DU area. Representation, however, could not be discussed in the meeting of EAC. The EAC was of the opinion to take point-wise replies from PP to the representation so that the same could be discussed in forthcoming meeting.

7. *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held that the submissions made by the PP require certain revisions as mentioned above. In view of the foregoing, the EAC recommended to defer the decision on the project and asked the PP to provide the following information:*

i. Clarification for the proposal of 2 basements with reference to recommendation of the committee constituted by NGT and Supreme Court Order.
ii. Analyse the discrepancies and resubmit the conceptual plan after making the necessary revisions. Water balance flowchart needs to be revised.
iii. Air pollution management in the context of Graded Action Plan for Delhi & NCR.
iv. Point-wise replies to representation made by Delhi University

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AGENDA ITEM NO. 62.3.2

Expansion of Rajasthan Co-operative Group Housing Society at plot no. 36, sector 4, Dwarka, New Delhi by M/s. Rajasthan CGHS Ltd. - Environment Clearance

(IA/DL/MIS/197825/2021; F.No. IA3-21/16/2021-IA.III)

1. The PP (M/s Rajasthan CGHS Ltd.) along with his consultant 'M/s. Ind Tech House Consult' made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The Committee took note of the following key parameters and salient features of the project presented during the meeting and as provided in the brief and application for this project:

i. The project is located at plot no. 36, sector 4, Dwarka, New Delhi with co-ordinates 28°36'08.40" N Latitude and 77°03'06.77" E longitude.
ii. The proposal is a case of 'Expansion'.
iii. The Project site was leased out to Rajasthan Co-operative Group Housing Society (CGHS) by Delhi Development Authority (DDA) on 20/03/1996 for plot area 14000 sqm. The construction of the project was completed by 01.04.2004. The Occupancy Certificate of the project was obtained dated 15.05.2006 for built up area of 24613.375 sqm. As the construction of the project was completed before EIA Notification, 2006 and the amendment of 2004 to EIA Notification, 1994; the project was outside the purview of Environmental Clearance. As such, there is no previous / existing EC for the project. Accordingly, the application is submitted for Fresh EC.
iv. The current proposal is for the addition of one room, one bathroom and one balcony in each flat and adding area in community block. This increase is due to increase in FAR. Due to this expansion there would be no increase in population, water demand and waste generation.

and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.

iv. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste. As committed, biodegradable waste shall be composted by use of OWC. Bio-Medical waste shall be segregated and disinfected and handed over to authorised agency. Inert waste shall be dumped to authorized site. The recyclable waste shall be sold to resellers.

v. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be 631.10 sqm and 328.9 sqm of terrace area shall be developed with ornamental species. As proposed, at least 75 trees to be maintained during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.

vi. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. As proposed, 2 nos. of RWH pits shall be maintained for rainwater harvesting after filtration.

vii. Anti-Smog gun shall be provided to curb air pollution during construction phase.

viii. The PP shall also provide electric charging points in the parking areas for e-vehicles as committed.

ix. PP should explore enhancing energy conservation up to at least 5% through use of solar energy.

x. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes as applicable to the project.

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AGENDA ITEM No. 64.4.3

Construction of Group Housing with built up area of 137879.64 Sqm at 1,3 Cavalry Lane & 4 Chhatra Marg Near Vishwavidyalaya Metro Station, New Delhi by M/s Young Builders Pvt. Ltd. – Reconsideration for Environment Clearance

(IA/DL/MIS/197084/2021;F.No.IA3-21/15/2021-IA.III)

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1. The EAC noted that the proposal was earlier examined in its 62nd Meeting held on 1st March, 2021. The PP was asked for following additional information:

i. Clarification for the proposal of 2 basements with reference to recommendation of the committee constituted by NGT and Supreme Court Order.
ii. Analyse the discrepancies and resubmit the conceptual plan after making the necessary revisions. Water balance flowchart needs to be revised.
iii. Air pollution management in the context of Graded Action Plan for Delhi & NCR.
iv. Point-wise replies to representation made by Delhi University

2. The EAC asked PP to provide the aforesaid information. The PP (M/s. Young Builders Pvt. Ltd.) along with his consultant 'M/s. Ind Tech House Consult' made a presentation and provided the following information:

i. Regarding Construction of 2 Basements: Ground water backing up around the basements and impacting neighbouring areas is a general consequence of basement construction below ground water levels. There are measures widely implemented in such situations and if correctly designed and constructed there should not be any significant ground water back up around the basement. This, however, does not form a critical concern in the National Building Code or in the guidelines of the Ministry of Urban affairs. A number of projects involving construction below the ground water levels are either constructed or under implementation in the vicinity of the project where basements are below the ground level and which have been cleared by the regulatory bodies. Since dewatering is also employed in the construction of sub water level structures and since prior permission for dewatering is a regulatory prerequisite, therefore the project proponents will take necessary permission from the competent Authority for dewatering for two basements as proposed and comply with all such conditions as may be imposed. The project has already planned to take suitable measures for controlling basement backup and would ensure that:
    a. All necessary conditions in the permissions for dewatering for basement construction are complied with.
    b. The excavation is kept dry.
    c. The basement design includes protection against ground water ingress to the finished development. Designs, to the satisfaction of the competent Authority, will afford sufficient protection in the event of ground water flooding.
    d. The basement design includes ground water drainage systems/ French Drains to prevent ground water backing up around the development and thereby protect neighbouring properties from impact.
    e. Footing drains, sloping away from the basement and discharging into recharge structures or land, as necessary, are

also be provided with the concurrence of the competent authority, completely around the basement along with drains beneath the basement floor. The basement floor will rest on a bed of gravel, and the gravel will have perforated drain pipes laid in to prevent any water from accumulating beneath the basement floor. The drains will be perforated pipes, usually PVC or some other type of thermoplastic and laid on several inches of gravel at the base of the footings and covered by gravel. The gravel, being much more permeable than the soils, allows water to rapidly drain into the perforated pipes and channelled away before it can even contact the basement wall.

f. Soil drains such as a French drain are installed, if necessary, to reduce the build-up of moisture in areas upstream of the basement.

g. All basement construction projects follow the requirements of the British standard BS 8102:2009 code of practice for the protection of below ground structures against water from the ground.

h. The Basement construction follows IS:3067(1988). Code of practice for general design details and preparatory work for damp proofing of building.

i. The basement construction follows IS:12251(1987). Code of practice for drainage of building basements.

j. The basement construction follows the guidelines given in IS 1742-1983 regarding disposal of Surface and subsoil waters

ii. Conceptual plan has been revised and resubmitted with revised water balance flowchart. During operational phase, total water demand of the project is expected to be 222 KLD and the same will be met by 158 KLD fresh water from Delhi Jal Board (DJB) and 64 KLD Recycled Water. Wastewater generated (175 KLD) will be treated in 01 STP of total 210 KLD capacity. 64 KLD of treated wastewater will be recycled and reused (52 KLD for flushing, 12 KLD for gardening etc.). About 96 KLD will be disposed in to municipal drain.

iii. Air pollution management plan has been prepared in the context of Graded Action Plan for Delhi & NCR and submitted.

iv. Point wise reply to representation made by Delhi University has been submitted.

3. The EAC observed that the PP has proposed STP in the 2nd basement of the building and was of the opinion that PP should explore the option of moving it to a higher level for energy conservation and operational efficiency. The PP agreed to the observation and committed to shift the STP to 1st basement.

4. *The EAC found the response to the queries as satisfactory. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified*

by the Ministry vide OM dated 4th January, 2019 for the said project/activity, while considering for accord of environmental clearance:

i. A STP for pre-treatment of wastewater shall be installed for construction phase. Only treated wastewater shall be used for construction purposes. As committed, no groundwater abstraction shall be done during construction as well as operation phase of the project.

ii. Fresh water requirement from DJB shall not exceed 158 KLD during operational phase.

iii. As proposed, waste water shall be treated in an onsite STP of total 210 KLD capacities. At least 64 KLD treated water from the STP shall be recycled and re-used for flushing (52 KLD), gardening (12 KLD), etc. PP shall reuse of excess treated water for horticultural use in nearby areas or HVAC cooling etc. No wastewater shall be discharge into the sewer line. Continuous online monitoring system shall be installed in the STP and data for its quality and quantity shall be shared and linked with DPCC.

iv. Ready-mix concrete shall be used to the larger extent to minimize dust emissions at site. Concreting activity shall be scheduled to avoid traffic congestion at the site in view of institutional zone. Photographs of site in this regard shall be shared in 6 monthly report as required to be submitted by PP to respective IRO, MoEF&CC.

v. Project Proponent should install a continuous online AAQ Monitoring stations in the project area in consultation with Delhi Pollution Control Committee (DPCC) before the start of demolition work. Online Monitoring should cover parameters e.g. PM10, PM2.5 along with Nox, Sox. during the construction period. Periodical monitoring of AAQ shall also be carried out through certified laboratory in order to validate the data. Data so generated should be displayed digitally on site for public display.

vi. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.

vii. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste. As committed, biodegradable waste shall be composted by use of OWC. Inert waste shall be dumped to authorized site. The recyclable waste shall be sold to resellers.

viii. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be 6113 sqm. As proposed, at least 286 trees and green belt of 02 meters along the boundary to be maintained during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm of land should be

planted and maintained. The existing trees will be counted for this purpose. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.

ix. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. As proposed, 6 nos. of RWH pits shall be maintained for rainwater harvesting after filtration.

x. A detailed traffic management and traffic decongestion plan shall be drawn and implemented to ensure that the service of the roads near project site may not get adversely impacted after the implementation of the project. The plan should stipulate, inter-alia, the path and appropriate time for the movement of vehicles to and from site. The Plan shall be vetted by concerned agency in the State Govt.

xi. Noise barriers of adequate efficiency shall be provided during construction phase.

xii. Anti-Smog gun (2 nos) shall be provided to curb air pollution during construction phase.

xiii. Project Proponent shall obtain the necessary permission for dewatering of ground water from Central Ground Water Authority (CGWA).

xiv. Project Proponent shall adopt suitable measures for controlling ground water backing up around the basements as committed.

xv. Project Proponent shall explore the adoption of green building techniques to avoid the formation of heat island effect in the area.

xvi. Project Proponent shall also provide electric charging points (6 nos.) in the parking areas for e-vehicles as committed.

xvii. PP should implement for enhancing energy conservation up to at least 8% through use of solar energy.

xviii. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes as applicable to the project.

****

AGENDA ITEM No. 64.4.4

Development of Heliport at Khasara no. 72,74,75,76,77,78 in Village Kambakshpur, Sector 151A, Noida, Gautam Budh Nagar, Uttar Pradesh by M/s Noida Okhla Industrial Development Authority - Terms of Reference

(IA/UP/MIS/203758/2021; F. No. 21-23/2021-IA.III)

1. The PP (M/s. Noida Okhla Industrial Development Authority) along with his consultant M/s. RITES Ltd. made a presentation before EAC (Infra-2) on

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F. No. IA3-21/15/2021-IA.III
Government of India
Ministry of Environment, Forest and Climate Change
(IA.III Section)

Indira Paryavaran Bhawan,
Jor Bagh Road, New Delhi - 110003

May 21st, 2021

To,

Shri. Rajiv Ranjan Sharma,
Vice President
M/s Young Builders Pvt. Ltd.
43, Babar Road, Near Bengali Market,
New Delhi, Delhi - 110001
Email: young.builders@aol.com
rajivranjan@youngbuilders.in

Subject: Environmental Clearance for Construction of Group Housing with built up area of 137879.64 Sqm at 1, 3 Cavalry Lane & 4 Chhatra Marg Near Vishwavidyalaya Metro Station, New Delhi by M/s. Young Builders Pvt. Ltd. – Regarding

Sir,

This has reference to your Application/Proposal No. IA/DL/MIS/197084/2021; received on 15th February, 2021 through Parivesh Portal for Environmental Clearance (EC) for Construction of Group Housing with built up area of 137879.64 Sqm at 1, 3 Cavalry Lane & 4 Chhatra Marg Near Vishwavidyalaya Metro Station, New Delhi by M/s. Young Builders Pvt. Ltd.

2. As per the provisions of the Environment Impact Assessment (EIA) Notification, 2006; as amended and notified under the Environment (Protection) Act, 1986 (29 of 1986), the above-mentioned project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Delhi, the proposal required appraisal at Central level by sectoral EAC.

3. Accordingly, the abovementioned proposal for Environmental Clearance has been examined by the Expert Appraisal Committee (Infra-2) first in its 62nd meeting held on 1st March, 2021 and thereafter in its 64th meeting held during 12-13 April, 2021.

4. The details of the project, as per the application and documents submitted by the project proponent, and also as informed during the above-mentioned meetings of EAC (Infra-2) are as under:

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i. The project is located at 28°41'39.79" N Latitude and 77°12'52.00" E
ii. Longitude.
iii. The project is a New project.
iv. The total plot area is 20000 sqm, FSI area is 49976.12 sqm and total construction (Built-up) area of 137879.64 sqm. The project will comprise of 05 Nos. buildings/blocks. Total 446 flats shall be developed. Maximum height of the building is 145.3 m. The details of building are as follows:

S. No.	Buildings Blocks	Max. No. of Floors
1	Block-A	2 Podium + Stilt+ 2 Fire Check Floors + 38
2	Block-B	2 Podium + Stilt+ 2 Fire Check Floors + 38
3	Block-C	2 Podium + Stilt+ 2 Fire Check Floors + 38
4	EWS	Ground +1 Fire Check Floors + 28
5	Community Block	Lv. 1 & 2
6	No. of Basement	02

v. During construction phase, total water requirement is expected to be approx. 280 ML which will be met by treated water from tanker supply. During the construction phase, soak pits and septic tanks will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labour force.
vi. During operational phase, total water demand of the project is expected to be 222 KLD and the same will be met by 158 KLD fresh water from Delhi Jal Board (DJB) and 64 KLD Recycled Water. Wastewater generated (175 KLD) will be treated in 01 STP of total 210 KLD capacity. 64 KLD of treated wastewater will be recycled and reused (52 KLD for flushing, 12 KLD for gardening etc.). About 96 KLD will be disposed in to municipal drain.
vii. About 1.40 TPD solid waste will be generated in the project. The biodegradable waste (0.85 TPD) will be processed in OWC and the non-biodegradable waste generated (0.55 TPD) will be handed over to authorized local vendor.
viii. The total power requirement during construction phase is 500 KW and will be met from Tata Power Delhi Distribution Limited (TPDDL) and total power requirement during operation phase is 2791 KW and will be met from TPDDL.
ix. 06 Nos. of RWH pits are proposed for ground water recharge.
x. The ground water depth in the project site varies from 8.45 m to 10.20 m below ground level (as per soil test report by Ground Engineering Limited – March 2018). Construction of basement will lead to excavation up to a depth of 12.45 m below ground level. Dewatering will be required up to a depth of additional 1.0 m i.e., total depth 13.45 m BGL.
xi. Parking facility for 860 is proposed to be provided against the requirement of 858 ECS (according to local norms).
xii. Proposed energy saving measures would save about approx. 4.46% of

power.

xiii. The project is not located in Critically Polluted area.

xiv. The project is not located within 10 km of Eco Sensitive areas. NBWL Clearance is not required.

xv. Forest Clearance is not required.

xvi. Court case pending against the project: At present no case is pending against the project. Earlier case details are given as below:

Writ Petition No.	Name of Court	Status of court case
3135/2010	Hon'ble Delhi High Court	Writ Petition No. 3135/2010 was disposed-off on 18.05.2011 allowing 200 FAR and no height restriction to the project.
2743/2012	Hon'ble Delhi High Court	Writ Petition No. 2743/2012 was dismissed in Hon'ble Delhi High Court on 27.04.2015. Follow through LPA No. 89/2018 was again dismissed by the Delhi High Court on 29.10.2018. SLP No. 5581/2019 finally dismissed by Hon'ble Supreme Court on 17.12.2019
8675/2011	Hon'ble Delhi High Court	Association of Metro Commuters challenged land auction by DMRC on ground of parking requirements at Vishwavidyalaya Metro Station - Writ Petition No. 8675/2011 was dismissed in Delhi High Court on 14.12.2011
6624 6625/2012	Hon'ble Delhi High Court	Lessee's challenged land auction by DMRC on ground of wrongful acquisition/public purpose - Writ Petition No. 6624-6625/2012 was dismissed in Delhi High Court on 10.09.2013. Follow through SLP No. 5014/2014 was also dismissed by the Hon'ble Supreme Court on 14.02.2014.

112 of 2018	Hon'ble NGT, New Delhi	Appeal No. 112 of 2018 was dismissed on 20.01.2021. YBPL requested to seek fresh EC approval due to change in overall project layout because of certain change in Unified Building Bye Law (UBBL) 2016. Hon'ble NGT dismissed the appeal as infructuous and directed YBPL to make a fresh application as per law.

xvii. Tree cutting is not involved in this project. 6113 sqm area is earmarked for green belt development with plantation of 286 trees.

xviii. Expected timeline for completion of the project- 31.12.2024

xix. Investment/Cost of the project is Rs. 494.2 Crore (land + Construction cost)

xx. Employment potential: The project is leading to development of the area by providing employment of the local people during construction and operation phase. 300 Labourers will be employed during the construction phase of the project.

xxi. Benefits of the project: The project is leading to development of the area by providing employment of the local people during construction phase. Providing Housing facility for all sections of the society including economically weaker section.

5. The EAC observed that the PP has earlier obtained EC twice for the same project vide letter No. DPCC/SEAC/50/SEIAA/1/2012 dated 13/08/2012 and vide letter No. SEIAA-D/C-353/EC-350/2018 dated 23/03/2018 due to increase in FAR area of the project and revision in the project planning. Now, the PP has re-applied for EC in connection with order passed by Hon'ble NGT, Principle Bench, Delhi on 20.01.2021 on Appeal No. 112/2018 in the matter of University of Delhi vs MoEF&CC.

6. The EAC (Infra 2), based on information and clarifications provided by the project proponent and detailed discussions held on the issues, has recommended granting of Environment Clearance to the project. The aforesaid recommendation of EAC (Infra-2) is subject to certain specific conditions, as stipulated during its 64th meeting held during 12-13 April, 2021.

7. Based on recommendations of EAC (Inra-2), the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance to the project for Construction of Group Housing with built up area of 137879.64 Sqm at 1, 3 Cavalry Lane & 4 Chhatra Marg Near Vishwavidyalaya Metro Station, New Delhi by M/s. Young Builders Pvt. Ltd., under the provisions of the EIA Notification, 2006 and amendments/circulars issued thereon, and subject to the following specific and standard conditions:

A. Specific Conditions:

i. A STP for pre-treatment of wastewater shall be installed for construction phase. Only treated wastewater shall be used for construction purposes. As committed, no groundwater abstraction shall be done during construction as well as operation phase of the project.

ii. Fresh water requirement from DJB shall not exceed 158 KLD during operational phase.

iii. As proposed, waste water shall be treated in an onsite STP of total 210 KLD capacities. At least 64 KLD treated water from the STP shall be recycled and re-used for flushing (52 KLD), gardening (12 KLD), etc. PP shall reuse of excess treated water for horticultural use in nearby areas or HVAC cooling etc. No wastewater shall be discharge into the sewer line. Continuous online monitoring system shall be installed in the STP and data for its quality and quantity shall be shared and linked with DPCC.

iv. Ready-mix concrete shall be used to the larger extent to minimize dust emissions at site. Concreting activity shall be scheduled to avoid traffic congestion at the site in view of institutional zone. Photographs of site in this regard shall be shared in 6 monthly report as required to be submitted by PP to respective IRO, MoEF&CC.

v. Project Proponent should install a continuous online AAQ Monitoring stations in the project area in consultation with Delhi Pollution Control Committee (DPCC) before the start of demolition work. Online Monitoring should cover parameters e.g. PM10, PM2.5 along with NOx, SOx. during the construction period. Periodical monitoring of AAQ shall also be carried out through certified laboratory in order to validate the data. Data so generated should be displayed digitally on site for public display.

vi. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.

vii. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste. As committed, biodegradable waste shall be composted by use of OWC. Inert waste shall be dumped to authorized site. The recyclable waste shall be sold to resellers.

viii. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be 6113 sqm. As proposed, at least 286 trees and green belt of 02 meters along the boundary to be maintained during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The species with heavy foliage, broad leaves and wide canopy

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cover are desirable. Water intensive and/or invasive species should not be used for landscaping.

ix. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. As proposed, 6 nos. of RWH pits shall be maintained for rainwater harvesting after filtration.

x. A detailed traffic management and traffic decongestion plan shall be drawn and implemented to ensure that the service of the roads near project site may not get adversely impacted after the implementation of the project. The plan should stipulate, inter-alia, the path and appropriate time for the movement of vehicles to and from site. The Plan shall be vetted by concerned agency in the State Govt.

xi. Noise barriers of adequate efficiency shall be provided during construction phase.

xii. Anti-Smog gun (2 Nos.) shall be provided to curb air pollution during construction phase.

xiii. Project Proponent shall obtain the necessary permission for dewatering of ground water from Central Ground Water Authority (CGWA).

xiv. Project Proponent shall adopt suitable measures for controlling ground water backing up around the basements as committed.

xv. Project Proponent shall explore the adoption of green building techniques to avoid the formation of heat island effect in the area.

xvi. Project Proponent shall also provide electric charging points (6 nos.) in the parking areas for e-vehicles as committed.

xvii. PP should implement for enhancing energy conservation up to at least 8% through use of solar energy.

xviii. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes as applicable to the project.

