

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

Principal Bench, New Delhi

In

Original Application No. 67/2020

In the Matter of: -

Nathan Chaudhary

Applicant

Vs.

State of GNCTD & Ors.

Respondent

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(Abhey Singh Soni)

Scientist 'E'

Central Pollution Control Board

Parivesh Bhawan, East Arjun Nagar

Delhi-110032

Place: Delhi

Date: 8<sup>th</sup> September, 2020

**Action Taken Report  
in the matter of  
Original Application No. 67/2020  
"Nathan Chaudhary vs State of  
GNCTD & Ors."**



**CENTRAL POLLUTION CONTROL BOARD**

(Ministry of Environment, Forest & Climate Change, Government of India)

**Parivesh Bhawan, East Arjun Nagar,**

**Shahdara, Delhi – 110032**

## **Background:**

The applicant in his Original Application (O.A.) describes that during the course of business visits in different part of the country, he came to know various illegalities are being committed by Panipat Refinery, Haryana and Digboi Refinery, Assam as well as other oil refineries w.r.t. handling, management and disposal of hazardous waste (i.e. spent catalyst).

Spent catalyst generated from Petrochemical processes and Petroleum Refining is defined as hazardous waste at Sl. No. 1.6 and 4.2 of Schedule I of the Hazardous and Other Wastes (Management & Transboundary Movement) (HOWM) Rules, 2016, respectively, which are required to be disposed in authorized disposal facility in accordance with authorization condition. Spent catalyst containing nickel, cadmium, zinc, copper, arsenic, vanadium and cobalt has been categorized under list of common recyclable hazardous wastes at Schedule IV of HOWM Rules, 2016.

The applicant came to know that this hazardous waste (i.e., spent catalyst) which is not within the purview of authorisation availed by M/s Lakhdatta Petrochemicals, Punjab and M/s Ganesh Steel and Alloys limited, West Bengal. According to the applicant, M/s Lakhdatta Petrochemicals, Punjab has obtained authorisation for processing of oil material meant from Panipat Refinery but it is illegally obtaining spent catalyst containing nickel, cadmium, zinc, copper, arsenic, vanadium and cobalt listed at Sl. No. 10 of Schedule IV of HOWM Rules, 2016 from Panipat Refinery. However, this waste cannot be processed at M/s Lakhdatta Petrochemicals, Punjab which has machinery and process unit installed for processing of oil. Also M/s Ganesh Steel and Alloys limited, West Bengal is obtaining the spent catalyst from Digboi Refinery, Digboi, Assam without authorisation for processing of such spent catalyst. M/s Ganesh Steel and Alloys limited has licence for induction furnace however for spent catalyst melting an independent and separate arc furnace required equipped with special machinery and procedure.

In the matter of O.A. No. 67/2020, applicant is claiming that spent catalyst generating from oil refineries are violating HOWM Rules, 2016 w.r.t. handling, management and disposal of spent catalyst. They are illegally selling their hazardous waste to the hazardous waste re-processors without valid authorisation from SPCB under Rule 9 of HOWM Rules, 2016.

In regards to unscientific handling, management and disposal of spent catalyst generated from various processes of the oil refineries, which comes under hazardous waste category of Schedule I (as listed at serial No. 1.1 to 4.5) of HOWM, Rules, 2016, the Hon'ble National

Green Tribunal (NGT) passed an order on 20.03.2020 (Attached as **Annexure-I**) in the matter of O. A. No. 67/2020 as below: -

*"...we find it necessary to require a factual and action taken report from the CPCB, Punjab State PCB, Haryana Punjab State PCB, West Bengal Punjab State PCB, Assam State PCB and the DPCC within two months. The CPCB will be the nodal agency for coordination and compliance..."*

### **Actions taken by the Central Pollution Control Board (CPCB):**

In this connection, Hon'ble NGT vide abovesaid order directed CPCB to act as nodal agency for co-ordination and compliance for submission of factual and action taken report. To ensure the compliance of Hon'ble NGT directions w.r.t. handling, management & disposal of spent catalyst in accordance of HOWM Rules, 2016, CPCB requested all such SPCBs/PCCs where oil refineries are operational and generating spent catalyst, to provide following information vide letter dated 10.06.2020 (attached as **Annexure II**):

- (a) SPCBs/PCCs shall verify and submit the records of generation, storing, handling, selling, inter-state as well as intra-state transporting and disposal of spent catalyst generated from various processes related to oil industries listed at serial No. 1.1 to 4.5 of Schedule I of HOWM Rules, 2016 specially oil refineries. Daily Records (Form-3), Manifest (Form-10) and Annual Returns (Form-4) shall be verified.
- (b) SPCBs/PCCs shall inspect and verify such re-processors who are authorized for processing of spent catalyst generating from oil industry under Rule 9 of HOWM Rules, 2016.
- (c) SPCBs/PCCs shall inspect and verify such re-processors who are authorized for recovery of metals from spent catalyst received from the oil industries listed at serial no. 10 in Schedule-IV of HOWM Rules, 2016.
- (d) SPCBs/PCCs shall also verify the compliance status of Hon'ble NGT orders dated 02.11.2015 in the O.A. No. 284/2015; Jugal Kishore vs Union of India & Ors.

Subsequently, CPCB also directed all the oil refineries to submit information w.r.t. generation, handling, management and disposal of spent catalyst generated within their premises vide letter dated 10.06.2020 (attached as **Annexure III**). A reminder letter was also issued to to SPCBs of Andhra Pradesh, Karnataka and Uttar Pradesh for submission of desired information. on 23.07.2020

Upon receipt and examination of information from SPCBs/PCCs and oil refineries in response of CPCB letter dated 10.06.2020, It was found that many spent catalyst recyclers/re-processors operate in the states of Chhattisgarh, Telangana, Jammu Kashmir and Rajasthan, thus CPCB issued a letter to said 04 SPCBs to verify and submit information related to the management of spent catalyst recyclers/re-processors exist in their states vide letter dated 23.07.2020 (attached as **Annexure IV**).

CPCB being the nodal agency in this matter, requested the concerned SPCBs/PCC to nominate an official from their Board to constitute a committee for co-ordination, carrying out inspections and preparation of factual and action taken report. The members of committee as nominated by concerned board are as below:

1. Sh. Anil C. Ranveer, Additional Director- CPCB, Delhi.
2. Dr. Siddhartha Gautam, Environmental Engineer, DPCC, Delhi.
3. Sh. Sisir Mondal, Assistant Environmental Engineer, WBPCB, Kolkata.
4. Sh. Vijay Gupta, Environmental Engineer, Regional Office, Bhatinda, Punjab.
5. Sh. Shailender Arora, Regional Officer, HSPCB, Panipat, Haryana.
6. Sh. Pankaj Kr. Dutta, Executive Engineer, ASPCB, Assam

CPCB has examined the information submitted by SPCBs/PCCs for spent catalyst generator, recyclers/utilizer and oil refineries w.r.t. generation, handling, management and disposal of spent catalyst and tabulated the information in Table – 1 and Table – 2, respectively as below:

**Table – 1: Details of generation, handling, management and disposal of spent catalyst as submitted by SPCBs/PCCs**

<b>Sr. No.</b>	<b>SPCBs/PCCs Reply</b>	<b>Observations</b>
1.	Assam Pollution Control Board (APCB) submitted the information vide letter dated 03.07.2020 and 27.08.2020	<ol style="list-style-type: none"> <li>1. There are 04 Oil refineries: i. Indian Oil Corporation Limited (IOCL), Digboi Refinery, ii. Numaligarh Refinery Ltd., iii. Guwahati Refinery and iv. Bongaigaon Refinery located in the state of Assam generating spent catalyst.</li> <li>2. APCB has issued a letter directing all the oil refineries in the State not to sold or transferred spent catalyst to any bidder/person for utilization as raw material without having valid authorization on 19.06.2020.</li> </ol>

		<ol style="list-style-type: none"> <li>3. IOCL, Digboi and Numali Garh Refinery has submitted their records of generation, storing, handling, selling, transporting and disposal of spent catalyst to APCB and it was verified by the Board.</li> <li>4. APCB has not authorized any re-processor under Rule 9 of HOWM Rules, 2016 for spent catalyst reprocessing, however the spent catalyst sent to the re-processor outside State.</li> <li>5. APCB has nominated Sh. Pankaj Kr. Dutta, Environmental Engineer (EE), for coordination and preparation of Action Taken Report.</li> <li>6. APCB vide letter dated 27.08.2020 submitted verification report pertaining to records of generation, storage, handling, selling (in the state) transportation and disposal of spent catalyst M/s IOCL, Assam Oil Division, Digboi and submitted records by IOCL Guwahati Refinery.</li> <li>7. Digboi refinery was physically visited by officials of APCB on 20.08.2020 and records were verified.</li> <li>8. Records of IOCL Guwahati and Bongaigaon Refinery were also verified by APCB.</li> </ol>
2.	Delhi Pollution Control Committee (DPCC) submitted the information vide letter dated 23.06.2020	<ol style="list-style-type: none"> <li>1. DPCC has informed that there is no oil refinery located in National Capital Territory of Delhi.</li> <li>2. As such information regarding spent catalyst generation &amp; recycling/re-processing was considered nil by DPCC.</li> <li>3. DPCC has nominated Dr. Siddhartha Gautam, EE, DPCC for coordination and preparation of Action Taken Report</li> </ol>
3.	Haryana State Pollution Control Board (HSPCB) submitted interim reply vide letter dated 26.06.2020 &	<ol style="list-style-type: none"> <li>1. HSPCB vide letter dated 26.06.2020 submitted interim reply.</li> <li>2. HSPCB has nominated and directed Regional Office, Panipat to communicate and prepare factual action taken report in the NGT matter O.A. 67/2020.</li> <li>3. Panipat-Regional Office, HSPCB vide letter dated 04.08.2020 submitted information regarding spent catalyst.</li> <li>4. There is only one oil refinery i.e., M/s Panipat Refinery and Petrochemical Complex, Panipat.</li> </ol>

Final Reply vide  
letter dated  
04.08.2020

5. There are no re-processors who are authorized for processing of spent catalyst generating from oil industry under Rule 9 of HOWM Rules, 2016 in Haryana.
6. There are no re-processors who are authorized for recovery of metals from spent catalyst received from oil industries listed as serial no. 10 in Schedule-IV of HOWM Rules, 2016 in Haryana.
7. Regarding compliance status of Hon'ble NGT order dated 02.05.2015 in O.A. No. 284/2015, Panipat refinery submitted vide letter dated 27.07.2020 that they are in compliance of NGT Directions and the sale of spent catalyst (alumina containing) is done only to CPCB authorized bidders.
8. As per information submitted, details provided for spent catalyst generation and disposal is given below:

<i>Year</i>	<i>Opening Stock (MT)</i>	<i>Quantity Generated (MT)</i>	<i>Quantity Disposed (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>
2017-18	497.5	440	440	Recycler	497.5
2018-19	497.5	1648.75	311.9	Recycler	1834.41
2019-20	1834.41	1257.80	550	Captive SLF	1950
			592.2	Recycler	

9. The above information regarding annual generation and disposal of spent catalyst as provided by HSPCB and also by unit (given at Sr. No. 12 of Table - 2) is contradictory.
10. Also upon examination of documents provided by HSPCB, it was found that there is Panipat Naphtha Cracker Division which has generated 3545.58 MT of spent catalyst in 2019-20. Through manifest submitted it was found that said spent catalyst disposed to recyclers such as M/s Perfect Stoneware Pipes Ltd., Plot No. 49-50, AKVN Industrial Area, Mandla, M.P. & M/s Premier Refractories of India Pvt. Ltd., Katni, M.P.

4.	Punjab Pollution Control Board (PPCB) submitted the information vide letter dated 29.06.2020	<p>1. There is only one oil refinery i.e., M/s Hindustan Petroleum Corporation Limited (HPCL)-Mittal Energy Limited, Bhatinda located in the state of Punjab generating Spent Catalyst and upon document verification PPCB submitted that Spent Catalyst (category 4.2) generated from abovesaid refinery is procured by following recyclers/re-processors:</p> <p>a. M/s Arth Metallurgicals Pvt. Ltd., Raipur</p> <table border="1" data-bbox="679 633 1417 781"> <thead> <tr> <th><i>Sr No</i></th> <th><i>Financial Year</i></th> <th><i>Quantity of Spent catalyst (MT)</i></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2015-16</td> <td>214.036</td> </tr> <tr> <td>2</td> <td>2016-17</td> <td>882.442</td> </tr> <tr> <td>3</td> <td>2017-18</td> <td>1162.258</td> </tr> </tbody> </table> <p>b. M/s Lakhdata Petrochemicals, Bhatinda</p> <table border="1" data-bbox="679 893 1417 967"> <thead> <tr> <th><i>Sr No</i></th> <th><i>Financial Year</i></th> <th><i>Quantity of Spent catalyst (MT)</i></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2017-18</td> <td>616.926</td> </tr> </tbody> </table> <p>c. M/s Ravindra Heraeus Pvt. Ltd., Udaipur</p> <table border="1" data-bbox="679 1077 1417 1151"> <thead> <tr> <th><i>Sr No</i></th> <th><i>Financial Year</i></th> <th><i>Quantity of Spent catalyst (MT)</i></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2018-19</td> <td>42.22</td> </tr> </tbody> </table> <p>d. M/s Mittal Pigments Pvt. Ltd., Kota</p> <table border="1" data-bbox="679 1263 1417 1337"> <thead> <tr> <th><i>Sr No</i></th> <th><i>Financial Year</i></th> <th><i>Quantity of Spent catalyst (MT)</i></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2019-20</td> <td>810.71</td> </tr> </tbody> </table> <p>2. M/s Lakhdata Petro Chemicals, village Ramsara, Dist. Bhatinda is the only re-processor of spent catalyst granted authorization under HOWM Rules, 2016. Details of spent catalyst lifted by said re-processor is as follows:</p> <p>a. 27.39 MT from M/s IFFCO, Aonla Unit, Bareilly, Uttar Pradesh on 19.06.2020 and</p> <p>b. 71.62 MT (38.58 MT on 04.06.2020 and 33.04 MT on 05.06.2020) from M/s IOCL, Panipat Refinery, Panipat.</p> <p>c. For transportation of hazardous waste from refinery, PPCB has granted authorization to M/s ShriNath Road Lines, Pali, Rajasthan.</p>	<i>Sr No</i>	<i>Financial Year</i>	<i>Quantity of Spent catalyst (MT)</i>	1	2015-16	214.036	2	2016-17	882.442	3	2017-18	1162.258	<i>Sr No</i>	<i>Financial Year</i>	<i>Quantity of Spent catalyst (MT)</i>	1	2017-18	616.926	<i>Sr No</i>	<i>Financial Year</i>	<i>Quantity of Spent catalyst (MT)</i>	1	2018-19	42.22	<i>Sr No</i>	<i>Financial Year</i>	<i>Quantity of Spent catalyst (MT)</i>	1	2019-20	810.71
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		<p>3. Regarding compliance status of Hon'ble NGT order dated 02.05.2015 in O. A. No. 284/2015, PPCB submitted that at the time of passing order Hazardous Wastes (Management, Handling and Transboundary Movement) (HWM) Rules, 2008 were applicable wherein CPCB approval is required for re-processing of hazardous wastes but Ministry of Environment, Forest and Climate Change (MoEF&amp;CC) framed new HOWM Rules, 2016 and under its Rule 6, SPCBs were empowered for granting authorization.</p>
5.	<p>West Bengal Pollution Control Board (WBPCB) submitted the information vide letter dated 18.06.2020</p>	<ol style="list-style-type: none"> <li>1. There is only one oil refinery i.e, M/s IOCL, Haldia Refinery, Haldia, Dist. Purba Medinipur located in the state of West Bengal generating Spent Catalyst.</li> <li>2. The hazardous wastes (Category 4.1 &amp; 4.2) generated from refinery were disposed in M/s West Bengal Waste Management Ltd., Purba Shrikrishnapur, Sutahata, West Bengal for Secured Landfilling (SLF).</li> <li>3. The unit maintains Daily records and submits Manifest and Annual returns for year 2019-20 and also maintain hazardous waste inventory in Form-3.</li> <li>4. There is only one authorised re-processor i.e., M/s Ganesh Steel and Alloys Ltd., West Bengal for reclamation of metals from spent catalyst containing nickel, molybdenum and vanadium (as listed at Sl. No. 10 in Schedule-IV of). Reprocessing unit is inspected on regular basis by WBPCB.</li> <li>5. For utilization of spent catalyst containing nickel, molybdenum for recovery of metal, SoP of CPCB is followed and WBPCB has granted authorisation under HOWM Rules, 2016.</li> <li>6. The unit i.e., M/s Ganesh Steel and Alloys Ltd., West Bengal has obtained authorization under Rule 9 of HOWM Rules, 2016 for utilizing spent catalyst.</li> </ol>

6.	Bihar Pollution Control Board (BPCB) submitted the information vide letter dated 19.06.2020	<ol style="list-style-type: none"> <li>1. There is only one oil refinery i.e., IOCL, Barauni Oil Refinery, Begusarai located in the state of Bihar generating Spent Catalyst.</li> <li>2. Spent catalyst generated from the refinery is stored and disposed through co-processing in cement industry located outside State.</li> <li>3. Unit maintaining Form-3 and also submitting Form-4 and Form-10 which have been verified by the BPCB.</li> <li>4. There is no authorized re-processor in the state for reprocessing of spent catalyst under Rule 9 of HOWM Rules, 2016.</li> <li>5. In compliance of Hon'ble NGT order dated 02.11.2015 in the matter of O.A. No. 284/2015; BPCB stated that as per HOWM Rules, 2016 no need of permission for use of spent catalyst as raw material/resource. The occupier /unit may send spent catalyst to the cement industry for co-processing with the proper manifest document.</li> </ol>
7.	Gujarat Pollution Control Board (GPCB) vide letters dated 26.06.2020 (interim reply) & 30.07.2020 (final reply)	<p>GPCB vide its interim reply letter dated 26.06.2020 informed that:</p> <ol style="list-style-type: none"> <li>1. There are 04 oil refineries in the State and concerned Regional Officers have been informed for carrying out inspection and submit the report.</li> <li>2. There are 42 re-processors/recyclers of spent catalyst authorized under Schedule IV of HOWM Rules, 2016. For inspection of such re-processors/recyclers concerned Regional Officers have been directed and report shall be submitted upon receipt of details.</li> <li>3. In compliance of Hon'ble NGT order dated 02.11.2015 in the matter of O.A. No. 284/2015, GPCB instructed concerned regional officers to ensure its compliance.</li> </ol> <p>GPCB vide letter dated 30.07.2020 submitted Action Taken Report and details furnished are as follows:</p>

1. There are 04 oil refineries i.e., (i) M/s. Nayara Energy Limited (NEL), (ii) M/s. Reliance Industries Limited (RIL), (iii) M/s. RIL Special Economic Zone (SEZ) and (iv) M/s. IOCL, (Gujarat Refinery) located in the state of Gujarat generating spent catalyst and concerned Regional Offices have conducted inspection and information submitted regarding spent catalyst is as follows:

<i>Name of Unit</i>	<i>Opening Stock 2019-20 (MT)</i>	<i>Quantity generated 2019-20 (MT)</i>	<i>Disposed to Recycler/ TSDF (MT)</i>	<i>Name of receiving Unit/TSDF</i>
M/s NEL	2751	73	1111.15	M/s. Rubamin Ltd, Vadodara
M/s RIL	694.8	1378	204.99	M/s. Earth Metallurgical, Chhattisgarh
M/s RIL (SEZ)	0.45	730.5	678.	M/s. Rubamin Ltd, Halol
			49.88	M/s. Earth Metallurgical, Chhattisgarh
M/s IOCL, (Gujarat Refinery)	945.48	430	500.24	M/s. Rubamin Ltd, Halol
			62	M/s. Refracast Metallurgical Pvt. Ltd, Chhatishgadh
			16.81	M/s. Shree Sita Ram Industries Pvt Ltd, Jammu
			28.835	M/s. Ganesh Steel & Alloy, Kolkata
			135	M/s. NECL, Vadodara

2. Gujarat State is having 42 authorized recyclers/re-processors authorized under Schedule-IV of HOWM Rules, 2016. Concerned regional offices of GPCB have conducted inspection and submitted report. It was also added that recyclers have been authorized with combined quantity of spent catalyst & other Schedule IV waste. Out of 42 recyclers, 31 units have not procured any spent catalyst

during 2019-20. Consolidated report of 11 units of spent catalyst procurement, recycling/reprocessing and disposal as submitted is given as below:

<i>Name of Unit</i>	<i>Stock at beginning of 2019-20 (MT)</i>	<i>Quantity procured in 2019-20 (MT)</i>	<i>Quantity processed in year 2019-20 (MT)</i>
M/s. Global Metal Chemie	0	151.616	151.616
M/s. Mukesh Traders	0.3	0.64	0.34
M/s. Ideal Chem Industries	5	10	10
M/s. Rubamin Private Limited, Nandesari	0	209.08	136.313
M/s. Rubamin Limited (Metal Unit), Halol	3623	2825.006	2256.204
M/s. Lavti Fertilizer & chemicals Pvt. Ltd.	370.887	58.45	151.573
M/s. Sulfozyme Agro (India) Pvt. Ltd	0	175.528	151.2
M/s. Gujarat Agro Industries	83.342	347.696	367.553
M/s. Shanti Enterprise	45.521	215.524	195.35
M/s. Shanti Metal Industries	93	158.4	161.8
M/s. Eurecat India Catalyst Services Pvt. Ltd.	89.6	92.64	160.783

3. Out of 11 units who processed spent catalyst in 2019, one unit namely M/s Ideal Chem Industries was reported not having any dedicated storage area for spent catalyst.
4. In compliance of Hon'ble NGT order dated 02.11.2015 in the matter of O.A. No. 284/2015, GPCB has instructed Regional Offices to ensure compliances.

8.	Kerala Pollution Control Board (KPCB) submitted the information vide letter dated 22.06.2020	<ol style="list-style-type: none"> <li>1. There is only one oil refinery i.e., M/s Bharat Petroleum Corporation Limited (BPCL), Kochi refinery, Ernakulam, Kerala generating Spent Catalyst.</li> <li>2. Spent catalyst is being disposed in Secured Landfill of Board authorized common hazardous waste Treatment, Storage and Disposal Facility (TSDF) at Ambalamedu and also sold to authorized recyclers through Metal Scrap Trading Company (MSTC) auction only.</li> <li>3. Board has verified the manifest and Annual form submitted by the unit and ensures that disposal is as per authorization under HOWM Rules, 2016.</li> <li>4. As per the list provided following are the recyclers/re-processors who have procured spent catalyst from M/s BPCL Kochi refinery: <ol style="list-style-type: none"> <li>i. M/s Rubamin Ltd, Panchmahal, Gujarat,</li> <li>ii. M/s Hindustan Platinum Pvt. Ltd., Mumbai, Maharashtra,</li> <li>iii. M/s Ganesh Steel &amp; Alloys Ltd., Kolkata., West Bengal,</li> <li>iv. M/s Shree Sita Ram Industries Pvt. Ltd., Jammu and</li> <li>v. M/s Refracast Metallurgicals Pvt. Ltd., Raipur, (C.G.)</li> </ol> </li> </ol>
9.	Maharashtra Pollution Control Board (MPCB) submitted the information vide letter dated 23.06.2020	<ol style="list-style-type: none"> <li>1. There are 02 oil refineries located in the state of Maharashtra generating spent catalyst and details are as follows: <ol style="list-style-type: none"> <li>i. M/s BPCL, Mumbai Refinery, Mumbai. Unit is maintaining Form-3 and submitted Form-10 &amp; Annual return (Form-4) 2019-20 regarding disposal of spent catalyst. As per Annual return 2019-20, unit has sent 454.35 MT of spent catalyst to Common Hazardous Waste TSDF (CHWTSDF) and 30.4 MT is sent to authorized recycler i.e., M/s Refracast Metallurgicals Pvt. Ltd., Raipur (C.G.) and</li> <li>ii. M/s HPCL, Mumbai. Unit is maintaining Form-3 and submitted Form-10 &amp; Annual return 2019-20 regarding disposal of spent catalyst. As per Annual return 2018-19,</li> </ol> </li> </ol>

		<p>unit has sent 1966.3 MT of spent catalyst to CHWTSDF and 88.27 MT is sent to various authorized recyclers.</p> <p>2. There are 03 recyclers/re-processors authorized by Board in Maharashtra for recycling of spent catalyst and details are as follows:</p> <p>i. M/s Hindustan Platinum Pvt. Ltd., Industrial Area MIDC, Pawane. Unit is maintaining Form-3 and submitted Form-10 &amp; Annual return (Form-4) 2019-20 regarding disposal of spent catalyst. As per Annual return 2018-19, industry has recycled 294.24 MT of spent catalyst.</p> <p>ii. M/s Team Eleven Metchem Technology Pvt. Ltd., Raigad. However, unit is not in operation.</p> <p>iii. M/s Grishma Metal Technology, Palghar. Unit is maintaining Form-3 and submitted Form-10 &amp; Annual return (Form-4) 2018-19 regarding disposal of spent catalyst. As per Annual return 2018-19, 23.72 MT of spent catalyst has been procured from M/s Oman Refinery, Madhya Pradesh and recycled.</p>
10.	Madhya Pradesh Pollution Control Board (MPPCB) submitted the information vide letter dated 22.06.2020	<p>1. There is only one oil refinery i.e., M/s Bharat Oman Refinery, Dist., Sagar, Madhya Pradesh (MP) located in the state of MP generating spent catalyst.</p> <p>2. The records such as Form-3, Form-4 and Form-10 of the unit is verified by Regional Officer, Sagar, MP and it is submitted that hazardous waste (spent catalyst Category 4.2) are being disposed/sold to authorized recyclers of MP and other states also.</p> <p>3. Upon verification of Annual Return, it was found that Spent Catalyst (category 4.2) generated from abovesaid refinery has been procured by following units:</p> <p>a. M/s Refracast Metallurgicals Pvt. Ltd., Raipur, C.G. (576.89 MT from 26.11.2018-10.12.2018 and 603.11 MT from 07.02.2019-16.02.2019),</p>

		<p>b. M/s Grishma Metal Technology, Mumbai (23.66 MT on 26.06.2019),</p> <p>c. M/s Vyankatesh Metals &amp; Alloys Pvt. Ltd., Indore, M.P. (284.32 MT from 11.10.2019-05.11.2019),</p> <p>d. M/s Hindustan Platinum Pvt. Ltd., Mumbai, Maharashtra (57.3 MT on 17.03.2020) and</p> <p>e. M/s Ravindra Heraeus Pvt. Ltd., Udaipur, Rajasthan (60.09 MT on 14.03.2020).</p> <p>4. In M.P., 02 units (M/s Vyankatesh Metals and Alloys Pvt. Ltd., Indore &amp; M/s Premier Refractories of India Pvt. Ltd, Katni) have been authorized for recycling/utilization of spent catalyst. MPPCB provided inspection reports of the two units which are briefed as below:</p> <p>i. M/s Vyankatesh Metals and Alloys Pvt. Ltd., Indore has been granted authorisation for recovery of metal salts (nickel and cobalt) by using spent catalyst generated from oil refineries. During 2019-20, unit has procured about 500.8 MT spent catalyst from various oil refineries across the country. About 99.0 MT spent catalyst has been processed and 401.8 MT is stored in the unit premises. Unit is recycling and reutilizing spent catalyst containing nickel and Cobalt as per Schedule IV of HOWM Rules, 2016. During recycling process of spent catalyst, undissolved residue containing alumina (<math>Al_2O_3</math>) and silica (<math>SiO_2</math>) is generated which is hazardous in nature and has to be disposed in accordance of authorisation condition. Last year, unit has disposed its alumina and silica waste to cement kiln. Upon document examination it was found that unit has procured spent catalyst from following oil refineries; (i) M/s Bharat Oman refinery Ltd. (284.32 MT), (ii) M/s IOCL, Panipat (145.78 MT), (iii) M/s RCF, Mumbai (56.46 MT) and (iv) M/s MRPL (14.24 MT)</p>
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		<p>ii. M/s Premier Refractories of India Pvt. Ltd, Katni has been granted authorisation under Rule 9 of HOWM Rules, 2016 for utilisation of spent alumina (Category 1.6 of Schedule I) for manufacturing of refractory materials. Unit has procured 1608 MT of spent catalyst from M/s IOCL, Panipat in 2019-20. During the year unit has processed 3173.00 MT of spent catalyst and still 1954.917 MT is stored in the premises.</p> <p>5. In compliance of Hon'ble NGT order dated 02.11.2015 in the matter of O.A. No. 284/2015, M/s Premier Refractories of India Pvt. Ltd., Katni was not permitted to procure spent catalyst from IOCL, Panipat but later CPCB published SoP for utilization of spent alumina and under Rule 9 of HOWM Rules, 2016 unit has been granted authorisation by MPPCB.</p>
11.	Odisha State Pollution Control Board (OSPCB) submitted the information vide letter dated	<p>1. There is only one oil refinery i.e., M/s IOCL, Paradeep Refinery, Paradeep located in state of Odisha generating spent catalyst. The unit was inspected on 19.06.2020 by board and the details are as follows:</p> <p>i. Unit has authorization under HOWM Rules, 2016 valid up to 31.03.2024.</p> <p>ii. Unit has sent 987 MT of spent catalyst to M/s Shree Cement Ltd., Chhattisgarh for co-processing. M/s Shree Cement is authorized by Chhattisgarh Environment Conservation Board (CECB) for co-processing of hazardous waste.</p> <p>iii. Presently unit has 3548 MT of spent catalyst stored within the premises and shall be sent to cement industry for co-processing.</p> <p>iv. The unit also has incinerator of 250 kg/hour capacity and captive SLF spread over 25,000 m<sup>2</sup> area for management of hazardous wastes.</p> <p>2. No unit has been granted authorization for processing of spent catalyst generated from oil industries.</p>