B. Standard Conditions:

I. Statutory compliance:

i. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.

ii. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.

iii. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.

iv. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

v. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

vi. The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.

vii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.

viii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.

ix. The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.

x. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.

II. Air quality monitoring and preservation:

i. Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.

ii. A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.

iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and PM_{25}) covering upwind and downwind directions during the construction period.

iv. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.

v. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3 meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.

vi. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.

vii. Wet jet shall be provided for grinding and stone cutting.
viii. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
ix. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules 2016.
x. The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
xi. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
xii. For indoor air quality the ventilation provisions as per National Building Code of India.

III. Water quality monitoring and preservation:

i. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.
ii. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
iii. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
iv. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
v. At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
vi. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.

vii. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.

viii. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.

ix. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

x. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.

xi. A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.

xii. All recharge should be limited to shallow aquifer.

xiii. No ground water shall be used during construction phase of the project.

xiv. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.

xv. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.

xvi. Sewage shall be treated in the STP with tertiary treatment.

xvii. No sewage or untreated effluent water would be discharged through storm water drains.

xviii. Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.

xix. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.

xx. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

IV. Noise monitoring and prevention:

i. Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

ii. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures:

i. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.

ii. Outdoor and common area lighting shall be LED.

iii. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.

iv. Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.

v. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.

vi. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

VI. Waste Management:

i. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.

ii. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.

iii. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.

iv. Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg/person/day must be installed.

v. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.

vi. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

vii. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environment friendly materials.

viii. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.

ix. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.

x. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

VII. Green Cover:

i. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).

ii. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.

iii. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

VIII. Transport

i. A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized,

public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.

a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
b. Traffic calming measures.
c. Proper design of entry and exit points.
d. Parking norms as per local regulation.

ii. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

iii. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

IX. Human health issues:

i. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

ii. For indoor air quality the ventilation provisions as per National Building Code of India.

iii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

v. Occupational health surveillance of the workers shall be done on a regular basis.

vi. A First Aid Room shall be provided in the project both during construction and operations of the project.

X. Miscellaneous:

i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has

been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

v. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and / or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

vi. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

vii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report

viii. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

ix. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

x. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

xi. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the Expert Appraisal Committee.

xii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).

xiii. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xiv. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xvi. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xvii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

xviii. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

8. The Environmental Clearance is being granted to M/s. Young Builders Pvt. Ltd. for Construction of Group Housing with built up area of 137879.64 Sqm at 1, 3 Cavalry Lane & 4 Chhatra Marg Near Vishwavidyalaya Metro Station, New Delhi.

9. This issues with the approval of the Competent Authority.

(Dr. Dharmendra Kumar Gupta)
Director (S)

Copy to:

1. Principal Secretary (Environment and Forest) cum Chairperson (DPCC), Department of Environment, Government of NCT of Delhi, 6th Floor, C Wing, Delhi Secretariat, I P Estate, Delhi-110002
2. Regional Officer, Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Jaipur Camp Office, 5th Floor, Sector "H" Aliganj, Lucknow – 226020
3. Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. Monitoring Cell, MoEF&CC, Indira Paryavaran Bhavan, New Delhi.
5. Guard File/ Record File/ Notice Board/MoEF&CC website.

(Dr. Dharmendra Kumar Gupta)
Director (S)

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Proof of Service 38

Gmail

Kumar Rajesh Singh <adv.kumarrajeshsingh@gmail.com>

Appeal No.17/2021 Univ. of Delhi Vs Moef & Ors (Reply by Moef -respondent no.1)

1 message

Kumar Rajesh Singh <adv.kumarrajeshsingh@gmail.com> Tue, Jan 18, 2022 at 3:23 PM
To: salik@eldfindia.com, accounts@mdoverseas.com

Please find enclosed herewith the copy of reply By Moef- Respondent No.1 in the aforesaid appeal.

--

Thanks & Regards :-
Kumar Rajesh Singh, Advocate
Off:- 53, Lawyers' Chamber,
Supreme Court of India,
New Delhi – 110001
Res :- Flat No.1003, 10th Floor, L Block,
Signature View Apartments,
Dr. Mukherjee Nagar Delhi – 110009
Mobile :- 9811013515, 7011734896

Reply -Delhi Univsity VS Moef & Ors.pdf
14980K

ANNEXURE-8

SITE INSPECTION REPORT

PROJECT:

Solid Waste Management and Disposal Facility at Kotdwar, District Pauri Garhwal, Uttarakhand by Nagar Palika Parishad, Kotdwara – Terms of Reference. (IA/UK/MIS/260357/2022; F. No. 21-35/2022-IA-III)

Date of site inspection: 18th June 2022

Sub-committee constituted vide O.M.: 19/67/202-IA.III dated 16.06.2022

Members of the subcommittee:

Dr. N.P. Shukla, Chairman, EAC (Infra -2)

Mr. B.C. Nigam. Member, EAC (Infra -2)

Dr. H.C.Sharatchandra, EAC (Infra-2)

Dr. Ashish Kumar Add. Director cum Member Secretary, EAC (Infra-2).

(Represented by Dr. Ragavan P, Scientist B, MoEF&CC, New Delhi)

Background Information:

The project proponent along with the consultant had submitted the PFR along with other mandatory details. However, the following details need to be highlighted for the purpose of this report.

1. A Detailed Project Report submitted by, Nagar Nigam Kotdwar they will manage approx. 80 TPD wastes including recyclable wastes [for a design period of 20 years]. It is also planned to set up decentralized segregation facilities. The proposed facility will have the following components:

    a. **Compost plant of capacity 43 TPD for processing bio-degradable waste [design period 20 years].**
    b. **Sanitary landfill facility [11,800 MT capacity – as of now due to unavailability of land planned for a period of 5 years] for inert materials and rejects.**
    c. **Liquid effluent i.e. leachate shall be treated in onsite leachate treatment unit.**

2. The proposed facility is being developed on a piece of land located in a reserved forest.

3. The plot size is only 0.998 ha. The state boundary of Uttar Pradesh – Uttarakhand lies at a distance of 7m approx. from the proposed site.

Issues of concern:

1. Whether the site elected, is in compliance with the statuary criteria as laid out in SWM Rules 2016 and CPEEO (Central Public Health and Environment organization of Ministry of urban development, GOI, under Swachh Bharat Mission)
2. The time period for which this land-fill facility is being developed is just 5 years for 11,800MT. Is it appropriate to develop a landfill facility for only 5 years?
3. Is the size of the plot which is 0.998 ha sufficient for developing the Solid Waste Management and Disposal Facility (landfill for 5 yrs, compost plant of 43TDP for 20 years, leachate treatment plant, and other administrative facilities?
4. Has the mandated buffer zone for any Solid Waste Management and Disposal Facility been complied in the project?
5. The site selected is in the forest area. Should the site for establishing Solid Waste Disposal and Management Facility be located in a natural forest?

Inspection Details:

1. An initial meeting with the local officers was held in which the project proponent made a presentation on the issues of concern.
2. This was followed by a field visit to the site.
3. After field visit, an exit meeting was held and issues observed during the field visit were discussed.

The outcome of the visit and discussion:

1. **SUITABILITY OF THE SITE:** The following chart brings out the facts and parameters in the field vis-a-vis mandatory criteria as laid out in the statuary guidelines for the selection of any site for the SWM site.

S. No.	CRITERIA	CPHEEO GUIDELINES and SWM Rules 2016	DESCRIPTION OF THE SITE
1	Lake/Pond	200 m away from the Lake/Pond	No lake/pond within 200m
2	River/Streams	100 m away from the	No natural stream/river is within 100 M.

		river/stream	Malin river is at a distance of 480M on the East.
3	Flood Plain	No Landfill shall be constructed within a 100-year flood plain	Mandatory NOC from the irrigation department is not available.
4	Highway	Away from 200 m NHAI/State	No National or State Highway passes within 200M of the site. NH -119 passes at a distance of 8.1 on SE.
5	Public Parks	300 m away from public parks	No parks within 300M
6	Wet Lands	No landfill within wetlands	Not a wetland
7	Habitation	500m away from the notified habitation	Nearest Habitation is 150m away from the site
8	Groundwater Table	Groundwater table> 2m	As per records the groundwater table in Kotdwar is more than 50M in Jan 2019. However, the actual depth of the groundwater table is to be established by borehole investigations./observation from the wells in the surrounding area.
9	Critical Habitat Area	No landfill within the Critical habitat area. It is defined as the area in which 1 or more endangered species live	No critical habitat
10	Airports	No landfill within 20 Km	Jolly Grant Airport, Dehradun is 53Km away from the site.
11	Water Supply Schemes/Wells	Minimum 500 m Away	No water supply schemes/wells are located within 500 m from the site.
12.	CRZ	Should not be sited	Not Applicable

2. **LIFE OF LANDFILL:** The landfill is being developed for a period of only 5 years for 11800MT. The guidelines issued by the ministry of urban development for Municipal Waste Management as per a part of duty assigned to them in Solid Waste Management Rules 2016, prescribe for any landfill to be managed for a period of 20-25 years. (See item 4.5.2.1of Bharat Swachh Mission Municipal Solid Waste Manual).
3. **SIZE OF THE PLOT:** The size of the plot proposed to be taken up for the activity is only 0.998 Ha. The area required for all the desired activities seems to be less for the technical and economic feasibility of the project.
4. **BUFFER ZONE:** Central Pollution Control Board, in March 2019 has issued "Amended Guidelines On The Provision Of Buffer zone Around Waste Processing And Disposal Facilities". The relevant portion of these guidelines are reproduced as below:

"1. Land of 200-500 m from the boundary of the processing unit is excluded for setting up any facilities but it is mandatory outside the project site as "No development area" for 30 years.

2. No Development area can be utilized for agriculture purposes."

The project proponent himself has submitted in form-1 and hid presentation the distance of nearest habitation is 150 m. Besides on-site inspection, it was revealed that adjacent to the boundary of the concerned plot is a plot on which a stone quarrying and crushing plant has been established which was in operation. Since it is a factory-like unit, it looks to be a unit established with the approval of the government.

This scenario is violative of the guidelines of the buffer zone.

5. **SITE IN THE FOREST AREA:** With the advent of new scientific information pouring in about the importance of biodiversity for human exitance, be it climate change, zoonotic diseases like Covid, warming of the earth, dwindling agriculture production, or unprecedented frequent floods, it will be a disaster to cut a natural forest for the dumping of wastes and establishing.

This activity of developing **Solid Waste Management and Disposal Facility** can be taken upon any unproductive piece of barren land away from the habitation. This will help not only preserve the forest and the wildlife habitat but will also provide habitable and conducive air and water for the upcoming generations

The big question to be answered is why destroy a good natural forest when this activity is possible on any other land?

6. **CURRENT MSW MANAGEMENT ISSUES:**

- It was observed that currently there is no scientific disposal and management of MSW in the area. Currently, all the waste generated is being dumped amidst houses next to a small river that ultimately flows into Ganga.
- Authorities have constructed a retaining wall to prevent waste from getting into the river. However, there is no space available for addition of waste. There is every chance that waste may get into the river during the monsoon.
- A cremation ground is also in the vicinity of the dump site.
- There is no revenue/degraded land available for establishment of a scientifically managed disposal site.

- Often the dump catches fire creating a public nuisance.
- From an environmental point, it is not advisable to continue dumping of waste in the current dumpsite. There is an urgent need to establish a scientifically managed landfill site with a processing facility.
- The village/town is located in a hilly region with an abundance of forests. As per the local urban body, there is no suitable land available, land which can be used for setting up this facility.

CONCLUSION

In light of the above facts and observations during the site visit following facts emerge:

1. The site does not meet all the criteria stipulated for establishing the MSW facility in terms of size and life of the plant.
2. Less than 1 ha of forest, proposed for the project, has already been permitted for to be used for the non-forestry purpose. . The diverted area looks like an old river bed full of small rocks and boulders devoid of any good growth.
3. Allowing the current practice of using the existing dumping site is not appropriate from an environmental perspective.
4. The life of the proposed site is only five (5) years and the local body is making efforts with the district administration to locate a larger "non-forestry site" to develop a scientifically managed processing site.
5. Considering the above facts and more importantly environmental issues that may emerge from the continued use of the existing dump site and the fact that the hilly terrain with limited revenue land available, although the proposed site does not meet all the requirements of MSW site criteria, the committee recommends the use of the 'proposed site' as an interim measure to process MSW scientifically with the following stipulations:
    a) The authorities shall use the proposed site as a MSW processing site and landfill site as per MSW rules by adopting all safety measures.
    b) No dry waste/recyclable waste shall be dumped in the waste.
    c) The authorities shall identify and establish a scientifically managed processing and landfill facility on non-forestry land with a life expectancy of 25 years within the next 1-2 years and develop the new site within 5 years.

d) The proposed site at the 'end of life', shall be properly capped as per rules, establish green cover, and return the land to the forest department.

e) This recommendation shall not be a precedent for approvals of other MSW facility.

The above report is submitted to the full committee of EAC (Infra-2) for consideration.

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ANNEXURE-9

SITE INSPECTION REPORT

PROJECT

Installation of Common Hazardous Waste Incinerator of capacity 10 MT/day at Plot No. D-26, UPSIDC, Sikandrabad Industrial Area, District Bulandshahar, Uttar Pradesh by M/s Sheetala Waste Management- Amendment in Environmental Clearance (F. No. 10-84/2018-IA-III dated 07.02.2020) (IA/UP/MIS/256070/2022; F. No. 21-26/2022-IA-III).

Subcommittee constituted by the EAC (Infra-2) vide O.M.: 10-84/2018-IA.III dated 19.05.2022 with the following members:

Mr. B.C. Nigam, Member, EAC

Dr. Manoranjan Hota, Member EAC

Dr. MV Ramana Murthy, Member EAC

Dr. Ashish Kumar Add. Director cum Member Secretary, EAC (Infra-2)

A. BACKGROUND INFORMATION

1. The Ministry of Environment, Forest and Climate Change (MoEF&CC) granted Environmental Clearance (EC) to the above-mentioned proposal on 07.02.2020. However, on receiving a complaint from Shri Mahender Raheja in respect of the inadequacy of available space for running the facility, an investigation was done by Ministry's Integrated Regional Office (IRO) at Lucknow for examining the storage area requirements corresponding to the EC capacity of the Waste Management Plant under question.
2. The IRO, with the help of regional offices of CPCB and UPPCB, examined the matter and reported that the required area for the activities specified in the EC would be 9527.25 sq. m (2281.25 sq. m for 10 TPD HW facility, 3000 sq. m for 10 TPD E-Waste facility and 4246 sq. m for 10 TPD contaminated drum facility). PP, however, has proposed a separate storage facility for discarded drums and containers (non-hazardous) and E-Waste on additional land, which is not a part of the existing project for which EC was granted. However, it may be noted that only storage is proposed in the additional land whereas activity is proposed in the existing land itself.
3. The Ministry, based on the findings of the IRO report, issued a show-cause notice on 06.05.2021 followed by directions to Project Proponent (PP) to seek amendment in EC for revision in project configuration and also suspended the EC until the amendment is duly approved. Accordingly, PP applied for an amendment in EC, which was recommended by EAC in its 83rd meeting held on 28.02.2022 and 02.03.202.
4. Subsequently, Ministry received a representation dated 07.04.2022 from Shri Vivek Tiwari, Ghaziabad, mentioning that any amendment to the suspended EC, would violate the compliance of CPCB Guidelines with the National Building Fire Code of India and EIA Notification, 2006.

In view of above, the MoEF&CC constituted the above sub-committee to investigate the adequacy of space for running the facility and other related issues.

B. ISSUE OF CONCERN:

1. Whether it is possible to install and run 10 TDP Common Hazardous Waste Incinerator facility in the plot area of the size 1875 sq. m along with other necessary paraphernalia activities while abiding by all the relevant regulatory provisions?

C. METHODOLOGY ADOPTED:

1. The complaint and other objections received against the project were read, understood, and considered in detail.

2. The relevant laws namely “Guidelines for Storage of Incinerable Hazardous Waste Treatment, Storage and Disposal facility and Captive HW incinerators (2008),”, CPCB Manual on Sampling, Analysis, and Characterization of Hazardous waste”, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and other relevant laws, rules and guidelines were referred.

3. CPCB was consulted on certain issues and non-congruency in the inspection report of IRO Lucknow and statutory provisions with regards to storage space in the rules and necessary clarifications were obtained.

D. OBSERVATIONS OF THE SUB-COMMITTEE

1. ADEQUACY OF SPACE:

i. The HWM Rules, 2016 have clear provisions with regard to the storage space and the period for which the stored waste can be kept. As per section 8 of the rules, the waste cannot be stored for a period of not more than 90 days.

ii. As per various documents referred to and as per the clarifications given by the CPCB, the specific gravity of Incinerable hazardous waste may vary between 0.8 to 1.7 based on the type of waste. After taking into consideration the observations during the visit to the site and the above fact, the specific gravity of 1.25 has been considered for calculating the storage space of the Incinerable waste.

iii. Considering 300 working days (including maintenance days), the annual capacity of the facility is estimated as 3000 MT. For storage up to a maximum of 90 days, space for 900 sq. m will be required. Taking specific gravity of 1.25 the area requirement would be 720 sq. m.

iv. As the project has the provision of stacked storage, (up to 3 stacked storage), the storage area available will be 479 × 3 = 1437 sq. m. Even with 2 stacked storage, the storage space for 479×2= 958 is available

against the required space requirement of 900 sq. m (or 720 sq. m. considering specific gravity of 1.25)

v. With regards to the provision of 15m distance between the storage sheds, it was found that the same is being complied.

vi. Other necessary facilities like fire safety Room/DG-Pump, Laboratory, Admin Block, Guard Room, etc. seems to be adequately placed.

2. GREEN COVER:

With regard to the mention of the 33% green cover in the complaint, the committee did not find any such mandatory provision in the HWM Rules or in any other regulatory guidelines. However, the condition to increase green cover is mentioned in the EC in the interest of environmental protection, and to offset the effect of developmental activity.

In the present case, the PP has a plan to undertake plantation inside the plant periphery. Since this is not adequate, he also plans to undertake the plantation activity on the available roadside land outside his premises with the permission of concerned local authorities.

In light of the fact that proper scientific disposal of waste is necessary for proper urban management, the proposal of the PP is acceptable.

E. CONCLUSION

In view of the above findings and the observations of the sub-committee during the site inspection, the sub-committee is of the view that there is adequate space to install and run a 10 TDP Common Hazardous Waste Incinerator facility in the plot area of the size 1875 sq. m along with other necessary paraphernalia activities while abiding by all the relevant regulatory provisions.

The above report of the sub-committee may be submitted to EAC (Infra-2).

Enclosures:

1. Show-cause and other replies received from the PP.
2. Correspondence with CPCB.
3. Pictures of the site visit.

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445268/2021/CS-I

Enclosure 1

F. No. 10-84/2018-IA-III
Government of India
Ministry of Environment, Forest and Climate Change
(IA – III Division – Infrastructure)

Indira Paryavaran Bhawan
Jor Bagh Road, New Delhi-110003

Thursday, 06 May 2021

To,

M/s Sheetala Waste Managment
78/2, Gaur Plaza, Main G.T.Road, Lal Kuan
Gautam Budh Nagar-202002, U.P
Email: sheetalawaste1@gmail.com

Subject: Show Cause Notice- regarding

Sir,

I am directed to refer to your proposal received online vide application no. IA/UP/IMIS/85302/2018 dated 13.11.2018, seeking Terms of Reference (ToR) in respect of Environment Impact Assessment (EIA) Notification, 2006 under the EP (Act) 1986. The Project Proponent inter-alia provided following information:

i. M/s Sheetal Waste Management Project has proposed installation of Common Hazardous Waste incinerator of capacity 10 MT/day at Plot No.D 26, UPSIDC, industrial State, Sikandrabad, District Bulandshahr, Uttar Pradesh.
ii. Total population in the proposed project will be 15 which include the population of 10 labours & 05 staffs.
iii. The total waster requirement for the entire project has been estimated to be 4 KLD. This includes domestic water requirement and flushing. Ground water will be extracted from 2 nos. of existing bore wells with prior permission form CGWB.
iv. The Total electrical load demand has been estimated to be 100 KW for the proposed project. The source of power will be from UPPCL.
v. In case of power failure, DG sets of total capacity of 420 KVA (3x125+3x15) for the proposed will be provided as power back-up.
vi. The domestic solid waste will be generated by the project will pertain to the Bio-degradable & non-biodegradable waste. It is estimated that maximum solid waste generation from entire project would be about 5 kg/day.

Whereas, this Ministry vide their letter dated 07.02.2020 granted Environment Clearance in favour of M/s Sheetala Waste Management for the project "installation of Common Hazardous Waste Incinerator of capacity of 10 MT/day' at Plot No. D-26, UPSIDC, Sikandrabad, Industrial Area, District Bulandshahr, U.P.

Whereas, a complaint has been received in the Ministry regarding false declaration in the documents submitted by M/s Sheetla Waste Management, Sikandrabad, Bulandshahar for obtaining the Environmental Clearance (EC) from the Ministry.

Whereas, the complaint was forwarded to IRO, MoEF&CC, Lucknow, wherein committee was constituted and site visit was conducted. The specific technical comments regarding the storage area requirement corresponding to the EC capacity of waste management plant of M/s Sheetal Waste Management are as below:

Activity	Capacity	Technical Comments regarding Storage area calculation
Hazardous Waste Incinerator	10MT/day	CPCB has evolved guideline for storage of the hazardous waste storage in November, 2008. As per the guideline Para 3.0 waste following is inferred: **Requirement:** • Adequate storage capacity (i.e. 50% of the annual capacity of the hazardous waste incinerator) should be provided in the premises. **Observations:** • The annual capacity if the incinerator is estimated at 3650 MT/annum (10 MT/day) (Assuming 365 working days and Specific Gravity of combustible waste is 0.80) • Adequate storage capacity (i.e 50% of the annual capacity of the hazardous waste incinerator) should be 1825 m^2. • Therefore, as per calculations (considering Specific Gravity of 0.80) **2281.25 m^2** area is required for storage of the hazardous waste for the said facility (excluding any other requirements such as at Green Belt, Treatment Area, Lab)
E-waste recycling facility/dismasting	10MT/day	As per CPCB guidelines on implementation of E-waste (Management) Rules, 2016 mentioned Page No 16, Para 6.3 Space requirement for dismantlers following is inferred: **Requirement:** • A dismantler needs a minimum of 300 m^2 are for dismantling capacity of 1 Ton/Day required for storage of raw material, segregated material, dismantling operations and office/administration & other utilities. **Observation:** • As per calculations **3000** m^2 area is required for the said facility for storage of raw material, segregated material, dismantling operations and office/administration & other utilities.
Contaminated Drum recycling	10MT/day	**Requirement:** • As per Standard Operating Procedure and checklist of minimal requisite facilities for utilization of hazardous waste Rule 9 of the Hazardous and other waste (Management and Transboundary movement) Rules, 2016 Page no. 52 checklist of Minimal Requisite Facilities at S. No. 3 Size/ capacity of Storage sheds to be adequate to store at least 7 days' requirement of contaminated drums mention.

		Observation: • International Standard SS drum has inside dimensions of 0.57 m diameter and 0.85 m height and approximate standard weight of 22 kg. • As per SOP, for 7 days, storage of contaminated drums (70 MT for 7 days) considering referred international standard the area required to store 70 MT drum per week shall be 4246 m^2, assuming two drums tracking and 1-meter spacing between row stacking (**Ref. Report on "Storage Time Limit for Storage of Incinerable Hazardous Wastes by the Operators of HW Treatment, Storage and Disposal Facility" Page -9 Para 3.1 in Storage Drums/Containers)**
Total Area Requirement		**(2281.25 + 3000+ 4246) Sqm =9527 Sqm**

Whereas, from above it is inferred that PP (in EIA report) indicated land measuring area of 1857 sq m for these operations while actual land required for activities would be 9527 Sq. m excluding green belt requirement.

Whereas, it appears that important facts were concealed by you with MoEF&CC in the process of appraisal with regard to land area required for the above-mentioned three activities viz. installation of Hazardous Waste Incineration (10MT/day), E-Waste Recycling facility (10 MT/day) and Contaminated drum recycling (10 MT/day) and based on the same EC was granted.

Whereas, it would mean that PP has very less space for said operations. Moreover, it is noted that neither in Form-1 nor in presentation/brief summary, PP has mentioned the land area where such operations to be implemented.

NOW THEREFORE, in exercise of the powers conferred under section 5 of the Environment (Protection) Act, 1986 and keeping in view the gravity of mis-representation/ concealment of technical facts observed by the Ministry, you are directed to show-cause within 15 days that why action, as deemed appropriate, under the provision of Environment (Protection) Act, 1986 shall not be taken and EC granted vide letter dated 7.2.2020 shall not be revoked.

(Dr. Dharmendra Kumar Gupta)
Scientist-F/Director (S)

Date: 20.05.2021

To,

The Scientist (F)/Director (S) - IA-III Division-Infrastructure,

Ministry of Environment Forest & Climate Change (MoEF&CC),

Indira Paryavaran Bhawan,

Jor Bagh Road, New Delhi-110003

Sub: Regarding clarification to Show Cause notice by your office issued to Sheetala Waste Management Project vide letter no. 10-84/2018/IA-III dated 06.05.2021

Ref.: 1. EC Letter issued to Sheetala Waste Management Project vide letter dated 07.02.2020

2. Intimation letter regarding plot use vide our letter dated 10.10.220

Sir,

In regards to the above, we are in receipt of a show cause notice (above ref.) from your office regarding concealment/misrepresentation of technical facts w.r.t area available for proposed operations for which Environmental Clearance has been issued by MoEF&CC, New Delhi vide letter dated 07.02.2020 (above ref.). In this regard, we would like to submit our response as under:

To begin with, we would like to mention that in the Form 1 as well as PFR we have clearly mentioned that our plot area is 1857 sq. m. for the said activities and the detailed layout plan was also presented during ToR as well as final presentation meeting. Therefore, we beg to differ that the facts were concealed from EAC. In fact, the granted EC also mentions the capacity as well as the green area (33%- 612.81 sq. m.).

We would now like to justify our land requirement based on practical implementation of the project as under:

S. No.	Activity & capacity	Technical Committee comments regarding storage area calculation	Clarification
1.	Hazardous waste incinerator: Capacity 10 MT/Day	CPCB has evolved guidelines for storage of the hazardous waste storage in November, 2008. As per the guideline Para 3.0 waste following is inferred: Requirement Adequate storage capacity (i.e. 50% of the annual capacity of the hazardous	The Common HW Incinerator Project has been proposed in line with HoW M&T M, Rules 2016, as per which maximum permissible storage for actual users and disposal facility operators is up to one hundred and eighty days of their annual capacity. The annual capacity of the incinerator is estimated at 3000 MT/annum

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www.sheetalawaste.com

S. No.	Activity & capacity	Technical Committee comments regarding storage area calculation	Clarification
		waste incinerator should be provided in the premises. Observations: The annual capacity of the incinerator is estimated at 3650 MT/annum (10 MT/Day) (Assuming 365 working days & specific gravity of combustible waste is 0.80) Adequate storage capacity (i.e.50 % of the annual capacity of the hazardous waste should be 1825 m^2 Therefore, as per calculations (considering specific gravity of 0.80) 2281.25 m^2 area is required for storage of the hazardous waste for the said facility (excluding any other requirements such as at green belt, treatment area, lab)	(10 MT/Day) (Assuming 300 working days). In view of the above, a provision of average storage capacity of maximum 30 days has been proposed at the Common HW incinerator facility, which is feasible in the land parcel. Also, the area mentioned at the point refers to the **storage area not the land area. The storage will be provided at layers (floor levels), which is the case with the project.** We would also like to submit that the guidelines mention construction of 4 separate sheds in addition to the incineration area, which have been constructed at site (without space constraint) and duly inspected by UPPCB and the CTE & CTO has been granted on the basis of site visit (Site photographs showing sheds and copy of CTO is enclosed as **Annexure I**). Further, we would like to humbly submit that the storage of incinerable waste for six months may cause potential fire and subsequent hazard for human life and/ or physical environment.
2.	E-Waste recycling facility/ dismantling: Capacity 10 MT/Day	As per CPCB guidelines on implementation of E-Waste (Management) Rules, 2016 mentioned Page No 16, Para 6.3 space requirement for dismantlers is inferred: Requirement: A dismantler needs a minimum of 300 m^2 are for dismantling capacity of 1 Ton/day required for storage of raw material, segregated material, dismantling operations and [redacted] utilities	• The EWM Rules, 2016, do not state a minimum days storage requirement and the **'Final Implementation Guideline for E- Waste Management Rules, 2016'** by CPCB provide for an estimated area calculation based on the maximum permissible time period for storage stated in the EWM rules, 2016 i.e. 180 days. • The required space estimation in the Implementation Guideline by CPCB for E- Waste Management Rules, 2016, is inclusive of area required for office, administration, utilities, free space for

S. No.	Activity & capacity	Technical Committee comments regarding storage area calculation	Clarification
		Observation: As per calculation 3000 m^2 area is required for the said facility for storage of raw material, segregated material, dismantling operations and office/administration & other utilities.	movement. Also, it is noteworthy that the guidelines provide estimation only regarding the area requirement. These are not based on the actual engineering and may vary from project to project. We would like to mention that some of the facilities included in the above space area requirement like administration and utilities will be common for the entire plant and thus, the area requirement works out to be lesser than that calculated based on guidelines. • Also, it is important to mention that the project proposal includes only dismantling operations for E-Waste received from various industries and does not involve volume reduction or recycling. Further, we would like to submit that the activity is not covered under the ambit of EIA Notification, 2006. We would like to submit that we have dropped the e-waste proposal from the project and no activity related to e-waste handling and/ or management will be carried out at the project site.
3.	Contaminated drum recycling: Capacity 10 MT/Day	Requirement: As per standard operating procedure & checklist of minimal requisite facilities for utilization of hazardous waste rule 9 of the with Hazardous and Other Waste (Management & Transboundary Movement), Rules 2016, Page No. 52 checklist of minimal requisite facilities at S. No. 3 Size/capacity of storage sheds to be adequate to store at least 7 days requirement of contaminated	• **The proposal does not involve recycling of 'contaminated' drums & containers.** • The reconditioning operations include washing & refurbishing of non hazardous discarded drums & containers would not require space as is stated under provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. • Also, we'd like to mention that the SOP referred here is for Standard Operating

S. No.	Activity & capacity	Technical Committee comments regarding storage area calculation	Clarification
		drums mention. Observation: International standard SS Drum has inside dimensions of 0.57 m diameter and 0.85 m height and approximate standard weight of 22 kg As per SOP, for 7 days, storage of contaminated drums (70 MT for 7 days) considering referred international standard the area required to store 70 MT drum per week shall be 4246 m^2 assuming 2 drum stacking and 1 metre spacing between row stacking (Ref. report on storage time limit for storage of incinerable hazardous wastes by the operators of HW Treatment, Storage and Disposal facility: Page-9 Para 3.1 in storage drums/containers)	Procedure and Checklist of Minimal Requisite Facilities for utilization of hazardous waste under Rule 9 of the Hazardous and Other Wastes (Management and Transboundary movement) Rules, 2016, whereas Sheetala Waste Management Project is a common hazardous waste incineration facility for disposal of hazardous waste through incineration and as per rule 3 (10), Page, 2 of the Hazardous and Other Wastes (Management and Transboundary movement) Rules, 2016 "disposal" means any operation which does not lead to reuse, recycling, recovery, utilization including co-processing and includes physico-chemical treatment, biological treatment, incineration and disposal in secured landfill;" Further, we would like to submit that the activity is not covered under the ambit of EIA Notification, 2006. We would like to submit that we have dropped the proposal from the project and no activity related to contaminated drums handling and/ or management will be carried out at the project site.

In view of the above, it may be stated that the proposed common facility for Hazardous Waste Incinerator is in consonance with the applicable laws without compromising on any environmental safeguards and/ or violation of any prescribed standards of CPCB/ MoEF&CC.

Hope that the above is in line with your requirements & that our project will be allowed to continue to serve the hazardous waste disposal needs of the state.

Yours Sincerely

For Sheetala Waste Management Project

(Nishank Kaushik)

Partner

Encl: as above

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Date: 30.05.2022

To,

The Hon'ble Joint Secretary (IA-III),

Mininstry of Environment, Forest & Climate Change (MoEF&CC)

Paryavaran Bhavan, Jor Bagh Road,

New Delhi 110003

Sub: Regarding objections received dated 07.04.2022 against amendment to Environmental Clearance issued to M/s Sheetala Waste Management Project

Ref.: Complaint by Shri Vivek Tiwari

Sir,

In regards to the above, we are in receipt of a complaint filed by Sh. Vivek Tiwari against the amendment to Environmental Clearance obtained for our Common Hazardous waste incinerator located at UPSIDC Industrial Area, Sikandrabad alleging that the company has mislead & played fraud with the MoEF&CC and Hon'ble EAC (Infra-2). **We have gone in detail of the contents of the compliant made and found the contents of the complaint misleading and inspired by mala fide intentions.**

We would hereby like to submit the point wise clarifications to the false allegations as under:

S. No.	Objection		Reply
1.	Whatsoever Layout it may be, it is NOT possible at all for installing common Hazardous Waste Incineration Facility adopting safety, provisions of the HW	**a.** Distance between Incinerator and Storage Shed and between each Storage Sheds (Four Storage Sheds Required as per Rules) has to be at least 15 meters to avoid Explosion in case of Fire; Four (Minimum Three) Sheds are required and each shed must be 15 meters apart from any shed	As per "Protocol for Performance Evaluation and Monitoring of the Common Hazardous Waste Treatment Storage and Disposal Facilities including Common Hazardous Waste Incinerators by CPCB" 15 m distance requirement is between storage

	Rules & CPCB Guidelines in a plot area of 1857 m^2 because:		sheds and the same has been provided. And the same was observed by Hon'ble EAC Members during the site visit.
		b. As per National Building Code of India - A clear 9 meter road (having two gates one for ENTRY and other for EXIT) is required as per Fire Code (attached National Building Code of India – Part 4 – Fire and Life Safety, page 22, para 3.4.1 Table 19 "Comparative Floor Area Ratio for Occupancies Facing Public Road at least 9 meter wide". Footnote# 5 of Table 19 states "In so far as single story storage and hazardous occupancies is concerned they would be further governed by volume to plot area (VPR) ratio to be decided by Authority".	As per information available on https://dgfscdhg.gov.in/national-building-code-india-fire-and-life-safety *"National Building Code of India is published by Bureau of Indian Standards and* ***it is recommendatory document.****"* Thus, state byelaws of Uttar Pradesh are applicable on any building project located in Uttar Pradesh. We beg to differ from the complainant in that our project is a common hazardous waste incineration facilityhaving provision for temporary storage of hazardous waste and not a building or development project.
		i. The maximum permissible height for Hazardous Waste Building (Code J) is 15 meter (See National Building Code of India Page 42, Footnote# 17 – Buildings above 15m height is not permitted for Group H (Storage) and Group J (Hazardous) occupancies. Given CPCB Guideline of 15m distance between each storage shed,	The project has been designed to operate based on CPCB guidelines & HoW Rules 2016. Also, NOC from fire department and CTE/CTO from UPPCB have been obtained for the project. **Justification for hazardous waste storage using stacking arrangement:**

		only single story HW Storage is possible as per Guidelines and Fire Safety Code.	• As per USEPA'S 2001 HWIR final rule (*copy enclosed*), the specific gravity of hazardous waste ranges between 1.0 & 1.5 (93%). • Annual capacity is estimated as 3000 MT considering 300 working days (including maintenance days) therefore storage is required for 1500 MT of hazardous waste. However, our plant is designed based on HoW Rules, 2016, as per which Hazardous waste cannot be stored for more than 90 days. • Therefore, the area requirement considering storage for 900 MT & specific gravity of 1.25 estimates at 720Sq.M. • Surface area of 3 storage sheds (combined): = 479 sq. m. • Stacking arrangement (upto2 stacks): Storage area available: 479 x 3 = 1437 sq. m. allows storage of 90 days. (Installed capacity). **Contents of the complaint are misleading and inspired by**

			mala fide intentions.
		c. Many mandatory functions of Common HW Incinerator are required such as – Weight Bridge, Fire Safety Room/DG-Pump, Fire Tanks, Tire Wash, Laboratory, Admin Block, Guard Room etc. as mentioned in mandatory infrastructure	As mentioned above, the project has been designed based on CPCB guidelines &HoW Rules 2016 and has been appraised by MoEF&CC along with UPPCB & provisions for weigh bridge, Fire Safety Room/DG- Pump, Fire Tanks, Tire Wash, Laboratory, Admin Block, Guard Room etc have been made in the plant layout**.** And the same was observed by Hon'ble EAC Members during the site visit.
		d. Green Belt of 10 meters all around the periphery is required.	Green cover area provision of ~33% of the total plant area i.e. 610 sq.m. including plantation on plant periphery has been provided in the plant area**.** And the same was observed by Hon'ble EAC Members during the site visit.
		e. Para #2 below, all possible layouts with diagram have been depicted, where it would be amply clear that for stated capacity of 10MT/day of Incinerator, it is NOT possible to comply with rules, guidelines as well as Fire Safety Code.	The plant layout showing project components is enclosed as Appendix I.
		f. Therefore, the layout proposed by the proponents is misleading & fraud and absolutely violates CPCB Guidelines, Protocol For Performance Evaluation and	Also we'd like mention that, there are several common standalone incinerators of similar or even larger capacity running

		Monitoring of CHWTSDF published May, 2010, and thus Rule 16(2) of HOW(M&T) Rules, 2016.	successfully in the country. Details of some of them are below:

S. No.	Project	Incinerator Capacity	Area requirement as per points raised by complainant	Storage area provided
1.	**Bharat Oil Company (I) Regd. E-18, Site-IV Industrial Area, Sahibabad, Ghaziabad**	**1800 MT Per Month**	**15840 Sq. Mtr. for storage only.**	**Total Plot Area is 1300 Sq. Mtr. (Approx.) area including all project components [i.e. Incineration plant, E-Waste recycling, Solvent Recovery, Used Oil Refinery, Discarded Drums & Containers, Gren Belt, DG Set Room, Administration Block etc.]**
2.	M/s Varni Enviro Care P. Ltd.	1500 Kg/hour	7920 Sq. Mtr. for storage only	5,187 sq. m. including incineration area (8% of total plot area)
3.	Coastal Waste Management Project (CWMP) Unit: 2 at Nellore District (AP).	55 TPD	12100 Sq. Mtr. for storage only	10,743 sq. m. including all project components [i.e. incineration plant, recycling facility(e-waste, Spent Solvent Recycling, Used Oil Recycling, Used Lead Acid Batteries), Bio-medical waste treatment facility, Waste Plastic Recycling, Waste Paper Recycling, renewable energy plant & waste to energy plant] except for landfill area, roads & greenbelt
4.	M/s Bharuch Enviro Infrastructure Limited	Existing Incinerator		Area for the proposed incinerator i.e. 12 Million

	Ankleshwar, Gujarat	capacity at TSDF Site is • Incinerator I:6.5 Million Kcal/hr • Incinerator II:6.5 Million Kcal/hr Proposed Expansion Incinerator Capacity: • Incinerator III: 12 Million Kcal/hr.		Kcal/hr = 1800 Sq Meters
5.	Maharashtra Enviro Power Limited	152 TPD	33,440 Sq. Mtr. for storage only	5,530.07 (Hazardous waste storage area)
6.	Mumbai Waste Management Limited	45000 TPA	27,500 Sq. Mtr. for storage only	31600 sq.m. including all project components [i.e. incineration plant, E-Waste recycling, Solvent Recovery, Plastic recycling, paper recycling, Bio-medical waste treatment facility, Waste Plastic Recycling, Waste Paper Recycling, MS Drum recycling] except for landfill area, roads & greenbelt
7.	West Bengal Waste Management Limited	55 TPD	12100 Sq. Mtr. for storage only	70,700 Sq. Mtr. for Processing facilities including Stabilization yard, Recycling Facilities, Secured landfill, Bio Medical waste, E waste etc. Storage for Incinerable

				hazardous waste is 500 Sq. Mtr.	
8.	Uttar Pradesh Waste Management Project (Kumbhi – Kanpur) A division of Ramky Group	47.3 TPD	Total Incinerable Waste and AFRF Storage Area 1040 Sq. Mtr.	1040 Sq. Mtr. Area is allotted for the storage of 47.3MT of incinerable and AFRF hazardous waste per day.	
There are several more, but we believe the above suffice in putting our point across. **Contents of the complaint are misleading and inspired by mala fide intentions.**					