		<p>3. In compliance of Hon'ble NGT order dated 02.11.2015 in the matter of O.A. No. 284/2015; OSPCB informed that unit has been directed not to enter into or execute any deal which plans to dispose of spent catalyst by using it as raw material without having approval from CPCB.</p>
12.	<p>Tamil Nadu Pollution Control Board (TNPCB) submitted the information vide letter dated 01.07.2020</p>	<p>1. There is only one oil refinery i.e. M/s Chennai Petroleum Corporation Ltd., Dist. Tiruvallur located in the state generating spent catalyst Category 4.2 of Schedule-I and 02 Petrochemical units i.e., (i) M/s Tamil Nadu Petro Products Ltd. &amp; (ii) M/s Celex Petro Chemicals Ltd., in Tiruvallur District generating spent catalyst Category 1.6 of Schedule-I.</p> <p>2. As per information provided details of spent catalyst disposal (for 2019-20) are as follows:</p> <p>i. M/s Tamil Nadu Petro Products Ltd. has exported 13.20 MT (including 3.7532 MT of previous year stock) of spent catalyst (Category 1.6) to M/s Jhonson Matthey, PGM Refining, England, UK.</p> <p>ii. M/s Celex Petro Chemicals Ltd. has not generated any spent catalyst (Category 1.6) this year but disposed 0.910 MT of previous stock in CHWTSDF at Gummudipundi.</p> <p>iii. M/s Chennai Petroleum Corporation Ltd., Dist. Tiruvallur has disposed 55.27 Mt of spent catalyst (Category 4.2) in CHWTSDF at Gummudipundi and 45 MT is stored within the premises.</p> <p>3. TNPCB has not granted any authorization for utilization of spent catalyst under Rule 9 of HOWM Rules, 2016.</p> <p>4. One unit i.e., M/s Hydromet India Pvt. Ltd., Dist. Kancheepuram has been authorized for recycling of spent catalyst for recovery of zinc and nickel compound. However, unit was not in operation for past 02 years.</p>
13.	<p>Karnataka State Pollution Control Board submitted the</p>	<p>1. There is only one oil refinery i.e., M/s Mangalore Refinery and Petrochemical Complex, located at Mangalore.</p>

	<p>information vide letter dated 20.08.2020</p>	<p>2. There are no re-processors who are authorized for processing of spent catalyst generating from oil industry under Rule 9 of HOWM Rules, 2016 in Karnataka.</p> <p>3. There are no recyclers who are authorized for recovery of metals from spent catalyst received from oil industries listed as serial no. 10 in Schedule-IV of HOWM Rules, 2016 in Karnataka.</p> <p>4. As per Annual return (Form-4) submitted, details provided for spent catalyst generation and disposal is given below:</p> <table border="1" data-bbox="612 741 1423 1234"> <thead> <tr> <th><i>Year</i></th> <th><i>Opening Stock (MT)</i></th> <th><i>Quantity Generated (MT)</i></th> <th><i>Quantity Disposed (MT)</i></th> <th><i>Name of Disposal Facility</i></th> <th><i>Stock Stored (MT)</i></th> </tr> </thead> <tbody> <tr> <td rowspan="2">2017-18</td> <td rowspan="2">---</td> <td rowspan="2">994.93</td> <td>12.8</td> <td>Co-processing</td> <td rowspan="2">670.4</td> </tr> <tr> <td>750.64</td> <td>Recycler</td> </tr> <tr> <td rowspan="2">2018-19</td> <td rowspan="2">670.4</td> <td rowspan="2">2426.71</td> <td>2366</td> <td>Co-processing</td> <td rowspan="2">174.58</td> </tr> <tr> <td>552.01</td> <td>Recycler</td> </tr> <tr> <td rowspan="2">2019-20</td> <td rowspan="2">174.58</td> <td rowspan="2">1453</td> <td>975</td> <td>Co-processing</td> <td rowspan="2">197.72</td> </tr> <tr> <td>453.9</td> <td>Recycler</td> </tr> </tbody> </table> <p>5. The unit disposing the generated spent catalyst to recyclers/utilizers such as Rubamin Ltd. &amp; Eurecat India Catalyst Services Pvt. Ltd. Gujarat, Arth Metallurgicals Pvt. Ltd. C.G. and Vyankatesh Metals and Alloys Pvt. Ltd. M.P.</p> <p>6. For co-processing in cement kiln, unit is sending spent catalyst to ACC Ltd., Gulbarga and J K Cements, Muddapur in Karnataka.</p> <p>7. Form-3 submitted by the unit is .....</p>	<i>Year</i>	<i>Opening Stock (MT)</i>	<i>Quantity Generated (MT)</i>	<i>Quantity Disposed (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>	2017-18	---	994.93	12.8	Co-processing	670.4	750.64	Recycler	2018-19	670.4	2426.71	2366	Co-processing	174.58	552.01	Recycler	2019-20	174.58	1453	975	Co-processing	197.72	453.9	Recycler
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			453.9	Recycler																												
14.	<p>Uttar Pradesh Pollution Control Board submitted reply vide mail dated 10.08.2020</p>	<p>1. There is only one oil refinery i.e., M/s IOCL Mathura Refinery, located at Mathura in U.P.</p> <p>2. No information provided regarding any re-processors/utilizers under Rule 9 of HOWM Rules, 2016 or any recyclers who are authorized for recovery of</p>																														

metals from spent catalyst received from oil industries listed as serial no. 10 in Schedule-IV of HOWM Rules, 2016.

3. As per authorization unit is permitted to generate 250MT/Annum of spent catalyst (Category 4.2 of Schedule I) and dispose the same to metal reclaimers through MSTC e-auction or into TSDF.
4. As per Annual return (Form-4) submitted, details provided for spent catalyst generation and disposal is given below:

<i>Year</i>	<i>Quantity Generated (MT)</i>	<i>Quantity Disposed (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>
2017-18	Nil	Nil		Nil
2018-19	768.82	768.82	Recyclers	0
2019-20	237.06	9.06	TSDF-Bharat Oil and Waste Management Limited	227.99

5. The unit disposing the generated spent catalyst to recyclers/utilizers such as Rubamin Ltd. Gujarat, Arham Industries, Rajasthan, Hindustan Platinum, Maharashtra and Vyankatesh Metals and Alloys Pvt. Ltd. M.P.
6. In year 2018-19 unit has generated and disposed 518.82 MT additional spent catalyst for which unit is not authorized.

15.	Andhra Pradesh Pollution Control Board (APPCB)	No information received regarding generation and utilization of spent catalyst in the state .
16.	Jammu Kashmir Pollution Control Board (JKPCB) submitted the	1. There is only one authorized re-processors in J&K using spent catalyst from oil refineries for recovery of metals namely M/s Sita Ram Industries, District: Simba.

	information vide letter dated 31.08.2020	<p>2. The copy of authorization under HOWM Rules, 2016 is not provided.</p> <p>3. Copy of passbook was submitted. As per passbook it was found that unit is permitted for recycling of all types of spent catalyst containing nickel &amp; copper alloy, cobalt, molybdenum and titanium.</p> <p>4. Mostly spent catalyst obtained from fertilizer industry.</p>
17.	Chhattisgarh Environment Conservation Board (CECB)	No information received regarding spent catalyst re-processor/utilizers in the state .
18.	Rajasthan Pollution Control Board (RPCB)	No information received regarding spent catalyst re-processor/utilizers in the state .
19.	Telangana State Pollution Control Board (TSPCB)	No information received regarding spent catalyst re-processor/utilizers in the state .

**Table -2: Details of handling, management and disposal of spent catalyst as submitted by Oil refineries**

<b>Sr. No.</b>	<b>Name &amp; Address Refinery</b>	<b>Observations</b>
1.	M/s. Hindustan Petroleum Corporation Limited (HPCL), Visakha Refinery, Malkapuram, Visakhapatnam,	<p>1. The unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981. Unit has Authorization under HOWM Rules, 2016 valid up to 31.12.2020.</p> <p>2. The unit is permitted for generation, collection, storage and disposal up to 1202.7 MT of spent catalyst (Category 4.2 of Schedule - I) annually to authorized re-processors, Recyclers and TSDF.</p> <p>3. The unit has TSDF membership with Coastal Waste Management Project, Visakhapatnam which is valid up to 31.03.2021.</p> <p>4. Form-3 maintained by the unit showing month-wise generation of spent catalyst. However, daily generation of hazardous waste is not maintained as per HOWM Rules, 2016.</p>

		<p>5. The details of spent catalysts management as per Annual Return (Form-4) submitted by the unit is as follows:</p> <table border="1" data-bbox="549 315 1378 1032"> <thead> <tr> <th><i>Year</i></th> <th><i>Generated Quantity (MT)</i></th> <th><i>Disposed Quantity (MT)</i></th> <th><i>Name of Disposal Facility</i></th> <th><i>Stock Stored (MT)</i></th> </tr> </thead> <tbody> <tr> <td rowspan="2">2017-18</td> <td rowspan="2">543</td> <td>349.5</td> <td>M/s Coastal Waste Management Project (TSDF), Visakhapatnam</td> <td rowspan="2">400</td> </tr> <tr> <td>8.5</td> <td>M/s Ganesh Steel &amp; Alloys Ltd., Kolkata, W.B.</td> </tr> <tr> <td rowspan="2">2018-19</td> <td rowspan="2">526.5</td> <td>665.3</td> <td>M/s Coastal Waste Management Project (TSDF), Visakhapatnam</td> <td rowspan="2">304.5</td> </tr> <tr> <td>81.8</td> <td>M/s Ultra Tech Cements Ltd.</td> </tr> <tr> <td rowspan="3">2019-20</td> <td rowspan="3">1236</td> <td>373.8</td> <td>M/s Coastal Waste Management Project (TSDF), Visakhapatnam</td> <td rowspan="3">1149.5</td> </tr> <tr> <td>369.7</td> <td>M/s Ultra Tech Cements Ltd.</td> </tr> <tr> <td>59.2</td> <td>M/s Arth Metallurgicals Pvt. Ltd., Raipur, C.G.</td> </tr> </tbody> </table> <p>6. Unit has submitted Form-10 (Manifest) for abovesaid disposals.</p>	<i>Year</i>	<i>Generated Quantity (MT)</i>	<i>Disposed Quantity (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>	2017-18	543	349.5	M/s Coastal Waste Management Project (TSDF), Visakhapatnam	400	8.5	M/s Ganesh Steel & Alloys Ltd., Kolkata, W.B.	2018-19	526.5	665.3	M/s Coastal Waste Management Project (TSDF), Visakhapatnam	304.5	81.8	M/s Ultra Tech Cements Ltd.	2019-20	1236	373.8	M/s Coastal Waste Management Project (TSDF), Visakhapatnam	1149.5	369.7	M/s Ultra Tech Cements Ltd.	59.2	M/s Arth Metallurgicals Pvt. Ltd., Raipur, C.G.
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2.	M/s Oil & Natural Gas Corporation (ONGC), Tatiphaka Refinery, East Godavari District PIN-533249, Andhra Pradesh	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981. Unit has Authorization under HOWM Rules, 2016 valid up to 30.09.2022.</p> <p>2. According to Authorization, unit is only permitted for collection, storage, treatment, transport and disposal of waste oil of quantity 150 LPA.</p> <p>3. There is no use/generation of spent catalyst in this refinery.</p> <p>4. As per From-10 (Annual return) information, unit has generated 84 KL and sold to M/s Saizrol Industries, Erode in 2016-17, 52.5 KL in 2017-18 which was stored only and 69.510 KL used oil which is sold to M/s Indo Petro Products, Cuddapah.</p>																												
3.	M/s Indian Oil Corporation	<p>1. Unit has submitted Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under</p>																												

	<p>Limited, Digboi Refinery, Digboi-786171</p>	<p>section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 31.03.2020. Unit has Authorization under HOWM Rules, 2016 valid up to 22.12.2021.</p> <ol style="list-style-type: none"> <li>2. Unit is permitted for generation, collection, storage and disposal up to 150 MT of spent catalyst (Category 4.2 of Schedule - I) annually to authorized re-processors/recyclers and TSDF.</li> <li>3. The unit has not provided TSDF membership information.</li> <li>4. The unit has not maintained daily generation of hazardous waste as per Form-3 of HOWM Rules, 2016.</li> <li>5. Annual Return (Form-4) provided by the unit. However, there was no generation of spent catalyst in the year 2017-18 &amp; 2018-19 and 56 MT spent catalyst has been generated in the year 2019-20. But the details of disposal of spent catalyst has not provided.</li> <li>6. As per manifest submitted it was found that in August 2016 unit has sent 68.332 MT of spent catalyst to M/s Ganesh Steel &amp; Alloys Pvt. Ltd., Kolkata, W.B. and 11.350 MT to M/s J S Pigments Pvt. Ltd., Hooghly.</li> </ol>
4.	<p>M/s Indian Oil Corporation Limited Guwahati Refinery, Noonmati Guwahati-781020, Assam</p>	<ol style="list-style-type: none"> <li>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 31.03.2021. Unit has Authorization under HOWM Rules, 2016 valid up to 26.01.2020. However, renewal of authorization applied on 01.10.2019.</li> <li>2. There is no TSDF in the state thus unit does not have any TSDF membership.</li> <li>3. The daily generation of spent catalyst has been not maintained as per Form-3, of HOWM Rules, 2016.</li> <li>4. Annual Return (Form-4) submitted by the unit but the documents were not maintained as per HOWM Rules, 2016 and details of spent catalysts management is as follows:</li> </ol>

<i>Year</i>	<i>Generated Quantity (MT)</i>	<i>Disposed Quantity (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>
2017-18	9.995	---	---	---
2018-19	16.97	52.716	M/s Arham Industries, Bharatpur	---
		2.086	M/s Ganesh Steel & Alloys Ltd., Kolkata	
2019-20	22.3	46.292	M/s Ganesh Steel & Alloys Ltd., Kolkata	---

5. The quantity of spent catalyst disposed as per manifest submitted for the year 2018 & 2019 and in Annual return are same.
6. However, the verification of generation and disposal quantity of spent catalyst was not done as the documents were not maintained as per HOWM Rules, 2016.

5. M/s Numaligarh Refinery P.O. Numaligarh Refinery Project Dist. Golaghat, Assam

1. Unit has Consent for Operate under section 25/26 of Water (Prevention & Control of Pollution) Act 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 valid up to 31.03.2020. But, Assam PCB vide notification dated 24.04.2020 extended validity of consent in their State for 03 months in wake of COVID 19. Application of renewal is submitted.
2. Unit has Authorization under HWM Rules, 2008 valid up to 07.01.2021.
3. There is no TSDF in the state thus unit does not have any TSDF membership.
4. The Form-3 has been maintained month wise, however daily generation of spent catalyst has been not maintained as per HOWM Rules, 2016
5. CPCB is unable to verify the details of spent catalysts as the documents were not maintained as per HOWM, Rules, 2016. However, details of spent catalysts from Annual Return (Form-4) submitted by the unit are as follows:

<i>Year</i>	<i>Generated Quantity (MT)</i>	<i>Disposed Quantity (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>

2017-18	97.840	--	Sold to Recycler	--
2018-19	NIL	--	--	--
2019-20	380	--	--	--

6. Quantity disposed as per manifest shows that spent catalyst were sold to M/s Arth Metallurgicals, Raipur, C.G. However, it was observed that some Manifests (Form-10) submitted does not mention date of disposal. The manifest (Form-10) has not been maintained as per HOWM, Rules 2016.

6. M/s Indian Oil Corporation Limited Bongaigaon refinery, PO Dhaligaon, Dist-Chirang Pin-783385, Assam

1. Unit has Consent for Operate under section 25/26 of Water (Prevention & Control of Pollution) Act 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 valid up to 31.03.2020. But, Assam PCB vide notification dated 24.04.2020 extended validity of consent in their State for 03 months in wake of COVID 19 i.e., up to 30.06. 2020.
2. Unit has Authorization under HOWM Rules, 2016 valid up to 06.08.2022. Unit has permission for generation, collection, transportation and storage of spent catalyst (Category 1.6 of Schedule I) of quantity 4.17 MT/month. Spent catalyst (Category 4.2 of Schedule I) is not generated as per authorization.
3. However, unit has mentioned in Form-3 and Form – 4 spent catalysts as Category 4.2 of Schedule I. Unit shall rectify the category of hazardous waste in authorization.
4. Unit has no TSDF membership as no TSDF exist in State of Assam.
5. The Form-3 has been maintained month wise, however daily generation of spent catalyst has been not maintained as per HOWM Rules, 2016.
6. Annual Return (Form-4) submitted by the unit and details of spent catalysts found are as follows:

<i>Year</i>	<i>Generated Quantity (MT)</i>	<i>Disposed Quantity (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>
2017-18	200.632	---	---	228.0 (27.368 previous stock)

2018-19	11.252	232.0	M/s Arth Metallurgical Pvt. Ltd., Raipur, C.G.	7.25
2019-20	20.375	---	---	27.625

7. Manifest submitted shows that spent catalyst were sold to M/s Arth Metallurgicals, Raipur, C.G. in November-December 2018 & February –May 2019.

7. M/s Indian Oil Corporation, Barauni Oil Refinery, Dist-Begusari-85114, Bihar

1. Unit has Consent for Operate under section 25/26 of Water (Prevention & Control of Pollution) Act 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 valid up to 30.11.2023. Unit has Authorisation under HOWM Rules, 2016 valid up to 06.01.2024.
2. Unit is permitted for generation, collection, storage, sale and disposal up to 1980 MT of spent catalyst (Category 4.2 of Schedule - I) annually to ACC Cements, Chaibasa for co-processing.
3. Unit has no TSDF membership.
4. Form-3 maintained by the unit showing month-wise generation of spent catalyst. Form-3 is not maintained as daily record. As per Form-3 unit has sent spent catalyst to M/s ACC Cements from April 2017 to August 2018, then both M/s ACC Cements & M/s Ambuja Cements in August 2018-September 2018 and from September 2018 to March 2020 to M/s Ambuja Cements only.
5. Annual Return (Form-4) submitted by the unit and details of spent catalysts are as follows:

Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)
2017-18	1980.8	2513	M/s ACC Cement Works	---
2018-19	1976.2	7252	M/s ACC Cement Works & M/s Ambuja Cements	1853.41
2019-20	969.8	824	M/s Ambuja Cements	1999.3

		<p>6. Unit has mentioned in Form -3 as well as in Form – 4 that other spent catalyst sent to authorized recycler but no details provided.</p> <p>7. As provided in Annual Return the quantity of generated spent catalyst doesn't match with the quantity of disposed quantity. Quantity disposed in 2018-19 which is 7252 MT was found very high against per permitted quantity of 1980 MT per annum in authorization.</p>																				
8.	M/s Reliance Industries Ltd., Meghpar, Dist. Jamnagar, Gujarat-361142	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 23.04.2021. Unit has Authorization under HOWM Rules, 2016 valid up to 23.01.2021.</p> <p>2. Unit is permitted for collection, storage, transportation and disposal up to 2000 MT of spent catalyst (Category 4.2 of Schedule - I) annually to TSDF and authorized re-processor.</p> <p>3. Unit has not submitted any TSDF membership.</p> <p>4. Form-3 maintained by the unit showing annual generation of spent catalyst. Form-3 is not maintained as daily record.</p> <p>5. As per Form – 3 and Annual Return (Form-4) submitted by the unit and details of spent catalysts are as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Generated Quantity (MT)</th> <th>Disposed Quantity (MT)</th> <th>Name of Disposal Facility</th> <th>Stock Stored (MT)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>195</td> <td>181.232</td> <td>Recyclers i.e., Rubamin Ltd. &amp;</td> <td>146.1</td> </tr> <tr> <td>2018-19</td> <td>2407.5</td> <td>1858.767</td> <td>Eurecat India catalyst Services Pvt. Ltd (Gujarat), Arham Industries &amp; Ravindra Heraeus (Rajasthan) and Refracast Metallurgical Pvt. Ltd. (Raipur C.G.)</td> <td>694.8</td> </tr> <tr> <td>2019-20</td> <td>1378</td> <td>204.99</td> <td>Recycler (Arth Metallurgicals Pvt. Ltd., Raipur, C.G.)</td> <td>1867.8 1</td> </tr> </tbody> </table> <p>6. Above details of recyclers have been verified by the Form – 10 (Manifest) submitted by the unit.</p>	Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)	2017-18	195	181.232	Recyclers i.e., Rubamin Ltd. &	146.1	2018-19	2407.5	1858.767	Eurecat India catalyst Services Pvt. Ltd (Gujarat), Arham Industries & Ravindra Heraeus (Rajasthan) and Refracast Metallurgical Pvt. Ltd. (Raipur C.G.)	694.8	2019-20	1378	204.99	Recycler (Arth Metallurgicals Pvt. Ltd., Raipur, C.G.)	1867.8 1
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2019-20	1378	204.99	Recycler (Arth Metallurgicals Pvt. Ltd., Raipur, C.G.)	1867.8 1																		

		7. Unit is permitted for 2000 MT of spent catalyst in authorization. However, it was observed that 2407.5 MT of spent catalyst generated in 2018-19 as per Annual Return submitted.																				
9.	M/s Reliance Industries Limited, "A Unit-Reliance Jamnagar SEZ" P.O. Reliance Greens, Motikhavadi, Jamnagar-361142,	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 29.12.2020. Unit has Authorisation under HOWM Rules, 2016 valid up to 29.12.2020.</p> <p>2. Unit is permitted for collection, storage, transportation and disposal up to 2200 MT of spent catalyst (Category 4.2 of Schedule - I) annually to TSDF and authorised re-processor.</p> <p>3. Unit has not submitted any TSDF membership.</p> <p>4. Form-3 maintained by the unit showing annual generation of spent catalyst. Form-3 is not maintained as daily record.</p> <p>5. As per Form – 3 and Annual Return (Form-4) submitted by the unit and details of spent catalysts are as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Generated Quantity (MT)</th> <th>Disposed Quantity (MT)</th> <th>Name of Disposal Facility</th> <th>Stock Stored (MT)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>215</td> <td>206.5</td> <td>Recyclers i.e., Rubamin Ltd., (Gujarat), Arham Industries (Rajasthan) and Refracast Metallurgical Pvt. Ltd. (Raipur), Star Alloy &amp; Chemicals Pvt. Ltd. (Korba) C.G. and in TSDF Saurashtra Enviro Projects</td> <td>146.1</td> </tr> <tr> <td>2018-19</td> <td>192</td> <td>200.05</td> <td>Recyclers i.e., Rubamin Ltd., (Gujarat), Refracast Metallurgical Pvt. Ltd. (Raipur), C.G. and in TSDF Saurashtra Enviro Projects)</td> <td>0.45</td> </tr> <tr> <td>2019-20</td> <td>730.5</td> <td>727.95</td> <td>Recycler i.e., Rubamin Ltd., (Gujarat) and (Arth Metallurgicals Pvt. Ltd., Raipur, C.G.)</td> <td>4.41</td> </tr> </tbody> </table>	Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)	2017-18	215	206.5	Recyclers i.e., Rubamin Ltd., (Gujarat), Arham Industries (Rajasthan) and Refracast Metallurgical Pvt. Ltd. (Raipur), Star Alloy & Chemicals Pvt. Ltd. (Korba) C.G. and in TSDF Saurashtra Enviro Projects	146.1	2018-19	192	200.05	Recyclers i.e., Rubamin Ltd., (Gujarat), Refracast Metallurgical Pvt. Ltd. (Raipur), C.G. and in TSDF Saurashtra Enviro Projects)	0.45	2019-20	730.5	727.95	Recycler i.e., Rubamin Ltd., (Gujarat) and (Arth Metallurgicals Pvt. Ltd., Raipur, C.G.)	4.41
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2018-19	192	200.05	Recyclers i.e., Rubamin Ltd., (Gujarat), Refracast Metallurgical Pvt. Ltd. (Raipur), C.G. and in TSDF Saurashtra Enviro Projects)	0.45																		
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		<p>6. Above details of recyclers have been verified by the Form – 10 (Manifest) submitted by the unit.</p> <p>7. The quantity of spent catalyst generated, disposed and then stored by the end of financial year showing imbalance in quantity.</p>																													
10.	M/s Essar Oil Limited, Vadinar Refinery, Po. Khambhaliya, Dist. Jamnagar, Gujarat-361305	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 16.09.2022 Unit has Authorization under HOWM Rules, 2016 valid up to 16.09.2022.</p> <p>2. Unit is permitted for collection, storage, transportation and disposal up to 8000 MT of spent catalyst (Category 4.2 of Schedule - I) annually through actual user/TSDF/Incineration.</p> <p>3. Unit has submitted TSDF membership with M/s Saurashtra Enviro Projects Pvt. Ltd.</p> <p>4. Form-3 maintained by the unit showing month-wise generation of spent catalyst. Form-3 is not maintained as daily record.</p> <p>5. As per Form – 3 and Annual Return (Form-4) submitted by the unit and details of spent catalysts are as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Generated Quantity (MT)</th> <th>Disposed Quantity (MT)</th> <th>Name of Disposal Facility</th> <th>Stock Stored (MT)</th> </tr> </thead> <tbody> <tr> <td rowspan="4">2017-18</td> <td rowspan="4">180.23</td> <td>337</td> <td>Rubamin Ltd., (Gujarat)</td> <td rowspan="4">39.83</td> </tr> <tr> <td>26</td> <td>M/s Vyankatesh Metals &amp; Alloys, Indore</td> </tr> <tr> <td>98</td> <td>M/s Refracast Metallurgicals Pvt. Ltd., Raipur, C.G.</td> </tr> <tr> <td>80.4</td> <td>M/s Bravo AgroTech, SurendraNagar</td> </tr> <tr> <td rowspan="2">2018-19</td> <td rowspan="2">2797</td> <td>58</td> <td>Rubamin Ltd., (Gujarat),</td> <td rowspan="2">2751</td> </tr> <tr> <td>28</td> <td>M/s Bravo AgroTech, SurendraNagar</td> </tr> <tr> <td rowspan="2">2019-20</td> <td rowspan="2">73</td> <td>1018.15</td> <td rowspan="2">Rubamin Ltd., (Gujarat)</td> <td rowspan="2">1713</td> </tr> <tr> <td>93.64</td> </tr> </tbody> </table> <p>6. Form – 10 (Manifest) details were submitted by the unit in tabulated form but no copies were provided for verification.</p>	Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)	2017-18	180.23	337	Rubamin Ltd., (Gujarat)	39.83	26	M/s Vyankatesh Metals & Alloys, Indore	98	M/s Refracast Metallurgicals Pvt. Ltd., Raipur, C.G.	80.4	M/s Bravo AgroTech, SurendraNagar	2018-19	2797	58	Rubamin Ltd., (Gujarat),	2751	28	M/s Bravo AgroTech, SurendraNagar	2019-20	73	1018.15	Rubamin Ltd., (Gujarat)	1713	93.64
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11.	M/s Indian Oil Corporation Limited , Gujarat Refinery, P.O. Jawaharnagar Vadodara-391320, Gujarat	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 30.09.2021 Unit has Authorization under HOWM Rules, 2016 valid up to 30.09.2021.</p> <p>2. Unit is permitted for disposal up to 1300 MT of spent catalyst (Category 4.2 of Schedule - I) monthly through registered recycler/TSDF.</p> <p>3. Unit has submitted TSDF membership certificate with M/s Nandesari Environment Control Ltd., Baroda &amp; M/s Bharuch Enviro Infrastructure Ltd., Ankleshwar.</p> <p>4. Form-3 maintained generation-wise for spent catalyst.</p> <p>5. Annual Return (Form-4) submitted by the unit and details of spent catalysts are as follows:</p> <table border="1" data-bbox="592 972 1366 1285"> <thead> <tr> <th><i>Year</i></th> <th><i>Generated Quantity (MT)</i></th> <th><i>Disposed Quantity (MT)</i></th> <th><i>Name of Disposal Facility</i></th> <th><i>Stock Stored (MT)</i></th> </tr> </thead> <tbody> <tr> <td rowspan="2">2017-18</td> <td rowspan="2">825.2</td> <td>170.74</td> <td>NECL (TSDF)</td> <td rowspan="2"></td> </tr> <tr> <td>962.53</td> <td>Recycler</td> </tr> <tr> <td rowspan="2">2018-19</td> <td rowspan="2">251</td> <td>216</td> <td>NECL (TSDF)</td> <td rowspan="2">945.48</td> </tr> <tr> <td>84.315</td> <td>Recycler</td> </tr> <tr> <td rowspan="2">2019-20</td> <td rowspan="2">430</td> <td>134.595</td> <td>NECL (TSDF)</td> <td rowspan="2">633</td> </tr> <tr> <td>607.885</td> <td>Recycler</td> </tr> </tbody> </table> <p>6. Form – 3 and manifest shows spent catalyst disposal to the following recyclers i.e., M/s Asian Barrels, Ankleshwar, M/s Hindustan Enviro Life Protection Services Limited, Ahmedabad, M/s Ganesh Steel and Alloy Limited, Kolkata, M/s Rubamin Limited, Panchmahal, Vadodara, M/s Shree Sita Ram Industry Private Limited, Jammu, M/s Refracast Metallurgicals Private Limited, Chhattisgarh, M/s Janta Tin Supply Co., Ahmedabad.</p>	<i>Year</i>	<i>Generated Quantity (MT)</i>	<i>Disposed Quantity (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>	2017-18	825.2	170.74	NECL (TSDF)		962.53	Recycler	2018-19	251	216	NECL (TSDF)	945.48	84.315	Recycler	2019-20	430	134.595	NECL (TSDF)	633	607.885	Recycler
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		607.885	Recycler																									
12.	M/s Indian Oil Corporation Limited, Panipat Refinery, Village Baholi ,Refinery	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 30.09.2021 Unit has Authorisation under HOWM Rules, 2016 valid up to 30.09.2021.</p>																										

	Road, Panipat-132410, Haryana	<p>2. Unit is permitted for disposal up to 600 MT of spent catalyst (Category 4.2 of Schedule - I) annually at onsite SLF and 1200 MT to Authorised recycler.</p> <p>3. Unit has TSDF membership with M/s Gujarat Enviro Protection &amp; Infrastructure (Haryana) Pvt. Ltd. A copy of work order is provided but membership certificate is not submitted.</p> <p>4. Form-3 maintained month-wise generation of spent catalyst and only 2019-20 record is provided.</p> <p>5. Annual Return (Form-4) submitted by the unit and details of spent catalysts are as follows:</p> <table border="1" data-bbox="603 741 1417 1055"> <thead> <tr> <th>Year</th> <th>Quantity Generated (MT)</th> <th>Quantity Disposed (MT)</th> <th>Name of Disposal Facility</th> <th>Stock Stored (MT)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>619</td> <td>440</td> <td>Recycler</td> <td>179</td> </tr> <tr> <td>2018-19</td> <td>1648.75</td> <td>311.9</td> <td>Recycler</td> <td>1835.75</td> </tr> <tr> <td rowspan="2">2019-20</td> <td rowspan="2">1350</td> <td>550</td> <td>Captive SLF</td> <td rowspan="2">1950</td> </tr> <tr> <td>592.2</td> <td>Recycler</td> </tr> </tbody> </table> <p>6. Manifest verification found that spent catalyst sent to following recyclers i.e., Arham Industries Limited, Refracast Metallurgical Pvt. Ltd., Rubamin Limited - Metal Unit, Bravo Agrotech, Vyankatesh metals and Alloys.</p>	Year	Quantity Generated (MT)	Quantity Disposed (MT)	Name of Disposal Facility	Stock Stored (MT)	2017-18	619	440	Recycler	179	2018-19	1648.75	311.9	Recycler	1835.75	2019-20	1350	550	Captive SLF	1950	592.2	Recycler
Year	Quantity Generated (MT)	Quantity Disposed (MT)	Name of Disposal Facility	Stock Stored (MT)																				
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2018-19	1648.75	311.9	Recycler	1835.75																				
2019-20	1350	550	Captive SLF	1950																				
		592.2	Recycler																					
13.	M/s Mangalore Refineries and Petroleum Ltd., Kuthethur, Mangalore Taluk, D K District, Karnataka	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 30.06.2021 Unit has Authorisation under HOWM Rules, 2016 valid up to 30.06.2021.</p> <p>2. Unit has been permitted different quantities of generation of spent catalyst (category 4.2) of various operational units for different time period and authorized for disposal to KSPCB authorized TSDF or SPCB authorized co-processor/recycler.</p> <p>3. Unit has no TSDF membership.</p> <p>4. Form-3 submitted by the unit is maintained generation wise and from each unit operation process.</p> <p>5. As per Annual return (Form-4) submitted, details provided for spent catalyst generation and disposal is given below:</p>																						

Year	Opening Stock (MT)	Quantity Generated (MT)	Quantity Disposed (MT)	Name of Disposal Facility	Stock Stored (MT)
2017-18	---	994.93	12.8	Co-processing	670.4
			750.64	Recycler	
2018-19	670.4	2426.71	2366	Co-processing	174.58
			552.01	Recycler	
2019-20	174.58	1453	975	Co-processing	197.72
			453.9	Recycler	

6. The unit disposing the generated spent catalyst to recyclers/utilizers such as Rubamin Ltd. & Eurecat India Catalyst Services Pvt. Ltd. Gujarat, Arth Metallurgicals Pvt. Ltd. C.G. and Vyankatesh Metals and Alloys Pvt. Ltd. M.P.
7. For co-processing in cement kiln, unit is sending spent catalyst to ACC Ltd., Gulbarga and J K Cements, Muddapur in Karnataka.