2.	Please see the top view of the plot as depicted below. At Least 10-meter-thick greenbelt is to be developed in the periphery of the facility, as per clause (xv) under the A -Specific Conditions of the Environment Clearance		Green cover area provision of ~33% of the total plant area i.e. 610 sq. m. including plantation around of plant periphery has been provided in the plant area**.** And the same was observed by Hon'ble EAC Members during the site visit.
3.	In the remaining 38.3 m X 12 m area, (459.6m2), the project proponent has to construct:	i. At least three (03) sheds out of the four (04) number of prescribed sheds arerequired (flammable + Ignitable waste shed, reactive shed and non-compatibleshed) for which at least 15 m distance in to be provided between the storagesheds and at least two routes to escape in the event of any fire (Refer paras 3.1(a) , (b), (g) and (k) of CPCB'S Guidelines 'Guidelines for the storage ofIncinerable Hazardous Wastes by the operations of common hazardous waste,waste treatments, storage and disposal facilities and captive HW incinerators",published in Nov, 2008 read with para 2.0 of the CPCB Guidelines " Protocol forthe performance evaluation and monitoring of the common HW TSDF includingcommon HW incinerators and Environment Clearance clause (vii) under	Three no of sheds for storage of hazardous waste based on compatibility & designed based on specific gravity as per USEPA have been constructed for storage of hazardous waste. The plant design provides for fire escape route & adheres to the Protocol forthe performance evaluation and monitoring of the common HW TSDF including common HW incinerators. **Contents of the complaint are misleading and inspired by mala fide intentions.**

		the A.Specific Conditions as well as clause 1. (iv) under B. Standard Conditions	
4.	Not possible as width is just 12 meters whereas the two routes of at least 9m each aremandatory as per the aforesaid para 3.1(k) of the CPCB'S storage guidelines read withthe National fire code of India.		We will reiterate that the project has been designed based on CPCB guidelines & HoW Rules, 2016 and appraised by MoEF&CC and UPPCB. Protocol for the performance evaluation and monitoring of the common HW TSDF including common HW incinerators by CPCB has no provision for 9 m road width. **Contents of the complaint are misleading and inspired by mala fide intentions.**
5.	Not possible to maintain 15 meter distance for all four (4) sheds.		Sheds for storage of hazardous waste based on compatibility & designed based on specific gravity as per USEPA have been constructed for storage of hazardous waste.
Therefore, when the site size is such that it cannot provide required storage sheds per CPCB Guideline(s) at all, the question(s) arise:		i. Whereas the incinerator plant of 10MT/day itself requires space of around 1200 m^2 just for rotary kiln, secondary chamber, Quencher/Spray Drier, Air Pollution Control Devices, Chimney, Incinerator Ash handling, Waste feeding space, waste storage exclusively for feeding into incinerator, Electric Room, Flue Gas Monitoring Room etc will be constructed? The same cannot be constructed in the in the remaining 38.3 m X 12 m area, (459.6m^2) outside of	It appears that Shri Vivek Tiwari is perusing outdated data wherein, bulky & space consuming incinerator plants were installed. Presently, the modern technology allows for an incinerator of 10 TPD to be installed in an area of about 325 sq. m. The same can be verified at Sheetala and several other incinerator plants running in the country (examples given in table above). **Contents of the complaint are**

	Green Belt.	**misleading and inspired by mala fide intentions.**
	ii. Where the Fuel Storage Tank which requires space (as Fuel Supply to the Incinerator) with dyke provision and separated 10meter distance as per safety requirement will be constructed?	This is a misleading since the fuel storage tank is located near the incinerator shed with proper safety systems and the Protocol forthe performance evaluation by CPCB has no 10 meter distance provision
	In addition, the plot area is also required for the installation of Multi-Effect Evaporator (please see EC – _B. Standard Conditions – _Water Quality Monitoring & Preservations sub-para (vii) and (viii)) and STP (please see EC – _B. Standard Conditions – _Water Quality Monitoring & Preservations sub-para (xi))?	This is a standard condition of the EC. The EIA report has no provision for MEE plant. The process effluent is treated in ETP. **Contents of the complaint are misleading and inspired by mala fide intentions.**
	iv. In addition, mandatory infrastructure for Fire Safety Tank of 50,000 Liters, Two Fire Safety Pumps, needed as per safety requirement, and for Common HW Incinerator will be constructed?	The project designed based on CPCB guidelines & HoW Rules 2016 has provision of underground tank of 50,000 litre capacity for fire safety, safety pumps. There are three fire pumps installed at the site.
	v. Also the Admin Block, Laboratory, Tire Wash (Tire Wash alone requires 75 m^2), Guard Room, Electric Room, DG Room, Truck & Car Parking are required mandatory infrastructure and reasonable plot area required for the same.	The project has provision for admin building complex, Guard Room Electric Room, DG, parking area in the plant premises. **Contents of the complaint are misleading and inspired by mala fide intentions.**
	vi. Multi-story structure to store Incinerable Waste violates the 15	It is advisable that the complainant may please

	meter storage distance between storage shed requirement of CPCB Guideline for Storage of Incinerable HW. Whether this 15-meter distance would be maintained vertically? It is not permitted under National Building Fire Code of India as stated earlier. Multistory is absolutely unsafe & dangerous in case of Fire and not recommended for storage of flammable/explosive substances. In addition, it's simply not possible & simply fictional to load, unload the drums from First Floor or Second Floor safely onto the trucks. A slight spark/ignition while loading/unloading drums can explode the entire muti-story structure.	undertake a more careful purview of the protocol by CPCB wherein provision for stacking arrangement has been provided. We would reiterate that this is not a building or housing development project & waste storage will be temporary therefore project located in industrial area has been designed based on CPCB guidelines & HoW Rules 2016 as is required. The incoming waste is tested before being brought in for storage and therefore careful arrangements for unloading & storage are undertaken based on waste type. Fork lift systems for transporting waste within premises is being done successfully all over the world in facilities handling hazardous waste &/or even hazardous waste chemicals. Also, we'd like to point out that in a populous country like Indiawhere suitable land for a TSDF is a scarce resource with HW generation figure reaching 9.24 Million MT during the year 2020-21, indicating a 5% increase compared to the previous year i.e. 2019-20 and if the entire quantity was to be managed effectively & sent to TSDFs, whether there'd be enough space available for

		storing the same if done only in the manner visualized by the complainant i.e. horizontal? **Contents of the complaint are misleading and inspired by mala fide intentions.**
	vii. In case the Project proponent has suggested additional land for storage as a feed to this project then the same would attract fresh Environment Clearance under the para 7(ii) of EIA Notification, whereby increase in leased or plot area would have environment impact footprint which must be considered. The storage area is an integrated part of Common Hazardous Waste Incinerator as per Guidelines/Rules. Even otherwise per above the mandatory infrastructure is not possible in the remaining 38.3 m X 12 m area, (459.6m2) or even in an area of 1200 m2 for all the mandatory requirements as listed above.	No additional land has been proposed for the common standalone hazardous waste incineration project of M/s Sheetala waste management project. The components spelt out repeatedly in this objection letter by the complainant have been adequately provide for by the company. Plant layout is enclosed as Appendix I. **Contents of the complaint are misleading and inspired by mala fide intentions.**

Objection

Therefore, with whatsoever amendment is proposed by the Project Proponent, the subject site is not at all adequate for common HW incinerator facility irrespective of any quantity. The Environment Clearance granted should be immediately withdrawn and penalize the project proponent for misleading & playing fraud with the MoeF&CC and Honorable Committee Members.

Response

We appreciate the concerns raised by Sh. Vivek Tiwari Ji for environmental protection of NCR region and would humbly like to submit that the our common hazardous waste incinerator facility is in spirit of

the rule 3(b) of Environment Protection Act, 1986, as it will aid in improvement of the surrounding environment by helping to reduce line source pollution due to reduction in transportation of hazardous waste of nearby areas and by also providing an environmentally sound hazardous waste management facility.

The project is operating while adhering to the EMP recommended in the EIA report to mitigate any adverse impact on the environment & the incineratoris operated in compliance to the statutory clearances and HoW Rules 2016. M/s Sheetala Waste Management Project is contributing towards scientific management of the Hazardous waste generated in Bulandshahr District & nearby districts, which have several small to medium scale industries, which was earlier resulting in either increase of pollution due to transportation or the waste being disposed off in an unscientific manner leading to an increased pollution load in the environment due to non-availability of any common incineration facility.

Also, we'd like to bring into your kind notice that appeal vide application no. 175/2020 against grant of EC to the project was duly reviewed by the Hon'ble NGT and the same has been declined vide its order dated August 25, 2020.

Our project has been appraised, reviewed & granted environmental clearance & its amendment by the Hon'ble EAC and by the UPPCB ad issued CTE, CTO & Authorization under HoW Rules, 2016.

In view of the above, it may be stated that the common facility for Hazardous Waste Incinerator is the need of the hour for hazardous waste management & disposal & it would be better suited that the complainant use his admirable diligence for bringing to light issues regarding the huge quantities of hazardous waste going unmanaged in the country for the lack of treatment units like ours in the country & allow us to do our job that I effectively manage the hazardous waste & protect the environment.

Contents of the complaint are misleading and inspired by mala fide intentions.

Trust the same is found in order

For Sheetala Waste Management Project

(NishankKaushik)

Partner

Date: 28.06.2022

To,

The Hon'ble Member Secretary,

Infra-2, Mininstry of Environment, Forest & Climate Change (MoEF&CC)

Paryavaran Bhavan, Jor Bagh Road,

New Delhi 110003

Sub: Regarding objections received dated 07.04.2022 against amendment to Environmental Clearance issued to M/s Sheetala Waste Management Project

Ref.: Complaint by Shri Vivek Tiwari

Sir,

In regards to the above,

We would hereby like to submit the point wise clarifications to the queries raised through mail dated 27th June 2022.

S. No.	Objection	Reply
1.	Specific Gravity of hazardous waste mentioned in the site visit report of CPCB is 0.83.	• As per CPCB guidelines for testing of hazardous waste and chemicals one has to follow the USEPA'S 2001 HWIR final rule *(Annexure – I, Ref. Manual on Sampling, Analysis and Characterization of Hazardous Wastes by CPCB, New Delhi, https://cpcb.nic.in/openpdffile.php?id=TmV3c0ZpbGVzLzYzXzE1MTc5MjI0ODRfbWVkaWFwaG90bzI1MDQ5LnBkZg==)* and the same fact was represented by us during the 83rd EAC Infra-2 meeting. • As per USEPA'S 2001 HWIR final rule (*Annexure-2*), the specific gravity of hazardous waste ranges between 1.0 & 1.5 (93%).

		• Also, in support of this fact we have attached the Comprehensive Analysis (CA) report and Fingerprint Analysis (FPA) report of the hazardous waste we are receiving at our facility for disposal *(Annexure-3)* which clearly supports the fact given in USEPA'S 2001 HWIR final rule that specific/bulk gravity of most of the hazardous waste is nearly 1.5. As per CA report 1bulk density of hazardous waste sample is 1.36, in CA report 2 bulk density of hazardous waste sample is 1.25, in CA report 2 bulk density of hazardous waste sample is 1.52 and in CA report 2 bulk density of hazardous waste sample is 1.72.
		• Annual capacity is estimated as 3000 MT considering 300 working days (including maintenance days) therefore storage is required for 1500 MT of hazardous waste. However, our plant is designed based on HoW Rules, 2016, as per which Hazardous waste cannot be stored for more than 90 days. • Therefore, the area requirement considering storage for 900 MT & specific gravity of 1.25 estimates at 720Sq.M. • Surface area of 3 storage sheds (combined): = 479 sq. m. • Stacking arrangement (upto2 stacks): Storage area available: 479 x 3 = 1437 sq. m. allows storage of 90 days. (Installed capacity).
		"Guidelines for Storage of Incinerable Hazardous Wastes by the Operators of Common Hazardous Waste Treatment, Storage and Disposal Facilities and Captive HW Incinerators" (Annexure 4) These guidelines were introduced to limit the storage time of hazardous waste at Incineration facilities to prevent the fire accidents as there was a fire in one of the storage shed of TSDF containing 293 MT of incinerable hazardous waste in drums at Ankaleshwar on April 03, 2008. As per *"Guidelines for Storage of Incinerable Hazardous Wastes by the Operators of Common Hazardous Waste*

		Treatment, Storage and Disposal Facilities and Captive HW Incinerators", The Committee noted that the normal time required for material to be taken up for incineration after receipt of the wastes at the facility could vary from 02 to 03 months to carryout activities like sampling, analysis, optimizing the mixing of different incinerable hazardous waste prior to the incineration. Taking into consideration the down time of the incinerator required for major maintenance or repairs which appear to be an annual activity, a maximum of six months storage time is considered appropriate (point 2.2.3, page no. 3). ***Recommended Storage time and the Quantity of the Incinerable Hazardous Wastes:*** Normal storage of incinerable hazardous wastes at the incinerator site should be restricted to maximum of six months (point 3.2, page 7). Above guidelines clearly mention that waste can be stored for maximum upto 6 months not minimum. ***"Some suggestion was made to provide intermediate storage so that the storage at the TSDF site could be restricted as practiced in some countries (point 2.2.7, point 4)."*** There is no where mention in the guidelines that incineration facilities have to store the hazardous waste for 6 months at least. These guidelines clearly states that incineration facilities should store the waste for minimum time frame and incinerate the waste as soon as possible so that fire and other accident situations can be avoided. At last, we would like to submit that Complainant again and again is using these guidelines to fulfil his malafide intentions.

The project is operating while adhering to the EMP recommended in the EIA report to mitigate any adverse impact on the environment & the incineratoris operated in compliance to the statutory clearances and HoW Rules 2016. M/s Sheetala Waste Management Project is contributing towards scientific

management of the Hazardous waste generated in Bulandshahr District & nearby districts, which have several small to medium scale industries, which was earlier resulting in either increase of pollution due to transportation or the waste being disposed off in an unscientific manner leading to an increased pollution load in the environment due to non-availability of any common incineration facility.

Also, we'd like to bring into your kind notice that appeal vide application no. 175/2020 against grant of EC to the project was duly reviewed by the Hon'ble NGT and the same has been declined vide its order dated August 25, 2020.

Our project has been appraised, reviewed & granted environmental clearance & its amendment by the Hon'ble EAC and by the UPPCB ad issued CTE, CTO & Authorization under HoW Rules, 2016.

In view of the above, it may be stated that the common facility for Hazardous Waste Incinerator is the need of the hour for hazardous waste management & disposal & it would be better suited that the complainant use his admirable diligence for bringing to light issues regarding the huge quantities of hazardous waste going unmanaged in the country for the lack of treatment units like ours in the country & allow us to do our job that I effectively manage the hazardous waste & protect the environment.

Trust the same is found in order

For Sheetala Waste Management Project

(NishankKaushik)

Partner

Annexure - 1

Uniform testing procedure for analysis of hazardous wastes samples

SCHEDULE II

[See rule 3 (1) (17) (ii)]

List of waste constituents, concentration limits and Analytical Methods

Class A: Based on leachable concentration limits [Toxicity Characteristic Leaching Procedure (TCLP) or Soluble Threshold Limit Concentration (STLC)]

Class	Constituents	Concentration (mg/L)	Analytical Method
A1	Arsenic	5.0	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3114B; 2012)
A2	Barium	100.0	AAS Method APHA 3111B :2012
			AAS Method APHA 3120 B :2012
A3	Cadmium	1.0	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3111B; 2012)
A4	Chromium and/or Chromium (III) compounds	5.0	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3111B; 2012)
A5	Lead	5.0	AAS Method (APHA 3111B : 2012)
			ICP Method (APHA 3120B : 2012)
A6	Manganese	10.0	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3111B; 2012)
A7	Mercury	0.2	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3112B; 2012)
A8	Selenium	1.0	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3114B; 2012)
A9	Silver	5.0	ICP Method (APHA 3120B :2012)
A10	Ammonia	50*	Distillation followed by Titrimetric Method (APHA 4500-NH_3 B/C :2012)
A11	Cyanide	20*	Distillation followed by Titrimetric Method (APHA 4500-CN^- C/D: 2012)
A12	Nitrate (as nitrate-nitrogen)	1000.0	UV-Vis Screening Method (APHA 4500-NO_3^- B :2012)
A13	Sulphide (as H_2S)	5.0	Iodometric Method (APHA 4500-S^{2-} F :2012)
A14	1,1-Dichloroethylene	0.7	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A15	1,2-Dichloroethane	0.5	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A16	1,4-Dichlorobenzene	7.5	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A17	2,4,5-Trichlorophenol	400.0	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A18	2,4,6-Trichlorophenol	2.0	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A19	2,4-Dinitrotoluene	0.13	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)

Annexure - 1

Class	Constituents	Concentration (mg/L)	Analytical Method
A20	Benzene	0.5	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A21	Benzo (a) Pyrene	0.001	USEPA Method 8310: Polynuclear Aromatic Hydrocarbons
A22	Bromodicholromethane	6.0	USEPA Method 524.2 Measurement of Purgeable organic compounds in water by Capillary Column Gas chromatography/Mass Spectrometry (GC-MS)
A23	Bromoform	10.0	USEPA Method 524.2 Measurement of Purgeable organic compounds in water by Capillary Column Gas chromatography/Mass Spectrometry (GC-MS)
A24	Carbon tetrachloride	0.5	USEPA Method 524.2 Measurement of Purgeable organic compounds in water by Capillary Column Gas chromatography/Mass Spectrometry (GC-MS)
A25	Chlorobenzene	100.0	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A26	Chloroform	6.0	USEPA Method 524.2 Measurement of Purgeable organic compounds in water by Capillary Column Gas chromatography/Mass Spectrometry (GC-MS)
A27	Cresol (ortho+ meta+ para)	200.0	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A28	Dibromochloromethane	10.0	USEPA Method 524.2 Measurement of Purgeable organic compounds in water by Capillary Column Gas chromatography/Mass Spectrometry (GC-MS)
A29	Hexachlorobenzene	0.13	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A30	Hexachlorobutadiene	0.5	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A31	Hexachloroethane	3.0	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A32	Methyl ethyl ketone	200.0	NIOSH Method 2500 by Gas Chromatography
A33	Naphthalene	5.0	USEPA Method 8310: Polynuclear Aromatic Hydrocarbons
A34	Nitrobenzene	2.0	Gas Chromatography Mass Spectrometry Method (APHA 6410B : 2012)
A35	Pentachlorophenol	100.0	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A36	Pyridine	5.0	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A37	Tetrachloroethylene	0.7	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A38	Trichloroethylene	0.5	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A39	Vinyl chloride	0.2	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A40	2,4,5-TP (Silvex)	1.0	USEPA Method 8321B Hebicides by High Pressure Liquid Chromatography (HPLC)
A41	2,4-Dichlorophenoxyacetic acid	10.0	USEPA Method 8321B Hebicides by High Pressure Liquid Chromatography (HPLC)
A42	Alachlor	2.0	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography

Annexure - 1

Class	Constituents	Concentration (mg/L)	Analytical Method
A43	Alpha HCH	0.001	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A44	Atrazine	0.2	Method 8141B: Organophosphorus Compounds by Gas Chromatography
A45	Beta HCH	0.004	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A46	Butachlor	12.5	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A47	Chlordane	0.03	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A48	Chlorpyriphos	9.0	USEPA Method 8141B: Organophosphorus Compounds by Gas Chromatography
A49	Delta HCH	0.004	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A50	Endosulfan (alpha+ beta+ sulphate)	0.04	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A51	Endrin	0.02	USEPA Method 8141B: Organophosphorus Compounds by Gas Chromatography
A52	Ethion	0.3	USEPA Method 8141B: Organophosphorus Compounds by Gas Chromatography
A53	Heptachlor (& its Epoxide)	0.008	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A54	Isoproturon	0.9	USEPA Method 532 by Gas Chromatography
A55	Lindane	0.4	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A56	Malathion	19	USEPA Method 8141B: Organophosphorus Compounds by Gas Chromatography
A57	Methoxychlor	10	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A58	Methyl parathion	0.7	USEPA Method 8141B: Organophosphorus Compounds by Gas Chromatography
A59	Monocrotophos	0.1	USEPA Method 8141B: Organophosphorus Compounds by Gas Chromatography
A60	Phorate	0.2	USEPA Method 8141B: Organophosphorus Compounds by Gas Chromatography
A61	Toxaphene	0.5	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A62	Antimony	15	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3112B; 2012)
A63	Beryllium	0.75	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3114B; 2012)
A64	Chromium (VI)	5.0	Colorimetric Method (APHA 3500-Cr^{-} B: 2012)
			IC method (APHA 3500-Cr^{-} C: 2012)
A65	Cobalt	80.0	AAS Method (APHA 3111B : 2012)
			ICP Method (APHA 3120B : 2012)
A66	Copper	25.0	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3111B; 2012)
A67	Molybdenum	350	AAS Method (APHA 3111D; 2012)
A68	Nickel	20.0	AAS Method (APHA 3111B : 2012)

Annexure - 1

Class	Constituents	Concentration (mg/L)	Analytical Method
			ICP Method (APHA 3120B : 2012)
A69	Thallium	7.0	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3111B; 2012)
A70	Vanadium	24.0	AAS Method (APHA 3111B : 2012)
			ICP Method (APHA 3120B : 2012)
A71	Zinc	250	ICP Method (APHA 3120 B : 2012)
			AAS Method (APHA 3111B; 2012)
A72	Fluoride	180.0	SPANDS method (APHA 4500-F^- D :2012)
A73	Aldrin	0.14	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A74	Dichlorodiphenyltrichloroethane (DDT), Dichlorodiphenyldichloroethylene (DDE), Dichlorodiphenyldichloroethane (DDD)	0.1	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A75	Dieldrin	0.8	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A76	Kepone	2.1	USEPA Method 8260 B Volatile Organic Compounds by Gas Chromatography Mass Spectrometry (GC-MS)
A77	Mirex	2.1	USEPA Method 8081B Organochlorine Pesticides by Gas Chromatography
A78	Polychlorinated biphenyls	5.0	USEPA Method 8082A Polychlorinated Biphenyls by Gas Chromatography
A79	Dioxin (2,3,7,8-TCDD)	0.001	USEPA Method 1613B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution by HRGC-HRMS
			USEPA Method 8081B Organochlorine Pesticides by by Gas Chromatography

Class B: Based on Total Threshold Limit Concentration (TTLC)

Class	Constituent	Concentration (mg/kg)	Test Method
B1	Asbestos	10,000	**USEPA METHOD 100.1** Analytical Method for Determination of Asbestos Fibers in water
B2	Total Petroleum Hydrocarbons (TPH) (C5 - C36)	5,000	**USEPA METHOD 8015C** Non-halogenated Organics by Gas Chromatography (C6 – C28)

Note:

(1) The testing method for list of constituents at A1 to A61 in Class-A, shall be based on Toxicity Characteristic Leaching Procedure (TCLP) and for extraction of leachable constituents, USEPA Test Method 1311 shall be used.