14.	M/s BPCL Kochi Refinery, PB No. 2, Ambalamugal, Kochi, Ernakulam – 682 302 Kerala	<ol style="list-style-type: none"> <li>1. Unit has not submitted Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981. Unit has not submitted Authorisation under HOWM Rules, 2016. <i>However, unit mention in covering letter that they have submitted CTO and Authorisation.</i></li> <li>2. Unit has TSDF membership with M/s Kerala Enviro Infrastructure Ltd. A copy of agreement is provided but membership certificate is not submitted.</li> <li>3. Form-3 maintained generation-wise data of spent catalyst and only 2017-18 &amp; 2018-19 record is provided. Form-3 not maintained as daily record.</li> <li>4. Annual Return (Form-4) submitted by the unit and details of spent catalysts are as follows:</li> </ol>
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Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)
2017-18	985.06	251.135	TSDF	179
		733.84	Recycler	
2019-20	1854.48	833.89	TSDF	916.84
		104.55	Recycler (M/s Shree Sitaram Industries Pvt. Ltd., M/s Refracast Metallurgical Pvt. Ltd. and M/s Ganesh Steel & Alloys Ltd.	

5. Annual return (Form-4) 2018-19 is not provided.
6. Unit informed that manifest shall be sent through courier but CPCB has not received any manifest (Form-10) yet.

15. M/s Bharat Oman Refineries Limited (BORL), Administrative building Refinery complex, Post BORL Residential complex, BINA, Dist : Sagar - 470124, Madhya Pradesh

1. Unit has Consent for Operate under section 25/26 of Water (Prevention & Control of Pollution) Act 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 valid up to 31.12.2020. Unit has Authorization under HOWM Rules, 2016.
2. Unit is permitted for disposal up to 1500 MT of spent catalyst (Category 4.2 of Schedule - I) annually to SPCB/CPCB authorized recycler/re-processors.
3. Unit has TSDF membership with Madhya Pradesh Waste Management Project. Membership certificate submitted.
4. Form-3 maintained generation-wise data of spent catalyst. Form-3 not maintained as daily record.
5. As per Form-3 and Annual Return (Form-4) submitted by the unit, the details of spent catalysts are as follows:

Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility
2017-18	425.33	259.23	M/s Vyankatesh Metals & Alloys Pvt. Ltd.
		211.1	M/s Ganesh Steel & Alloys Ltd.
2018-19	1180	1180	M/s Refracast Metallurgical Pvt. Ltd.
2019-20	425.37	60.09	M/s Ravindra Heraeus Pvt. Ltd.
		57.3	M/s Hindustan Platinum Ltd.
		284.32	M/s Vyankatesh Metals & Alloys Pvt. Ltd.

		26.33	M/s Grishma Metals Technology, Palghar, Maharashtra																																		
		6. Manifest (Form-10) for above disposal to recycler has been submitted by the unit.																																			
16.	M/s Hindustan Petroleum Corporation Ltd., Mahul, Chembur, Mumbai -400074, Maharashtra	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 31.08.2020. Unit has Authorization under HWM Rules, 2008 valid up to 31.08.2020.</p> <p>2. Unit is permitted for disposal up to 4332 MT of spent catalyst (Category 4.2 of Schedule-I) annually to CHWTSDF only.</p> <p>3. Unit has submitted copy of work order of Mumbai Waste Management Limited (MWML). Membership certificate not submitted.</p> <p>4. Form-3 maintained month-wise generation data of spent catalyst. Form-3 not maintained as daily record.</p> <p>5. Annual Return (Form-4) submitted by the unit, the details of spent catalysts are as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Quantity Generated (MT)</th> <th>Quantity Disposed (MT)</th> <th>Name of Disposal Facility</th> </tr> </thead> <tbody> <tr> <td rowspan="4">2017-18</td> <td rowspan="4">1910.6</td> <td>1846.1</td> <td>MWML</td> </tr> <tr> <td>45.1</td> <td>M/s Team Eleven Pvt. Ltd., Taloja</td> </tr> <tr> <td>9.1</td> <td>M/s Hind Traders, MP</td> </tr> <tr> <td>10.3</td> <td>M/s National Traders, Mumbai</td> </tr> <tr> <td rowspan="5">2018-19</td> <td rowspan="5">2054.52</td> <td>30.57</td> <td>M/s National Traders, Mumbai</td> </tr> <tr> <td>15.95</td> <td>JBS Mines</td> </tr> <tr> <td>13.76</td> <td>M/s Arth Metals &amp; Metallurgicals</td> </tr> <tr> <td>27.99</td> <td>M/s Team Eleven Pvt. Ltd., Taloja</td> </tr> <tr> <td>1966.3</td> <td>MWML</td> </tr> <tr> <td rowspan="3">2019-20</td> <td rowspan="3"></td> <td>367.7</td> <td>M/s Rubamin Ltd.</td> </tr> <tr> <td>82.7</td> <td>M/s Refracast Pvt. Ltd.</td> </tr> <tr> <td>1748.8</td> <td>MWML</td> </tr> </tbody> </table> <p>6. Manifest (Form-10) for above disposal to recyclers &amp; TSDF has been submitted by the unit.</p>		Year	Quantity Generated (MT)	Quantity Disposed (MT)	Name of Disposal Facility	2017-18	1910.6	1846.1	MWML	45.1	M/s Team Eleven Pvt. Ltd., Taloja	9.1	M/s Hind Traders, MP	10.3	M/s National Traders, Mumbai	2018-19	2054.52	30.57	M/s National Traders, Mumbai	15.95	JBS Mines	13.76	M/s Arth Metals & Metallurgicals	27.99	M/s Team Eleven Pvt. Ltd., Taloja	1966.3	MWML	2019-20		367.7	M/s Rubamin Ltd.	82.7	M/s Refracast Pvt. Ltd.	1748.8	MWML
Year	Quantity Generated (MT)	Quantity Disposed (MT)	Name of Disposal Facility																																		
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		1748.8	MWML																																		

		7. It was observed that unit is authorized for disposal of spent catalyst only to TSDF but unit has provided some spent catalyst to recyclers/re-processors also.																												
17.	M/s Bharat Petroleum Corporation Limited Mumbai Refinery, Mahul, Mumbai 400074, Maharashtra	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 31.08.2021. Unit has Authorization under HOWM Rules, 2016 valid up to 31.08.2021.</p> <p>2. Unit is permitted for disposal up to 2538.75 MT of spent catalyst (Category 4.2 of Schedule-I) annually to CHWTSDF/authorized re-processor.</p> <p>3. Unit has membership with Mumbai Waste Management Limited (MWML). Membership certificate submitted.</p> <p>4. Form-3 maintained generation-wise data of spent catalyst. Form-3 not maintained as daily record.</p> <p>5. Annual Return (Form-4) submitted by the unit and the details of spent catalysts are as follows:</p> <table border="1"> <thead> <tr> <th><i>Year</i></th> <th><i>Generated Quantity (MT)</i></th> <th><i>Disposed Quantity (MT)</i></th> <th><i>Name of Disposal Facility</i></th> </tr> </thead> <tbody> <tr> <td rowspan="5">2017-18</td> <td rowspan="5">1315.21</td> <td>852.74</td> <td>MWML</td> </tr> <tr> <td>74.33</td> <td>M/s Rajkob Industries</td> </tr> <tr> <td>223.33</td> <td>M/s Refracast Pvt. Ltd.</td> </tr> <tr> <td>81.31</td> <td>M/s Arham Industries</td> </tr> <tr> <td>83.49</td> <td>M/s Arth Metals &amp; Metallurgicals</td> </tr> <tr> <td rowspan="2">2018-19</td> <td rowspan="2">458.88</td> <td>426.37</td> <td>MWML</td> </tr> <tr> <td>32.51</td> <td>M/s Refracast Pvt. Ltd.</td> </tr> <tr> <td rowspan="2">2019-20</td> <td rowspan="2">97.47</td> <td>367.7</td> <td>MWML</td> </tr> <tr> <td>30.04</td> <td>M/s Refracast Pvt. Ltd.</td> </tr> </tbody> </table> <p>6. Manifest (Form-10) for above disposal to recyclers &amp; TSDF has been submitted by the unit for year 2019 only.</p> <p>7. Annual return for 2019-20 shows incomplete generation of spent catalyst.</p> <p>8. In authorization only spent catalyst of category 4.2 mentioned but annual return filed by the unit shows various other hazardous wastes (such as spent carbon, spent clay and charcoal, molecular sieves, etc.) generated from manufacturing process being included in same category.</p>	<i>Year</i>	<i>Generated Quantity (MT)</i>	<i>Disposed Quantity (MT)</i>	<i>Name of Disposal Facility</i>	2017-18	1315.21	852.74	MWML	74.33	M/s Rajkob Industries	223.33	M/s Refracast Pvt. Ltd.	81.31	M/s Arham Industries	83.49	M/s Arth Metals & Metallurgicals	2018-19	458.88	426.37	MWML	32.51	M/s Refracast Pvt. Ltd.	2019-20	97.47	367.7	MWML	30.04	M/s Refracast Pvt. Ltd.
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18.	M/s Indian Oil Corporation, IOCL Paradip Refinery, P.O. Jhimani, Via-Kujang, Jagatsinghpur-754141,	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 31.03.2021. Unit has Authorization under HOWM Rules, 2016 valid up to 31.03.2024.</p> <p>2. Unit is permitted for disposal up to 2500 MT of spent catalyst (Category 4.2 of Schedule-I) annually to CHWTSDF, Jajpur/sale to actual users authorized by OSPCB/disposal in own SLF.</p> <p>3. No TSDF membership obtained as unit has captive Secured Landfill.</p> <p>4. Form-3 maintained month-wise generation data of spent catalyst provided for year 2019 only. Form-3 not maintained as daily record.</p> <p>5. Annual Return (Form-4) submitted by the unit and the details of spent catalysts are as follows:</p> <table border="1" data-bbox="571 1081 1377 1597"> <thead> <tr> <th>Year</th> <th>Generated Quantity (MT)</th> <th>Disposed Quantity (MT)</th> <th>Name of Disposal Facility</th> </tr> </thead> <tbody> <tr> <td rowspan="4">2017-18</td> <td rowspan="4">489.5</td> <td>209.5</td> <td>Stored in disposal area for disposal through co-processing</td> </tr> <tr> <td>22</td> <td>Incineration and ash disposal in SLF</td> </tr> <tr> <td>250</td> <td>Disposed in own SLF</td> </tr> <tr> <td>8</td> <td>Disposed through recycler</td> </tr> <tr> <td>2018-19</td> <td>1095</td> <td>1095</td> <td>Co-processing in cement industry</td> </tr> <tr> <td rowspan="2">2019-20</td> <td rowspan="2">2484</td> <td>1497.4</td> <td>Disposed in own SLF</td> </tr> <tr> <td>986.9</td> <td>Co-processing in cement industry</td> </tr> </tbody> </table> <p>6. Manifest (Form-10) for above disposal for co-processing in M/s Shree Cement has been submitted by the unit.</p>	Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	2017-18	489.5	209.5	Stored in disposal area for disposal through co-processing	22	Incineration and ash disposal in SLF	250	Disposed in own SLF	8	Disposed through recycler	2018-19	1095	1095	Co-processing in cement industry	2019-20	2484	1497.4	Disposed in own SLF	986.9	Co-processing in cement industry
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19.	M/s HPCL-Mittal Energy Limited, (Guru Gobind Singh Refinery), Village Phullo Khari, Taluka: Talwandiaboo.	<p>1. Unit has Consent for Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 31.03.2022. Unit has Authorization under HOWM Rules, 2016 valid up to 30.07.2020.</p>																								

	Distt. Bathinda, PIN-151301 , Punjab	<ol style="list-style-type: none"> <li>2. Unit is permitted for disposal up to 2500 MT of spent catalyst (Category 4.2 of Schedule-I) annually for Generation, Collection, Storage, Recycling, Disposal.</li> <li>3. No TSDF membership obtained. Unit is sending hazardous wastes to approved vendors, for co-processing in cement industries/captive Secured Landfill.</li> <li>4. Form-3 maintained month-wise generation data of spent catalyst provided. Form-3 not maintained as daily record. Disposal date and quantity to authorized recyclers has mentioned in Form-3.</li> <li>5. Annual Return (Form-4) submitted by the unit and the details of spent catalysts are as follows:           <table border="1" data-bbox="611 853 1442 1196"> <thead> <tr> <th>Year</th> <th>Generated Quantity (MT)</th> <th>Disposed Quantity (MT)</th> <th>Name of Disposal Facility</th> <th>Stock Stored (MT)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">2017-18</td> <td rowspan="2">1779.184</td> <td>616.926</td> <td>M/s Lakhdatta Petrochem</td> <td rowspan="2"></td> </tr> <tr> <td>1162.258</td> <td>M/s Arth Metallurgicals Pvt Ltd.</td> </tr> <tr> <td>2018-19</td> <td>82.22</td> <td>42.22</td> <td>M/s Ravindra Heraeus Pvt. Ltd</td> <td>40</td> </tr> <tr> <td>2019-20</td> <td>770.71</td> <td>810.71</td> <td>Mittal Pigments Pvt. Ltd. Kota</td> <td></td> </tr> </tbody> </table> </li> <li>6. Manifest (Form-10) for above disposal has been submitted by the unit</li> </ol>	Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)	2017-18	1779.184	616.926	M/s Lakhdatta Petrochem		1162.258	M/s Arth Metallurgicals Pvt Ltd.	2018-19	82.22	42.22	M/s Ravindra Heraeus Pvt. Ltd	40	2019-20	770.71	810.71	Mittal Pigments Pvt. Ltd. Kota	
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20.	M/s Chennai Petroleum Corporation Ltd, Manali Maanali village, Madhavaram Taluk, Tiiruvallur District, Tiiruvallur - 600068, Tamil Nadu	<ol style="list-style-type: none"> <li>1. Unit has provided in the reply that they have Consent to Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 31.03.2020. Unit has Authorization valid up to 04.11.2019. But copy of CTO and Authorization not submitted.</li> <li>2. Unit informed that online application for renewal of consent and authorization is submitted to TNPCB.</li> <li>3. Unit has membership with Industrial Waste Management Association (IWMA). Unit submitted that for disposal of hazardous waste to Tamil Nadu Waste Management Limited (TNWML), the industry has to be member of IWMA.</li> </ol>																						

		<p>4. Form-3 maintained month-wise generation data of spent catalyst provided. Form-3 not maintained as daily record.</p> <p>5. Annual Return (Form-4) submitted by the unit and the details of spent catalysts are as follows:</p> <table border="1"> <thead> <tr> <th><i>Year</i></th> <th><i>Generated Quantity (MT)</i></th> <th><i>Disposed Quantity (MT)</i></th> <th><i>Name of Disposal Facility</i></th> <th><i>Stock Stored (MT)</i></th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>---</td> <td>173.5</td> <td>TNWML-TSDF</td> <td>---</td> </tr> <tr> <td>2018-19</td> <td>130</td> <td>124.8</td> <td>TNWML-TSDF</td> <td>5.2</td> </tr> </tbody> </table> <p>6. Annual Return (Form 4) for 2019-20 has not been filed by the unit yet. Annual return filed in 2017-18 does not mention quantity of generation, only disposal.</p> <p>7. Manifest (Form-10) for above disposal has been submitted by the unit and it was found that unit is disposing spent catalyst in TNWML.</p>	<i>Year</i>	<i>Generated Quantity (MT)</i>	<i>Disposed Quantity (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>	2017-18	---	173.5	TNWML-TSDF	---	2018-19	130	124.8	TNWML-TSDF	5.2
<i>Year</i>	<i>Generated Quantity (MT)</i>	<i>Disposed Quantity (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>													
2017-18	---	173.5	TNWML-TSDF	---													
2018-19	130	124.8	TNWML-TSDF	5.2													
21.	M/s Chennai Petroleum Corporation Ltd, Cauvery Basin Refinery, Panangudi, Nagapattinam District-611002, Tamil Nadu	<p>1. Unit has not submitted Consent to Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 and Authorization under HOWM Rules, 2016.</p> <p>2. Quantity of permitted hazardous wastes is difficult to find in absence of CTO and Authorization.</p> <p>3. Unit has no membership with any TSDF.</p> <p>4. Only Form-3 and Form-4 submitted by the unit which do not include spent catalyst generation and disposal details.</p> <p>5. No Manifest provided. Unit informed that no hazardous waste disposed to any recycler.</p>															
22.	M/s Indian Oil Corporation Limited, , P.O.Mathura Refineries, Mathura-281006, Uttar Pradesh	<p>1. Unit has Consent to Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981 valid up to 31.12.2021. Unit has Authorization valid up to 28.06.2022.</p> <p>2. Unit is permitted for disposal up to 250 MT of spent catalyst (Category 4.2 of Schedule-I) annually to approved metal reclaimers through MSTC/TSDF.</p>															

		<p>3. Unit has submitted copy of work order with Bharat Oil and Waste Management Limited, U.P. No membership certificate submitted.</p> <p>4. Form-3 maintained month-wise generation data of spent catalyst provided. Form-3 not maintained as daily record.</p> <p>5. Annual Return (Form-4) submitted by the unit and the details of spent catalysts are as follows:</p> <table border="1" data-bbox="598 577 1406 1122"> <thead> <tr> <th>Year</th> <th>Generated Quantity (MT)</th> <th>Disposed Quantity (MT)</th> <th>Name of Disposal Facility</th> <th>Stock Stored (MT)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>NIL</td> <td>---</td> <td>---</td> <td>---</td> </tr> <tr> <td>2018-19</td> <td>768.82</td> <td>768.82</td> <td>M/s Rubamin Limited, Gujarat, M/s Vyankatesh Metals and Alloys Pvt. Ltd., M/s Hindustan Platinum Pvt. Ltd., Navi Mumbai, M/s Arham Industries, Rajasthan</td> <td>---</td> </tr> <tr> <td>2019-20</td> <td>237.06</td> <td>9.06</td> <td>M/s Bharat Oil &amp; Waste Management Limited</td> <td>227.99</td> </tr> </tbody> </table> <p>6. Annual Return (Form 4) for 2018-19 shows generation of spent catalyst more than permitted in authorization.</p> <p>7. Manifest (Form-10) for above disposal has been submitted by the unit.</p>	Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)	2017-18	NIL	---	---	---	2018-19	768.82	768.82	M/s Rubamin Limited, Gujarat, M/s Vyankatesh Metals and Alloys Pvt. Ltd., M/s Hindustan Platinum Pvt. Ltd., Navi Mumbai, M/s Arham Industries, Rajasthan	---	2019-20	237.06	9.06	M/s Bharat Oil & Waste Management Limited	227.99
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2019-20	237.06	9.06	M/s Bharat Oil & Waste Management Limited	227.99																		
23.	M/s Indian Oil Corporation Limited- P.O. Haldia Refinery, Dist. Medinipore (E). Pin 721606 , West Bengal	<p>1. Unit has not submitted Consent to Operate under section 25/26 of Water (Prevention &amp; Control of Pollution) Act 1974 and under section 21 of Air (Prevention &amp; Control of Pollution) Act 1981. It was found in Form-4, unit has Authorization dated 15.12.2015. However, copy of CTO and authorization not submitted.</p> <p>2. Unit has submitted membership certificate with West Bengal Waste Management Limited (WBWML).</p> <p>3. Form-3 maintained generation-wise data of spent catalyst provided. Form-3 not maintained as daily record.</p> <p>4. Annual Return (Form-4) submitted by the unit and the details of spent catalysts are as follows:</p>																				

<i>Year</i>	<i>Generated Quantity (MT)</i>	<i>Disposed Quantity (MT)</i>	<i>Name of Disposal Facility</i>	<i>Stock Stored (MT)</i>
2017-18	1387.96 (including 74.17 MT of Previous stock)	1211.48	WBWML	250.65
2018-19	1289.1	1382.22	WBWML	150
2019-20	1731.14	1194.59 312.14	WBWML Recyclers (Ganesh Steel & Alloys, Arth Metallurgicals Pvt. Ltd., Refracast Metallurgical Pvt. Ltd. & KGN Enterprises)	374.41

5. Manifest (Form-10) for above disposal has been submitted by the unit.

### **Actions taken by the Committee:**

**First meeting of committee** - The first virtual meeting of the Committee constituted of members nominated by the CPCB and 5 concerned SPCBs/PCCs (Punjab, Haryana, West Bengal, Assam and Delhi) for preparation of factual and action taken report in compliance of above mentioned NGT matter was held on 02.07.2020.

To verify the claims made by the applicant in OA 67/2020 w.r.t. handling, management and disposal of spent catalyst without authorisation under HOWM Rules, 2016 in different parts of the country, the Committee has proposed that there is need to visit 05 oil refineries including Panipat Refinery and Digboi Refinery and 05 re-processors including M/s Lakhdata Petro Chemicals and M/s Ganesh Steel and Alloys Limited in the month of August 2020 before submission of factual action taken report in the Hon'ble NGT.

**Second meeting of committee** - The second virtual meeting of the Committee was held on 10.08.2020 to discuss about the course of action to carry out physical visits. It was decided that Oil Refineries (Generator of spent catalyst) and Recyclers/Re-processors of Spent Catalyst shall be physically visited and verified by the committee for preparation of factual and action taken report.

But, due to COVID-19 pandemic, members of the Committee was in the opinion that it is difficult to carry out joint physical visits of large number of oil refineries and recyclers/re-

processors of Spent Catalyst. Therefore, it was proposed to carry out the physical visit scheduled as below:

S. No.	Name of Unit	Date of Visit	Committee Member
1.	M/s IOCL, Panipat Refinery Panipat (Haryana)	18.08.2020	Sh. Anil C. Ranveer, CPCB, Dr. Siddhartha Gautam, DPCC,
2.	M/s HPCL Refinery, Bhatinda, Punjab	21.08.2020- 22.08.2020	Sh. Shailender Arora, HSPCB Sh. Vijay Gupta, PPCB
	M/s Lakhdatta Petrochem, Bhatinda, Punjab		
3.	M/s Ganesh Steel & Alloys Pvt. Ltd., Kolkata	12.08.2020	Sh. Sisir Mondal WBPCB & RD-CPCB, Kolkata
4.	M/s IOCL, Digboi Refinery, Digboi, Assam.	21.08.2020	Sh. Pankaj Kr. Dutta, APCB

The Committee also suggested that, other members who may not be able to join the physical visit shall attend the visit through video conferencing for necessary actions.

The committee also recommended to finalize the report before 30 August, 2020 which is to be submitted before Hon'ble NGT.

**Third meeting of committee** - The third virtual meeting of the Committee was held on 02.09.2020 for preparation and finalization of factual and action taken report in the matter of OA 67/2020 w.r.t. handling, management and disposal of spent catalyst.

### **Field Observations:**

**In wake of COVID-19** pandemic situation and lockdown conditions prevailing in several states for its containment, CPCB in communication with committee members carried out few industries inspection and factual observations were given as below:

In compliance to the Hon'ble NGT order dated 20.03.2020, inspection was carried out by the committee comprising the officials from the Central Pollution Control Board, Punjab Pollution Control Board, West Bengal Pollution Control Board, Assam Pollution Control Board and Delhi Pollution Control Committee, to verify the complaints regarding unscientific handling, management and disposal of spent catalyst generated from various processes of the oil refineries.

During visits, following oil refineries were inspected randomly and the observations of the committee are as follows:

Sr. No.	Name & address of unit	Observations
(1)	M/s Indian Oil Corporation Limited, Panipat Refinery, Panipat, Haryana	<p>The unit was inspected on 18.08.2020 by Anil C. Ranveer (AD, CPCB) and Shailendra Arora (RO, HSPCB), whereas other members of committee were requested to join virtually.</p> <p>a) The unit has a Refinery Division and also Naphtha Cracker Division. Spent catalyst generated from refinery process categorized as 4.2 in Schedule I and from petrochemical process is 1.6 in Schedule I of HOWM Rules, 2016.</p> <p>b) Units have valid Consents and authorizations. But it was observed that Naphtha cracker division is generating and disposing additional spent catalyst quantity than permitted in their authorization.</p> <p>c) Records of spent catalyst generation was maintained on monthly basis. Hazardous waste generation records were not maintained as per Form-3 of HOWM, Rules, 2016.</p> <p>d) The spent catalyst storage area was not marked with any sign of hazardous waste storage site in Naphtha Cracker Division. Moreover, the shed area provided was not appropriate in size. Bags and Drums were also not properly labelled as per Rule 17 of HOWM Rules, 2016.</p> <p>e) The unit is selling their spent catalyst to authorized recyclers/utilizers through e-auction on MSTC. The unit has prepared their own SoP for handling and management of hazardous waste. This SoP has maintained timeline of disposing hazardous waste in 90 days to recyclers/utilizers or captive SLF.</p> <p>f) During inspection it was found that, approximately 1906 MT of spent catalyst were stored in the premises for more</p>

		<p>than 90 days without intimation/permission of HSPCB which is a violation of Rule 8 of HOWM Rules, 2016.</p> <p>g) The unit has captive SLF of capacity 17,400 m<sup>3</sup>.</p> <p>h) Detail inspection report of IOCL Panipat Refinery and Naphtha cracker Division is attached as <b>Annexure-V</b>.</p>
(2)	M/s IOCL, Digboi Refinery, Assam	<p>The unit was inspected on 20.08.2020 by Pankaj Kumar Dutta (EE, APCB), whereas other members of committee were requested to join virtually.</p> <p>a) The unit is a Refinery generating spent catalyst of category 4.2 in Schedule I of HOWM Rules, 2016.</p> <p>b) The unit have valid Consents and authorizations for generation and disposal of 150 MT per annum spent catalyst.</p> <p>c) In year 2019-20, the unit generated 61.32 MT of spent catalyst and stored 81.89 MT till date (including 20.57 MT previous stock).</p> <p>d) As per manifest and annual return, it was found that unit has last disposed spent catalyst in August 2016, therefore keeping rest of the spent catalyst more than period of 90 days without intimation/permission of APCB which is a violation of Rule 8 of HOWM Rules, 2016.</p> <p>e) The spent catalyst of Digboi refinery which is category 4.2 of Schedule I of HOWM Rules, 2016 were disposed to M/s Ganesh Steel and Alloys Limited, Kolkata authorized by WBPCB for utilization of gasifier slag and spent catalyst category 18.1 of Schedule I of HOWM Rules, 2016.</p> <p>f) Detail inspection report of IOCL Digboi Refinery is attached as <b>Annexure – VI</b>.</p>
(3)	HPCL-Mittal Energy Limited, Bhatinda, Punjab	<p>The unit was inspected on 22.08.2020 by Anil C. Ranveer (AD, CPCB), Dr. Siddhartha Gautam (EE, DPCC, Delhi) and Vijay Gupta (RO, PPCB) whereas other members of committee were requested to join virtually.</p>

		<p>a) The unit is a Refinery generating spent catalyst of category 4.2 in Schedule I of HOWM Rules, 2016.</p> <p>b) The unit have valid Consents and authorizations for generation and disposal of 2500 MT per annum spent catalyst.</p> <p>c) The unit is disposing its spent catalyst to authorized recyclers/utilizers through e-auction on MSTC.</p> <p>d) Records of spent catalyst generation was maintained on monthly basis. Hazardous waste generation records were not maintained as per Form-3 of HOWM, Rules, 2016.</p> <p>e) The spent catalyst storage area was not marked with any sign of hazardous waste storage site. Storage drums were also not properly labelled as per Rule 17 of HOWM Rules, 2016.</p> <p>f) The unit has captive SLF of capacity 20,000 MT. ETP chemical sludge and oil &amp; grease skimming residue (Category 35.3 and 35.4 respectively of Schedule of HOWM Rules, 2016) are being disposed in captive SLF.</p> <p>g) Detail inspection report of HPC-Mittal Energy Limited Refinery is attached as <b>Annexure- VII</b>.</p>
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Other than oil refineries, the committee also carried out random inspection of spent catalyst recyclers/re-processors/utilizers and the observations of the committee are as follows:

Sr. No.	Name & address of unit	Observations
i.	M/s Ganesh Steel and Alloys Limited, Hooghly, West Bengal	<p>The unit was inspected on 12.08.2020 by Abhijit Chattopadhyay (RD, CPCB-Kolkata), Sandeep Roy (Sc. D, CPCB-Kolkata) and Sisir Mondal (AEE, WBPCB) whereas other members of committee were requested to join virtually.</p> <p>a) The unit is identified as Red category industry and also recycler/re-processors of hazardous waste. During inspection unit was in operation.</p> <p>b) The unit have valid Consent and Authorization under HOWM Rules, 2016 for utilization of gasifier slag and spent catalyst</p>

		<p>generated during production of ammonia in nitrogenous fertilizer industry as per SoP published by CPCB in June 2017.</p> <p>c) The unit is procuring hazardous waste (gasifier slag and spent catalyst) from M/s Gujarat Narmada Valley Fertilizer Company Limited and from some oil refineries also.</p> <p>d) The unit is not authorized to procure spent catalyst (category 4.2 of Schedule I of HOWM Rules, 2016) from oil refineries.</p> <p>e) Records of hazardous waste storage were maintained as per Form-3 and labelling were followed as per HOWM, Rules, 2016.</p> <p>f) The unit due to its utilization process generating hazardous wastes such as process slag and non-recyclable metallic dust which are being disposed through M/s West Bengal Waste Management Limited as per authorization condition.</p> <p>g) Detail inspection report of Ganesh Steel and Alloys Limited is attached as <b>Annexure-VIII</b>.</p>
ii.	M/s Lakhdata Petrochem, Bhatinda, Punjab	<p>The unit was inspected on 21.08.2020 by Anil C. Ranveer (AD, CPCB), Dr. Siddhartha Gautam (EE, DPCC, Delhi), Vijay Gupta (RO, PPCB) and Ramandeep Sidhu (AEE, PPCB) whereas other members of committee were requested to join virtually.</p> <p>a) The unit is recycler/re-processors of hazardous waste and identified as Red category industry. During inspection unit was not in operation.</p> <p>b) The unit have valid Consent and Authorization under HOWM Rules, 2016 for collection, storage, recycling and utilization of Spent Catalyst (Category 4.2 of Schedule I of HOWM Rules, 2016) of quantity 3200 MT/Annum.</p> <p>c) The process of metal reclamation through spent catalyst involves roasting, pulverization, leaching, purification, precipitation and drying.</p> <p>d) The spent catalyst (raw material) was found stored in MS Drums after roasting during inspection. The storage area was not properly marked.</p>

		<p>e) The unit has submitted Form-3 which is maintained on procurement basis of spent catalyst. Record was found maintained as per Form-3 of HOWM Rules, 2016.</p> <p>f) Upon verification of document, it was found that unit has procured 616.92 MT of spent catalyst from HPCL Refinery, Bhatinda; 71.62 MT of spent catalyst in June 2020 from IOCL, Panipat and 27.39 MT of spent catalyst from M/s IFFCO, Bareilly, U. P.</p> <p>g) The spent catalyst generated from (IFFCO) fertilizer industry falls under category 18.1 of Schedule I of HOWM Rules, 2016 but as per authorization, unit is only permitted for spent catalyst category 4.2 (spent catalyst from oil refineries) of Schedule I of said rule.</p> <p>h) The unit is not authorized to procure spent catalyst (category 18.1 of Schedule I of HOWM Rules, 2016) from fertilizer industry.</p> <p>i) The unit is procuring spent catalyst through e-auction on MSTC.</p> <p>j) The unit has a dedicated hazardous waste storage area for hazardous waste being generated during recycling/utilization process. At the time of inspection the hazardous waste storage area was empty.</p> <p>k) Detail inspection report of Lakhdatta Petrochem is attached as <b>Annexure- IX</b>.</p>
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### Observations:

1. It was found that category of spent catalyst, quantity and disposal method is not defined clearly in the authorization granted by the concerned SPCB in case of IOCL Panipat and some other oil refineries.
2. IOCL Panipat, Haryana, IOCL Mathura Refinery, Uttar Pradesh, IOCL Barauni, Bihar, Reliance Jamnagar, Gujarat are generating Spent catalyst 8505.215 MT, 518.82 MT, 5202 MT and 407 MT respectively, which are exceeding the authorised quantity of spent catalyst

given in the authorization by the concerned SPCB during the last 3 years, which is violations of HOWM Rules, 2016.

3. During the inspection of the committee, it was found that approximately 400 MT of spent catalyst was stored in the storage yard of IOCL Panipat. Upon verification of Form-3 and Form-10, it was found that IOCL Panipat has stored 1950 MT of spent catalyst more than 90 days which is violation of Rule 8 of HOWM Rules, 2016.
4. IOCL Digboi, Assam not maintaining the manifest records for assessing the actual quantity of generation and disposal of spent catalyst for last 3 years. But we found one manifest entry that they have sold 68.332 MT of spent catalyst to unauthorized utilizer namely Ganesh Steel and Alloys Ltd., West Bengal in August 2016. In this case, IOCL Digboi, Assam and Ganesh Steel and Alloys Ltd., West Bengal are violating HOWM Rules, 2016.
5. Similarly, IOCL Vadodara and IOCL Haldia are generating 1506.2 MT and 4482.37 MT of spent catalyst respectively in last 3 years. Out of it IOCL Vadodara and IOCL Haldia have sold 28.835 MT and 13 MT respectively to illegal utilizers namely, Ganesh Steel and Alloys Ltd., West Bengal, who is not authorized to process this spent catalyst.
6. It was also observed the fertilizer industry-IFFCO, Bareilly, U.P. sold their spent catalyst to the unauthorized utilizer namely, Lakhdatta Petrochem, Bhatinda (Punjab), who is not authorized to process this spent catalyst. Therefore, both units violating HOWM Rules, 2016.
7. All the 23 oil refineries are not maintaining generation of spent catalyst (Form-3) and manifest (Form-10) as per HOWM Rules, 2016. In result of that we are not able to verify actual quantity of generation and disposal of spent catalyst.
8. During the inspection of joint committee, it was found that, the IOCL Panipat, HPCL Bhatinda and IOCL Digboi, are not maintaining packaging and labelling of hazardous and other waste as per Rule 17 of HOWM Rules, 2016. In addition to that these units (except HPCL-Mittal refinery, Bhatinda Punjab) also not having adequate storage facility for safe and environmentally sound management of hazardous and other wastes as per Rule 4 of HOWM Rules, 2016.
9. Generally, oil refineries do not examine the eligibility of recyclers/utilizers of spent catalyst as per HOWM Rules, 2016 before E-auctioning through MSTC.

10. No information received from Andhra Pollution Control Board regarding generation and utilization of spent catalyst in the state.
11. No information received from Rajasthan Pollution Control Board, Chhattisgarh Environment Conservation Board and Telangana State Pollution Control Board, regarding re-processor/ utilizers of spent catalyst in the state.

**Recommendations:**

1. SPCBs/PCCs shall be directed to issue proper authorization for handling and management of hazardous and other waste in accordance of HOWM Rules, 2016 to generators/utilizers/recyclers, clearly mentioning the category, quantity and disposal method.
2. All oil refineries generating hazardous waste including spent catalyst shall ensure to dispose off their hazardous and other waste in scientific manner or to the authorized utilizers/recyclers in accordance of HOWM Rules, 2016.
3. Recyclers/utilizers shall be directed to ensure that procurement of hazardous and other waste including spent catalyst as per authorization granted to them.
4. All oil refineries generating hazardous waste including spent catalyst shall ensure proper packaging and labelling of hazardous and other waste as per Rule 17 of HOWM Rules, 2016 and also ensure adequate storage facility for safe and environmentally sound management of hazardous and other wastes as per Rule 4 of HOWM Rules, 2016.
5. All generators/utilizers/recyclers of hazardous waste including spent catalyst shall maintain mandatory records like Form-3, Form-4 and Form-10 as prescribed in HOWM Rules, 2016.
6. Financial Penalty shall be imposed on all the defaulting units (generators/utilizers/recyclers) for procedural violations listed in CPCB “Guidelines on Implementing Liabilities for Environmental Damages due to Handling & Disposal of Hazardous Wastes and Penalty” and as per Rule 23 of HOWM Rules, 2016.
7. Environmental Compensation shall be imposed on defaulting units (generators/utilizers/recyclers) for violating HOWM Rules, 2016 as per CPCB guideline “Enforcement Framework for Effective Implementation of HOWM Rules, 2016” as listed below:

- i. IOCL Panipat, Haryana for excess quantity of 8505.215 MT of spent catalyst as against authorized quantity in last 3 financial years and storing 1950 MT of spent catalyst for more than 90 days within the premises;
  - ii. IOCL Mathura Refinery, Uttar Pradesh for excess quantity of 518.82 MT of spent catalyst as against authorized quantity in the year 2018-19;
  - iii. IOCL Barauni, Bihar for excess quantity of 5252 MT of spent catalyst as against authorized quantity in the year 2018-19;
  - iv. Reliance Jamnagar, Gujarat for excess quantity of 407 MT of spent catalyst as against authorized quantity in the year 2018-19;
  - v. IFFCO, Bareilly, U.P. for illegal sold of 27.39 MT of spent catalyst to unauthorized recycler/utilizer i.e. M/s Lakhdata Petrochem, Bhatinda, Punjab;
  - vi. IOCL Digboi for illegal sold of 68.332 MT of spent catalyst to unauthorized recycler/utilizer i.e. Ganesh Steel and Alloys Pvt. Ltd. (West Bengal);
  - vii. IOCL Haldia for illegal sold of 13 MT of spent catalyst to unauthorized recycler/utilizer i.e. Ganesh Steel and Alloys Pvt. Ltd. (West Bengal);
  - viii. IOCL Vadodara for illegal sold of 28.835 MT of spent catalyst to unauthorized recycler/utilizer i.e. Ganesh Steel and Alloys Pvt. Ltd. (West Bengal);
  - ix. M/s Lakhdata Petrochem (Bhatinda) for procuring and processing 27.39 MT of spent catalyst of category 18.1 of Schedule-I of HOWM, Rules 2016 without authorization in the year 2019-20;
  - x. M/s Ganesh Steel and Alloys Pvt. Ltd. (West Bengal) for procuring and processing 110.167 MT of spent catalyst without authorization.
8. All the spent catalyst generator i.e., Oil refineries shall be directed to prepare uniform Standard Operating Procedure (SoP) for E-auctioning of hazardous and other waste including spent catalyst across the country.

Acceptance of the report by committee members in the matter of OA no 67/2020 through mail is annexed at **Annexure -X**

  
Dr. Siddhartha Gautam,  
Environmental Engineer, DPCC, Delhi

  
Anil C. Ranveer,  
Additional Director, CPCB, New Delhi

\*\*\*\*\*

Item No. 03

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 67/2020  
(I.A. No. 129/2020)

(Order No.01)

Nathan Chaudhary

Applicant(s)

Versus

State of GNCTD & Ors.

Respondent(s)

Date of hearing: 20.03.2020

**CORAM:** HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

For Applicant(s)

Mr. Ram Kr, Mr. R.L Soni, Advocates

**ORDER**

1. Grievance in this application is unscientific disposal of spent catalysts (Oxide) which is under the category of hazardous waste within the range of item no. 1.1 to 4.5 of the Schedule 1 of the Hazardous and other Waste Rules, 2016 by Panipat refinery and Digboi refinery. The violation takes place in selling, handling, storing and transporting the said waste illegally. The applicant has relied upon an earlier order of the Tribunal dated 02.11.2015 in *Original Application No. 284/2015, Jugal Kishore v. Union of India & Ors.*, directing as follows:

*“1. There shall be no transfer/sale of Spent Catalysts (Alumina Containing) to any bidder/persons who plans to dispose of the spent catalyst by using it as a raw material without having approval from the CPCB as envisaged under Rule 11 of the HW Rules.*

*2. The respondent no. 3 is restrained from entering into or executing any such deal with the bidder/persons who plans to dispose of the spent catalyst by using it as a raw*

*material without having approval from the CPCB as envisaged under Rule 11 of the HW Rules."*

3. In view of the above, we find it necessary to require a factual and action taken report from the CPCB, Punjab State PCB, Haryana Punjab State PCB, West Bengal Punjab State PCB, Assam State PCB and the DPCC within two months by email at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in). The CPCB will be the nodal agency for coordination and compliance.
4. A copy of this order be sent to the CPCB, Punjab State PCB, Haryana Punjab State PCB, West Bengal Punjab State PCB, Assam Punjab State PCB and the DPCC by email for compliance.

List for further consideration on 06.07.2020.

Adarsh Kumar Goel, CP

Sheo Kumar Singh, JM

Dr. Nagin Nanda, EM

March 20, 2020  
Original Application No. 67/2020  
I.A. No. 129/2020)  
AK

Annexure II

SPEED POST

TIME BOUND  
NGT MATTER

F.No.-B-29016/NGT-67/20/WM-II Div./AR/

June 10, 2020

To,

The Member Secretary,  
(As per List Attached)

**Subject: Compliance of Hon'ble National Green Tribunal order dated 20.03.2020 in the matter of O.A. No. 67/2020; Nathan Chaudhary vs State of GNCTD & Ors.-reg.**

Sir,

Hon'ble National Green Tribunal (NGT) passed an order on 20.03.2020 (copy enclosed) regarding unscientific handling, management and disposal of spent catalyst generated from various processes of the oil refineries, which comes under hazardous waste category of Schedule I (as listed at serial No. 1.1 to 4.5) of the Hazardous and Other Wastes (Management & Transboundary Movement) (HOWM) Rules, 2016.

In this case, applicant in O.A. No. 67/2020 is claiming that spent catalyst generating from oil refineries, violating HOWM Rules, 2016 w.r.t. handling, management and disposal of spent catalyst. They are illegally selling their hazardous waste to the hazardous waste re-processors without valid authorisation from SPCB under Rule 9 of HOWM Rules, 2016.

In this connection, Hon'ble NGT vide abovesaid order directed CPCB as nodal agency for co-ordination and compliance for submission of factual and action taken report. To ensure compliance of Hon'ble NGT directions and handling, management & disposal of spent catalyst in accordance of HOWM Rules, 2016, you are requested to provide information on the following points:

- SPCB shall verify and submit the records of generation, storing, handling, selling, inter-state as well as intra-state transporting and disposal of spent catalyst generated from various processes related to oil industries listed at serial No. 1.1 to 4.5 of Schedule I of HOWM Rules, 2016 specially oil refineries. Daily Records (Form-3), Manifest (Form-10) and Annual Returns (Form-4) shall be verified.
- SPCB shall inspect and verify such re-processors who are authorized for processing of spent catalyst generating from oil industry under Rule 9 of HOWM Rules, 2016.
- SPCB shall inspect and verify such re-processors who are authorized for recovery of metals from spent catalyst received from the oil industries listed at serial no. 10 in Schedule-IV of HOWM Rules, 2016.
- SPCB shall also verify the compliance status of Hon'ble NGT orders dated 02.11.2015 in the O.A. No. 284/2015; Jugal Kishore vs Union of India & Ors.

In view of above, you are requested to submit the information on the above points positively by **22.06.2020** so as to enable CPCB to prepare consolidated action taken report for submission to Hon'ble NGT before the next date of hearing i.e., **06.07.2020**. **In addition to that, you are also requested to nominate an official from your Board for co-ordination and preparation of action taken report in the matter as directed by the Hon'ble NGT.**

**TREAT AS MOST URGENT**

Yours faithfully,

(Abhey Singh Soni)

Additional Director & Head  
Waste Management Division – II

Encl.: As Above

केन्द्रीय प्रदूषण नियंत्रण बोर्ड

मिर्मातृ

S. No.	Name & Address of State Boards
1.	The Member Secretary Assam Pollution Control Board Bamunimaiden, Guwahati – 781021
2.	The Member Secretary Haryana Pollution Control Board C-11, Sector-6 Panchkula Haryana-134 109 Chandigarh
3.	The Member Secretary Punjab Pollution Control Board Vatavaran Bhawan, Nabha Road Patiala – 147 001
4.	The Member Secretary West Bengal Pollution Control Board Paribesh Bhawan, 10A, Block- LA, Sector III, Salt Lake City, Calcutta- 700106
5.	The Member Secretary Delhi Pollution Control Committee 4th Floor, ISBT Building, Kashmere Gate, Delhi - 110006.

**TIME BOUND  
NGT MATTER**

**SPEED POST**

F.No.-B-29016/NGT-67/20/WM-II Div./AR/

June 10, 2020

To,

The Member Secretary,  
(As per List Attached)

**Subject: Compliance of Hon'ble National Green Tribunal order dated 20.03.2020 in the matter of O.A. No. 67/2020; Nathan Chaudhary vs State of GNCTD & Ors.-reg.**

Sir,

Hon'ble National Green Tribunal (NGT) passed an order on 20.03.2020 (copy enclosed) regarding unscientific handling, management and disposal of spent catalyst generated from various processes of the oil refineries, which comes under hazardous waste category of Schedule I (as listed at serial No. 1.1 to 4.5) of the Hazardous and Other Wastes (Management & Transboundary Movement) (HOWM) Rules, 2016.

In this case, applicant in O.A. No. 67/2020 is claiming that spent catalyst generating from oil refineries, violating HOWM Rules, 2016 w.r.t. handling, management and disposal of spent catalyst. They are illegally selling their hazardous waste to the hazardous waste re-processors without valid authorisation from SPCB under Rule 9 of HOWM Rules, 2016.

In this connection, Hon'ble NGT vide abovesaid order directed CPCB as nodal agency for co-ordination and compliance for submission of factual and action taken report. To ensure compliance of Hon'ble NGT directions and handling, management & disposal of spent catalyst in accordance of HOWM Rules, 2016, you are requested to provide information on the following points:

- SPCB shall verify and submit the records of generation, storing, handling, selling, inter-state as well as intra-state transporting and disposal of spent catalyst generated from various processes related to oil industries listed at serial No. 1.1 to 4.5 of Schedule I of HOWM Rules, 2016 specially oil refineries. Daily Records (Form-3), Manifest (Form-10) and Annual Returns (Form-4) shall be verified.
- SPCB shall inspect and verify such re-processors who are authorized for processing of spent catalyst generating from oil industry under Rule 9 of HOWM Rules, 2016.
- SPCB shall inspect and verify such re-processors who are authorized for recovery of metals from spent catalyst received from the oil industries listed at serial no. 10 in Schedule-IV of HOWM Rules, 2016.
- SPCB shall also verify the compliance status of Hon'ble NGT orders dated 02.11.2015 in the O.A. No. 284/2015; Jugal Kishore vs Union of India & Ors.

In view of above, you are requested to submit the information on the above points positively by **22.06.2020** so as to enable CPCB to prepare consolidated action taken report for submission to Hon'ble NGT before the next date of hearing i.e., **06.07.2020**.

Yours faithfully,

(Abhey Singh Soni)

Additional Director & Head  
Waste Management Division – II

Encl.: As Above

केन्द्रीय प्रदूषण नियंत्रण बोर्ड  
निर्गत .....  
दिनांक 10/06/2020

S. No.	Name & Address of State Boards
1.	The Member Secretary Andhra Pradesh Pollution Control Board D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamvari Street, Kasturibaipet, Vijayawada – 520 010
2.	The Member Secretary Bihar Pollution Control Board Parivesh Bhawan, Plot No. NS-B/2 Patliputra Industrial Area, Patliputra, Patna (Bihar)-800023
3.	The Member Secretary Gujarat Pollution Control Board Paryavaran Bhawan, Sector 10-A, Gandhi Nagar - 382010
4.	The Member Secretary Karnataka State Pollution Control Board, Parisara Bhavana, 1 <sup>st</sup> to 5 <sup>th</sup> Floor 49, Church Street, Bengaluru – 560 001
5.	The Member Secretary Kerala Pollution Control Board Pattom Palace, P.O. Thiruvananthapuram – 695 004
6.	The Member Secretary Maharashtra Pollution Control Board Kalptaru Point, 2 <sup>nd</sup> - 4 <sup>th</sup> floor, Opp. Cine Planet, Sion Circle, Sion (E), Mumbai – 400 022
7.	The Member Secretary Madhya Pradesh Pollution Control Board Paryavaran Parisar, Sector E-5, Arera Colony, Bhopal – 462 016
8.	The Member Secretary State Pollution Control Board, Odisha Paribesh Bhawan, A-118, Nilakantha Nagar, Unit-VIII, Bhubaneswar – 751 012.
9.	The Member Secretary Tamil Nadu Pollution Control Board No. 76, Mount Salai Guindy, Chennai – 600 032
10.	The Member Secretary Uttar Pradesh Pollution Control Board Building No TC-12V

TIME BOUND  
NGT MATTER

SPEED POST

F.No.-B-29016/NGT-67/20/WM-II Div./AR/

911-933

June 10, 2020

To,

Units  
(as per list enclosed)**Subject: Compliance of Hon'ble National Green Tribunal order dated 20.03.2020 in the matter of O.A. No. 67/2020; Nathan Chaudhary vs State of GNCTD & Ors.-reg.**

Sir,

Hon'ble National Green Tribunal (NGT) passed an order on 20.03.2020 (copy enclosed) regarding unscientific handling, management and disposal of spent catalyst generated from various processes of the oil refineries, which comes under hazardous waste category of Schedule I (as listed at serial No. 1.1 to 4.5) of the Hazardous and Other Wastes (Management & Transboundary Movement) (HOWM) Rules, 2016.

In this case, applicant in O.A. No. 67/2020 is claiming that spent catalyst generating from oil refineries, violating HOWM Rules, 2016 w.r.t. handling, management and disposal of spent catalyst. They are illegally selling their hazardous waste to the hazardous waste re-processors without valid authorisation from SPCB under Rule 9 of HOWM Rules, 2016.

In this connection, Hon'ble NGT vide abovesaid order directed CPCB as nodal agency for co-ordination and compliance for submission of factual and action taken report. To ensure compliance of Hon'ble NGT directions and handling, management & disposal of spent catalyst in accordance of HOWM Rules, 2016, you are requested to provide information on the following points:

- (a) Copies of Consent to Operate (CTO) and Authorisation for handling and management of spent catalyst under Rule 9 of HOWM Rules, 2016.
- (b) Records of generation, storing, handling, selling, transporting and disposal of hazardous wastes including spent catalyst:
  - i. Copy of daily records maintained for generation of Hazardous Wastes (**Form 3** of HOWM Rules, 2016).
  - ii. Copies of manifest for last three years (**Form 10** of HOWM Rules, 2016).
  - iii. Copies of annual returns for last three years (**Form 4** of HOWM Rules, 2016)
  - iv. Copy of TSDF membership, if any.

In view of above, you are directed to submit the above documents/information positively by 22.06.2020 to this office for verification and compilation of the report for filing the report to Hon'ble NGT within time frame.

Yours faithfully,

(Abhey Singh Soni)  
Additional Director & Head  
Waste Management Division – II

Encl.: As Above

o/c

केन्द्रीय प्रदूषण नियंत्रण बोर्ड

दिनांक 11/06/2020

11/06/2020

### List of Oil Refineries

S.No.	Name and Address of the Industry
1	M/s Hindustan Petroleum Corporation Limited, VisakhaRefinery, Malkapuram, Visakhapatnam, Andhra Pradesh
2	M/s Oil & Natural Gas Corporation, Tatiphaka Refinery, East Godavari District PIN-533249, Andhra Pradesh
3	M/s Indian Oil Corporation Limited, Digboi Refinery, Digboi 786171 Assam
4	M/s Indian Oil Corporation Limited Guwahati Refinery, Noonmati Guwahati-781020, Assam
5	M/s Numaligarh Refinery P.O. Numaligarh Refinery Project Dist. Golaghat, Assam
6	M/s Indian Oil Corporation Limited Bongaigaon refinery, PO Dhaligaon, Dist- Chirang Pin-783385, Assam
7	M/s Indian Oil Corporation, Barauni Oil Refinery, Dist- Begusari-85114, Bihar
8	M/s RELIANCE INDUSTRIES Ltd Meghpar, Meghpar, Dist. Jamnagar, Gujarat 361142
9	M/s Reliance Industries Limited, "A Unit-Reliance Jamnagar SEZ" P.O.Reliance Greens, Motikhavadi, Jamnagar 361142, Gujarat
10	M/s Essar Oil Limited, Vadinar Refinery, Po. Khambhaliya, Dist. Jamnagar, Gujarat-361305
11	M/s Indian Oil Corporation Limited , Gujarat Refinery, P.O. Jawaharnagar Vadodara 391320, Gujarat
12	M/s Indian Oil Corporation Limited, Panipat Refinery, Refinery Road, Pampat 132410, Haryana

13	M/s Mangalore Refineries and Petroleum Ltd., Kuthethur, Mangalore Taluk, D K District, Karnataka
14	M/s BPCL Kochi Refinery, PB No. 2, Ambalamugal, Kochi, Ernakulam – 682 302, Kerala
15	M/s Bharat Oman Refineries Limited, Administrative building Refinery complex, Post BORL Residential complex, BINA, Dist : Sagar -470124, Madhya Pradesh
16	M/S Hindustan Petroleum Corporation Ltd., Mahul, Chembur, Mumbai -400074, Maharashtra
17	M/s Bharat Petroleum Corporation Limited Mumbai Refinery, Mahul, Mumbai 400074, Maharashtra
18	M/s Indian Oil Corporation, IOCL Paradip Refinery, P.O. Jhimani, Via Kujang, Jagatsinghpur-754141, Odisha
19	M/s HPCL Mittal Energy Limited, (Guru Gobind Singh Refinery), Village Phullo Khari. Taluka: Talwandi saboo, Distt. Bathinda, PIN 151301 . Punjab
20	M/s Chennai Petroleum Corporation Ltd, Manali Maanali village, Madhavaram Taluk, Tiruvallur District, Tiruvallur -600068, Tamil Nadu
21	M/s Chennai Petroleum Corporation Ltd, Cauvery Basin Refinery, Panangudi, Nagapattinam District-611002, Tamil Nadu
22	M/s Indian Oil Corporation Limited, P.O. Mathura Refineries, Mathura-281005, Uttar Pradesh
23	M/s Indian Oil Corporation Limited P.O. Haldia Refinery, Dist, Medinipore (E). Pin 721606 , West Bengal

SPEED POST

TIME BOUND  
NGT MATTER

F.No.-B-29016/NGT-67/20/WM-II Div./AR/ 3230-3233

July 23, 2020

To,

**The Member Secretary**  
(As per list attached)**Subject: Compliance of Hon'ble National Green Tribunal order dated 20.03.2020 in the matter of O.A. No. 67/2020; Nathan Chaudhary vs State of GNCTD & Ors.-reg.**

Sir,

Hon'ble National Green Tribunal (NGT) passed an order on 20.03.2020 (copy enclosed) regarding unscientific handling, management and disposal of spent catalyst generated from various processes of the oil refineries, which comes under hazardous waste category of Schedule I (as listed at serial No. 1.1 to 4.5) of the Hazardous and Other Wastes (Management & Transboundary Movement) (HOWM) Rules, 2016.

In this case, applicant in O.A. No. 67/2020 is claiming that spent catalyst generating from oil refineries, violating HOWM Rules, 2016 w.r.t. handling, management and disposal of spent catalyst. They are illegally selling their hazardous waste to the hazardous waste re-processors without valid authorisation from SPCB under Rule 9 of HOWM Rules, 2016.