(2) The testing method for list of constituents at A62 to A79 in Class- A, shall be based on Soluble Threshold Limit Concentration (STLC) and Waste Extraction Test (WET) Procedure given in

Appendix II of section 66261 of Title 22 of California Code regulation (CCR) shall be used.

(3) In case of ammonia (A10), cyanide (A11) and chromium VI (A64), extractions shall be conducted using distilled water in place of the leaching media specified in the TCLP/STLC procedures*.

(4) A summary of above specified leaching/extraction procedures is included in manual for characterization and analysis of hazardous waste published by Central Pollution Control Board and in case the method is not covered in the said manual, suitable reference method may be adopted for the measurement.

(5) In case of asbestos, the specified concentration limits apply only if the substances are in a friable, powdered or finely divided state.

(6) The hazardous constituents to be analyzed in the waste shall be relevant to the nature of the industry and the materials used in the process.

(7) Wastes which contain any of the constituents listed below shall be considered as hazardous, provided they exhibit the characteristics listed in Class-C of this Schedule:

Class-C

S. No.	Constituent	Test Methods
1.	Acid Amides	**USEPA METHOD 8316** Acrylamide, Acrylonitrile and Acrolein by High Performance Liquid Chromatography (HPLC)
2.	Acid anhydrides	**USEPA METHOD 8270D** Semi-volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
3.	Amines	
4.	Anthracene	
5.	Aromatic compounds other than those listed in Class-A	
6.	Bromates, (hypo-bromites)	**USEPA METHOD 300** Determination of Inorganic anions in Drinking Water by Ion Chromatography
7.	Chlorates (hypo-chlorites)	
8.	Carbonyls	**USEPA METHOD 8315A** Determination of Carbonyl Compounds by HPLC
9.	Ferro-silicate and alloys	
10.	Halogen- containing compounds which produce acidicvapours on contact with humid air or water e.g. silicontetrachloride, aluminum chloride, titanium tetrachloride	**USEPA METHOD 9023** Extractable Organic Halides (EOX) in Solids
11.	Halogen- silanes	
12.	Halogenated Aliphatic Compounds	**USEPA METHOD 8121** Chlorinated Hydrocarbons by Gas Chromatography: Capillary Column Technique
13.	Hydrazine (s)	
14.	Hydrides	
15.	Inorganic Acids	**USEPA METHOD 9056A** Determination of Inorganic Anions by Ion Chromatography
16.	Inorganic Peroxides	
17.	Inorganic Tin Compounds	
18.	Iodates	
19.	(Iso- and thio-) Cyanates	
20.	Manganese-silicate	

Annexure - 1

S. No.	Constituent	Test Methods
21.	Mercaptans	
22.	Metal Carbonyls	**USEPA METHOD 207-2** Analysis for Isocyanates By HPLC:
23.	Metal hydrogen sulphates	
24.	Nitrides	
25.	Nitriles	**USEPA METHOD 8316** Acrylamide, Acrylonitrile and Acrolein by HPLC
26.	Organic azo and azooxy Compounds	**USEPA METHOD 8321B** Solvent-Extractable Non-volatile Compounds by High-Performance Liquid Chromatography/ Thermospray/Mass Spectrometry (HPLC/TS/MS) Or Ultraviolet (UV) Detection
27.	Organic Peroxides	**ASTM E298** Standard Method for Organic Peroxides
28.	Organic Oxygen Compounds	
29.	Organic Sulphur Compounds	
30.	Organo- Tin Compounds	**USEPA METHOD 8323** Determination of Organotins by Micro-Liquid Chromatography- Electrospray Ion Trap Mass Spectrometry
31.	Organo nitro- and nitroso compounds	**USEPA METHOD 8270D** Semi-volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
32.	Oxides and hydroxides except those of hydrogen, carbon, silicon, iron, aluminum, titanium, manganese, magnesium, calcium	
33.	Phenanthrene	**USEPA METHOD 8270D** Semi-volatile Organic Compounds by GC/MS
34.	Phenolic Compounds	**USEPA METHOD 8041A** Phenols by Gas Chromatography
35.	Phosphate compounds except phosphates of aluminum, calcium and iron	**USEPA METHOD 365.3** Phosphorous, all forms
36.	Salts of pre-acids	
37.	Total Sulphur	
38.	Tungsten Compounds	
39.	Tellurium and tellurium compounds	
40.	White and Red Phosphorus	**USEPA Method 7580** White Phosphorus (P4) by Solvent Extraction and Gas Chromatography
41.	2-Acetylaminofluorene	**USEPA METHOD 8270D** Semi-volatile Organic Compounds by GC/MS
42.	4-Aminodiphenyl	
43.	Benzidine and its salts	
44.	Bis (Chloromethyl) ether	

S. No.	Constituent	Test Methods
45.	Methyl chloromethyl ether	
46.	1,2-Dibromo-3-chloropropane	
47.	3,3'-Dichlorobenzidine and its salts	
48.	4-Dimethylaminoazobenzene	
49.	4-Nitrobiphenyl	
50.	Beta-Propiolactone	**USEPA METHOD 8260C** Volatile organic compounds by GC/MS

Class C: Based on Hazardous Characteristics

Apart from the concentration limit listed above at Class-A and Class-B of Schedule-II of the HOWM Rules, 2016, the substances or wastes shall be classified as hazardous waste if it exhibits any of the following characteristics due to the presence of any hazardous constituents:

Class C1: Flammable- A waste exhibits the characteristic of flammability or ignitability if a representative sample of the waste has any of the following properties, namely: -

(i) flammable liquids, or mixture of liquids, or liquids containing solids in solution or suspension (for example, paints, varnishes, lacquers, etc; but not including substances or wastes otherwise classified on account of their dangerous characteristics), which give off a flammable vapour at temperature less than 60°C. This flash point shall be measured as per ASTM D 93-79 closed-cup test method or as **determined by an equivalent test method published by Central Pollution Control Board**;

(ii) it is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns vigorously and persistently creating a hazard;

(iii) it is an ignitable compressed gas;

(iv) It is an oxidizer and for the purposes of characterisation is a substance such as a chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter.

Class C2: Corrosive- A waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties, namely: -

(i) it is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5;

(ii) it is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm per year at a test temperature of 55 °C;

(iii) it is not aqueous and, when mixed with an equivalent weight of water, produces a solution having a pH less than or equal to 2 or greater than or equal to 12.5;

(iv) it is not a liquid and, when mixed with an equivalent weight of water, produces a liquid that corrodes steel (SAE1020) at a rate greater than 6.35 mm per year at a test temperature of 55 °C.

Note:

For the purpose of determining the corrosivity, the Bureau of Indian Standard 9040 C method for

pH determination, NACE TM 01 69: Laboratory Corrosion Testing of Metals and EPA 1110A method for corrosivity towards steel (SAE1020) to establish the corrosivity characteristics shall be adopted.

Class C3: Reactive or explosive- A waste exhibits the characteristic of reactivity if a representative sample of the waste it has any of the following properties, namely: -

(i) it is normally unstable and readily undergoes violent change without detonating;

(ii) it reacts violently with water or forms potentially explosive mixtures with water;

(iii) when mixed with water, it generates toxic gases, vapours or fumes in a quantity sufficient to present a danger to human health or the environment;

(iv) it is a cyanide or sulphide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapours or fumes in a quantity sufficient to present a danger to human health or the environmental;

(v) it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;

(vi) it is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure;

(vii) it is a forbidden explosive.

Class C4: Toxic- A waste exhibits the characteristic of toxicity, if: -

(i) the concentration of the waste constituents listed in Class A and B (of this schedule) are equal to or more than the permissible limits prescribed therein;

(ii) it has an acute oral LD50 less than 2,500 milligrams per kilogram;

(iii) it has an acute dermal LD50 less than 4,300 milligrams per kilogram;

(iv) it has an acute inhalation LC50 less than 10,000 parts per million as a gas or vapour;

(v) it has acute aquatic toxicity with 50% mortality within 96 hours for zebra fish (*Brachidaniorerio*) at a concentration of 500 milligrams per litre in dilution water and test conditions as specified in BIS test method 6582 – 2001.

(vi) it has been shown through experience or by any standard reference test- method to pose a hazard to human health or environment because of its carcinogenicity, mutagenecity, endocrine disruptivity, acute toxicity, chronic toxicity, bio-accumulative properties or persistence in the environment.

Class C5: Substances or Wastes liable to spontaneous combustion - Substances or Wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up on contact with air, and being then liable to catch fire.

Class C6: Substances or Wastes which, in contact with water emit flammable gases-
Substances or Wastes which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

Class C5: Oxidizing - Substances or Wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen cause, or contribute to, the combustion of other materials.

Class C8: Organic Peroxides - Organic substances or Wastes which contain the bivalent O−O structure, which may undergo exothermic self-accelerating decomposition.

Class C9: Poisons (acute) - Substances or Wastes liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact.

Class C10: Infectious - Substances or Wastes containing viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans.

Class C11: Liberation of toxic gases in contact with air or water - Substances or Wastes which, by interaction with air or water, are liable to give off toxic gases in dangerous quantities.

Class C12: Eco-toxic- Substances or Wastes which if released, present or may present immediate or delayed adverse impacts to the environment by means of bioaccumulation or toxic effects upon biotic systems or both.

Class C13: Capable, by any means, after disposal, of yielding another material, e.g., leachate, which possesses any of the characteristics listed above.

Note: The above test methods can be available in the USEPA publication i.e. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, also known as SW-846 and the same may refer at https://www.epa.gov/hw-sw846.

ANALYSIS OF RCRA "*MIXTURES & DERIVED-FROM*" HAZARDOUS WASTE CONSTITUENT DATA

BACKGROUND DATA FOR USEPA'S 2001 HWIR FINAL RULE

Prepared by: Mark Eads, Economist
US Environmental Protection Agency
Office of Solid Waste (Economics, Methods & Risk Analysis Division)
1200 Pennsylvania Avenue, NW (Mailcode 5307W)
Washington, DC 20460
Office website: http:www.epa.gov/osw Phone: 703-308-8615

27 April 2001

Part 1: **Attribute #8 of 12** (cont'd) of NHWCS Hazardous Wastes: Detailed Breakdown of **Physical Form Codes** in the NHWCS

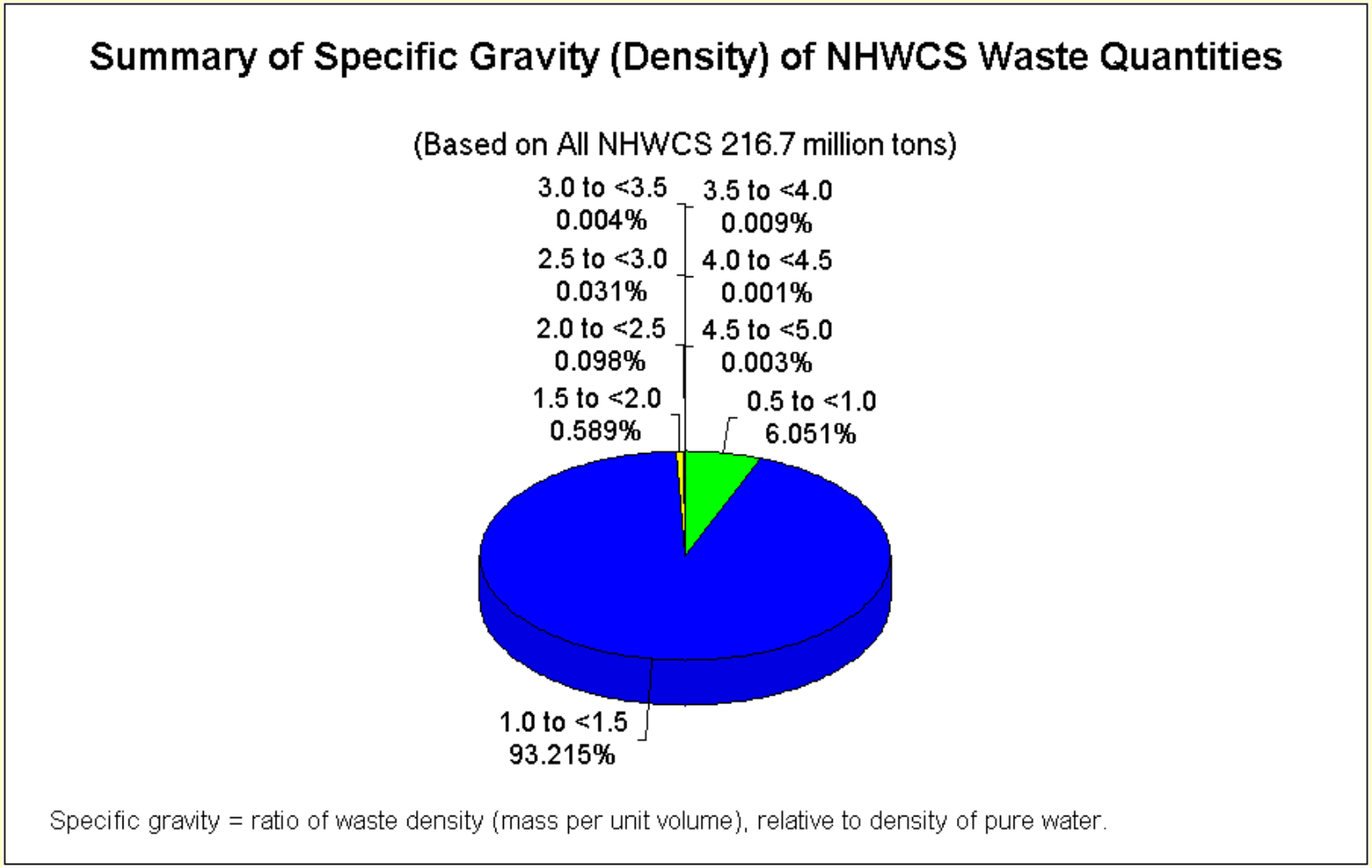
Count	Form Code	Category*	Description	1993 tons
1	B102	Inorganic liquids	Aqueous waste with low other toxic organics	55,500,798
2	B101	Inorganic liquids	Aqueous waste with low solvents	45,999,522
3	B114	Inorganic liquids	Other aqueous waste with low dissolved solids	28,237,849
4	B119	Inorganic liquids	Other inorganic liquids	27,634,887
5	B105	Inorganic liquids	Acidic aqueous waste	12,488,808
6	B115	Inorganic liquids	Scrubber water	12,388,899
7	B113	Inorganic liquids	Other aqueous waste with high dissolved solids	7,484,103
8	B219	Organic liquids	Other organic liquids	6,444,269
9	B110	Inorganic liquids	Caustic aqueous waste	3,304,871
10	B111	Inorganic liquids	Aqueous waste with reactive sulfides	2,768,101
11	B207	Organic liquids	Concentrated aqueous solution of other organics	1,084,621
12	B116	Inorganic liquids	Leachate	1,082,561
13	B104	Inorganic liquids	Spent acid without metals	995,398
14	B204	Organic liquids	Halogenated/nonhalogenated solvent mixture	723,994
15	B106	Inorganic liquids	Caustic solution with metals but no cyanides	500,589
16	B301	Inorganic solids	Soil contaminated with organics	464,022
17	B103	Inorganic liquids	Spent acid with metals	445,419
18	B319	Inorganic solids	Other waste inorganic solids	422,887
19	B203	Organic liquids	Nonhalogenated solvent	415,028
20	B305	Inorganic solids	Dry lime or metal hydroxide solids chemically fixed	364,058
21	B309	Inorganic solids	Batteries or battery parts, casings, cores	326,993
22	B302	Inorganic solids	Soil contaminated with inorganics only	316,368
23	B109	Inorganic liquids	Spent caustic	232,504
24	B107	Inorganic liquids	Caustic solution with metals and cyanides	218,492
25	B603	Organic sludges	Oily sludge	197,187
26	B503	Inorganic sludges	Wastewater treatment sludge with toxic organics	187,938
27	B205	Organic liquids	Oil-water emulsion or mixture	187,426
28	B202	Organic liquids	Halogenated (e.g. chlorinated) solvent	150,928
29	B303	Inorganic solids	Ash, slag, or other residue from incineration	143,455
30	B602	Organic sludges	Still bottoms of nonhalogenated solvents or other organic liquids	130,297
31	B304	Inorganic solids	Other dry ash, slag, or thermal residue	119,504
32	B513	Inorganic sludges	Sediment or lagoon dragout contaminated with inorganics only	108,342
33	B504	Inorganic sludges	Other wastewater treatment sludge	95,436
34	B607	Organic sludges	Biological treatment sludge	87,049
35	B409	Organic solids	Other nonhalogenated organic sludge	76,017
36	B201	Organic liquids	Concentrated solvent-water solution	75,678
37	B511	Inorganic sludges	Air pollution control device sludge (e.g. fly ash, wet scrubber sludge)	74,391
38	B211	Organic liquids	Paint thinner or petroleum distillates	71,950
39	B306	Inorganic solids	Dry lime or metal hydroxide solids not fixed	65,679
40	B316	Inorganic solids	Other metal salts/chemicals	50,394
41	B208	Organic liquids	Concentrated phenolics	41,047
42	B512	Inorganic sludges	Sediment or lagoon dragout contaminated with organics	40,769
43	B407	Organic solids	Other halogenated organic solids	37,472
44	B312	Inorganic solids	Metal-cyanide salts/chemicals	37,142
45	B606	Organic sludges	Resins, tars, or tarry sludge	34,049
46	B505	Inorganic sludges	Untreated plating sludge without cyanides	31,776
47	B206	Organic liquids	Waste oil	30,759
48	B502	Inorganic sludges	Lime sludge with metals/metal hydroxide sludge	28,174
49	B601	Organic sludges	Still bottoms of halogenated solvents or other organic liquids	28,160
50	B310	Inorganic solids	Spent solid filters or adsorbents	22,515
51	B307	Inorganic solids	Metal scale, filings, or scrap	19,954
52	B315	Inorganic solids	Other reactive salts/chemicals	17,581
53	B212	Organic liquids	Reactive or polymerizable organic liquid	17,366
54	B701	Inorganic gases	Inorganic gases	17,199
55	B112	Inorganic liquids	Aqueous waste with other reactives (e.g. explosives)	16,959
56	B209	Organic liquids	Organic paint, ink, lacquer, or varnish	10,837
57	B519	Inorganic sludges	Other inorganic sludges	7,705
58	B506	Inorganic sludges	Untreated plating sludge with cyanides	6,527
59	B510	Inorganic sludges	Degreasing sludge with metal scale or filings	5,773
60	B403	Organic solids	Solid resins or polymerized organics	5,773
61	B609	Organic sludges	Other organic sludges	5,364
62	B501	Inorganic sludges	Lime sludge without metals	4,641
63	B314	Inorganic solids	Reactive sulfide salts/chemicals	2,558
64	B210	Organic liquids	Adhesives or epoxies	1,709
65	B604	Organic sludges	Organic paint or ink sludge	1,703
66	B401	Organic solids	Halogenated pesticide solid	909
67	B001	Lab Packs	Lab packs of old chemicals only	13
68	NR	Not reported	Not reported in NHWCS	4,604,762
			Total =	216,230,636