In this connection, Hon'ble NGT vide abovesaid order directed CPCB as nodal agency for co-ordination and compliance for submission of factual and action taken report. To ensure compliance of Hon'ble NGT directions and handling, management & disposal of spent catalyst in accordance of HOWM Rules, 2016, you are requested to provide information on the following points:

- SPCB shall inspect, verify and submit the records of procurement, handling, utilization and disposal of spent catalyst by recyclers/re-processors who are authorized for recycling/processing of spent catalyst generating from oil industries (listed at serial No. 1.1 to 4.5 of Schedule I) under Rule 9 of HOWM Rules, 2016. Daily Records (Form-3), Manifest (Form-10) and Annual Returns (Form-4) shall be verified.
- SPCB shall inspect and verify such re-processors who are authorized for recovery of metals from spent catalyst received from the oil industries listed at serial no. 10 in Schedule-IV of HOWM Rules, 2016.
- SPCB shall also verify the compliance status of Hon'ble NGT orders dated 02.11.2015 in the O.A. No. 284/2015; Jugal Kishore vs Union of India & Ors.

In view of above, you are requested to submit the information on the above points positively by **31.07.2020** so as to enable CPCB to prepare consolidated action taken report for submission to Hon'ble NGT in time bound manner.

Yours faithfully,

(Abhey Singh Soni)

Additional Director & Head  
Waste Management Division – II

Encl.: As Above

केन्द्रीय प्रदूषण नियंत्रण बोर्ड  
दिनांक 23/07/20

O/C

List of States where spent catalyst recyclers/re-processors authorized.

Sl. No.	Name and Address of SPCB
1.	The Member Secretary Chhattisgarh Environment Conservation Board Paryavas Bhawan, North Block Sector-19, Naya Raipur (C.G.)- 490099 ✓
2.	The Member Secretary Jammu & Kashmir State Pollution Control Board Shiekh-ul-Campus, behind Govt. Silk Factory, Raj Bagh, Srinagar (J&K)
3.	The Member Secretary Telangana Pollution Control Board Paryavarana Bhawan, A-III Institutional Estate, Sanathnagar Hyderabad – 500018.
4.	The Member Secretary Rajasthan Pollution Control Board 4, Institutional Area, Jhalana Doongri Jaipur – 302 004, Rajasthan.

*[Handwritten signature]*

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**INSPECTION OF INDUSTRIES WITH REGARD TO GENERATION  
AND MANAGEMENT OF HAZARDOUS WASTES**

S. No.	Particulars	Status/details			
1.	Name & address of the industry	M/s IOCL Panipat Panipat Refinery and PX PTA Petrochemical Complex of IOCL, Village Baholi, Dist., Panipat, Haryana			
2.	Date of Visit	18.08.2020			
3.	Contact Person Name, Designation, Contact No. & E-mail	A K Tiwari Senior Manager (Health, Safety & Environment) 0180-252-2550, 9671307623 <a href="mailto:tiwariak2@indianoil.in">tiwariak2@indianoil.in</a>			
4.	Name and Designation of the Officials visiting the Unit	S. No.	Name of Official	Designation	
		1	Anil C. Ranveer	Additional Director, CPCB	
		2	Shailendra Arora	Regional Officer, HSPCB	
5.	Process description in brief for each Product. Also attach Process Flow Diagram indicating raw materials and sources of hazardous waste generation along with mass balance	IOCL Panipat refinery is a crude oil refining process unit. Several furnace units based on working principle of atmospheric as well as high pressure high temperature involved in refining process of crude oil. Each unit produces various product given at Sl. No. 7 where Fresh Catalyst also fed in a reactor/furnace. This catalyst over a period of time no longer serve the purpose and becomes spent which needs to be disposed as per authorization condition.			
6.	Year of commissioning	1998			
7.	Production (in MT or KL/day) of each product	S. No.	Product	MT/day	Operational Status
		1	Propylene	324	
		2	LPG	2376	
		3	Naphtha	5238	
		4	PTA	2210	
		5	Benzene	60	
		6	Kerosene	2211	
		7	LSHS	513	
		8	Bitumen	1293	
					As per consent to operate granted

*(Signature)*  
RO, HSPCB

*(Signature)*  
Anil C. Ranveer

		9	Petroleum Coke	2934																												
8.	Details of Consent under the Water Act, 1974 & Air Act, 1981	Consent no.: HSPCB/Consent/ : 313105620PITCTO7559304 Date of issue: 04.05.2020 Validity: 30.09.2021																														
9.	Status of Authorization under the Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 (HWM Rules, 2008) / Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 (HOWM Rules 2016)	Authorisation no.: HWM/PIT/2020/7613249 Date of issue: 16.06.2020 Validity: 30.09.2024 Spent Catalyst generation authorized for 1800 MT/Annum. Disposal authorized for 600 MT in onsite SLF and 1200 MT to authorized recyclers.																														
10.	Name and Categories of HW generated and their respective quantity	The details of spent catalyst generation and their quantity, as verified the inspecting team during the inspection are as below:																														
		<table border="1"> <thead> <tr> <th>Year</th> <th>Generated Quantity (MT)</th> <th>Disposed Quantity (MT)</th> <th>Name of Disposal Facility</th> <th>Stock Stored (MT)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>440</td> <td>440</td> <td>E-auctioned to Recyclers</td> <td>497.56</td> </tr> <tr> <td>2018-19</td> <td>1648.75</td> <td>311.9</td> <td>E-auctioned to Recyclers</td> <td>1835.75</td> </tr> <tr> <td rowspan="2">2019-20</td> <td rowspan="2">1257.80</td> <td>550</td> <td>SLF</td> <td rowspan="2">1950</td> </tr> <tr> <td>592.2</td> <td>E-auctioned to Recyclers</td> </tr> <tr> <td>Upto Aug 2020</td> <td>---</td> <td>1408.36</td> <td>E-auctioned to Recyclers</td> <td>---</td> </tr> </tbody> </table>				Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)	2017-18	440	440	E-auctioned to Recyclers	497.56	2018-19	1648.75	311.9	E-auctioned to Recyclers	1835.75	2019-20	1257.80	550	SLF	1950	592.2	E-auctioned to Recyclers	Upto Aug 2020	---	1408.36	E-auctioned to Recyclers	---
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		Annual Return (Form - 4) verified for above disposal of spent catalyst. Manifest (Form-10) for year 2019-20 was submitted which shows that spent catalyst sold to M/s Lakhdata Petrochemical, Bhatinda, M/s Vyankatesh Metals and Alloys Ltd, M.P., M/s Rubamin Ltd., Gujarat, and M/s Arham Industries, Rajasthan.																														
11.	Captive Recycling/ Utilization/ Incineration/ Secured Landfilling facility details	Unit has SLF in the premises and as per record it is used for disposal for 550 MT spent catalyst in 2019-20. Capacity: Size 125 x 45 x 2.8 m (L x W x H) and quantity it can store is 17,400 m <sup>3</sup> .																														
12.	Details of HW storage, Quantity of HW Stored	1. Storage facility details and capacity:																														

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RD, HSPCB

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(Amal C. Ranveer)

	and period of storage	<p>(i) Lined /Unlined : Lined</p> <p>(ii) Open/Covered and safe from rain water intrusion : Covered</p> <p>(iii) In case of incinerable hazardous waste storage, comment on compliance of CPCB guidelines: Spent catalyst was found stored and as informed by unit representative 440 MT is stored which is already e-auctioned to M/s Lakhdata Petrochemicals, Bhatinda but not lifted yet by M/s Lakhdata Petrochemicals, Bhatinda.</p>
13.	Categories and quantity of HW sent to authorized user/Common TSDF actual user/Common TSDF	<p>1. Details of the authorized actual user/Common TSDF, as applicable, whom HW sent: M/s Lakhdata Petrochemical, Bhatinda, M/s Vyankatesh Metals and Alloys Ltd, M.P., M/s Rubamin Ltd., Gujarat, and M/s Arham Industries, Rajasthan were actual utilizers who have procured spent catalyst through e-auctioning. E-auction sale order provided by unit and verified during the visit.</p> <p>2. Details of HW sent to the authorized actual user and TSDF, as applicable, since previous financial year (as per daily /annual record and manifest document Form 10): Unit claimed to have TSDF agreement with GEPIL, Haryana but no agreement copy provided by the unit.</p>
14.	Compliance w.r.t. labeling, manifest system, records, annual returns, etc.	<p>Please make observations on the below:</p> <ol style="list-style-type: none"> <li>1. Adequate packaging of HW: Spent catalyst stored in MS Drums</li> <li>2. Labeling of HW containers in Form 18: Labelled but with incomplete data not as per Form 8 of HOWM Rules, 2016.</li> <li>3. Compliance of all Manifest Documents and sending/receiving of the same to concerned when HW are being sent (refer Rule 19 of the HOWM Rules, 2016): Complied.</li> <li>4. Transportation of HW only by authorized sender or receiver: Complied. Transporters were arranged by receivers.</li> <li>5. NOC from the concerned SPCB/PCC if HW are sent for disposal to other State/UT. Intimation to SPCB time to time.</li> <li>6. Intimation to both the SPCBs/PCCS before handing over the waste to the transport in case HW is sent for recycling or utilisation including co-processing: Intimation to SPCB time to time.</li> <li>7. Prior intimation to SPCBs/PCCs of the States/UTs of transit in case of interstate transportation. Complied.</li> <li>8. Transportation of HW and compliance with Rules under Motor Vehicles Act, 1988: Complied. Transporters were arranged by receivers</li> <li>9. Daily records maintenance in Form 3: The records has been found maintained on monthly basis however as per HOWM Rules, 2016 records has to be maintained on daily basis.</li> <li>10. Timely submission of annual returns in Form 4 to the SPCB/PCC: Complied</li> </ol>

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RD, HSPCB

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(Anil K. Ramveer)

15.	Safety facilities provided at storage facility	S. No.	Safety Facility																																											
		1.	Cemented storage ground area																																											
		2.	Shed provided																																											
16.	Details of HW contaminate sites, if any, within and outside the industry premise	Not observed in Refinery premises.																																												
17.	Observations	<p>1. Unit has installed Environmental Data Display board but the information was not updated.</p> <p>2. Unit has submitted Form-3 which is maintained monthly basis of spent catalyst generation. Daily records were not as per format.</p> <p>3. Unit has provided auction detail of MSTC, where unit has sold of spent catalyst to following actual users as follows:</p> <table border="1"> <thead> <tr> <th>Date of auction</th> <th>Quantity of Spent catalyst (MT)</th> <th>Sold to Users/Recyclers/utilizers</th> <th>Actual Users/Recyclers/utilizers</th> </tr> </thead> <tbody> <tr> <td>04.02.2020</td> <td>420</td> <td>M/s Lakhdataa Petrochem, Bhatinda</td> <td></td> </tr> <tr> <td>04.02.2020</td> <td>41</td> <td>M/s Lakhdataa Petrochem, Bhatinda</td> <td></td> </tr> <tr> <td>09.06.2020</td> <td>390</td> <td rowspan="2">M/s Rubamin Ltd., Gujarat</td> <td></td> </tr> <tr> <td></td> <td>380</td> <td></td> </tr> <tr> <td>29.06.2020</td> <td>173.2</td> <td></td> <td></td> </tr> <tr> <td>09.06.2020</td> <td>380</td> <td>M/s Vyankatesh Metals &amp; Alloys Pvt. Ltd., M.P.</td> <td></td> </tr> <tr> <td>30.06.2020</td> <td>21.9</td> <td>M/s Arham Industries, Rajasthan</td> <td></td> </tr> </tbody> </table> <p>4. It was observed that unit has stored spent catalyst (approx. 1906.01 MT) more than 90 days in their premises, which is violation of Rule 8 of HOWM Rules, 2016. Upon examination of Manifest (Form 10) following details were found:</p> <table border="1"> <thead> <tr> <th>Last date of spent catalyst disposal</th> <th>Next Date of spent catalyst disposal</th> <th>Quantity Stored in premises more than 90 days</th> <th>Violation Observed under Rule 8</th> </tr> </thead> <tbody> <tr> <td>28.12.2019</td> <td>04.06.2020</td> <td>1906.01</td> <td>Quantity generated and stored before March 2020</td> </tr> <tr> <td>1142.2 MT out of total</td> <td>1811.01 Stocked till</td> <td>Includes 95 MT</td> <td>March to May 2020</td> </tr> </tbody> </table>		Date of auction	Quantity of Spent catalyst (MT)	Sold to Users/Recyclers/utilizers	Actual Users/Recyclers/utilizers	04.02.2020	420	M/s Lakhdataa Petrochem, Bhatinda		04.02.2020	41	M/s Lakhdataa Petrochem, Bhatinda		09.06.2020	390	M/s Rubamin Ltd., Gujarat			380		29.06.2020	173.2			09.06.2020	380	M/s Vyankatesh Metals & Alloys Pvt. Ltd., M.P.		30.06.2020	21.9	M/s Arham Industries, Rajasthan		Last date of spent catalyst disposal	Next Date of spent catalyst disposal	Quantity Stored in premises more than 90 days	Violation Observed under Rule 8	28.12.2019	04.06.2020	1906.01	Quantity generated and stored before March 2020	1142.2 MT out of total	1811.01 Stocked till	Includes 95 MT	March to May 2020
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RO/HS/PCB

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(Anil K. Ramteer)

stock of 2953.21 till Dec 2019	Dec 2019	generated in Jan-Feb 2020	considered 90 days
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5. Spent catalyst generated from RFCCU unit only is disposed in SLF however spent catalyst generated from other process units is sold to recyclers/utilizers.
6. Hazardous waste storage area was properly marked, lined and covered but wastes stored in drums were not labeled as per HOWM Rules, 2016.
7. There are two storage shed for ETP Sludge and oil & chemical sludge but were not marked as hazardous waste storage site in ETP premises.
8. Unit has prepared its own SoP for handling and management of hazardous waste in their unit. Details of e-auction as per their SoP is given below with timeline:
  - i. Zero date for auctioning/handing over to co-processor/disposal to SLF starts on the day of generation.
  - ii. Approval by competent authority for handing over the proposal to Store and HW (7 days in advance).
  - iii. Pre-Qualification Criteria (PQC) and other special terms and conditions to be followed related to Hazardous/E-waste approval from competent authority (7 days in advance).
  - iv. MSDS along with pictures to be shared with materials for uploading during e-auctioning (7 days).
  - v. Approval of e-auction as per delegation of power (14 days).
  - vi. Entry of reserve price on MSTC e-auction portal as fixed by committee. MSTC publish e-auction on their portal (21 days).
  - vii. As per schedule and terms and conditions mentioned in e-auction catalogue free sample collection by bidders (30 days).
  - viii. After e-auction, sale intimation letter issued to customer and copy to IOCL by MSTC (40 days).
  - ix. In case of "no bidder" for any particular HW in 3 continuous auctions, recommendations shall be taken from HSE for further action (75 days).
  - x. Approval from competent authority for shifting to SLF/TSDF, if no bidder received in continuous 3 auctions even at a cost (80 days).
  - xi. Disposal of spent catalyst in Panipat refinery captive SLF/TSDF (85 days).
  - xii. Submission of PQC documents by H<sub>1</sub> bidder (within 3 days of e-auction (48/58/68 day)).
  - xiii. Verification of documents, if documents are not in order bidder will be rejected, re-auction will be processed (within next 2 days of receipt of documents (50/60/70 day)).

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R.O., HSPCB

*[Signature]*  
(Amil C. Ramveer)

		<p>xiv. If documents found valid, submission of security deposit money by H<sub>1</sub> bidder after getting approval for sale form competent authority (within next 7 days (57/67/77 day)).</p> <p>xv. Confirmation of submission of security deposit from IOCL to MSTC and issue of sale order by MSTC to H<sub>1</sub> bidder with copy to IOCL (within next 3 days (60/70/80 day)).</p> <p>xvi. H<sub>1</sub> bidder to submit service charge with applicable taxes to MSTC and material value amount to IOCL (within next 7 days (67/77/87 day)).</p> <p>9. Photographs of visit is attached as <b>Annexure I</b>.</p>
10.	Recommendations	<ol style="list-style-type: none"> <li>1. The unit shall update Environmental Data Display Board regularly.</li> <li>2. The unit shall maintain daily generation of hazardous wastes as per Form – 3 of HOWM Rules, 2016.</li> <li>3. The unit shall ensure proper packaging and labelling of hazardous and other waste as per Rule 17 of HOWM Rules, 2016.</li> <li>4. Unit shall properly marked the storage area and store the ETP, Oil and chemical sludge in the ETP premises.</li> <li>5. The unit shall ensure to dispose off hazardous waste through e-auction to the authorized recyclers/utilizers.</li> </ol>

  
 Shailendra Arora,  
 Regional Officer, Panipat,  
 HSPCB

  
 Anil C. Ranveer,  
 Additional Director, CPCB,  
 New Delhi

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Photographs taken during inspection

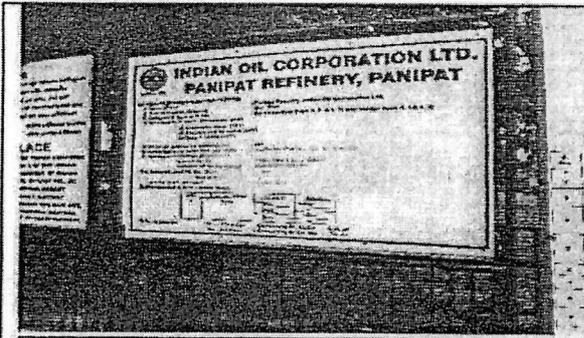


Fig. 1: Environmental Data Display Board

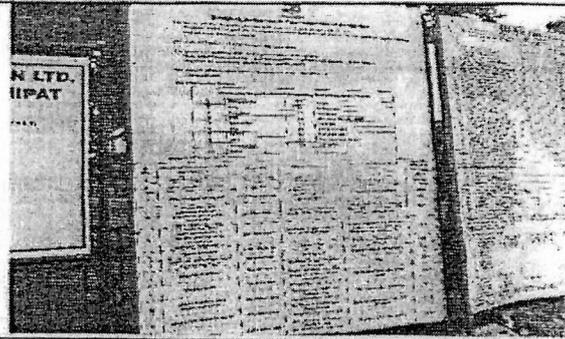


Fig. 2: Environmental Data Display Board

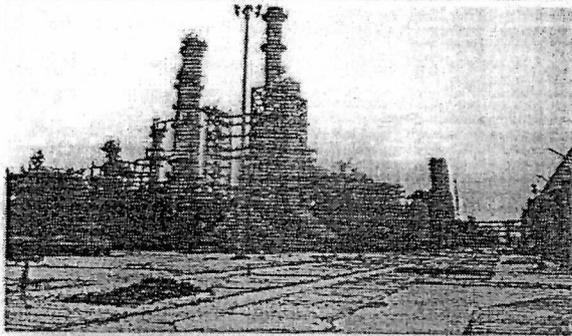


Fig. 3: Hydro Cracker Unit (spent catalyst generating unit)

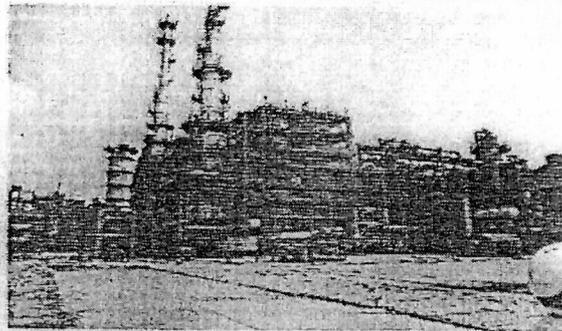


Fig. 4: Hydro Treater Unit spent catalyst generating units)

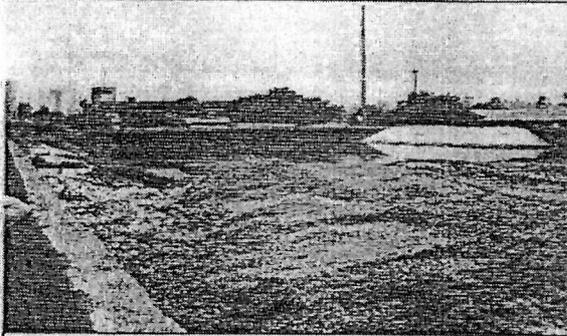


Fig. 5: Secured Landfill site

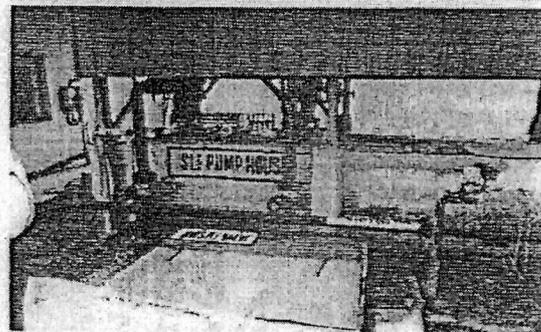


Fig. 6: Leachate collection pump

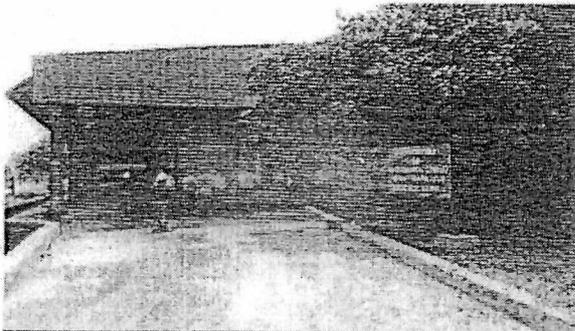


Fig. 7: Hazardous waste storage area



Fig. 8: Spent catalyst stored in MS Drums

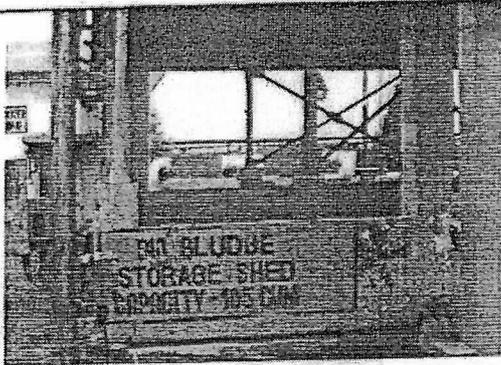


Fig. 9: Hazardous ETP sludge storage yard not marked as hazardous sign

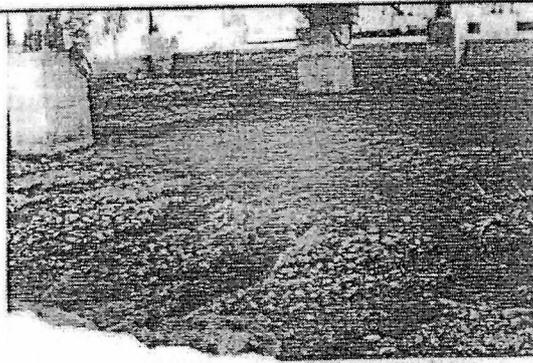


Fig. 10: Hazardous ETP sludge storage yard

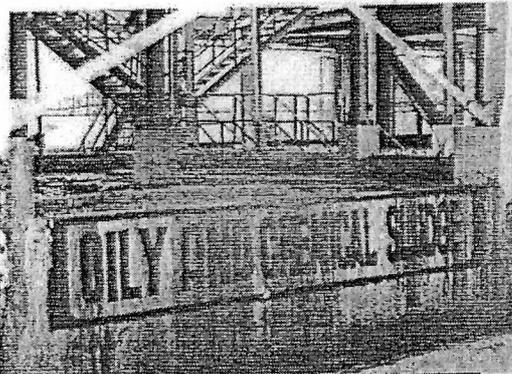


Fig. 11: Hazardous oil and chemical sludge storage yard not marked as hazardous sign

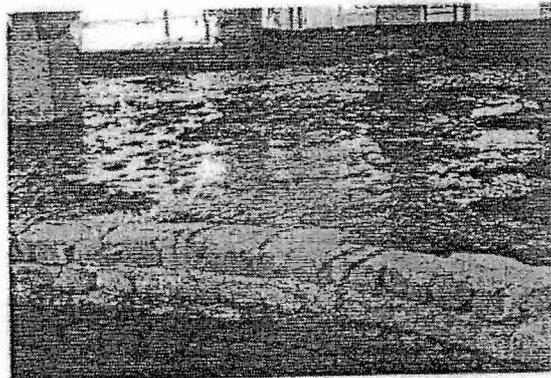


Fig. 10: Hazardous oil and chemical sludge storage yard



**INSPECTION OF INDUSTRIES WITH REGARD TO GENERATION  
AND MANAGEMENT OF HAZARDOUS WASTES**

S. No.	Particulars	Status/details			
1.	Name & address of the industry	M/s IOCL Panipat <b>Panipat Naptha Cracker</b> (A unit of Indian Oil), Village Baljatan, Tehsil Matlauda, Panipat, Haryana			
2.	Date of Visit	18.08.2020			
3.	Contact Person Name, Designation, Contact No. & E-mail	A K Tiwari Senior Manager (Health, Safety & Environment) 0180-252-2550, 9671307623 <a href="mailto:tiwariak2@indianoil.in">tiwariak2@indianoil.in</a>			
4.	Name and Designation of the Officials visiting the Unit	S. No.	Name of Official	Designation	
		1	Anil C. Ranveer	Additional Director, CPCB	
		2	Shailendra Arora	Regional Officer, HSPCB	
5.	Process description in brief for each Product. Also attach Process Flow Diagram indicating raw materials and sources of hazardous waste generation along with mass balance	Panipat Naptha Cracker is a petrochemical process unit. Swing unit generates spent catalyst. Ethylene and Cyclohexane mixed in a reactor (high pressure high temperature) where Fresh Catalyst also fed in a fixed bed reactor where alumina is present. Final product polyethylene formed generating spent catalyst around 26 MT/ 3 days of unit process.			
6.	Year of commissioning	2006			
7.	Production (in MT or KL/day) of each product	S. No.	Product	MT/day	Operational Status
		1	Polyethylene	1750	
		2	Polymer	3600	
		3	MEG	900	
		4	Benzene	600	
		5	1,3 Butadiene	200	
		6	Butene-1	60	
8.	Details of Consent under the Water Act, 1974 & Air Act, 1981	Consent no.: HSPCB/Consent/ : 313105817PITCTO3530699 Date of issue: 14.05.2017 Validity: 30.09.2021			
9.	Status of Authorization	Authorization No.:HSPCB/Consent/:313105817PITCTOHWM3530699			

*A. K. Tiwari*  
RD HSPCB

*Anil C. Ranveer*

<p>under the Hazardous Waste (Management, Handling &amp; Transboundary Movement) Rules, 2008 (HWM Rules, 2008) / Hazardous &amp; Other Wastes (Management &amp; Transboundary Movement) Rules, 2016 (HOWM Rules 2016)</p>	<p>Date of issue:14.05.2017 Validity: 30.09.2021 Hazardous waste category wise generation and disposal not mentioned in Authorization.</p>																				
<p>10. Name and Categories of HW generated and their respective quantity</p>	<p>The details of spent catalyst generation and their quantity, as verified the inspecting team during the inspection are as below:</p> <table border="1" data-bbox="542 660 1420 1075"> <thead> <tr> <th>Year</th> <th>Generated Quantity (MT)</th> <th>Disposed Quantity (MT)</th> <th>Name of Disposal Facility</th> <th>Stock Stored (MT)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>9109.825</td> <td>8716.115</td> <td>E-auctioned Recyclers</td> <td>2500</td> </tr> <tr> <td>2018-19</td> <td>5077.81</td> <td>7577.81</td> <td>E-auctioned Recyclers</td> <td>--</td> </tr> <tr> <td>2019-20</td> <td>3545.58</td> <td>3525.58</td> <td>E-auctioned Recyclers</td> <td>20</td> </tr> </tbody> </table> <p>Annual Return (Form – 4) verified for above disposal of spent catalyst. Manifest (Form-10) for year 2019-20 was submitted which shows that spent catalyst was given to M/s Premier Refractories of India Pvt. Ltd., Katni, M. P. and M/s Perfect Stoneware Pipes Ltd., Mandla, M. P.</p>	Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)	2017-18	9109.825	8716.115	E-auctioned Recyclers	2500	2018-19	5077.81	7577.81	E-auctioned Recyclers	--	2019-20	3545.58	3525.58	E-auctioned Recyclers	20
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<p>11. Captive Recycling/ Utilization/ Incineration/ Secured Landfilling facility details</p>	<p>No disposal of spent catalyst generated from swing unit of Naphtha Cracker Division in SLF. Unit has SLF in the premises but it is used for disposal of other hazardous wastes of oil refinery except spent catalyst of swing unit of Naphtha Cracker Division. SLF Capacity : Size 125 x 45 x 2.8 m (L x W x H) and quantity in Tonne it can store 17400 Tons</p>																				
<p>12. Details of HW storage, Quantity of HW Stored and period of storage</p>	<p>1. Storage facility details and capacity: (i) Lined /Unlined : Lined cemented (ii) Open/Covered and safe from rain water intrusion: Partially covered violation of Rule 4 of HOWM Rules, 2016.</p>																				
<p>13. Categories and quantity of HW sent to authorized actual user/Common TSDF</p>	<p>1. Details of the authorized actual user*/Common TSDF, as applicable, whom HW sent: M/s Premier Refractories of India Pvt. Ltd., Katni, M. P. and M/s Perfect Stoneware Pipes Ltd., Mandla, M. P. were two actual utilizers who have procured spent catalyst through e-auctioning. E-auction sale order provided by</p>																				

*[Signature]*  
RD, HSPCB

*[Signature]*  
Anil C. Ranveer

		unit and also verified during the visit.						
		2. Details of HW sent to the authorized actual user and TSDF, as applicable, since previous financial year (as per daily /annual record and manifest document Form 10): Unit informed they have TSDF agreement with GEPIL, Haryana, copy of agreement with GEPIL was submitted by the unit.						
14.	Compliance w.r.t. labeling, manifest system, records, annual returns, etc.	<p>Please make observations on the below:</p> <ol style="list-style-type: none"> <li>1. Adequate packaging of HW: Spent catalyst stored in jumbo bags</li> <li>2. Labeling of HW containers in Form 18: No labelling</li> <li>3. Compliance of all Manifest Documents and sending/receiving of the same to concerned when HW are being sent (refer Rule 19 of the HOWM Rules, 2016): Complied. Manifest for 2019-20 disposal submitted.</li> <li>4. Transportation of HW only by authorized sender or receiver: Complied. Transporters were arranged by receivers.</li> <li>5. NOC from the concerned SPCB/PCC if HW are sent for disposal to other State/UT. Intimation to SPCB time to time and authorization for transportation obtained.</li> <li>6. Intimation to both the SPCBs/PCCS before handing over the waste to the transport in case HW is sent for recycling or utilisation including co-processing: Intimation to SPCB time to time</li> <li>7. Prior intimation to SPCBs/PCCs of the States/UTs of transit in case of interstate transportation. Complied</li> <li>8. Transportation of HW and compliance with Rules under Motor Vehicles Act, 1988: Complied. Transporters were arranged by receivers.</li> <li>9. Daily records maintenance in Form 3: The records has been found maintained on monthly basis however as per HOWM Rules, 2016 records has to be maintained on daily basis.</li> <li>10. Timely submission of annual returns in Form 4 to the SPCB/PCC: Complied</li> </ol>						
15.	Safety facilities provided at storage facility	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Safety Facility</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Cemented storage ground area</td> </tr> <tr> <td>2.</td> <td>Partial Shed provided</td> </tr> </tbody> </table>	S. No.	Safety Facility	1.	Cemented storage ground area	2.	Partial Shed provided
S. No.	Safety Facility							
1.	Cemented storage ground area							
2.	Partial Shed provided							
16.	Details of HW contaminate sites, if any, within and outside the industry premise	Not observed contamination of soil and water.						

*DAhno*  
RO, HSPCB

*(Anil J. Ranveer)*

17.	Observations	<p>Please write down non-compliances, significant observations</p> <ol style="list-style-type: none"> <li>1. The unit has valid authorization till 30.09.2021 to generate and dispose hazardous waste however, the quantity of spent catalyst has been not mentioned.</li> <li>2. As informed by HSPCB officials they have issued this authorization based on application of unit. However, unit has applied for hazardous waste i.e., spent catalyst and molecular sieves for generation of 3076 tons per annum. The unit has requested disposal of hazardous waste by means of recyclers (1703 tons per annum) and in-house disposal (229 tons per annum).</li> <li>3. However, as per the annual returns, the unit is generating more than 3076 MT spent catalyst annually sending the same to utilizers for which unit is not authorized.</li> <li>4. In last 3 financial years, unit has generated approximately 17,733.215 MT of spent catalyst as against applied quantity of 9228 MT of spent catalyst, which indicates 8505.215 MT of spent catalyst was additionally generated and supplied to utilizers.</li> <li>5. The spent catalyst storage area was not marked with any sign of hazardous waste storage site. Moreover, the shed area provided was not appropriate in size. Many bags of spent catalyst were found stored in open area and rain water was observed intruding the same. The packaging and labelling of hazardous waste was not found as per Rule 17 of HOWM Rules, 2016. Photographs attached as <b>Annexure – I</b></li> <li>6. The records has been found maintained on monthly basis however as per HOWM Rules, 2016 records has to be maintained on daily basis.</li> <li>7. Unit has provided auction detail of MSTC, where unit has sold 5400 MT of spent catalyst to M/s Premier Refractories of India Pvt. Ltd., Katni, M.P. vide sale order dated 21.09.2019.</li> <li>8. Unit has prepared its own SoP for handling and management of hazardous waste in their unit. The procedure for e-auction is same as given in Panipat Refinery inspection report.</li> </ol>
18.	Recommendations	<ol style="list-style-type: none"> <li>1. The unit shall operate with proper authorization defining the quantity of hazardous waste generation including spent catalyst.</li> <li>2. The unit shall maintain daily generation of hazardous wastes as per Form – 3 of HOWM Rules, 2016.</li> <li>3. The unit shall maintain proper storage facility for safe and environmentally sound management of hazardous and other wastes as per Rule 4 of HOWM Rules, 2016.</li> <li>4. The unit shall ensure to avoid rain water intrusion in hazardous waste storage facility.</li> <li>5. The unit shall ensure proper packaging and labelling of hazardous and other waste as per Rule 17 of HOWM Rules, 2016.</li> <li>6. The unit shall ensure to dispose off hazardous waste through e-</li> </ol>

*[Signature]*  
RO, HSPCB

*[Signature]*  
(Aul) C. Banerjee

auction to the authorized recyclers/utilizers



Shailendra Arora,  
Regional Officer, Panipat,  
HSPCB



Anil C. Ranveer,  
Additional Director, CPCB,  
New Delhi

\*\*\*\*\*

Photographs taken during inspection



Fig.1: Online Monitoring Station of Naptha Craker Division

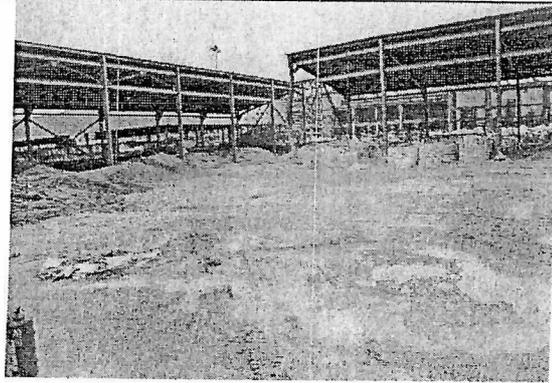


Fig.2: Spent catalyst storage area

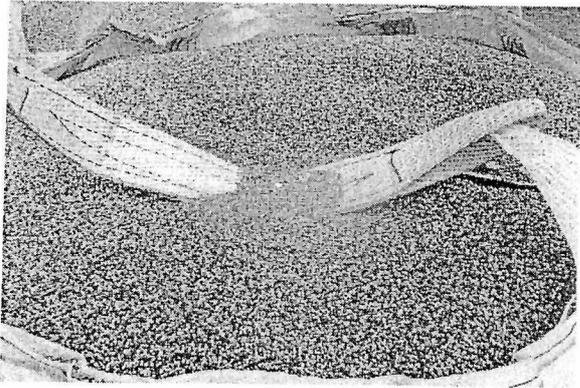


Fig.3: Spent catalyst stored in jumbo bags

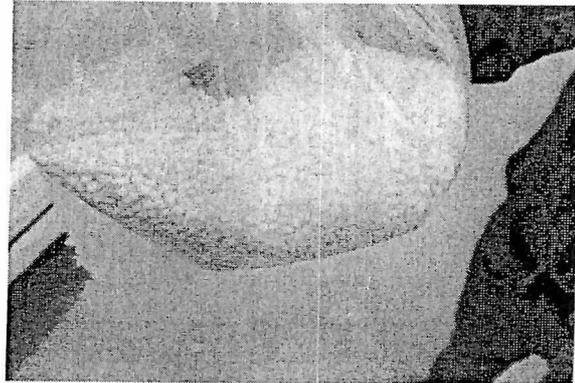


Fig.4: Fresh catalyst

\*  
**FORMAT FOR INSPECTION OF INDUSTRIES WITH REGARD TO  
 GENERATION AND MANAGEMENT OF HAZARDOUS WASTES**

S. No.	Particulars	Status/details																								
1.	Name & address of the industry	Digboi Refinery, Indian Oil Corporation(Assam Oil Division) P.O:Digboi,Dist: Tinsukia(Assam)-786171																								
2.	Date of Visit	20.08.2020																								
3.	Contact Person Name, Designation, Contact No. & E-mail	Sri Tridib Saikia, CM,HSE, e-mail :tridib_saikia@indianoil.in																								
4.	Name and Designation of the Officials visiting the Unit	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Name of Official</th> <th>Designation</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Pankaj Kr.Dutta</td> <td>Executive Engineer.</td> </tr> </tbody> </table>	S. No.	Name of Official	Designation	1.	Pankaj Kr.Dutta	Executive Engineer.																		
S. No.	Name of Official	Designation																								
1.	Pankaj Kr.Dutta	Executive Engineer.																								
5.	Process description in brief for each Product. Also attach Process Flow Diagram indicating raw materials and sources of hazardous waste generation along with mass balance	Petroleum refining is carried out through a series of processes such as vacuum distillation , catalytic reforming ,delayed coking, Hydro treating, desulphurization etc. for production of HSD,MS, LPG and other petroleum derivatives details of which is <b>Attached As Annexure-I</b>																								
6.	Year of commissioning	1996(after modernization)																								
7.	Production (in MT or KL/day) of each product	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Product</th> <th>MT/ Annum</th> <th>Operational Status</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>MS BS-IV</td> <td>91670.171</td> <td>operational</td> </tr> <tr> <td>2.</td> <td>MS BS-VI</td> <td>23693.521</td> <td>do</td> </tr> <tr> <td>3.</td> <td>LPG</td> <td>14705.523</td> <td>do</td> </tr> <tr> <td>4.</td> <td>HSD BS-IV</td> <td>296182.718</td> <td>do</td> </tr> <tr> <td>5.</td> <td>HSD-BS-IV</td> <td>75928.015</td> <td>do</td> </tr> </tbody> </table>	S. No.	Product	MT/ Annum	Operational Status	1	MS BS-IV	91670.171	operational	2.	MS BS-VI	23693.521	do	3.	LPG	14705.523	do	4.	HSD BS-IV	296182.718	do	5.	HSD-BS-IV	75928.015	do
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4.	HSD BS-IV	296182.718	do																							
5.	HSD-BS-IV	75928.015	do																							

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		6	MTO	34.86	do	
		7	IFO(CFO/RF O)	5079.620	do	
		8	SULPHUR	341.843	do	
		9	FO-regular	84259.059	do	
		10	CRMB	160.914	do	
		11	Paraffin Wax	32544.5	do	
		12	Petroleum Coke	41903.858	do	
			Total	666504.60	do	
8.	Details of Consent under the Water Act, 1974 & Air Act, 1981	Date of issue:29.03.2019 Validity:31.03.2020(extended 31.07.20)				
		Date of issue:29.03.2019 Validity:31.03.2020(extended 31.07.20)				
9.	Status of Authorization under the Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 (HWM Rules, 2008) / Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 (HOWM Rules 2016) and details of Hazardous Waste (HW) authorized  (please also attach copy of authorization)	Date of issue:22.12.2016 Validity:21.12.2021				
		<b>S. No.</b>	<b>Name of HW</b>	<b>Category</b>	<b>Quantity</b>	<b>Mode of Treatment &amp; Disposal/Recycling/Reuse/etc.</b>
		1.	Oily Sludge	4.1	12000	
		2.	Oily Sludge	3.3	MTA	
		3.	Bio sludge	Schedule-II,C-10	1000MTA	
		4.	Spent Catalyst	4.2	150 MTA	
10.	Name and Categories of HW generated and	The details of various categories of hazardous wastes generation and their				

their respective quantity

quantity, as verified the inspecting team during the inspection are as below in Table I:

S. No.	Quantity Generation permitted	Actual Quantity Generated	Quantity Disposed	Quantity Stored	Method of Disposal
1	12000MTA (oily sludge)	690MT	4997 MT(till date)	12704 MT(legacy waste)	Bio remediation
2	150MTA (spent catalyst)	61.32MT		81.89MT	Sold to actual user/re-processor through e-auction.
3	1000MT	700 MT	806MT	970MT	Bio remediation

\* Please give name and quantity of each of the inputs for each rows of the above table. In case of recycling/utilization/pre-processing/co-processing units, the inputs would as per include HW being procured and used in deriving products

11. Captive Recycling/ Utilization/ Incineration/ Secured Landfilling facility details

If yes, please specify details of such facilities including compliance details as per the Rule and CPCB guidelines:  
Onsite bioremediation of oily sludge undertaken (no specific guidelines for bioremediation ) volume:2600 cubic metres.

12. Details of HW storage, Quantity of HW Stored and period of storage

1. Storage facility details and capacity:
  - (i) Lined /Unlined : lined with HDPE (for oily sludge)
  - (ii) Open/Covered and safe from rain water intrusion : enclosed shed for spent catalyst
  - (iii) Capacity : Size L x W x H and quantity in Tonne it can store
- a) Spent catalyst storage: 100ft\*15ft\*14ft
- b) Sludge pit:90m\*57m\*2m,proposed:20m\*30m\*2m
- (iv) In case of incinerable hazardous waste storage, comment on compliance of CPCB guidelines:

2. Details of HW Stored:

S. No.	Name & Category of HW	Actual HW generated in Tonne (2019-20)	Previous Stock (in Tonne) stored in Storage shed (at the beginning of previous financial year)	Actual quantity (in Tonne) found stored on the day of inspection	Balance (in Tonne) (Disposed)	Latest date of transfer of HW to authorized Recycler/Co-processor/TSDf/etc.
1	Oily Sludge	690	17011	12704	4997	March 2020
2	Bio sludge	700	1076	970	806	March 2020
3	Spent catalyst	61.32	20.57	81.89	---	

3. Comments on whether HW is being sent to authorized Recycler/ Co-process TSDf/etc. timely in compliance with Rule 9 of the HOWM Rules:

As stated by the contact person spent catalyst was sent to actual user/recycler located in other states. Manifest submitted.

13. Categories and quantity of HW sent to authorized actual user/Common TSDf

1. Details of the authorized actual user\*/Common TSDf, as applicable, whom HW sent in August, 2016:

S. No.	Name & address of the authorized common TSDf/Actual User	Name of SPCB/PCC who granted authorization to the authorized TSDf/Actual User and authorization no. with its validity	Activities for which authorization granted to the authorized TSDf/Actual User (Specify among Transportation/Recycling/Utilization/Pre-processing/Co-processing/Incineration/Secured landfilling)	Name and categories of HW for which authorization granted to the authorized TSDf/Actual User
1	Ganesh Steel	Authorized By WBPCB vide.	Re-refining/recycling	Spent nickel

		&Alloys limited, 14, N.S Road, 3 <sup>rd</sup> Floor, Room No. 315, Kolkata-700001, West Bengal	No.118/28(HW)-2902/2013 dt.05.05.2016	catalyst, spent copper catalyst
		<p>* Actual user includes occupier who procures and processes HW for reuse, recycling recovery, pre-processing, utilisation including co-processing.</p> <p>2. Details of HW sent to the authorized actual user and TSDF, as applicable, since previous financial year (as per daily /annual record and manifest document Form 10): As per manifests submitted till date the previous consignment of HW was sent in the year 2016 and since then HW have not been sent.</p>		
14.	Compliance w.r.t. labeling, manifest system, records, annual returns, etc.	<p>Please make observations on the below:</p> <ol style="list-style-type: none"> <li>1. Adequate packaging of HW: Complied</li> <li>2. Labeling of HW containers in Form 18: Labeling done, certain modifications recommended.</li> <li>3. Compliance of all Manifest Documents and sending/receiving of the same to concerned when HW are being sent (refer Rule 19 of the HOWM Rules, 2016): Manifest submitted.</li> <li>4. Transportation of HW only by authorized sender or receiver: Yes, complied.</li> <li>5. NOC from the concerned SPCB/PCC if HW are sent for disposal to other State/UT: Records pertaining to NOC from the concerned SPCB could not be produced by the occupier during inspection.</li> <li>6. Intimation to both the SPCBs/PCCS before handing over the waste to the transport in case HW is sent for recycling or utilization including co-processing: Records not available.</li> <li>7. Prior intimation to SPCBs/PCCs of the States/UTs of transit in case of interstate transportation: Records not available.</li> <li>8. Transportation of HW and compliance with Rules under Motor Vehicles Act, 1988: Records not available.</li> <li>9. Daily records maintenance in Form 3: Complied.</li> <li>10. Timely submission of annual returns in Form 4 to the SPCB/PCC: Complied till date.</li> </ol>		
15.	Safety facilities provided at storage facility	Firefighting system has been incorporated. Details of the Safety facilities have been enclosed as annexure.		
16.	Environmental Monitoring	Please comment on results of ground water sampling; soil sampling; stack emission monitoring conducted by SPCB/PCC or EPA notified lab in presence of		

		SPCB/PCC officials: As per analysis reports produced at the time of inspection the parameters analyzed are within permissible limits for stack emission. Ground water test reports have been enclosed.
17.	Details of HW contaminated sites, if any, within and outside the industry premise	Oily sludge generated in the refinery premises have been observed to be stored in lined pits which is bio remediated subsequently. No contaminated sites have been observed, however further assessment might be require along with soil sampling and analysis to ascertain the same.
18.	Observations	<ol style="list-style-type: none"> <li>1. Spent catalyst generated by the occupier was observed to be stored in properly covered shed stacked in wooden ramps in an orderly fashion.</li> <li>2. The previous consignment of HW was sent in August, 2016 to a unit in the state of West Bengal, manifest of which have been submitted.</li> <li>3. The oily sludge is bio remediated, further assessment is required to ascertain the efficacy of the process.</li> <li>4. The unit is exploring ways for recovery of oil as well as preprocessing of oily sludge being stored in the sludge pits.</li> </ol>
19.	Recommendations	<ol style="list-style-type: none"> <li>1.) The Unit shall adhere to all the provisions of HoWM Rules 2016 pertaining to storage, packaging, labelling, transportation and disposal of hazardous waste including spent catalyst generated within their premises.</li> <li>2.) Utilizable hazardous waste shall be handed over to actual users which are duly authorized by concerned SPCB under Rule 9 of the HoWM Rules.</li> <li>3.) NOC should be obtained from concerned SPCB if HW are sent for disposal to other State and prior intimation shall be given to SPCBs/PCCs of the States/UTs of transit in case of interstate transportation.</li> <li>4.) Steps should be taken to check contamination of storm water from bioremediation sites as well as sludge pits.</li> </ol>

  
 Pankaj Kr. Dutta, E.E

Place: Digboi  
 Date: 20.08.2020

Details of HW sent to authorized actual user and TSDF

S. No	Name of HW & Category	Quantity recycled/Utilized/Disposed in captive facility (in Tonne)			HW sent for Recycling/Utilization/Pre-processing/Co-processing/Incineration/Secured Landfilling in Tonnes and to whom(as per manifest enclosed) during August ,2016						Total HW recycled/Utilized in Captive facility and sent to other authorized facility	Quantity of hazardous waste store within the premises
		Incinerated	Secured Landfilled	Recycled/Utilized	Recycling	Utilization	Co-processing	Incineration	Secured Landfilling	Sent to whom		
1	Spent Catalyst	NIL	NIL	NIL	93.362MT		---	----	---	as per manifest enclosed	---	81.89MT

WEST BENGAL POLLUTION CONTROL BOARD

(Department of Environment, Govt. of West Bengal)

Paribesh Bhawan

Bldg. No. 10 A, Block-LA, Sector-III, Bidhan Nagar,

Kolkata - 700 056

TEL: 033-2332-2000/2001/2002/2003/2004/2005/2006/2007/2008/2009/2010/2011/2012/2013/2014/2015/2016/2017/2018/2019/2020/2021/2022/2023/2024/2025/2026/2027/2028/2029/2030/2031/2032/2033/2034/2035/2036/2037/2038/2039/2040/2041/2042/2043/2044/2045/2046/2047/2048/2049/2050/2051/2052/2053/2054/2055/2056/2057/2058/2059/2060/2061/2062/2063/2064/2065/2066/2067/2068/2069/2070/2071/2072/2073/2074/2075/2076/2077/2078/2079/2080/2081/2082/2083/2084/2085/2086/2087/2088/2089/2090/2091/2092/2093/2094/2095/2096/2097/2098/2099/2100

Fax: 033-2332-0121/0122/0123/0124/0125/0126/0127/0128/0129/0130/0131/0132/0133/0134/0135/0136/0137/0138/0139/0140/0141/0142/0143/0144/0145/0146/0147/0148/0149/0150/0151/0152/0153/0154/0155/0156/0157/0158/0159/0160/0161/0162/0163/0164/0165/0166/0167/0168/0169/0170/0171/0172/0173/0174/0175/0176/0177/0178/0179/0180/0181/0182/0183/0184/0185/0186/0187/0188/0189/0190/0191/0192/0193/0194/0195/0196/0197/0198/0199/0200

Form - 1

Form of Authorization under the provisions of the Hazardous Waste Management and Handling & Transboundary Movement) Rules, 2008 & amendments made thereon.

Ref.: Application for renewal of authorization dated 04.04.2016 for management & handling of hazardous waste.

Authorization for Operating a facility for generation, handling, collection, reception, storage, transport, recycling, reprocessing, reuse and disposal of hazardous wastes under Rules 5(4) of the Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 & amendments made thereafter.

1. Memo No. and date of previous Authorizations issued by the Board 144/2S(HW)-2902/2013 dt 18.11.2014.

2. M/s. Ganesh Steel & Alloys Ltd.

NH-2, Delhi Road, Vill: Dakshin Rajvadharpur, P.O.: Mallickpara, P.S.: Serampore, District: Hooghly, Pin- 712 203 West Bengal is hereby granted an authorization to operate a facility for generation, handling, collection, reception, transport, storage and disposal of hazardous waste of category (s) "5.1, 34.1, 35.1" on the premises situated in NH-2, Delhi Road, Vill: Dakshin Rajvadharpur, P.O.: Mallickpara, P.S.: Serampore, District: Hooghly, Pin- 712 203 West Bengal.

3. The authorization shall be in force for a period upto 28.02.2017.

4. The authorization is subject to the condition stated below and such conditions are as may be specified in the rules for the time being in force under the Environment (Protection) Act, 1986.

Handwritten signature and date 03/5/16

[Senior Environmental Engineer]

TRUE COPY ATTESTED Waste Management Cell

on behalf of

Member Secretary

KANAI KUMAR PAUL West Bengal Pollution Control Board

REGN. NO. 270004

Established Date: 1986

Page 01 of 03



Encl.: Terms & conditions for authorization.

GANESH STEEL & ALLOYS LIMITED

Narayan M. Baid.

Director

09 MAY 2016

Terms and conditions of authorization

- 20. Spent Ni catalyst / spent copper catalyst as mentioned in the 'Registration Certificate -Cum- Pass-Book' for re-refining /recycling of hazardous wastes obtained from the State Board shall be purchased from the actual generator only and not from traders. During each purchase of these wastes, the original pas-book issued by the State Board should be endorsed by the seller. All such wastes purchased should be reprocessed by the unit itself and should not be sold/disposed to others under any circumstances.
- 21. The unit shall not sell or sold through manifest system. The unit shall maintain manifest system as per the order of the State Pollution Control Board (SPCB), during the period of validity of the manifest Pass-Book issued by the SPCB. The registered recyclers shall be entered of manifest system and copy of the same should be kept as record.
- 22. The slag from the alloy steel manufacturing activity/ pyro-metallurgical operations shall be kept in the lined pit within the premises in an environmentally safe manner so that no leaching and ground contamination takes places until further directions on this issue are issued by the State Board.
- 23. The unit shall dispose dust from the APC system, if practically feasible, to the unit having valid authorisation and approval from Central Pollution Control Board under Rule 11 or to be disposed to the Common Hazardous Waste Treatment, Storage and Disposal Facility at Haldia maintaining manifest system.
- 24. Records of hazardous waste generation, storage and disposal shall be maintained properly and shall be available during inspection by Boards officials.
- 25. The unit shall properly fill up and regularly update the environmental information on Display Boards as per the order of the Hon'ble Supreme Court dated 14.10.2003 in W.P. (C) No. 657 of 1995 and a copy of the same shall be submitted to the this office within 30 ( thirty) days from the date of issue of this authorization.
- 26. The unit shall submit air/water consent status within 30 days from the date of issue of this authorisation.
- 27. Authorization will be revoked in case of noncompliance with any of the above conditions.
- 28. Further extension of validity period of this authorisation shall be considered only after satisfactory compliance with the above mentioned conditions.

M/s. Ganesh Steel & Alloys Ltd.  
 NH-2, Delhi Road, Vill: Dakshin Rajyadharpur,  
 P.O.: Mallickpara, P.S.: Serampore, District: Hooghly,  
 Pin- 712 203 West Bengal

[Senior Environmental Engineer]  
 Waste Management Cell  
 on behalf of  
 Member Secretary  
 West Bengal Pollution Control Board

03/5/16

GANESH STEEL & ALLOYS LIMITED  
 Navnetan Mal Baid,  
 Director



TRUE COPY ATTESTED  
 KAVAI KUMAR PAUL, NOTARY  
 REGN. NO. 270004  
 Bankura Court, KOLKATA, WB

03 MAY 2016

2

Terms and conditions of authorization

1. The authorization shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made thereunder.
2. The unit shall not store hazardous waste for more than 90 Days under any circumstances.
3. The authorization or its renewal shall be produced during inspection at the request of an officer authorized by the State Pollution Control Board.
4. The person authorized shall not rent, lend, sell, transfer or take the name of the unit for any purpose without the permission of the State Pollution Control Board.
5. Any change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of the authorization.
6. It is the duty of the authorized person to take prior permission of the State Pollution Control Board to close down the facility.
7. An application for the renewal of authorization shall be made as laid down in Rule 5 (7) of the Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 & amendments made thereafter.
8. The person authorized is allowed to store the hazardous wastes inside the factory with all precautionary measures to avoid any leaching. Moreover direct land filling of any hazardous wastes is not permitted.
9. The occupier will not be allowed to dispose / recycle / reuse or reprocess any of their hazardous wastes by any unauthorized external agency / or without the consent of State Board.
10. The occupier / generator will not be allowed to transport any types of hazardous wastes through any unauthorized transporters as per Motor Vehicles Act, 1988 and Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 & amendments made thereafter.
11. Hazardous waste storing drums / pits should be properly covered.
12. Proper display arrangement showing characteristic / category / quantity per month etc. to be made at the storing site.
13. The occupier should maintain all other formalities viz Form - 3, 4, 6, 11, 12 & 13 as per Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 & amendments made thereafter.
14. Any off-specification product and containers of hazardous chemicals should not be disposed of outside or sold to any unauthorized agency without the knowledge of the Board.
15. All safety precautions and procedures to be adopted during handling of hazardous wastes.
16. Good housekeeping to be maintained in the factory.
17. Authorization may be withdrawn any time if hazardous wastes storage facilities are not found satisfactory and in case of non-compliance of any statutory provisions under the said rules.
18. The unit shall store the hazardous wastes (category wise separately) under shade in an environment friendly safe manner within the premises at designated places.
19. The unit shall not store hazardous wastes onsite for more than 90 (ninety) days.