* The terms "organic" and "inorganic" historically connote two branches of chemical science, and their respective subject area categories of chemical substances (matter):

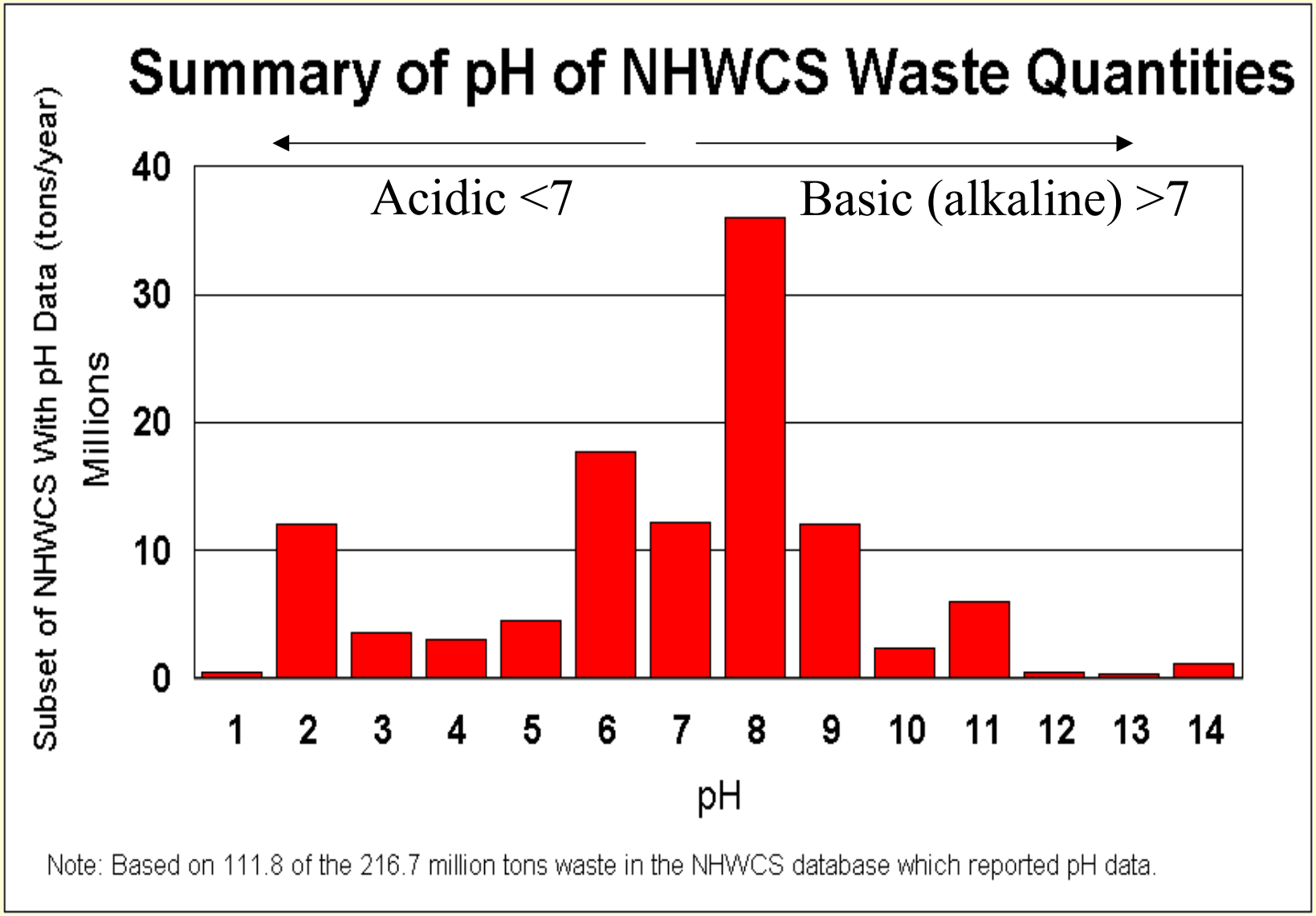
Organic = substances derived from plants and animals (i.e. chemicals composed of carbon and hydrogen, and occasionally nitrogen or phosphorus).

Inorganic = substances being or composed of matter other than plant or animal (i.e. mineral).

Part 1: **Attribute #9 of 12** of NHWCS Hazardous Wastes: **Specific Gravity** of RCRA Hazardous Wastes in the NHWCS



Part 1: **Attribute #10 of 12** of NHWCS Hazardous Wastes:
pH (acidity/basicity) of RCRA Hazardous Wastes in the NHWCS



Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :-	Facility at: - D-26, UPSIDC Industrial Area,
78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, Gautam Buddha Nagar, Uttar Pradesh.	Sikandrabad, Bulandshahr, U.P. 203206
Web:- www.sheetalawaste.com	Email:- lab@sheetalawaste.com

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/14		Report Date	2	6	.	0	8	.	2	0	2	1

Name of Client	: M/s Acme Organics Pvt. Ltd.
Address	: E-1, 2, 19&20, Industrial. Area, Part- Gopalpur,Sikandrabad-203205 Distt.- Bulandshahr (U.P.)
Email ID	: info@acmeorgenicsindia.com
Membership No	:

Name of Sample / Hazardous Waste	: Chemical Sludge		
Description of Sample When Received	: Semi Solid		
Sample Reference Number : 21-22/14		Sample Received Date	: 24/08/2021
Sample Drawn By	: Client	Sample Analysis Start Date	: 24/08/2021
Waste Category :	Schedule -1-**29.2**	Schedule -2-	MSDS Provide by client : { } Yes {✓} No
Confirmation Date	: 26/08/2021		
Testing Period	: 3 days		

Physical Observation

S/N	Particulars	Observation
1.	Physical State	Semi Solid
2.	Color	Dark Brown
3.	Texture	Wet Lumps
4.	Is there any Violet Chemical Change (in Air)(Normally Unstable) (Yes/No)	NO
5.	React Violet With Water (Yes/No)	NO
6.	Generating of Toxic Fumes With Water/Acid/Basic (Yes/No)	NO
7.	Forms Potentially explosive mixture with water (Yes/No)	NO
8.	Explosion When subjected to a strong initiating force (Yes/No)	NO
9.	Explosion at normal temperature & pressure (Yes/No)	NO

Sr. Chemist

Sheetala Waste Management Project Laboratory

for

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :-
78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, Gautam Buddha Nagar, Uttar Pradesh.

Facility at: - D-26, UPSIDC Industrial Area, Sikandrabad, Bulandshahr, U.P. 203206

Web:- www.sheetalawaste.com

Email:- lab@sheetalawaste.com

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/14		Report Date	2	6	.	0	8	.	2	0	2	1

TEST RESULT

Parameter	Unit	Method	Result	CPCB Std. for Secure Landfill Disposal
PFLT (Paint Filter Liquid Test)	-	SW 846 9095 A	NA	Pass
Bulk Density	gm/cc	ASTM-D 5057-90	1.36	Not Specified
Calorific Value	cal/g	IS:1350 Part II – 1970	**3646.74**	<2500 cal/g
Flash Point	^{0}C	USEPA 1998, SW 846 ;1020 A	>65	>65^{0}C
LOD @ 105^{0}C	%	SW 846 1684	45.14	Not Specified
LOI @ 550^{0}C(Dry Basis)	%	SW 846 1684	**59.47**	<20 %: Non Biodegradable, < 5%: Biodegradable
pH (at Room Temperature)	-	SW 846 9045 C	7.29	4 to 12
Water soluble Substance	%	APHA 2540-E	NA	≤ 10 % w/W
Reactive Sulfide	mg/kg	SW 846- 9034	NIL	<500
Reactive Cyanides	mg/kg	SW 846 9010 B & 9014	NIL	<250
Sulphate as SO_4^{--}	mg/kg	APHA 4500 SO_4^{--} - E	NA	Not Specified
Total Phenol (WLT)	mg/L	APHA-5530 B & D	NA	<100
Ammonia as N (WLT)	mg/L	APHA-4500 NH_3 B & C	NA	<1000
Fluorides as F^- (WLT)	mg/L	APHA 4500 F^- - D	NA	<50

Sr. Chemist

Sheetala Waste Management Project Laboratory

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :-
78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, Gautam Buddha Nagar, Uttar Pradesh.

Facility at: - D-26, UPSIDC Industrial Area, Sikandrabad, Bulandshahr, U.P. 203206

Web:- www.sheetalawaste.com

Email:- lab@sheetalawaste.com

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/14		Report Date	2	6	.	0	8	.	2	0	2	1

Parameter	Unit	Method	Result	CPCB Std. for Secure Landfill Disposal
Nitrate as Nitrogen (WLT)	mg/L	IS : 3025 1998	NA	<30
Cyanide (WLT)	mg/L	APHA 4500 CN-K	NA	<2
Arsenic as As (TCLP)	mg/L	APHA-3500 As B	NA	<5.0
Arsenic as As (WLT)	mg/L	APHA-3500 As B	NA	<1.0
Cadmium as Cd (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<1.0
Cadmium as Cd (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<0.2
Total Chromium as Cr (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<5.0
Hexavalent Chromium (WLT)	mg/L	(USEPA 3111) APHA 3500 Cr B	NA	<0.5
Lead as Pb (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<5.0
Lead as Pb (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<2.0
Nickel as Ni (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	Not Specified
Nickel as Ni (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<3.0
Zinc as Zn (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	Not Specified
Zinc as Zn (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<10.0
Copper as Cu (TCLP)	mg/L	USEPA 3111) APHA 3111 B	NA	Not Specified
Copper as Cu (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<10
Mercury as Hg (TCLP)	µg/L	SW-486 7470 A	NA	<0.2
Mercury as Hg (WLT)	µg/L	SW-486 7470 A	NA	<0.1

Sr. Chemist

Sheetala Waste Management Project Laboratory

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :-
78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, Gautam Buddha Nagar, Uttar Pradesh.

Facility at: - D-26, UPSIDC Industrial Area, Sikandrabad, Bulandshahr, U.P. 203206

Web:- www.sheetalawaste.com

Email:- lab@sheetalawaste.com

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/14		Report Date	2	6	.	0	8	.	2	0	2	1

Safety Instructions for Handling of Hazardous Waste (if any):- .....

Use Proper PPE's during the handling of Hazardous Waste Sample.

ABBREVIATIONS:-

NA - Not Applicable
ND -Not Detected
CA -Comprehensive Analysis
BDL -Below Detectable Limit
LOD -Loss on Drying
LOI -Loss on Ignition
TCLP -Toxicity characteristic leaching procedure

Note:-

- Test result relate only to the sample submitted for testing.
- This certificate may not be reproduced in part, without the written permission of this laboratory.
- Any correction invalidates this certificate.
- **This Test report is valid for two years from the date of issue of report.**

Disposal Pathway / Opinions / Interpretations

Incinerator

** END OF REPORT**

Sheetala Waste Management Project Laboratory

Sr. Chemist

for Laboratory

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

LABORATORY FINGER PRINT ANALYSIS REPORT

Date of Sampling: 24/08/2021 **Date of Report:** 24/08/2021

SAMPLE REGISTRATION AND LAB ADVISE	
Registration No. : LAB/SWMP/FPA/Floin/2021-22/21	Manifest No. : 0103
Sample description : Sludge	Recipe No. : —
Quantity of Collected Sample : 250 gm	Disposal pathway : Incineration
Hazardous waste Characteristic's:	Corrosive { } Reactive { } Ignitable { } Toxic {✓} High Organic content {✓} Other { }

Date of Analysis: 24/08/2021

FINGER PRINT ANALYSIS REPORT

S/N	Parameter	Method	Unit	Result
1	Physical State	.....	.....	Semi solid
2	Color	.....	.....	Dark Brown
3	Texture	.....	.....	Wet lumps
4	pH at °C	USEPA 1998 SW-846; 9045 C	°C	6.45
5	Loss on Drying at 105°C	APHA 23rd Edition;2017;2540	%	47.14
6	Loss on Ignition, at 550°C		%	56.17
7	Bulk Density	ASTM D 5057-10	gm/cc	1.35
8	Calorific Value (In case loss of ignition ≥20%)	IS 1350 (Part 2) :1970	cal/gm	3476.14
9	Flash Point	IS -1448 [P:21] 2012	°C	>65°C
10	Paint Filter Liquid Test	USEPA 1998 SW-846; 9095B	.....	PASS
11	Reactive Sulfide	USEPA 1998 SW-846; 9030B & 9034	mg/kg	BDL
12	Reactive Cyanide	USEPA 1998, SW-846; 9014	mg/kg	BDL

NA: NOT ANALYSE
ND: NOT DETECTED
BDL: BELOW DETECTION LIMIT

Note: **PPE's required**: Goggles, Helmet, Gumboot, Hand gloves, Mask, Safety Shoes, & Reflective Jacket.

Comments: The above analyzed parameters for FPA match with those of the CA report for the same waste. The disposal pathway for this waste remains the same as quoted earlier.

Sheetala Waste Management Project Authorised Signatory

Analyzed By

For

Lab In-Charge

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :- 78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, G. B. Nagar, Uttar Pradesh.	**Facility at: -** D-26, UPSIDC Industrial Area, Sikandrabad, Bulandshahr, U.P. 203206
Web:- www.sheetalawaste.com	**Email:- lab@sheetalawaste.com**

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/60		Report Date	0	7		0	3		2	0	2	2

Name of Client	: Dipty Lal Judge Mal Pvt. Ltd.
Address	: D-55-58, 66-68, Phase-II Noida-201305, G. B. Nagar, U. P.
Email ID	:
Membership No	:

Name of Sample / Hazardous Waste	: **Paint Sludge**		
Description of Sample When Received	: Solid		
Sample Reference Number : **60**		Sample Received Date	: 03/03/2022
Sample Drawn By	: Client	Sample Analysis Start Date	: 03/03/2022
Waste Category :	Schedule -1	Schedule -2-	
Confirmation Date : 07/03/2022		Testing Period	: 05 days

Physical Observation

S/N	Particulars	Observation
1.	Physical State	Solid
2.	Color	White
3.	Texture	Dry Lumps
4.	Is there any Violet Chemical Change (in Air)(Normally Unstable) (Yes/No)	NO
5.	React Violet With Water (Yes/No)	NO
6.	Generating of Toxic Fumes With Water/Acid/Basic (Yes/No)	NO
7.	Forms Potentially explosive mixture with water (Yes/No)	NO
8.	Explosion When subjected to a strong initiating force (Yes/No)	NO
9.	Explosion at normal temperature & pressure (Yes/No)	NO

Sr. Chemist

Sheetala Waste Management Laboratory

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

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COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/60		Report Date	0	7		0	3		2	0	2	2

TEST RESULT

Parameter	Unit	Method	Result	CPCB Std. for Secure Landfill Disposal
PFLT (Paint Filter Liquid Test)	-	SW 846 9095 A	Pass	Pass
Bulk Density	gm/cc	ASTM-D 5057-90	1.25	Not Specified
Calorific Value	cal/g	IS:1350 Part II – 1970	**4974.57**	<2500 cal/g
Flash Point	^{0}C	USEPA 1998, SW 846 ;1020 A	220 ^{0}C	>65^{0}C
LOD @ 105^{0}C	%	SW 846 1684	21.18	Not Specified
LOI @ 550^{0}C (Dry Basis)	%	SW 846 1684	**89.71**	<20 %: Non Biodegradable, < 5%: Biodegradable
pH (at Room Temperature)	-	SW 846 9045 C	6.74	4 to 12
Water soluble Substance	%	APHA 2540	NA	≤ 10 % w/W
Reactive Sulfide	mg/kg	SW 846- 9034	NA	<500
Reactive Cyanides	mg/kg	SW 846 9010 B & 9014	NA	<250
Sulphate as SO_4^{--}	mg/kg	APHA 4500 SO_4^{--} - E	NA	Not Specified
Total Phenol (WLT)	mg/L	APHA-5530 B & D	NA	<100
Ammonia as N (WLT)	mg/L	APHA-4500 NH_3 B & C	NA	<1000
Fluorides as F^- (WLT)	mg/L	APHA 4500 F^- - D	NA	<50

Sr. Chemist

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Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

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COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/60		Report Date	0	7		0	3		2	0	2	2

Parameter	Unit	Method	Result	CPCB Std. for Secure Landfill Disposal
Nitrate as Nitrogen (WLT)	mg/L	IS : 3025 1998	NA	<30
Cyanide (WLT)	mg/L	APHA 4500 CN-K	NA	<2
Arsenic as As (TCLP)	mg/L	APHA-3500 As B	NA	<5.0
Arsenic as As (WLT)	mg/L	APHA-3500 As B	NA	<1.0
Cadmium as Cd (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<1.0
Cadmium as Cd (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<0.2
Total Chromium as Cr (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<5.0
Hexavalent Chromium (WLT)	mg/L	(USEPA 3111) APHA 3500 Cr B	NA	<0.5
Lead as Pb (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<5.0
Lead as Pb (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<2.0
Nickel as Ni (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	Not Specified
Nickel as Ni (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<3.0
Zinc as Zn (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	Not Specified
Zinc as Zn (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<10.0
Copper as Cu (TCLP)	mg/L	USEPA 3111) APHA 3111 B	NA	Not Specified
Copper as Cu (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<10
Mercury as Hg (TCLP)	µg/L	SW-486 7470 A	NA	<0.2
Mercury as Hg (WLT)	µg/L	SW-486 7470 A	NA	<0.1

Sr. Chemist

Sheetala Waste Management Project Laboratory

for

Head Laboratory

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :- 78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, G. B. Nagar, Uttar Pradesh.

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COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/60		Report Date	0	7		0	3		2	0	2	2

Safety Instructions for Handling of Hazardous Waste (if any):- .....

Use Proper PPE's during the handling of Hazardous Waste Sample.

ABBREVIATIONS:-

BDL: Below Detectable Limit
NA: Not Analyze
LOD: Loss on Drying
LOI: Loss on Ignition
TCLP: Toxicity characteristic leaching procedure

Note:-

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Disposal Pathway / Opinions / Interpretations

Incineration

** END OF REPORT**

Sheetala Waste Management Project Laboratory

Sr. Chemist

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

LABORATORY ANALYSIS REPORT

Date of Sampling: 21/06/2022 **Date of Report:** 21/06/2022

SAMPLE REGISTRATION AND LAB ADVISE	
Registration No. : LAB/SWMP/FPA/F10In/2223/361	Manifest No. : 0492
Sample description : Paint sludge	Recipe No. : —
Quantity of Collected Sample : 200 gm	Disposal pathway : Incineration
Hazardous waste Characteristic's:	Corrosive { } Reactive { } Ignitable { } Toxic {✓} High Organic content {✓} Other { }

Date of Analysis: 21/06/2022

FINGER PRINT ANALYSIS REPORT

S/N	Parameter	Method	Unit	Result
1	Physical State	.....	.....	solid
2	Color	.....	.....	White
3	Texture	.....	.....	Dry lumps
4	pH at °C	USEPA 1998 SW-846; 9045 C	°C	7.23
5	Loss on Drying at 105°C	APHA 23rd Edition;2017;2540	%	24.57
6	Loss on Ignition, at 550°C		%	91.03
7	Bulk Density	ASTM D 5057-10	gm/cc	1.09
8	Calorific Value (In case loss of ignition ≥20%)	IS 1350 (Part 2) :1970	cal/gm	5120.44
9	Flash Point	IS -1448 [P:21] 2012	°C	205°C
10	Paint Filter Liquid Test	USEPA 1998 SW-846; 9095B	.....	NA
11	Reactive Sulfide	USEPA 1998 SW-846; 9030B & 9034	mg/kg	NA
12	Reactive Cyanide	USEPA 1998, SW-846; 9014	mg/kg	NA

NA: NOT APPLICABLE
ND: NOT DETECTED
BDL: BELOW DETECTION LIMIT

Note: **PPE's required**: Goggles, Helmet, Gumboot, Hand gloves, Mask, Safety Shoes, & Reflective Jacket.

Comments: The above analyzed parameters for FPA match with those of the CA report for the same waste. The disposal pathway for this waste remains the same as quoted earlier.