GANESH STEEL & ALLOYS LIMITED

*Nannatan M. Bai*

Director



TRUE COPY ATTESTED

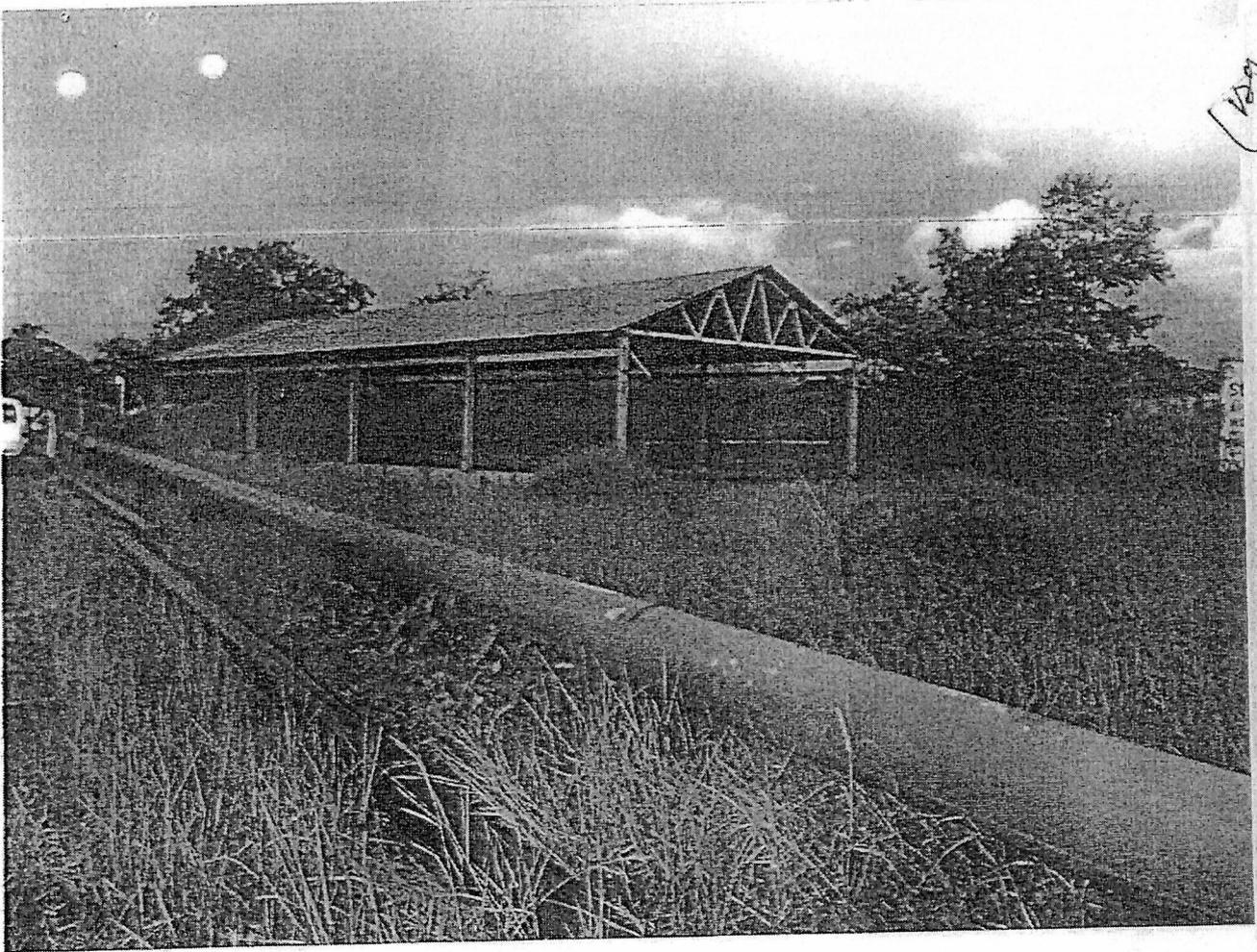
*K. K. Paul*  
 KAMAL KUMAR PAUL, Notary  
 REGN. NO. 270004  
 District Court, Kolkata, West Bengal

9 MAY 2016

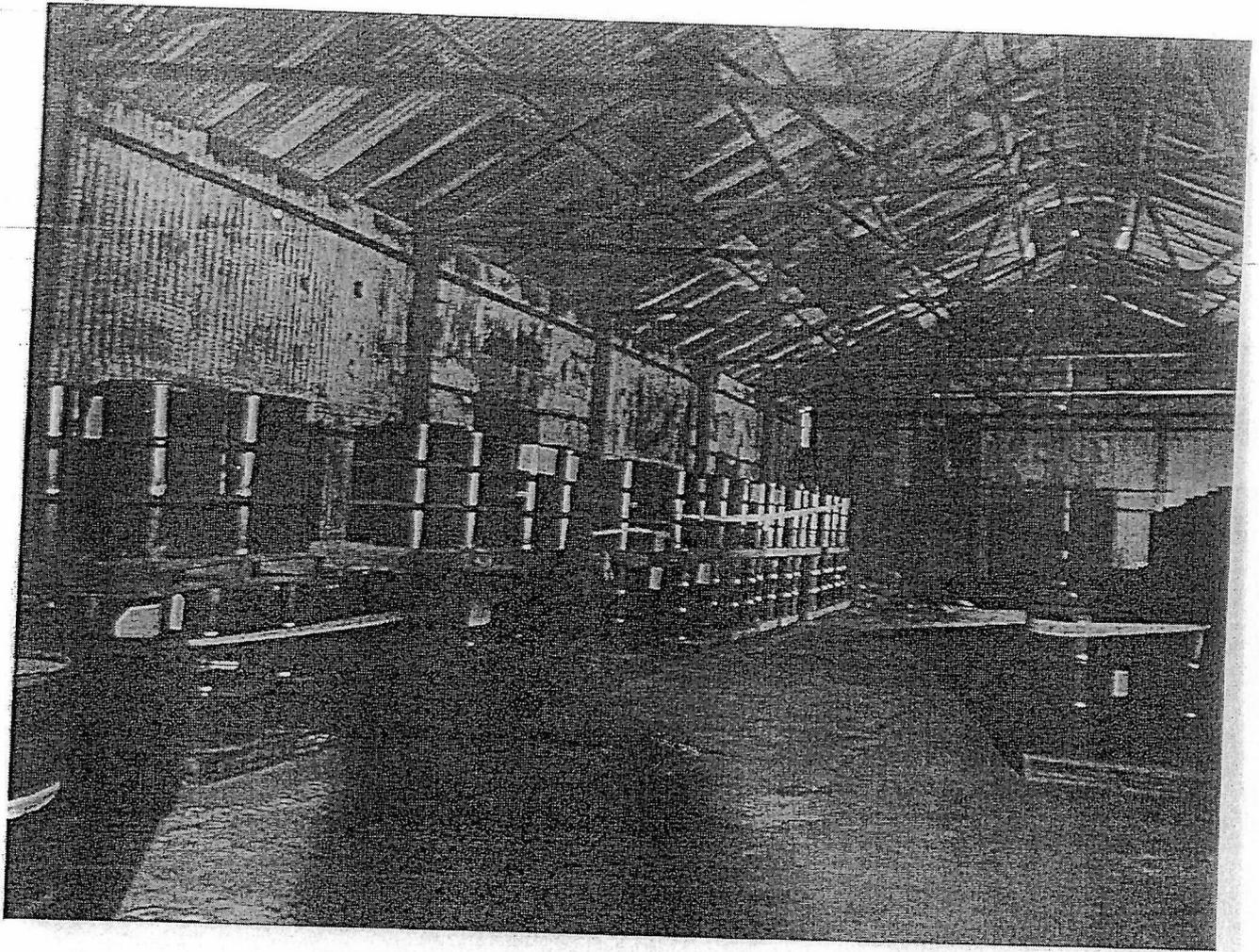
8/27/2020

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801



**INSPECTION OF INDUSTRIES WITH REGARD TO GENERATION  
AND MANAGEMENT OF HAZARDOUS WASTES**

S. No.	Particulars	Status/details			
1.	Name & address of the industry	HPCL-Mittal Energy Limited, Guru Govind Singh Refinery Project, Village-Phullokari, Taluka-Talwandi Saboo, Bhatinda, Punjab-151301			
2.	Date of Visit	22.08.2020			
3.	Contact Person Name, Designation, Contact No. & E-mail	Sanket Thapar (Head-Energy Management Cell), 9988810290 <a href="mailto:sanket.thapar@hmel.in">sanket.thapar@hmel.in</a>			
4.	Name and Designation of the Officials visiting the Unit	<b>S. No.</b>	<b>Name of Official</b>	<b>Designation</b>	
		1	Anil C. Ranveer	Additional Director, CPCB	
		2	Vijay Gupta	Regional Officer- PPCB, Bhatinda	
		3	Ramandeep Sidhu	Assistant Environmental Engineer- PPCB, Bhatinda	
		4	Dr. Siddhartha Gautam	Environmental Engineer-DPCC, Delhi	
5.	Process description in brief for each Product. Also attach Process Flow Diagram indicating raw materials and sources of hazardous waste generation along with mass balance	HPCL-Mittal Energy (Guru Gobind Singh Refinery) is a crude oil refining process unit of capacity 11.25 MMTPA. Several furnace units based on atmospheric as well as high pressure high temperature involved in refining process of crude oil. Cracking unit further produces various product given at Sl. No. 7 where Fresh Catalyst also fed in a reactor/furnace.			
6.	Year of commissioning	2012			
7.	Production (in MT or KL/day) of each product	<b>S. No.</b>	<b>Product</b>	<b>MT/day</b>	<b>Operational Status</b>  As per consent to operate granted
		1.	LPG	2889	
		2.	Naphtha	2615	
		3.	Gasoline	3994	
		4.	ATF	1500	
		5.	Kerosene	600	
		6.	Diesel	14527.8	
		7.	Sulphur	622	
		8.	Coke	2974	
		9.	Hexane	15	
		10.	Poly Propylene	1500	
		11.	Bitumen	1560	

8.	Details of Consent under the Water Act, 1974 & Air Act, 1981	<p>Water Consent no.: CTOW/Renewal/BTI/2019/9511579  Date of issue: 29.07.2019  Validity: 31.03.2022</p> <p>Air Consent no.: CTOA/Renewal/BTI/2019/9511030  Date of issue: 29.07.2019  Validity: 31.03.2022</p>																						
9.	Status of Authorization under the Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 (HWM Rules, 2008) / Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 (HOWM Rules 2016)	<p>Authorisation no.: HWM/renew/BTI/2019/9564797  Date of issue: 31.07.2019  Validity: 30.07.2020</p> <p>Spent Catalyst (Category 4.2) authorized for 2500 MT/Annum for generation, collection, storage, recycling and disposal.</p> <p>Unit has also applied for renewal of authorization.</p>																						
10.	Name and Categories of HW generated and their respective quantity	<p>The details of spent catalyst generation and their quantity, as verified the inspecting team during the inspection are as below:</p> <table border="1" data-bbox="593 949 1412 1442"> <thead> <tr> <th>Year</th> <th>Generated Quantity (MT)</th> <th>Disposed Quantity (MT)</th> <th>Name of Disposal Facility</th> <th>Stock Stored (MT)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">2017-18</td> <td rowspan="2">1779.184</td> <td>616.92</td> <td>Lakhdata Petrochemicals, Bhatinda</td> <td rowspan="2">0</td> </tr> <tr> <td>1162.258</td> <td>Arth Metallurgicals Pvt. Ltd., Raipur</td> </tr> <tr> <td>2018-19</td> <td>82.22</td> <td>42.22</td> <td>Ravindra Heraeus Pvt. Ltd., Udaipur</td> <td>40</td> </tr> <tr> <td>2019-20</td> <td>770.71</td> <td>810.71</td> <td>Mittal Pigments Pvt. Ltd., Kota</td> <td>0</td> </tr> </tbody> </table> <p>Annual Return (Form – 4) verified for above disposal of spent catalyst.</p>	Year	Generated Quantity (MT)	Disposed Quantity (MT)	Name of Disposal Facility	Stock Stored (MT)	2017-18	1779.184	616.92	Lakhdata Petrochemicals, Bhatinda	0	1162.258	Arth Metallurgicals Pvt. Ltd., Raipur	2018-19	82.22	42.22	Ravindra Heraeus Pvt. Ltd., Udaipur	40	2019-20	770.71	810.71	Mittal Pigments Pvt. Ltd., Kota	0
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11.	Captive Recycling/Utilization/ Incineration/ Secured Landfilling facility details	<p>Unit has SLF in the premises and as per record it is used for disposal of ETP Sludge and Oil &amp; Grease skimming residues.</p> <p>Capacity: Size 112 x 75 x 2.5 m (L x W x H) and quantity it can store is 20,000 MT.</p>																						
12.	Details of HW storage, Quantity of HW Stored and period of storage	<p>1. Storage facility details and capacity:</p> <ul style="list-style-type: none"> <li>(i) Lined /Unlined : Lined</li> <li>(ii) Open/Covered and safe from rain water intrusion : Covered</li> <li>(iii) In case of incinerable hazardous waste storage, comment on compliance of CPCB guidelines: Hazardous waste storage area</li> </ul>																						

		was found empty.							
13.	Categories and quantity of HW sent to authorized actual user/Common TSDF	<p>1. Details of the authorized actual user/Common TSDF, as applicable, whom HW sent: Lakhdata Petrochemical, Bhatinda, Arth Metallurgical Pvt. Ltd., Raipur, Ravindra Heraeus Pvt. Ltd., Udaipur and Mittal Pigments Pvt. Ltd., Kota were actual utilizers who have procured spent catalyst through e-auctioning. E-auction sale order provided by unit and verified during the visit.</p> <p>2. Details of HW sent to the authorized actual user and TSDF, as applicable, since previous financial year (as per daily /annual record and manifest document Form 10): The unit does not have membership of any TSDF. All the hazardous waste is sent to approved vendors / co-processed in Cement Industry/ send to Captive Secured Land Fill (SLF) site.</p>							
14.	Compliance w.r.t. labeling, manifest system, records, annual returns, etc.	<p>Please make observations on the below:</p> <ol style="list-style-type: none"> <li>1. Adequate packaging of HW: No hazardous waste found stored</li> <li>2. Labeling of HW containers in Form 18: No hazardous waste found stored</li> <li>3. Compliance of all Manifest Documents and sending/receiving of the same to concerned when HW are being sent (refer Rule 19 of the HOWM Rules, 2016): Complied.</li> <li>4. Transportation of HW only by authorized sender or receiver: Complied. Transporters were arranged by receivers.</li> <li>5. NOC from the concerned SPCB/PCC if HW are sent for disposal to other State/UT: NOC is required to be arranged by transporter and intimation to SPCB was given at the end to the financial year.</li> <li>6. Intimation to both the SPCBs/PCCS before handing over the waste to the transport in case HW is sent for recycling or utilisation including co-processing: Intimation to SPCB was given at the end to the financial year.</li> <li>7. Prior intimation to SPCBs/PCCs of the States/UTs of transit in case of interstate transportation. Complied.</li> <li>8. Transportation of HW and compliance with Rules under Motor Vehicles Act, 1988: Complied. Transporters were arranged by receivers</li> <li>9. Daily records maintenance in Form 3: The records has been found maintained on monthly basis however as per HOWM Rules, 2016 records has to be maintained on daily basis.</li> <li>10. Timely submission of annual returns in Form 4 to the SPCB/PCC: Complied</li> </ol>							
15.	Safety facilities provided at storage facility	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Safety Facility</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Cemented storage ground area</td> </tr> <tr> <td>2.</td> <td>Shed provided</td> </tr> </tbody> </table>	S. No.	Safety Facility	1.	Cemented storage ground area	2.	Shed provided	
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1.	Cemented storage ground area								
2.	Shed provided								
16.	Details of HW contaminate sites, if any,	There is no any contaminated sites in the premises.							

		2.	Shed provided
16.	Details of HW contaminate sites, if any, within and outside the industry premise	There is no any contaminated sites in the premises.	
17.	Observations	<ol style="list-style-type: none"> <li>1. Unit has installed Environmental Data Display board but the information regarding hazardous waste generation was not updated.</li> <li>2. Unit has submitted Form-3 which is maintained generation basis of spent catalyst. Daily records was not maintained as per Form-3 of HOWM Rules, 2016.</li> <li>3. The hazardous waste storage area was found empty during inspection. The storage area was not properly marked.</li> <li>4. As informed by the unit representative, the quantity of spent catalyst generation depend on the life of fresh catalyst. Most of the cracking unit of refinery is able to generate spent catalyst in a period of 1 to 3 years.</li> <li>5. ETP chemical sludge and oil &amp; grease skimming residue (Category 35.3 and 35.4 respectively of Schedule of HOWM Rules, 2016) are being disposed in captive SLF. Two leachate collection pump of 10 m<sup>3</sup>/hr capacity is installed for leachate collection.</li> <li>6. ETP treated water is used in horticulture within its premises.</li> <li>7. The spent catalyst has been disposed through e-auction to authorized recycler/utilizer.</li> <li>8. Photographs of visit is attached as Annexure I.</li> </ol>	
18.	Recommendations	<ol style="list-style-type: none"> <li>1. The unit shall update Environmental Data Display Board regularly.</li> <li>2. The unit shall maintain daily generation of hazardous wastes as per Form – 3 of HOWM Rules, 2016.</li> <li>3. The unit shall ensure proper packaging and labelling of hazardous waste as per Rule 17 of HOWM Rules, 2016.</li> <li>4. Unit shall properly marked the storage area and store the ETP, Oil and chemical sludge in designated storage area.</li> <li>5. The unit shall provide proper storage facility for safe and environmentally sound management of hazardous and other wastes as per Rule 4 of HOWM Rules, 2016.</li> <li>6. The unit shall ensure to dispose off hazardous waste through e-auction to the authorized recyclers/utilizers.</li> </ol>	

  
Dr. Siddhartha Gautam,  
Environmental Engineer,

  
Ramandeep Sidhu,  
Assistant Environmental Engineer,

  
Vijay Gupta,  
Regional Officer,

  
Anil C. Ranveer,  
Additional Director.

Scanned by CamScanner

Photographs taken during inspection



Fig. 1: Main entrance of the HPCL Refinery

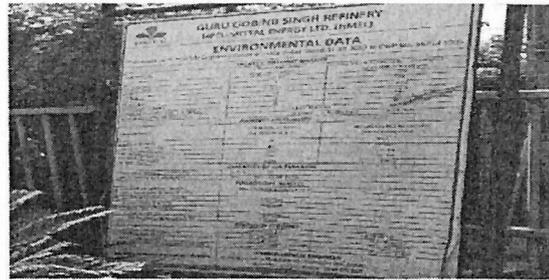


Fig. 2: Environmental Data Display Board

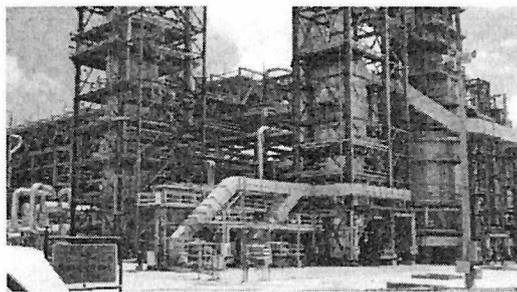


Fig. 3: Hydro Cracker Unit (spent catalyst generating unit)

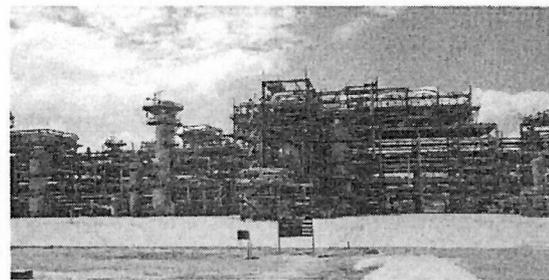


Fig. 4: FCC Unit (spent catalyst generating units)

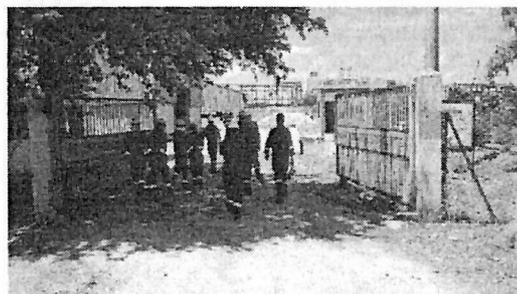


Fig. 5: Secured Landfill site

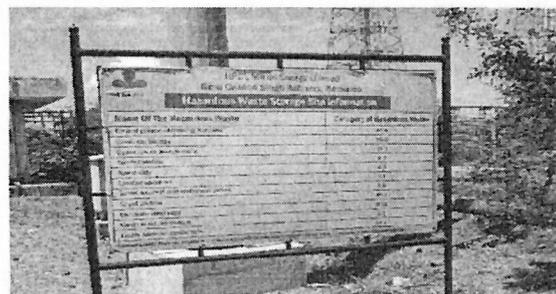


Fig. 6: Hazardous waste information for storage and disposal in SLF

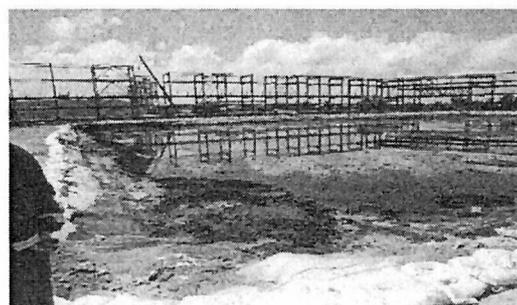


Fig. 7: Secured LandFill

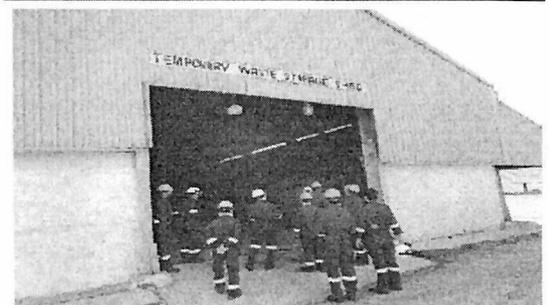


Fig. 8: Hazardous waste storage area

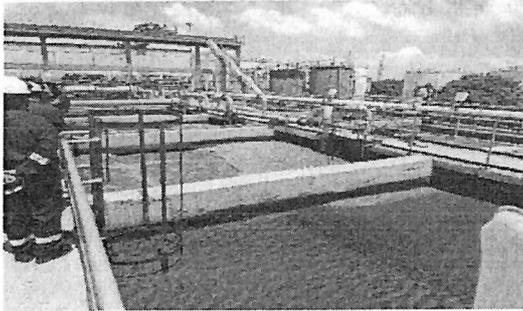


Fig. 9: Effluent Treatment Plant Unit

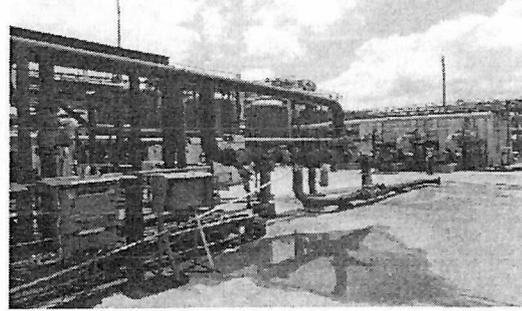


Fig. 10: Filter units of ETP

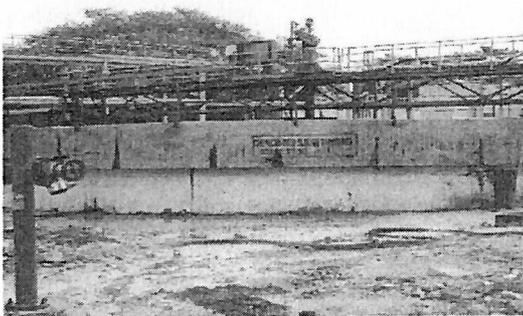


Fig. 11: Chemical oil sludge thickener of ETP

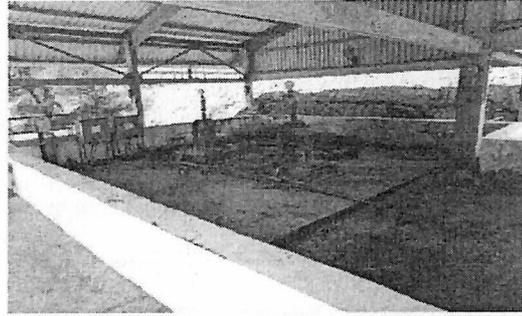


Fig. 10: Leachate Collection Pump at SLF Site

## Joint Inspection Report of M/s. Ganesh Steel &amp; Alloys Ltd.

1.	Name and Address of the industry	:	M/s. Ganesh Steel & Alloys Ltd. NH-2, Delhi Road, Vill: Dakshin Rajyadharpur, P.O: Malliickpara, P.S: Serampore, Dist.: Hooghly, PIN: 712203, West Bengal.
2.	Reference of Inspection	:	In connection with Hon'ble National Green Tribunal in the matter of O.A. No. 67/2020; Nathan Chaudhary Vs State of GNCTD & Ors, dtd. 20.03.2020 which related to unauthorized disposal of Spent Catalyst by the Oil Refineries (Generator of HW) and re-processing of Spent Catalyst by the unauthorized re-processor units in the country and violating the HOWM Rule 2016.
3.	Date and Time of Inspection	:	12.08.2020 from 11:00 a.m. to 12:30 p.m.
4.	Name and Designation of the Inspecting Officials	:	i. Sri Abhijit Chattopadhyay, Regional Director, CPCB, Kolkata. ii. Sri Sisir Mondal, Asst. Environmental Engineer, WMC, WBPCB. iii. Sri Sandeep Roy, Scientist-D, CPCB, Kolkata.
5.	Observation Made	:	a. This is an unit identified under Red Category of industries and also Recycler/re-processor Hazardous Wastes. b. The unit is engaged in extraction of metals like Nickel, Molybdenum from Gasifier Slag containing Ni and Spent Catalyst containing Mo with the help of two nos. of Induction Furnaces of capacity 6 MT/charge and 4 MT/charge each. As reported Induction Furnace of 4 MT capacity is not in operation since 2015. The industry produces alloy steel ingot & stainless steel ingot. The raw materials viz. iron scraps, slag containing Ni & catalyst containing Mo etc. are

charged in the furnaces. Both the furnaces are separately provided with Cyclone Separator, Bag filter followed by I.D. Fan and stack of height about 100 ft. from ground level mainlining SOP of CPCB.

- c. It is reported that in recycling/utilizing of gasifier slag containing Ni (20-45%) is recovered with efficiency 98-99% and 1-2% Ni is left in slag. While the recovery of Mo from Spent Catalyst containing Mo (10-20%) is 80 –85% and Mo in the range of 15-20% is left in slag. The slag generated from the process is reused again after crushing for recovery of precious left over metals.
- d. It is informed that both the above materials are normally procured in auction from fertilizer plants like Gujrat Narmada Valley Fertilizer Company Ltd, IFFCO Ltd. and from oil refineries of IOCL.
- e. The recyclable hazardous wastes (HW) i.e. the raw materials of the industry are being stored separately with labeling following HOWM Rules 2016. Daily records of storage are being maintained following Form -3 of HOWM Rules, 2016.
- f. The recyclable HWs are transported by generator(s) to this unit.
- g. The unit has obtained SOP from CPCB as per under Rule 9 of HOWM Rules, 2016 in disposing spent catalyst.
- h. The unit also generates hazardous wastes viz. process slag and non-recyclable metallic dust generated from air pollution control devices. The HWs are disposed through M/s. West Bengal Waste Management Ltd.(WBWML), a common hazardous waste Treatment, storage and disposal facility authorized by WBPCB. The HWs are transported by the vehicles owned by

		<p>WBWML maintain HOWM Rules.</p> <p>i. The Manifest System is being followed and Annual Return in Form - 4 are submitted to the State Board (WBPCB) as per HOWM Rules, 2016.</p> <p>j. The Environmental Information (in English &amp; Bangla language) are maintained and displayed in front of factory main gate.</p> <p>k. The Environmental Monitoring is being conducted by concerned Regional Office of WBPCB.</p> <p>l. During inspection, the unit was in operation with one on. Induction furnace of capacity 6 MT/charge. The APC devices were also in operation. Low visible stack emission was observed.</p>
6.	<p>Status of CFO (Consent to Operate) under the Air Act, 1981 and Water Act, 1974.</p> <p>Status of Authorization under Hazardous and Other Wastes (Management &amp; Transboundary Movement) Rules, 2016</p>	<p>: The unit has obtained Consent to Operate under Section 25 &amp; 26 of the Water (Prevention and Control of Pollution) Act, 1974 and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 and is valid upto 29.02.2024. (copy enclosed)</p> <p>Obtained valid Hazardous Waste Authorization in Form 2 from WBPCB and is valid upto 31.12.2022. (copy enclosed)</p> <p>The industry was issued Pass Book from WBPCB for maintaining record of Hazardous Waste Material purchase and subsequent Re-finishing/Recycling of Hazardous Wastes on 01.06.2018 and is valid upto 31.12.2022. (copy enclosed)</p> <p>Few photographs taken during inspection are also enclosed.</p>
7.	Remarks	<p>: l. It is to be mentioned here that the industry in question is using/utilizing spent catalyst generated from Fertilizer and Oil Refineries</p>

	<p>industries. The hazardous wastes (Gasifier slag) containing Ni &amp; Spent Catalyst containing Mo are procured from M/s. GNVFC, IFFCO-Phoolpur (U.P.) Ltd and IOCL, Oil Refinery respectively.</p> <p>II. The industry utilize HWs of waste streams 18.1, A66, A67 &amp; A68 (categorized as per Schedule II of HOWM Rules, 2016) in house for reusing or re-processing to recover the metal and the industry is authorized by WBPCB vide authorization letter 56/2S(HW)-2902/2013 dtd. 20.03.2018. The relevant documents shows that the industry mostly procures the spent catalyst containing Mo from different oil refineries of IOCL and sometimes from IFFCO Ltd., Phoolpur (U.P.). That is why the name of the industry was reported.</p> <p>III. In this case, the claim of the applicant in O.A. No. 67/2020 may be ignored as the industry obtained authorization from WBPCB and SOP from CPCB under Rule 9 of HOWM Rules, 2016.</p>
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*A. Chattopadhyay*  
14/8/2020

Signature of inspecting officer

A. Chattopadhyay, RD, CPCB

*S. Mondal*  
14.08.20

Signature of inspecting officer

S. Mondal, AEE, WBPCB

*S. Roy*  
14/8/2020

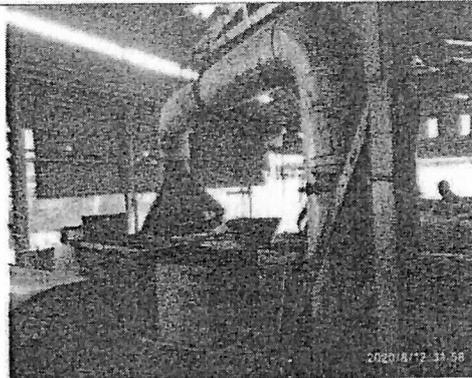
Signature of inspecting Officer

S. Roy, Scientist-D, CPCB

Photographs of M/s. Ganesh Steels and Alloys Pvt. Ltd.



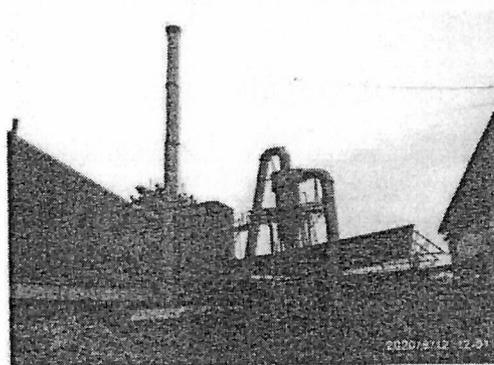
On-site storage of HWs facility



Movable suction hood over induction furnace



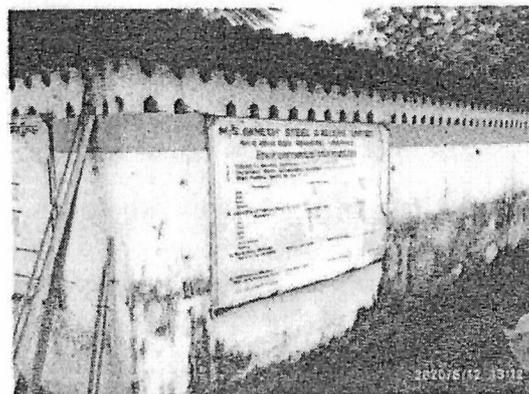
Mechanical handling facility of raw materials



Air pollution control devices of induction furnace



Environmental information in Bengali Language



Environmental information in English Language



## WEST BENGAL POLLUTION CONTROL BOARD

(Department of Environment, Govt. of West Bengal)

Paribesh Bhawan

Bldg. No. 10 A, Block-LA, Sector-III, Bidhan Nagar,

Kolkata - 700 098

Tel : 0091 (033) 2335-9088 / 8861 / 8211 / 8073 / 6731

2335-0261 / 8212 / 8213 / 7428 / 5975

Fax : 0091 (033) 2335 6730 / 2813

Website : [www.wbpcb.gov.in](http://www.wbpcb.gov.in), e-mail : [wbpcbnet@wbpcb.gov.in](mailto:wbpcbnet@wbpcb.gov.in)

Authorisation letter no.:

Memo No. 56 /2S(HW) -2902/2013

Date: 20 /03/2018

### FORM 2

#### Grant of Authorization under the provisions of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

Ref.: Application for renewal of authorization dated 22.12.2017 for management & handling of hazardous waste.