Analyzed By

Sheetala Waste Management Project Laboratory

Lab In-Charge

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :- 78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, G. B. Nagar, Uttar Pradesh.	**Facility at: -** D-26, UPSIDC Industrial Area, Sikandrabad, Bulandshahr, U.P. 203206
Web:- www.sheetalawaste.com	**Email:- lab@sheetalawaste.com**

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2022-23/07/B	Report Date	16/04/2022

Name of Client	: Kartikey Processors
Address	: Plot No. B-8 & 9, UPSIDC, Phase-1, Hapur, U.P. 201015
Email ID	:
Membership No	:

Name of Sample / Hazardous Waste	: **Chemical Sludge**		
Description of Sample When Received	: Semi Solid		
Sample Reference Number	: **07**	Sample Received Date	: 12/04/2022
Sample Drawn By	: Client	Sample Analysis Start Date	: 13/04/2022
Waste Category :	Schedule -1	Schedule -2-	
Confirmation Date : 16/04/2022		Testing Period	: 04 days

Physical Observation

S/N	Particulars	Observation
1.	Physical State	Semi solid
2.	Color	Black
3.	Texture	Wet Lumps
4.	Is there any Violet Chemical Change (in Air)(Normally Unstable) (Yes/No)	NO
5.	React Violet With Water (Yes/No)	NO
6.	Generating of Toxic Fumes With Water/Acid/Basic (Yes/No)	NO
7.	Forms Potentially explosive mixture with water (Yes/No)	NO
8.	Explosion When subjected to a strong initiating force (Yes/No)	NO
9.	Explosion at normal temperature & pressure (Yes/No)	NO

Sr. Chemist

Sheetala Waste Management Project Laboratory

for

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :- 78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, G. B. Nagar, Uttar Pradesh.

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COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2022-23/07/B		Report Date	1	6		0	4		2	0	2	2

TEST RESULT

Parameter	Unit	Method	Result	CPCB Std. for Secure Landfill Disposal
PFLT (Paint Filter Liquid Test)	-	SW 846 9095 A	Pass	Pass
Bulk Density	gm/cc	ASTM-D 5057-90	1.52	Not Specified
Calorific Value	cal/g	IS:1350 Part II – 1970	3548.13	<2500 cal/g
Flash Point	°C	USEPA 1998, SW 846 ;1020 A	340 °C	>65°C
LOD @ 105°C	%	SW 846 1684	41.70	Not Specified
LOI @ 550°C (Dry Basis)	%	SW 846 1684	**91.13**	<20 %: Non Biodegradable, < 5%: Biodegradable
pH (at Room Temperature)	-	SW 846 9045 C	7.35	4 to 12
Water soluble Substance	%	APHA 2540	NA	≤ 10 % w/W
Reactive Sulfide	mg/kg	SW 846- 9034	<1	<500
Reactive Cyanides	mg/kg	SW 846 9010 B & 9014	<1	<250
Sulphate as SO_4^{--}	mg/kg	APHA 4500 SO_4^{--} - E	NA	Not Specified
Total Phenol (WLT)	mg/L	APHA-5530 B & D	NA	<100
Ammonia as N (WLT)	mg/L	APHA-4500 NH_3 B & C	NA	<1000
Fluorides as F^- (WLT)	mg/L	APHA 4500 F^- - D	NA	<50

Sheetala Waste Management Project Laboratory

Sr. Chemist

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

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Email:- lab@sheetalawaste.com

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2022-23/07/B		Report Date	1	6		0	4		2	0	2	2

Parameter	Unit	Method	Result	CPCB Std. for Secure Landfill Disposal
Nitrate as Nitrogen (WLT)	mg/L	IS : 3025 1998	NA	<30
Cyanide (WLT)	mg/L	APHA 4500 CN-K	NA	<2
Arsenic as As (TCLP)	mg/L	APHA-3500 As B	NA	<5.0
Arsenic as As (WLT)	mg/L	APHA-3500 As B	NA	<1.0
Cadmium as Cd (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<1.0
Cadmium as Cd (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<0.2
Total Chromium as Cr (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<5.0
Hexavalent Chromium (WLT)	mg/L	(USEPA 3111) APHA 3500 Cr B	NA	<0.5
Lead as Pb (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<5.0
Lead as Pb (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<2.0
Nickel as Ni (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	Not Specified
Nickel as Ni (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<3.0
Zinc as Zn (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	Not Specified
Zinc as Zn (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<10.0
Copper as Cu (TCLP)	mg/L	USEPA 3111) APHA 3111 B	NA	Not Specified
Copper as Cu (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<10
Mercury as Hg (TCLP)	µg/L	SW-486 7470 A	NA	<0.2
Mercury as Hg (WLT)	µg/L	SW-486 7470 A	NA	<0.1

Sr. Chemist

Sheetala Waste Management Project Laboratory

Head Laboratory

Sheetala Waste Management Project

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Email:- lab@sheetalawaste.com

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2022-23/07/B		Report Date	1	6		0	4		2	0	2	2

Safety Instructions for Handling of Hazardous Waste (if any):- .....

Use Proper PPE's during the handling of Hazardous Waste Sample.

ABBREVIATIONS:-

BDL: Below Detectable Limit
NA: Not Analyze
LOD: Loss on Drying
LOI: Loss on Ignition
TCLP: Toxicity characteristic leaching procedure

Note:-

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Disposal Pathway / Opinions / Interpretations

Incineration

** END OF REPORT**

Sheetala Waste Management Project Laboratory

Sr. Chemist

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

LABORATORY ANALYSIS REPORT

Date of Sampling: 12/4/22 **Date of Report:** 12/4/2022

SAMPLE REGISTRATION AND LAB ADVISE	
Registration No. : LAB/SWMP/FPA/F10In/2223/256/B	Manifest No. : 0331
Sample description : Chemical sludge	Recipe No. : —
Quantity of Collected Sample : 200gm	Disposal pathway : Incineration
Hazardous waste Characteristic's:	Corrosive { } Reactive { } Ignitable { } Toxic { ✓ } High Organic content { ✓ } Other { }

Date of Analysis: 12/4/2022 **FINGER PRINT ANALYSIS REPORT**

S/N	Parameter	Method	Unit	Result
1	Physical State	.....	.....	Solid
2	Color		.....	Black
3	Texture		.....	Wet lumps
4	pH at °C	USEPA 1998 SW-846; 9045 C	°C	7.85
5	Loss on Drying at 105°C	APHA 23rd Edition;2017;2540	%	40.81
6	Loss on Ignition, at 550°C		%	87.96
7	Bulk Density	ASTM D 5057-10	gm/cc	1.37
8	Calorific Value (In case loss of ignition ≥20%)	IS 1350 (Part 2) :1970	cal/gm	2636.41
9	Flash Point	IS -1448 [P:21] 2012	°C	380°c
10	Paint Filter Liquid Test	USEPA 1998 SW-846; 9095B	.....	PASS
11	Reactive Sulfide	USEPA 1998 SW-846; 9030B & 9034	mg/kg	NA
12	Reactive Cyanide	USEPA 1998, SW-846; 9014	mg/kg	NA

NA: NOT APPLICABLE
ND: NOT DETECTED
BDL: BELOW DETECTION LIMIT

Note: **PPE's required**: Goggles, Helmet, Gumboot, Hand gloves, Mask, Safety Shoes, & Reflective Jacket.

Comments: The above analyzed parameters for FPA match with those of the CA report for the same waste. The disposal pathway for this waste remains the same as quoted earlier.

Sheetala Waste Management Laboratory

Analyzed By

Lab In-Charge

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :-
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COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/05		Report Date	2	0	.	0	5	.	2	0	2	1

Name of Client	: M/s India Glycols Ltd.
Address	: A-1, Industrial Area, Bazpur Road, Kashipur, Distt- U.S. Nagar 244713(U.K.)
Email ID	:
Membership No	:

Name of Sample / Hazardous Waste	: Waste Chemical		
Description of Sample When Received	: Oily		
Sample Reference Number : 21-22/05		Sample Received Date	: 19/05/2021
Sample Drawn By	: Client	Sample Analysis Start Date	: 19/05/2021
Waste Category :	Schedule -1-	Schedule -2-	MSDS Provide by client : { } Yes { } No
Confirmation Date : 20/04/2021			
Testing Period	: 2 days		

Physical Observation

S/N	Particulars	Observation
1.	Physical State	Oily
2.	Color	Black
3.	Texture	Free Flow
4.	Is there any Violet Chemical Change (in Air)(Normally Unstable) (Yes/No)	NO
5.	React Violet With Water (Yes/No)	NO
6.	Generating of Toxic Fumes With Water/Acid/Basic (Yes/No)	NO
7.	Forms Potentially explosive mixture with water (Yes/No)	NO
8.	Explosion When subjected to a strong initiating force (Yes/No)	NO
9.	Explosion at normal temperature & pressure (Yes/No)	NO

Sr. Chemist

Sheetala Waste Management Project Laboratory

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

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COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/05		Report Date	2	0	.	0	5	.	2	0	2	1

TEST RESULT

Parameter	Unit	Method	Result	CPCB Std. for Secure Landfill Disposal
PFLT (Paint Filter Liquid Test)	-	SW 846 9095 A	NA	Pass
Bulk Density	gm/cc	ASTM-D 5057-90	1.72	Not Specified
Calorific Value	cal/g	IS:1350 Part II – 1970	**4603.82**	<2500 cal/g
Flash Point	^{0}C	USEPA 1998, SW 846 ;1020 A	>65	>65^{0}C
LOD @ 105^{0}C	%	SW 846 1684	15.45	Not Specified
LOI @ 550^{0}C(Dry Basis)	%	SW 846 1684	**69.47**	<20 %: Non Biodegradable, < 5%: Biodegradable
pH (at Room Temperature)	-	SW 846 9045 C	6.95	4 to 12
Water soluble Substance	%	APHA 2540-E	NA	≤ 10 % w/W
Reactive Sulfide	mg/kg	SW 846- 9034	BDL	<500
Reactive Cyanides	mg/kg	SW 846 9010 B & 9014	BDL	<250
Sulphate as SO_4^{--}	mg/kg	APHA 4500 SO_4^{--} - E	NA	Not Specified
Total Phenol (WLT)	mg/L	APHA-5530 B & D	NA	<100
Ammonia as N (WLT)	mg/L	APHA-4500 NH_3 B & C	NA	<1000
Fluorides as F^- (WLT)	mg/L	APHA 4500 F^- - D	NA	<50

Sheetala Waste Management Project Laboratory

Sr. Chemist

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :-
78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, Gautam Buddha Nagar, Uttar Pradesh.

Facility at: - D-26, UPSIDC Industrial Area, Sikandrabad, Bulandshahr, U.P. 203206

Web:- www.sheetalawaste.com

Email:- lab@sheetalawaste.com

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/05		Report Date	2	0	.	0	5	.	2	0	2	1

Parameter	Unit	Method	Result	CPCB Std. for Secure Landfill Disposal
Nitrate as Nitrogen (WLT)	mg/L	IS : 3025 1998	NA	<30
Cyanide (WLT)	mg/L	APHA 4500 CN-K	NA	<2
Arsenic as As (TCLP)	mg/L	APHA-3500 As B	NA	<5.0
Arsenic as As (WLT)	mg/L	APHA-3500 As B	NA	<1.0
Cadmium as Cd (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<1.0
Cadmium as Cd (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<0.2
Total Chromium as Cr (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<5.0
Hexavalent Chromium (WLT)	mg/L	(USEPA 3111) APHA 3500 Cr B	NA	<0.5
Lead as Pb (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	<5.0
Lead as Pb (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<2.0
Nickel as Ni (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	Not Specified
Nickel as Ni (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<3.0
Zinc as Zn (TCLP)	mg/L	(USEPA 3111) APHA 3111 B	NA	Not Specified
Zinc as Zn (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<10.0
Copper as Cu (TCLP)	mg/L	USEPA 3111) APHA 3111 B	NA	Not Specified
Copper as Cu (WLT)	mg/L	(USEPA 3111) APHA 3111 B	NA	<10
Mercury as Hg (TCLP)	µg/L	SW-486 7470 A	NA	<0.2
Mercury as Hg (WLT)	µg/L	SW-486 7470 A	NA	<0.1

Sr. Chemist

Sheetala Waste Management Project Laboratory

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

Head Office :-	Facility at: -
78/2, Gaur Plaza, Main G.T. Road, Lal Kuan, Gautam Buddha Nagar, Uttar Pradesh.	D-26, UPSIDC Industrial Area, Sikandrabad, Bulandshahr, U.P. 203206
Web:- www.sheetalawaste.com	Email:- lab@sheetalawaste.com

COMPREHENSIVE ANALYSIS REPORT

Report No.	LAB/SWMP/CA/2021-22/05		Report Date	2	0	.	0	5	.	2	0	2	1

Safety Instructions for Handling of Hazardous Waste (if any):- .....

Use Proper PPE's during the handling of Hazardous Waste Sample.

ABBREVIATIONS:-

NA - Not Applicable
ND -Not Detected
CA -Comprehensive Analysis
BDL -Below Detectable Limit
LOD -Loss on Drying
LOI -Loss on Ignition
TCLP -Toxicity characteristic leaching procedure

Note:-

- Test result relate only to the sample submitted for testing.
- This certificate may not be reproduced in part, without the written permission of this laboratory.
- Any correction invalidates this certificate.
- **This Test report is valid for two years from the date of issue of report.**

Disposal Pathway / Opinions / Interpretations

Incinerator

** END OF REPORT**

Sr. Chemist

Sheetala Waste Management Project Laboratory

Head Laboratory

Annexure - 3

Sheetala Waste Management Project

Incinerator/E-Waste/Discarded Drum & Container

LABORATORY FINGER PRINT ANALYSIS REPORT

Date of Sampling : 25/06/2021 **Date of Report:** 26/06/2021

SAMPLE REGISTRATION AND LAB ADVISE	
Registration No. : LAB/SWMP/FPA/ Flood/21-22/11	Manifest No. : 0084
Sample description : waste chemicals	Recipe No. : —
Quantity of Collected Sample : 200 mL	Disposal pathway : Incineration
Hazardous waste Characteristic's:	Corrosive { } Reactive { } Ignitable { } Toxic { ✓ } High Organic content { ✓ } Other { }

Date of Analysis: 25/06/2021 **FINGER PRINT ANALYSIS REPORT**

S/N	Parameter	Method	Unit	Result
1	Physical State	.....	.....	Oily
2	Colour	.....	.....	Brown
3	Texture	.....	.....	Free flow
4	pH at °C	USEPA 1998 SW-846; 9045 C	°C	7.33
5	Loss on Drying at 105°C	APHA 23rd Edition;2017;2540	%	14.53
6	Loss on Ignition, at 550°C		%	67.14
7	Bulk Density	ASTM D 5057-10	gm/cc	1.78
8	Calorific Value (In case loss of ignition ≥20%)	IS 1350 (Part 2) :1970	cal/gm	3782.43
9	Flash Point	IS -1448 [P:21] 2012	°C	>65°C
10	Paint Filter Liquid Test	USEPA 1998 SW-846; 9095B	.....	PASS
11	Reactive Sulfide	USEPA 1998 SW-846; 9030B & 9034	mg/kg	NA
12	Reactive Cyanide	USEPA 1998, SW-846; 9014	mg/kg	NA

NA: NOT ANALYSE
ND: NOT DETECTED
BDL:BELOW DETECTION LIMIT

Note: **PPE's required**: Goggles, Helmet, Gumboot, Hand gloves, Mask, Safety Shoes, & Reflective Jacket.

Comments: The above analysed parameters for FPA match with those of the CA report for the same waste. The disposal pathway for this waste remains the same as quoted earlier.

Sheetala Waste Management Project Laboratory

Analysed By

For

Lab In-Charge

Annexure - 4

Hazardous Waste Management Series :
HAZWAMS/.../2005-2006

"Guidelines for Storage of Incinerable Hazardous Wastes by the Operators of Common Hazardous Waste Treatment, Storage and Disposal Facilities and Captive HW Incinerators"

CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment & Forests)
Parivesh Bhawan, East Arjun Nagar
DELHI -110 032
e-mail: cpcb@nic.in Website: www.cpcb.nic.in

November 2008

Hazardous Waste Management Series :
HAZWAMS/.../2005-2006

"Guidelines for Storage of Incinerable Hazardous Wastes by the Operators of Common Hazardous Waste Treatment, Storage and Disposal Facilities and Captive HW Incinerators"

CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment & Forests, Govt. of India)
Parivesh Bhawan, East Arjun Nagar
DELHI -110 032
e-mail: cpcb@nic.in Website: www.cpcb.nic.in

Annexure - 4

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
(भारत सरकार का संगठन)
पर्यावरण एवं वन मंत्रालय
Central Pollution Control Board
(A Govt. of India Organisaton)
MInistry of Environment & Forests
Phone : 22304948/22307233

ज. मो. माऊसकर, भा.प्र.से.
अध्यक्ष
J. M. MAUSKAR, IAS
Chairman

FOREWORD

Hazardous Waste Treatment, Storage and Disposal Facilities (TSDFs) including Hazardous Waste Incinerators are indeed essential for treatment and disposal of hazardous wastes in an environmentally sound manner. Although, both, the earlier Hazardous Waste (Management & Handling) Rules, 1989 and the newly notified Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 stipulate necessary provisions for proper collection, reception, transport, treatment, storage and disposal of hazardous wastes, there was a serious incident of fire recently in one of the TSDFs located in the State of Gujarat. In order to prevent recurrence of such fire accidents in future as well as to assess and examine the lacunas with regard to the measures being adopted by the common TSDFs and Incinerator Operators, especially for storage of incinerable hazardous waste, and to review the existing guidelines for storage of incinerable hazardous waste, Central Pollution Control Board constituted a Committee under the Chairmanship of Shri R.K. Garg, former Managing Director, Indian Rare Earths Limited, Mumbai. The Committee comprised experts from Oil Industry Safe Directorate (OISD), News Delhi; Petroleum & Explosives Safety Organisation (PESO), Nagpur; Disaster Management Institute, Bhopal, Engineers India Limited, New Delhi, Andhra Pradesh Pollution Control Board (APPCB)), Maharashtra Pollution Control Board (MPCB), Mumbai; and Gujarat Pollution Control Board (GPCB), Gandhinagar as also representatives of Ministry of Environment & Forests (MoEF) and CPCB.

The R.K. Garg Committee held interactions with the SPCBs and TSDF operators and also visited the TSDF in Gujarat where fire accident took place. The present report was finalized after incorporating the inputs, suggestions and views received from the members of the Committee, State Pollution Control Boards, namely AP, Gujarat, Maharashtra, West Bengal, Punjab, Rajasthan, Kerala, Madhya Pradesh and Tamil Nadu, and the operators of TSDFs, especially M/s. RAMKY, Hyderabad; M/s. GEPIL, Surat and M/s. BEIL, Ankleshwar. The Report provides clear guidelines with respect to the time limit for storage of incinerable hazardous waste, measures to be taken at storage sheds so as to avoid spillages, leakage control and the need for proper record keeping and maintenance, including hazard analysis and safety audit.

The noteworthy contributions made by Shri R.K. Grag, Chairman of the Committee and other members of the Committee, SPCBs and TSDF Operators in preparation of the report deserve acknowledgement. The sincere efforts made by my colleagues Shri J. Chandra Babu, Environmental Engineer and Shri H.K. Karforma, Sr. Environmental Engineer & Incharge HWMD in finalization of the report under the able supervision and guidance of Dr. B. Sengupta, Former Member Secretary, CPCB, need also to be appreciated.

I hope this Document would be useful to the various stake holders for management of hazardous wastes in the country. The Operators of Common TSDFs including captive incinerators are expected to follow these Guidelines whereas SPCBs and PCCs are required to ensure its compliance.

(J.M. Mauskar)

11 November, 2008

'Parivesh Bhawan' C.B.D. - cum-Office Complex, East Arjun Nagar, Delhi-110 032
Fax : 22304948 / 22307078 email : cpcb@alpha.nic.in
Website : http://www.cpcb.nic.in

CONTENTS

1.0. Back Ground.

Hazardous Waste Treatment, Storage and Disposal Facilities (TSDFs) facilitate collection, reception, transport, treatment, storage and disposal of hazardous wastes in an environmentally sound manner. The disposal facility may be having only a secured land fill (SLF) for ultimate disposal of hazardous wastes or may be having incineration alone or combination of secured landfill & incineration. At present, all the common disposal facility operators have not installed hazardous waste incinerator in view of either incinerable hazardous waste generation is not adequate enough for carrying out incineration in economical way or generation is not uniform in all the regions or operators might be in planning phase for installation of the hazardous waste incinerators as a part of the common disposal facilities.

Hazardous Waste (Management & Handling) Rules, 1989 as amended does not stipulate storage time limit either to the TSDF operators or to the Incineration Operators with regard to the storage of incinerable hazardous wastes within such facilities. It is a common practice by the operators of TSDF to store the hazardous waste (HW) till adequate quantum of Incinerable hazardous wastes is procured or accumulated in the common facilities for carrying out incineration as per a planned schedule or till the incinerator becomes operational in case of an incinerator under installation.

There was a fire in one of the storage shed of TSDF containing 293 MT of incinerable hazardous waste in drums at Ankaleshwar on April 03, 2008. In this fire, said quantity of wastes in the drums got burnt. In order to prevent occurrence of such accidents, Central Pollution Control Board (CPCB) have constituted a Committee vide office order No. F. No.B-29016 (SC)/1/06/HWMD/681 dated April 17, 2008 **(Annexure-1)**, *with the following terms of reference:*

1. Prevention of fire hazards at TSDF site and major precautions to be taken.

2. Quantity of incinerable waste to be stored at TSDF site for incineration, considering the Incineration Capacity of TSDF site and HW (M & H) Rules.

3. Specification of the godown (s) and the major precaution to be taken in godown for storing hazardous waste in order to prevent fire hazard.

4. Any other aspects related to above with overall view to prevent such eventualities in future.

2.0. Deliberations of the Committee:

Committee held three meetings with the State Pollution Control Boards (SPCBs) namely Andhra Pradesh (AP), Maharashtra, Gujarat, Punjab, Tamilnadu (TN), Rajasthan, Madhya Pradesh (MP) and West Bengal (WB) as well as with the operators of incinerators namely RAMKY, Hyderabad; Gujarat Enviro Infrastructure Limited (GEPIL), Surat; and Bharuch Enviro Infrastructure Limited (BEIL), Ankaleshwar. One

meeting was held at the BEIL site. Prior to the meeting with the operators of TSDF, the Committee also had a visit to the BEIL, Ankaleshwar so as to assess the precautions/safety measures adopted by the operator after the accident.

2.1. The committee noted the information with regard to the incinerable hazardous waste generation quantities, present capacities of incinerators and the proposed expansion in incinerator capacities through setting-up of new incinerators or by expansion of the existing facilities provided by SPCBs during the interactions held and are as summarized in **Table 1.**

Table 1: Major State-wise present incinerable hazardous waste generation, present capacity of the incinerators and proposed capacity in next 02 to 03 years

Sl. No	Name of the State	Present incinerable hazardous waste generation in TPA	Capacity of the incinerator (s) in TPA			Total Incinerator (s) Capacity in next 02 to 03 years in TPA *
			Common	Captive or individual	Proposed incinerator (s) capacity in next 2 to 3 years	
1	Gujarat	1,06,000	32,600	4000	1,65,000	2,01,608
2	AP	31,700	20,000	5000	6000	31,000
3	Maharashtra	1,52,000	30,000	8500	40,000	78,500
4	WB	13,055	10,800	7000	-	17,800
5	TN	11,500	-	1,500	10,000	11,500
6	MP	5,000	Under installation	2,000	10,000	12,000
7	Rajasthan	23,025	-	5500	-	5,500

* *In some of the States, the incinerable hazardous wastes is proposed to be used as supplementary fuel in cement kilns*

2.2. Observations and Discussions:

2.2.1. In the State of Maharashtra, incinerable hazardous waste generation is much higher than the existing & the proposed incinerator capacity. Therefore, there is a need to plan for additional common incinerator.

The states which are not appearing in **Table - I** above like Punjab, Haryana, UP etc. should also take the corrective measures to add incineration capacity after reviewing the generation in their States.

2.2.2. During the visit to BEIL, it was observed by the Committee that the shed where fire took place has been reconstructed. The shed is now provided with adequate distances about 15m between the storage sheds, and the storage sheds has also been provided with the extended fire hydrant line, adequate space between the stacked drums, arrangements of automatic water sprinkling system around the shed, and alarm system. The Committee was informed that similar arrangements will be made for all the existing sheds as well as new sheds which are under construction.

2.2.3. The Committee noted that the normal time required for material to be taken up for incineration after receipt of the wastes at the facility could vary from 02 to 03 months to carryout activities like sampling, analysis, optimizing the mixing of different incinerable hazardous waste prior to the incineration. ***Taking into consideration the down time of the incinerator required for major maintenance or repairs which appears to be an annual activity, a maximum of six months storage time is considered appropriate.***

2.2.4. CPCB have published a document on "Guidelines for Common Hazardous Waste Incinerators in June 2005" (i.e. HAZWAMS/30/2005-2006), which cover transportation, storage, analytical facilities, feeding systems and combustion systems, pollution control devices and monitoring. However, fire detection and fire protection systems during storage and sampling, types of buildings for storage of hazardous wastes and the arrangements for stacking etc need to be further incorporated in the guidelines.

2.2.5. The incinerator facility operators informed that presently incinerable hazardous wastes are being received by them in the form of solid, liquid (organic and aqueous) as well as semi-solid in nature. However, this figure varies from facility to facility depending upon the manufacturing processes adopted by the industrial units i.e. solid: 10 -70 %; Semi-solid: 10-30 % and liquid: 30-60 %). Mostly, the operators receive wastes in barrels having capacity about 200 liters either supplied by the operator of the facility or owned by the member industries. It was also stated that the liquids are always taken up for incineration prior to the solids and their storage time is kept to the minimum.

2.2.6. It was informed by some of the SPCB representatives that some incinerable hazardous wastes are now being used along with the fuel in some cement kilns.

2.2.7. Some suggestion was made to provide intermediate storage so that the storage at the TSDF site could be restricted as practiced in some countries. However, in view of the some practical difficulties and the expenditure involved on providing safety systems like fire detection & protection etc. it has not found favor with the Committee.

3.0. Recommendations of the Committee:

3.1. Storage and Handling of Incinerable Hazardous Wastes:

After review of the existing guidelines of CPCB for storage of incinerable hazardous wastes, the revised guidelines for storage and handling of incinerable hazardous wastes are suggested as follows:

Storage Area (Storage Shed):

a. Flammable, ignitable, reactive and non-compatible wastes should be stored separately and never should be stored in the same storage shed.

b. Storage area may consist of different sheds for storing different kinds of incinerable hazardous wastes and sheds should be provided with suitable openings.

c. Adequate storage capacity ***(i.e. 50 % of the annual capacity of the hazardous waste incinerator)*** should be provided in the premises.

d. Storage area should be designed to withstand the load of material stocked and any damage from the material spillage.

e. Storage area should be provided with the flameproof electrical fittings and it should be strictly adhered to.

f. Automatic smoke, heat detection system should be provided in the sheds. Adequate fire fighting systems should be provided for the storage area, along with the areas in the facility.

g. There should be at least 15 m distance between the storage sheds.

h. Loading and unloading of wastes in storage sheds should only be done under the supervision of the well trained and experienced staff.

i. Fire break of at least 04 meter between two blocks of stacked drums should be provided in the storage shed. One block of drum should not exceed 300 MT of waste.

j. Minimum of 1 meter clear space should be left between two adjacent rows of drums in pair for inspection.

k. The storage and handling should have at least two routes to escape in the event of any fire in the area.

l. Doors and approaches of the storage area should be of suitable sizes for entry of fork lift and fire fighting equipment;

m. The exhaust of the vehicles used for the purpose of handling, lifting and transportation within the facility such as forklifts or trucks should be fitted with the approved type of spark arrester.

n. In order to have appropriate measures to prevent percolation of spills, leaks etc. to the soil and ground water, the storage area should be provided with concrete floor or steel sheet depending on the characteristics of waste handled and the floor must be structurally sound and chemically compatible with wastes.

o. Measures should be taken to prevent entry of runoff into the storage area. The Storage area shall be designed in such a way that the floor level is at least 150 mm above the maximum flood level.

p. The storage area floor should be provided with secondary containment such as proper slopes as well as collection pit so as to collect wash water and the leakages/spills etc.

q. All the storage yards should be provided with proper peripheral drainage system connected with the sump so as to collect any accidental spills in roads or within the storage yards as well as accidental flow due to fire fighting.

Storage Drums/Containers:

a. The container shall be made or lined with the suitable material, which will not react with, or in other words compatible with the hazardous wastes proposed to be stored.

b. The stacking of drums in the storage area should be restricted to three high on pallets (wooden frames). Necessary precautionary measures should be taken so as to avoid stack collapse. However, for waste having flash point less than 65.5 ^{O} C, the drums should not be stacked more than one height.

c. No drums should be opened in the storage sheds for sampling etc. and such activity should be done in designated places out side the storage areas;

d. Drums containing wastes stored in the storage area should be labeled properly indicating mainly type, quantity, characteristics, source and date of storing etc.

Spillage/leakage control measures:

a. The storage areas should be inspected daily for detecting any signs of leaks or deterioration if any. Leaking or deteriorated containers should be removed and ensured that such contents are transferred to a sound container.

b. Incase of spills / leaks/dry adsorbents/cotton should be used for cleaning instead of water.

c. Proper slope with collection pits be provided in the storage area so as to collect the spills/leakages.

d. Storage areas should be provided with adequate number of spill kits at suitable locations. The spill kits should be provided with compatible sorbent material in adequate quantity.

Record Keeping and Maintenance:

a. Proper records with regard to the industry –wise type of waste received, characteristics as well as the location of the wastes that have been stored in the facility need to be maintained.

Miscellaneous:

a. Smoking shall be prohibited in and around the storage areas;

b. Good house keeping need to be maintained around the storage areas.

c. Signboards showing precautionary measures to be taken, in case of normal and emergency situations should be displayed at appropriate locations.

d. To the extent possible, manual operations with in storage area are to be avoided. Incase of manual operation, proper precautions need to be taken, particularly during loading / unloading of liquid hazardous waste in drums.

e. A system for inspection of storage area to check the conditions of the containers, spillages, leakages etc. should be established and proper records should be maintained.

f. The wastes containing volatile solvents or other low vapor pressure chemicals should be adequately protected from direct exposure to sunlight and adequate ventilation should be provided.

g. Tanks for storage of liquids waste should be properly dyked and should be provided with adequate transfer systems.

h. Storage sites should have adequate & prompt emergency response equipment systems for the hazardous waste stored on-site. This should include fire fighting arrangement based on the risk assessment, spill management, evacuation and first aid.

i. Immediately on receipt of the hazardous waste, it should be analyzed and depending upon its characteristics its storage should be finalized.

j. Only persons authorized to enter and trained in hazardous waste handling procedures should have access to the storage site.

k. Mock drill for onsite emergency should be conducted regularly and records maintained.

3.2. Recommended Storage time and the Quantity of the Incinerable Hazardous Wastes:

Normal storage of incinerable hazardous wastes at the incinerator site should be restricted to maximum of six months

3.3. Hazard Analysis and Safety Audit:

For every incinerator facility, a preliminary hazard analysis should be conducted. Safety Audit internally by the Operator every year & externally once in two years by a reputed expert agency should be carried out and same should be submitted to the SPCB/PCC.

Such conditions should be stipulated by SPCBs while granting authorization under Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 to the incinerator operators.

All the above recommendations are also applicable for captive incinerators.

-- OO--

Annexure –I

CENTRAL POLLUTION CONTROL BOARD
Hazardous Waste Management Division
Parivesh Bhavan, East Arjun Nagar
DELHI – 110 032

F. No.B-29016 (SC)/1/06/HWMD/672-681 April 17, 2008

OFFICE ORDER

Sub: **Constitution of the Committee for "Limiting storage time for storage of incinerable hazardous wastes by the hazardous wastes treatment, storage and disposal facilities i.e. TSDF Operators"**.

The Chairman, CPCB has constituted a Committee in order to finalize the maximum time permissible to the operators of TSDF facilities in the country for the storage of incinerable hazardous wastes. This is in view of the fire incident which has taken place at Ankaleshwar, Gujarat at TSDF site on 3rd April, 2008 in Shed no. 7 of M/s. Bharuch Enviro Infrastructure Limited. The composition of the committee is as follows:

1.	Dr. R. K. Garg	Chairman
2.	Representative of Disaster Management Institute, Bhopal	Member
3.	Representative of E.I.L, New Delhi	Member
4.	Representative of Oil Industries Safety Directorate	Member
5.	Representative of Department of Explosive, Nagpur	Member
6.	Member Secretary, CPCB	Member
7.	Representative of MoEF(HSMD)	Member
8.	Representative of Andhra Pradesh, Gujarat & Maharashtra PCB	Member
9.	Incharge, HWM Division, CPCB	Member Convener

2. **Term of Reference of the Committee**: *The terms of reference of the Committee are as follows:*

i. Prevention of fire hazards at TSDF site and major precautions to be taken.

ii. Quantity of incinerable waste to be stored at TSDF site for incineration, considering the Incineration Capacity of TSDF site and HWM Rules.

iii. Specification of the godown(s) and the major precaution to be taken in godown for storing hazardous waste in order to prevent fire hazard.

iv. Any other aspects related to above with overall view to prevent such eventualities in future.

3. **Tenure of the expert committee**: Tenure of the expert committee for fulfilling the tasks as per terms of reference would be *maximum of 3 months.*

4. **Reimbursement of TA/DA:** TA/DA will be paid only to the external expert members, as applicable, and as per the Central Government Rules, as and when invited from the external organizations other than the SPCBs/ PCCs/ MoEF/ CPCB.

5. **Honorarium:** An Honorarium of Rs. 3000/- per day (Rupee three thousands only) as sitting fee, for attending the meeting will be paid only to the non-official Expert Members.

This issue with the approval of the competent authority, Central Board.

Sd/-

(Dr. B. Sengupta)
Member Secretary

Copy for information to:

1. All the concerned (as per list enclosed) – You are requested to kindly nominate representative of your organization for attending the meetings of the Committee by April 25, 2008 positively.
2. PS to CCB, Delhi.
3. PS to MS, CPCB, Delhi.
4. ACO, CPCB, Delhi.

Sd/-
(Dr. B. Sengupta)
Member Secretary

Enclosure 2

CLARIFICATION BY CPCB

Subcommittee query dated 22.06.2022

1. CPCB-RO Lucknow has referred 2008 guidelines regarding storage of hazardous Waste and recommended that 50% of the annual capacity of the hazardous waste incinerator should be provided in the premises. In support of this, the CPCB has provided a SOP document developed by CPCB in June 2016 under Rule 9 of HSW Rules, 2016. In this document, a few papers from some other report have been included and above mentioned quotation of CPCB has been given as part of the recommendations of some committee.

2. What is the latest rule position in respect of minimum capacity required for storage shed in HWM facility with incinerator? Please provide the copy of document and its weblink, if any.

CPCB reply dated 23.06.2022

Point-1: In the IRO Report, the immediate pages after Standard Operating Procedure (SoP) for utilization of contaminated drums are the pages from CPCB guideline titled "Guidelines for Storage of Incinerable Hazardous Wastes by the Operators of Common Hazardous Waste Treatment, Storage and Disposal Facilities and Captive HW Incinerators" for storage of hazardous waste (refer page numbers 4-6).

Point-2: The above mentioned guideline has published in 2008 and still applicable and available on CPCB website at https://cpcb.nic.in/displaypdf.php?id=aHdtZC9OZXdJdGVtLTEzMS1HdWlkZWxpbmUtZm9yLXN0b3JhZ2Utb2YtaW5jaW5lcmFibGUtSFcucGRm

CPCB has published SoP for utilization of contaminated barrels /containers/ drums containing hazardous wastes/chemicals/oil and lubricants in June, 2016 and revised the same in February, 2021 and available at https://cpcb.nic.in/uploads/hwmd/55_SOP.pdf

Subcommittee query dated 23.06.2022

1. Why are we still following '2008 guidelines' when SOP 2016 mandates storage of not more than 90 days for various types of hazardous wastes? Here, 'SOP 2016' means Standard Operating

Procedure and Checklist of Minimal Requisite Facilities for utilization of hazardous waste under Rule 9 of the Hazardous and Other Wastes (Management and Transboundary movement) Rules, 2016. And '2008 guidelines' means Guidelines for Storage of Incinerable Hazardous Wastes by the Operators of Common Hazardous Waste Treatment, Storage and Disposal Facilities and Captive HW Incinerators, 2008.

2. Is there any possibility to update the 2008 guidelines in near future as these guidelines are quite old (>14 years) and might need updation as per latest Hazardous Waste Management Rules 2016 and also in light of latest technological developments in the field of processing of hazardous wastes.

CPCB reply dated 23.06.2022

1.Government of India vide notification dated 04.04.2016 has notified the Hazardous and other Wastes (Management & Transboundary Movement) (HOWM) Rules, 2016 in supersession of the earlier Rules (i.e. Hazardous Wastes (Management, Handling and Transboundary Movement) (HWM) Rules, 2008 and Hazardous Wastes (Management & Handling) Rules, 1989) to ensure safe storage, treatment and disposal of hazardous and other wastes in an environmentally sound manner without causing adverse effect to environment and human health. HOWM Rules, 2016 are similar to HWM Rules 2008 with respect to storage conditions for hazardous waste.

CPCB in November 2008 has published a 'Guidelines for Storage of Incinerable Hazardous Wastes by the Operators of Common Hazardous Waste Treatment, Storage and Disposal Facilities and Captive HW Incinerators'. This guideline was prepared to prevent accidents during storage of incinerable hazardous waste. This guideline is applicable for storage of incinerable hazardous waste in the premises of TSDF facility and normal storage of incinerable hazardous wastes is mentioned as maximum of six months (180 days).

Provisions laid down in the HOWM Rules, 2016 and HWM Rules, 2008 delegated responsibility to CPCB for issuing scientific or technical guidelines/ Standard Operating Procedures (SoPs) for utilization of hazardous waste from time to time. CPCB has published SoP for 'utilization of contaminated barrels /containers/ drums containing hazardous wastes/chemicals/oil

and lubricants' in June, 2016 and revised the same in February, 2021. The said SoP is applicable only for utilization of contaminated drums.

2.The existing guidelines may be updated from time to time in the following scenarios:

i. Rules updation deviates with respect to conditions laid down in the guidelines.

ii. Hon'ble courts directs to update.

iii. Technology upgradation.

Subcommittee query dated 24.06.2022

As per details provided by you and if I understood it correctly, the normal storage of incinerable hazardous wastes is mentioned as maximum of six months (180 days). Is there any limit for keeping the minimum storage or maintain minimum of storage capacity? From the report of CPCB, RO office it appears that Project proponent has to maintain storage capacity of 50% of annual capacity, i.e, for 180 days.

May kindly clarify the above so that we can proceed further with the submission of our report to EAC (Infra-2).

CPCB reply dated 27.06.2022

As per CPCB Guidelines published in 2008 titled 'Guidelines for Storage of Incinerable Hazardous Wastes by the Operators of Common Hazardous Waste Treatment, Storage and Disposal Facilities and Captive HW Incinerators' adequate storage capacity (i.e. 50 % of the annual capacity of the hazardous waste incinerator) should be provided in the premises (please refer page No. 04 of guideline).

Subcommittee query dated 28.06.2022

i. as per CPCB Manual on Sampling, Analysis and Characterization of Hazardous Wastes (link provided in attached pdf document), one has to follow the USEPA'S 2001 HWIR final rule and as per these rules, the specific gravity of hazardous waste ranges between 1.0 & 1.5 (93%). In support of their claim they have attached the Comprehensive Analysis (CA) report and Fingerprint Analysis (FPA) report of the

hazardous waste they are receiving at their facility for disposal (annexure 3).

ii. the annual capacity is estimated as 3000 MT considering 300 working days (including maintenance days) therefore storage is required for 1500 MT of hazardous waste. However, their plant is designed based on HoW Rules, 2016, as per which Hazardous waste cannot be stored for more than 90 days. Therefore, the area requirement considering storage for 900 MT & specific gravity of 1.25 estimates at 720Sq.M. Surface area of 3 storage sheds (combined): = 479 sq. m.; Stacking arrangement (upto2 stacks): Storage area available: 479 x 3 = 1437 sq. m. allows storage of 90 days.

iii. as per "Guidelines for Storage of Incinerable Hazardous Wastes by the Operators of Common Hazardous Waste Treatment, Storage and Disposal Facilities and Captive HW Incinerators", the Committee noted that the normal time required for material to be taken up for incineration after receipt of the wastes at the facility could vary from 02 to 03 months to carryout activities like sampling, analysis, optimizing the mixing of different incinerable hazardous waste prior to the incineration. Taking into consideration the down time of the incinerator required for major maintenance or repairs which appear to be an annual activity, a maximum of six months storage time is considered appropriate (point 2.2.3, page no. 3).

CPCB reply dated 29.06.2022

1.Specific gravity of incinerable hazardous waste may vary between 0.8 to 1.7 based on the type of the waste.

2. Taking into consideration the down time of the incinerator required for major maintenance or repairs which appears to be an annual activity, a maximum of six months storage time is considered during preparation of the CPCB guideline 2008. However, as per HOWM Rules, 2016, the storage of hazardous waste in the premises is restricted to 90 days.

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Enclosure 3

Site Visit Photographs

Common Hazardous Waste Incinerator of capacity 10 MT/day at Plot No. D-26, UPSIDC, Sikandrabad Industrial Area, District Bulandshahar, Uttar Pradesh