1. Memo no. and date of previous authorisation issued by the Board 24/2S(HW)-2902/2013, dated 08.03.2017.

2. M/s Ganesh Steel & Alloys Ltd.,

NH-2, Delhi Road, Vill.: Dakshin Rajyadharpur, P.O.: Mallickpara, P.S: Serampore, District: Hooghly, Pin - 712 203, West Bengal is hereby granted an authorisation based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilisation, treatment, disposal, or any other use of hazardous or other wastes or both on the premises situated at NH-2, Delhi Road, Vill.: Dakshin Rajyadharpur, P.O.: Mallickpara, P.S: Serampore, District: Hooghly, Pin - 712 203, West Bengal.

#### Details of Authorisation (Hazardous Wastes Generated)

Sl. no.	Category of Hazardous Waste as per the Schedule I, II and III of these rules	Authorised mode of disposal or recycling or utilization or co-processing etc.	Quantity (ton/annum)
1.	A68, A66	Disposal to CHWTSDF*	25.00
2.	35.1	Disposal to CHWTSDF*	10.0

#### (Hazardous Wastes Recycled or Utilized or co-processed)

Sl. no.	Category of Hazardous Waste as per the Schedule I, II and III of these rules	Authorised mode of disposal or recycling or utilization or co-processing etc.	Quantity (ton/annum)
1.	18.1, A66, & A68	Utilized in house for recycling or co-processing*.	3672

\* For detail refer to Specific Conditions.

2(1) Authorisation shall be valid for a period upto 31.12.2022 with effect from the date of issue.

2(2) The authorisation is subject to the following general and specific conditions.

[Chief Engineer]

Waste Management Cell

West Bengal Pollution Control Board

#### **A. General conditions of authorisation**

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty"
7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.
8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.
11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
12. An application for the renewal of an authorisation shall be made three months before the expiry of such authorisation.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
14. Annual return in Form 4 shall be filed by June 30<sup>th</sup> every year for the period ending 31st March of that year.

#### **B. Specific conditions:**

1. The unit shall store the hazardous wastes (category wise separately) under shade in an environment friendly safe manner within the premises at designated places.
2. The unit shall not store hazardous wastes onsite for more than 90 (ninety) days. For generation of hazardous waste less than 10 tonnes/year, onsite storage is permitted upto 180 days.

3. Nickle bearing slag (A68) and Copper bearing slag (A66) shall be sold through manifest system (Form 10) to the authorized recyclers having valid authorization of the State Pollution Control Board or to be disposed through CHWTSDF.
4. Gasifire Slag containing Nickle (A68) and Molybdenum Catalyst (18.1) obtained from M/s. Gujrat Narmada Vally Fertilizer and Chemicals Ltd. (GNFC), Gujrat, are to be utilized in house as per SoP obtained from CPCB.
5. Flue gas cleaning dust (35.1) to be disposed to the Common Hazardous Waste Treatment, Storage & Disposal Facility at Haldia, through Manifest system.
6. The unit shall submit copies of Form 10 to the State Board on a regular basis.
7. The unit shall submit Annual return in Form 4 on a regular basis.
8. Records of hazardous waste generation, storage and disposal shall be maintained properly and shall be available to the inspecting officials of the State Board during inspection.
9. The unit shall update regularly the environmental information in Display Boards as per the order of the Hon'ble Supreme Court dated. 14.10.2003 in W.P.(C) NO.657 of 1995.
10. Authorisation will be revoked in case of non-compliances with any of the above conditions.

**M/s Ganesh Steel & Alloys Ltd.,  
NH-2, Delhi Road, Vill.: Dakshin Rajyadharpur, P.O.:  
Mallickpara, P.S: Serampore, District: Hooghly,  
Pin - 712 203, West Bengal.**

  
[Chief Engineer]  
Waste Management Cell  
West Bengal Pollution Control Board

# WEST BENGAL POLLUTION CONTROL BOARD

'Paribesh Bhawan',  
Bldg. No. - 10A, Block - LA, Sector-III,  
Salt Lake City, Kolkata - 700 098



Consent Letter Number : C0097128.

Memo Number : 483/PCB/HGY/R/877-200 I (I) .

Date : 22/11/2016

Renewal of Consent to Operate under Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974, and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981.

The West Bengal Pollution Control Board (hereinafter referred to as 'State board') under the provisions of Section 25 & 26 of the Water (Prevention and Control of Pollution) Act, 1974 as amended and Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended and Rules and Orders made thereunder hereby grants renewal of consent to :  
M/s. **Ganesh Steel & Alloys Ltd.**

(hereinafter referred to as 'Applicant') for its unit located at **NH-2, Delhi Road, P.O. Mallickpara, Vill-Dakshin Rajyadharpur, P.S. Serampore, (Detailed address of the manufacturing unit) Dist- Hooghly. Pin-712203.**

for a period from **01/03/2017** to **28/02/2019** to continue operation of the industrial unit and to discharge liquid effluent and to emit gaseous effluent from the premises/land of the industrial unit, in accordance with the conditions as mentioned in the 'Consent to Operate' issued to the Applicant vide no. \_\_\_\_\_ dated \_\_\_\_\_ (hereinafter referred to as 'Earlier Consent') and the conditions mentioned below, provided on any day at any instance the quantity and quality of liquid discharge and gaseous emission shall not exceed the permissible limit as specified in the Table I & II of the Earlier Consent and in this consent letter and as specified in the Environmental (Protection) Act, 1986.

Breach of the conditions and/or failure to comply with the directions as mentioned in the Earlier Consent and in this consent shall render the applicant liable for prosecution under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.

The State Board reserve the right to revoke, withdraw or make any reasonable variation/change/alter the conditions of the Earlier Consent and this consent letter giving one month's notice to the applicant.

#### Additional Conditions :

- 1) This consent is valid for manufacturing of :
  - a) Alloy Steel Ingots - 880 TPM (Max)
  - b) Non Alloy Steel Ingots - 800 TPM (max)
  - c) Stainless steel Ingots - 300 TPM (max) .
- 2) This consent may be revoked on case of any valid public complaint regarding environment.

For and on behalf of the State Board

(Member Secretary/Chief Engr./Sr. Env. Engr./Env. Engr./Asst. Engr./Sr. Engineer  
Environment  
Hooghly R.O., W.B.P.C.B.



Condition : The conditions of the Earlier Consent has been modified as mentioned below :

The Applicant shall observe the following fuel consumption pattern : Same as earlier consent.

Sl. No.	Type of fuel	Quantity per day	Sl. No.	Type of fuel	Quantity per day
01.			02		
03			04		

02. Daily Water consumption for the following purpose should not exceed :

Industrial cooling, spraying in mine pits and boiler feed water (water used for gardening should be included in this category of use)	Domestic purpose	Processing whereby water gets polluted and the pollutants are easily biodegradable	Processing whereby water gets polluted and the pollutants are not easily biodegradable

03. Daily discharge effluent shall not exceed.

	Industrial Liquid effluent	Domestic Liquid effluent	Mixed (industrial & domestic liquid effluent)
No. of outfalls			
Quantity	KL	KL	KL
Place of discharge			

04. The Applicant shall maintain the quality of liquid effluents so that it should conform to the Standard for final effluent as mentioned. :

Outlet No.	Nature of effluent									Frequency of effluent sampling	
		pH	BOD (mg/l. max.)	COD (mg/l. max.)	TSS (mg/l. max.)	O & G (mg/l. max.)	(mg/l. max.)	(mg/l. max.)	(mg/l. max.)		(mg/l. max.)

05. The Applicant shall maintain the quality of the gaseous emissions to conform the quality of the final gaseous emission to the Standard as given below :

Stack No.	Stack height from G.L. (in mts.)	Stack attached to (source and control system, if any)	Volume Nm <sup>3</sup> /hr.	Velocity of gas emission (m/sec)	Concentrations of parameters not to exceed				Frequency of sampling
					SPM (mg/Nm <sup>3</sup> )	CO (% v/v)			
S-1									
S-2									
S-3									
S-4									

06. The Applicant shall maintain the generation and treatment / disposal of non-hazardous solid waste as specified below :

Type of waste	Quantity	Treatment	Disposal

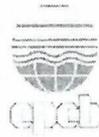


Applicant shall apply for renewal of consent to State Board in prescribed form 60 (sixty) days before expiry of the consent.

For and on behalf of the State Board

(Member Secretary/Chief Engr./Sr. Engr./Env. Engr./Asst. Engineer)

Environmental Engineer  
Hooghly R.O., W.B.P.C.B.



**INSPECTION OF INDUSTRIES WITH REGARD TO GENERATION  
AND MANAGEMENT OF HAZARDOUS WASTES**

S. No.	Particulars	Status/details																				
1.	Name & address of the industry	Lakhdata Petro Chemicals Village: Ramsara, Bhatinda, Punjab-151001																				
2.	Date of Visit	21.08.2020																				
3.	Contact Person Name, Designation, Contact No. & E-mail	Mukesh Jindal (Owner), 9216450254 lakhdatachemical@gmail.com																				
4.	Name and Designation of the Officials visiting the Unit	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Name of Official</th> <th>Designation</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Anil C. Ranveer</td> <td>Additional Director, CPCB</td> </tr> <tr> <td>2</td> <td>Vijay Gupta</td> <td>Regional Officer- PPCB, Bhatinda</td> </tr> <tr> <td>3</td> <td>Ramandeep Sidhu</td> <td>Assistant Environmental Engineer- PPCB, Bhatinda</td> </tr> <tr> <td>4</td> <td>Dr. Siddhartha Gautam</td> <td>Environmental Engineer-DPCC, Delhi</td> </tr> </tbody> </table>	S. No.	Name of Official	Designation	1	Anil C. Ranveer	Additional Director, CPCB	2	Vijay Gupta	Regional Officer- PPCB, Bhatinda	3	Ramandeep Sidhu	Assistant Environmental Engineer- PPCB, Bhatinda	4	Dr. Siddhartha Gautam	Environmental Engineer-DPCC, Delhi					
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		3	Ramandeep Sidhu	Assistant Environmental Engineer- PPCB, Bhatinda																		
4	Dr. Siddhartha Gautam	Environmental Engineer-DPCC, Delhi																				
<p>5. Process description in brief for each Product. Also attach Process Flow Diagram indicating raw materials and sources of hazardous waste generation along with mass balance</p>																						
6.	Year of commissioning	2017																				
7.	Production (in MT or KL/day) of each product	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Product</th> <th>Quantity</th> <th>Operational Status</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Base Fraction Oil</td> <td>11.2 KL/day</td> <td rowspan="5">As per consent to operate granted</td> </tr> <tr> <td>2.</td> <td>Light Fraction Oil</td> <td>0.7 KL/day</td> </tr> <tr> <td>3.</td> <td>Co/Ni Zinc Cake</td> <td>5000 Kg/day</td> </tr> <tr> <td>4.</td> <td>Gypsum Cake</td> <td>4000 Kg/day</td> </tr> <tr> <td>5.</td> <td>Calcium Molybdate</td> <td>2300 Kg/day</td> </tr> </tbody> </table>	S. No.	Product	Quantity	Operational Status	1.	Base Fraction Oil	11.2 KL/day	As per consent to operate granted	2.	Light Fraction Oil	0.7 KL/day	3.	Co/Ni Zinc Cake	5000 Kg/day	4.	Gypsum Cake	4000 Kg/day	5.	Calcium Molybdate	2300 Kg/day
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<p>8. Details of Consent under the Water Act, 1974 &amp; Air Act, 1981</p>																						
<p>Water Consent no.: CTOW/Renewal/BTI/2019/7161467 Date of issue: 20.04.2018 Validity: 30.09.2022 Air Consent no.: CTOA/Renewal/BTI/2018/7161221</p>																						

		Date of issue: 20.04.2018 Validity: 30.09.2022																									
9.	Status of Authorization under the Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 (HWM Rules, 2008) / Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 (HOWM Rules 2016)	Authorisation no.: HWM/Fresh/BTI/2018/7161606 Date of issue: 20.04.2018 Validity: 30.09.2022  Spent Catalyst (Category 4.2) authorized for 3200 MT/Annum for collection, storage, recycling and utilization.																									
10.	Name and Categories of HW generated and their respective quantity	The details of quantity of spent catalyst procured and utilized, as verified the inspecting team during the inspection are as below: <table border="1" data-bbox="598 761 1412 1176"> <thead> <tr> <th>Year</th> <th>Procured Quantity (MT)</th> <th>Utilized Quantity (MT)</th> <th>Stock Stored (MT)</th> <th>Procured from</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>616.92</td> <td>0</td> <td>616.92</td> <td>HPCL, Bhatinda, Punjab</td> </tr> <tr> <td>2018-19</td> <td>0</td> <td>616.92 (Previous year stock)</td> <td>0</td> <td>---</td> </tr> <tr> <td>2019-20</td> <td>27.39</td> <td>27.39</td> <td>0</td> <td>IFFCO, UP</td> </tr> <tr> <td>June 2020</td> <td>71.62</td> <td>---</td> <td>71.62</td> <td>IOCL, Panipat</td> </tr> </tbody> </table> <p>Annual Return (Form – 4) verified for above procurement and utilization of spent catalyst.</p>	Year	Procured Quantity (MT)	Utilized Quantity (MT)	Stock Stored (MT)	Procured from	2017-18	616.92	0	616.92	HPCL, Bhatinda, Punjab	2018-19	0	616.92 (Previous year stock)	0	---	2019-20	27.39	27.39	0	IFFCO, UP	June 2020	71.62	---	71.62	IOCL, Panipat
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June 2020	71.62	---	71.62	IOCL, Panipat																							
11.	Details of HW storage, Quantity of HW Stored and period of storage	1. Storage facility details and capacity: <ul style="list-style-type: none"> <li>(i) Lined /Unlined : Lined</li> <li>(ii) Open/Covered and safe from rain water intrusion : Covered</li> <li>(iii) Hazardous waste (raw material) storage: Spent Catalyst of quantity 55.32 MT after roasting was found stored in MS Drums.</li> </ul>																									
12.	Compliance w.r.t. labeling, manifest system, records, annual returns, etc.	Please make observations on the below: <ol style="list-style-type: none"> <li>1. Adequate packaging of HW: Spent catalyst stored in MS Drums</li> <li>2. Labeling of HW containers in Form 18: No labelling</li> <li>3. Compliance of all Manifest Documents and sending/receiving of the same to concerned when HW are being sent (refer Rule 19 of the HOWM Rules, 2016): Transporter namely M/s Shri Nath Roadlines, Pali, Rajasthan arranged for transportation of spent catalyst.</li> <li>4. Transportation of HW only by authorized sender or receiver:</li> </ol>																									

		<p>Authorization of transporter not provided during inspection.</p> <ol style="list-style-type: none"> <li>5. NOC from the concerned SPCB/PCC if HW are sent for disposal to other State/UT. Intimation to SPCB time to time.</li> <li>6. Intimation to both the SPCBs/PCCS before handing over the waste to the transport in case HW is sent for recycling or utilisation including co-processing: Intimation to SPCB time to time.</li> <li>7. Prior intimation to SPCBs/PCCs of the States/UTs of transit in case of interstate transportation. Complied.</li> <li>8. Transportation of HW and compliance with Rules under Motor Vehicles Act, 1988: Transporter namely M/s Shri Nath Roadlines, Pali, Rajasthan arranged for transportation of spent catalyst but Authorization of transporter not provided during inspection</li> <li>9. Daily records maintenance in Form 3: The records has been found maintained on procurement basis in Form – 3 of HOWM Rules, 2016.</li> <li>10. Timely submission of annual returns in Form 4 to the SPCB/PCC: Complied</li> </ol>						
13.	Safety facilities provided at storage facility	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Safety Facility</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Lined storage ground area</td> </tr> <tr> <td>2.</td> <td>Shed provided</td> </tr> </tbody> </table>	S. No.	Safety Facility	1.	Lined storage ground area	2.	Shed provided
S. No.	Safety Facility							
1.	Lined storage ground area							
2.	Shed provided							
14.	Observations	<ol style="list-style-type: none"> <li>1. The unit had displayed Environmental Data on a flex sheet but the information regarding hazardous waste generation was not updated.</li> <li>2. The unit was not in operation at the time of inspection. Unit representative informed that they have not operated the plant since April 2020, due to lockdown condition as all labours and technical staff went to their hometown.</li> <li>3. The unit has submitted Form-3 which is maintained on procurement basis of spent catalyst. Record was maintained as per Form-3 of HOWM Rules, 2016.</li> <li>4. The spent catalyst (raw material) was found stored in MS Drums after roasting during inspection. The storage area was not properly marked.</li> <li>5. The process of metal reclamation through spent catalyst involves roasting, pulverization, leaching, purification, precipitation and drying.</li> <li>6. The unit has installed 02 rotatory kiln of capacity 10 tons each. 03 leaching reactors of capacity 2 tons each followed by 03 filter press. For drying of final product, a designated room with dryer oven was found.</li> <li>7. The unit has installed APCD with cyclone attached to wet scrubber then followed by bag house and it is attached to furnace where roasting is done.</li> </ol>						

		<p>scrubber then followed by bag house and it is attached to furnace where roasting is done.</p> <p>8. The unit has also installed a separate plant for recycling of used oil and waste oil in the same premises as per consent.</p> <p>9. Upon verification of documents, it was found that unit has procured 616.92 MT of spent catalyst from HPCL Refinery, Bhatinda in financial year 2017-18 but utilized in financial year 2019-19. During processing of 616.92 MT of spent catalyst 370 MT of process waste generated which was disposed by co-processing in bricks manufacturing.</p> <p>10. In financial year 2019-20, unit has procured 27.39 MT of spent catalyst from M/s IFFCO, Barcilly, U. P. and utilized the same. The process waste of 10 MT generated during utilization process and it was disposed by co-processing in bricks manufacturing. This spent catalyst generated from (IFFCO) fertilizer industry falls under category 18.1 of Schedule I of HOWM Rules, 2016 but as per authorization, unit is only permitted for spent catalyst category 4.2 (spent catalyst from oil refineries) of Schedule I of said rule.</p> <p>11. The unit has recently procured 71.62 MT of spent catalyst in June 2020 from IOCL, Panipat which is kept in MS Drums after roasting under covered shed.</p> <p>12. The unit has maintained passbook issued by PPCB for procurement and recycling of hazardous waste.</p> <p>13. The unit is procuring spent catalyst through e-auction on MSTC.</p> <p>14. The unit has a dedicated hazardous waste storage area for hazardous waste being generated during recycling/utilization process. At the time of inspection the hazardous waste storage area was empty.</p> <p>15. Photographs of visit is attached as <b>Annexure I</b>.</p>
15.	Recommendations	<p>1. The unit shall update Environmental Data Display Board regularly.</p> <p>2. The unit shall also maintain record of generation of hazardous wastes as per Form - 3 of HOWM Rules, 2016.</p> <p>3. The unit shall ensure proper packaging and labelling of hazardous and other waste as per Rule 17 of HOWM Rules, 2016.</p> <p>4. The unit shall ensure to procure hazardous waste through e-auction from the authorized generators for specific category of hazardous.</p> <p>5. The unit shall ensure to procure only such hazardous wastes for which they are authorized.</p>

  
Dr. Siddhartha Gautam,  
Environmental Engineer,  
DPCC, Delhi

  
Ramandeep Sidhu,  
Assistant Environmental Engineer,  
Bhatinda Regional Office, PPCB

  
Vijay Gupta,  
Regional Officer,  
Bhatinda, PPCB

  
Anil C. Ranveer,  
Additional Director,  
CPCB, New Delhi

Photographs taken during inspection

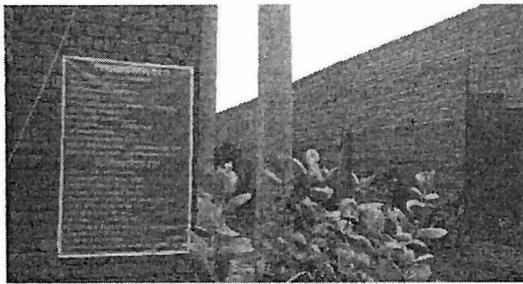


Fig. 1: Environmental Data Display Board

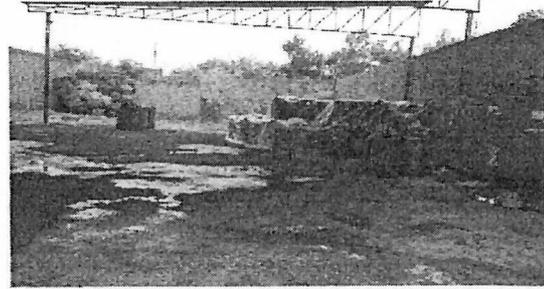


Fig. 2: Spent catalyst stored in drums under shed but unlined floor

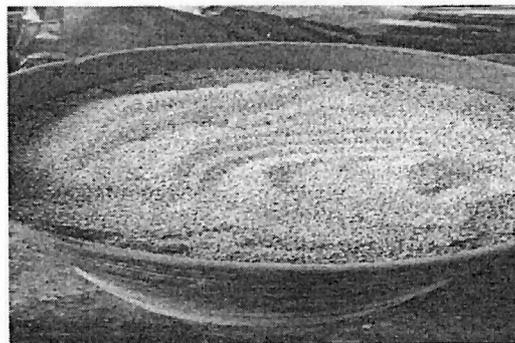


Fig. 3: Spent catalyst stored after roasting



Fig. 4: Rotary Kiln attached with pulverizer

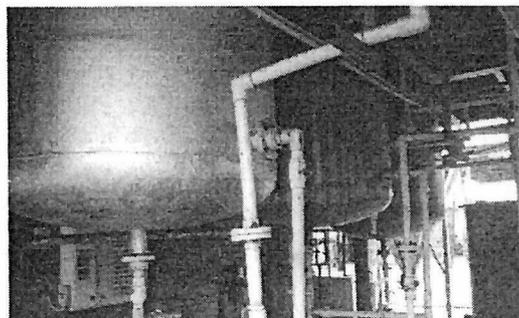


Fig. 5: Leaching Reactor

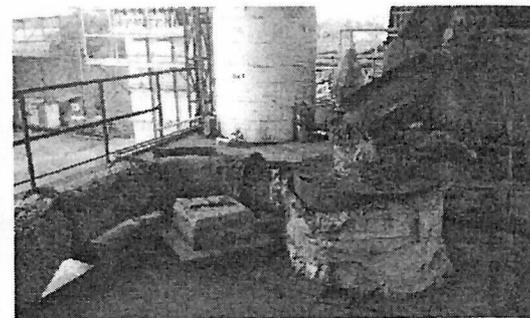


Fig. 6: SiLo feed above pulverizer

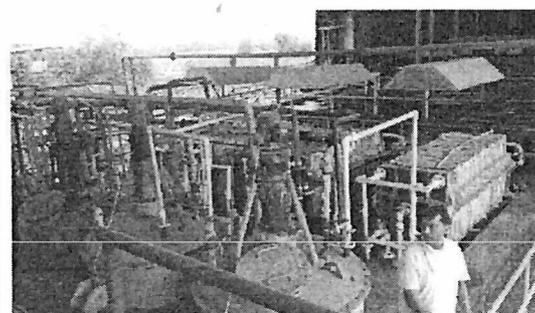


Fig. 7: Top view of leaching reactor and filter press

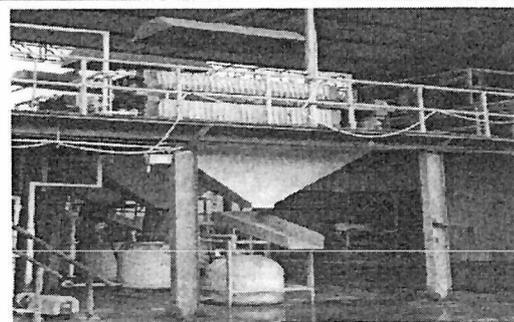


Fig. 8: Filter press and downstream of product collection and excess water



Fig. 9: Oven for drying of product

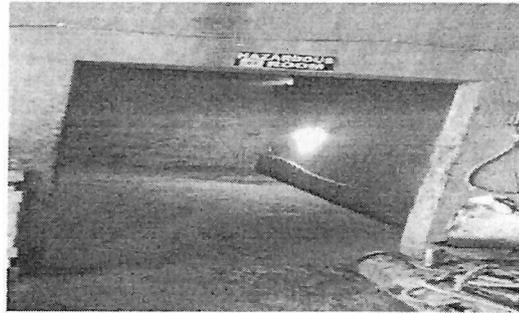


Fig. 10: Hazardous waste storage room

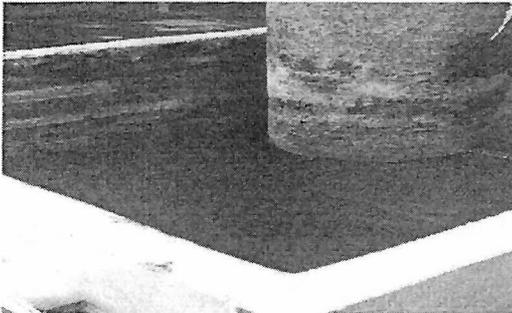


Fig. 11: Wet Scrubber

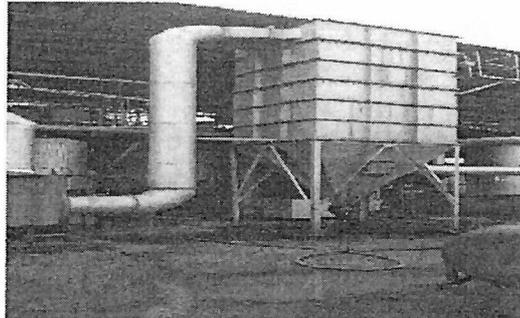


Fig. 12: Bag Filter

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## Modified Report of M/s. Ganesh Steel

message

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**sir mondal** <sisir.avirup@gmail.com>  
): hwmd.cpcb@gmail.com

Tue, Sep 8, 2020 at 12:55 P

Sir,  
I agreed with the final report prepared by CPCB. In this respect I would like to request you to Please  
incorporate a few points as highlighted with the yellow colour of the  
report attached and please update the information in the Final Report.

Regards,

Sisir.  
>

---

 **Modified Ganesh\_Steel-08.09.2020\_\_final.doc**  
784K

**Re: Final Action Taken Report in the matter of O.A. No 67/2020; "Nathan Chaudhary vs State of GNCTD & Ors."-Reg.**

**From :** vkg 642003 <vkg\_642003@yahoo.com>

Tue, Sep 08, 2020 12:15 PM

**Subject :** Re: Final Action Taken Report in the matter of O.A. No 67/2020;  
"Nathan Chaudhary vs State of GNCTD & Ors."-Reg.

**To :** HWMD CPCB <hwmd.cpcb@nic.in>

OK, Agreed Sir.

**Regards**

**Vijay Gupta,  
Environmental Engineer.,  
Punjab Pollution Control Board,  
Regional Office,  
Bathinda**

On Monday, September 7, 2020, 03:03:14 PM GMT+5:30, HWMD CPCB <hwmd.cpcb@nic.in> wrote:

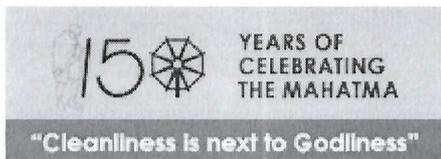
Sir,

Please find enclosed herewith final Action Taken Report in the matter of O.A. No 67/2020; "Nathan Chaudhary vs State of GNCTD & Ors." regarding illegal disposal of spent catalyst by oil refineries to the unauthorized utilizer.

Final ATR is put up for consideration and signature, please. Kindly revert your confirmation though mail.

Next date of hearing is 11.09.2020.

Regards,  
Abhey Singh Soni  
DH, WM-II



---

**Signed report by Sh. Shailender Arora RO, HSPCB (Action Taken Report in the matter of O.A. No 67/2020; "Nathan Chaudhary vs State of GNCTD & Ors."-Reg.)**

---

**From :** hspcbrokar@gmail.com

Tue, Sep 08, 2020 10:33 AM

**Subject :** Signed report by Sh. Shailender Arora RO, HSPCB (Action Taken Report in the matter of O.A. No 67/2020; "Nathan Chaudhary vs State of GNCTD & Ors."-Reg.)

1 attachment

**To :** HWMD CPCB <hwmd.cpcb@nic.in>, hspcbhazardouswaste@gmail.com, hspcbropr@gmail.com

Please find enclosed herewith the signed report by Sh. Shailender Arora RO, HSPCB.

**Regional Office  
Haryana State Pollution Control Board  
2<sup>nd</sup> floor, SCO- 78-79 above Punjab National Bank,  
Namastey Chowk, Karnal**

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— **Final Action Taken Report in the matter of OA 67\_2020 (2)\_compressed.pdf**  
6 MB

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**From :** pankaj67d@gmail.com

Mon, Sep 07, 2020 03:12 PM

**Subject :** <No Subject>

📎 1 attachment

**To :** anil ranveer <anilranveer.cpcb@gov.in>

Agreed, go a head

Sent from my iPhone

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— **Final Action Taken Report in the matter of OA 67\_2020.docx**

102 KB

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