



Date: 08.05.2015

The Regional Officer,
Ministry of Environment, Forests & Climate Change,
Pearson Road, P.O. New Forest, FRI Campus,
Dehradun.

Subject: Compliance Report of Environmental Clearance Conditions of Zinc, Lead, M&C and Silver Plant for the period **October-14 to March-2015.**

Ref: Letter no. F-11011/327/2010/IA-II (I) dated 26.04.2011 from MoEF

EC-51/10/265 dated 16.03.2010 from SEIAA

Sir,

We have received Environmental Clearance from Ministry of Environment and Forest for our Zinc (4,65,000 TPA) and Lead (1,50,000 TPA) Melting-Casting Plant on 26th April 2011 and 500 TPA Silver Plant from SEIAA on 16.03.2010.

Please find enclosed herewith Compliance Status Report of Environmental Clearance Conditions of the same for the period of October 2014 to March 2015.

Thanking you,

Yours faithfully,

For Hindustan Zinc Ltd.,
Pan Nagar Metal Plant

CC: 1. The Member Secretary, SEIAA, Dehradun.



Compliance Report of Environment Clearance

Name of the Project: Hindustan Zinc Ltd.
Zinc and Lead Melting-Casting Plant
Plot No.2, Sector -14,
IIE SIDCUL Pantnagar (Uttarakhand)

Clearance Letter No: J-11011/327/2010/IA-II(I) Dt.26th April 2011

Period of Compliance Report: October-2014 to March-2015

Sr.No	Condition	Compliance Status
A	Specific conditions.	
1	On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. bag filters shall be provided to keep the emission levels below 50 mg/Nm ³ by installing energy efficient technology.	Efficient bag filters with online PM analyzers for all process stacks are provided to keep emission level below the 50 mg/Nm ³ . Online SO ₂ analyzer provided for DG stacks. Ambient Air quality monitoring is being done monthly in four location approved by UEPPCB by external agency registered from MOEF and continuous monitoring facility is in ordering stage, commissioning will be ensured shortly.
2	The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009 should be followed.	Noted and is being followed.
3	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30 th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB should be followed.	All Fugitive emission is being treated through stacks connected with bag filters. Apart from this monthly work zone monitoring is being carried out. Reports of stacks and work zone attached here for reference. (Annexure-I & I-A)
4	The total water requirement shall not exceed 500 KLD. Permission to draw water from the Competent Authority shall be obtained. No effluent shall be discharged and 'zero' discharge should be adopted.	Water requirement of Zinc and Lead M&C process and silver process is limited to 325m ³ /day. For which CGWA is already given consent (Letter no. : 21-4(34)/CGWA/UR/2010-

		<p>1776 on dated 08 March 2010. However, by considering future requirement of water revised application for withdrawal of additional 175m³/day is submitted to CGWB on 15.07.2014. Effluent treatment plant of 87 KLD is provided for treating the combined trade effluents from the company's Zinc & Lead melting casting and Silver refining plant in the same complex, but there is no effluent generation from process. Hence, ETP is not in operation.</p> <p>STP of 30 KLD is provided for treating the combined sewage effluents from the company's zinc & Lead melting casting and Silver refining plant in the same complex. The entire treated sewage effluent is being used for plantation.</p> <p>With the above steps, zero discharge is being maintained.</p> <p>Storm water shall be allowed to drain ensuring no contamination.</p>
5	<p>Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB.</p>	<p>We do not take any surface water and no effluent is discharged to surface water body.</p> <p>Ground water from bore well is being monitored at inside the plant.</p> <p>Treated effluent is being monitored monthly.</p> <p>Monitoring reports are attached here.(Annexure-II)</p>
6	<p>Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources</p>	<p>Three rain water storage ponds of capacity 2542, 1500 and 841 cum is constructed inside the property area for storing the rainwater for reuse after appropriate treatment, if required.</p>

7	Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB within 3 months of issue of environment clearance letter.	Risk and Disaster Management Plan has been submitted to Ministry's Regional Office at Lucknow, SPCB and CPCB on 20.07.2011.
8	As proposed, green belt shall be developed in 33 % of the plant area. Selection of plant species should be as per the CPCB guidelines in consultation with the DFO.	Phase wise plantation work has been done- to achieve the desired green belt coverage. Till date, about 10,000 Nos.of saplings (38 % of total area) have been planted in the entire complex that also includes a Silver refining plant.
9	At least 5 % of the total cost of the project shall be earmarked towards the enterprise social commitment (ESC) and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in a time bound manner.	CSR plan prepared and submitted to MOEF-Regional Office Lucknow, CPCB regional office Lucknow and UEPPCB Dehradun along with E.C compliance report as dated 20.07.2012., This is being implemented in phased manner with the help of local administration..
10	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	As a project implementation philosophy, all construction labors are housed in labor camps provided by their employers and they commute to project site everyday with amenities as provided by their employers. During project stage no housing facilities are provided to the construction labor in the premises. Project activities are already completed in FY 2013-14.
B	General Conditions	Compliance Status
1	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB) and the State Government.	Being ensured.
2	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Shall be complied with
3	At least four ambient air quality monitoring stations shall be established in the downward	Four Sampling locations & in consultation with UEPPCB established

	direction as well as where maximum ground level concentration of PM ₁₀ , SO ₂ and NO _x are anticipated in consultation with the SPCB including one ambient air quality monitoring station in the downwind direction. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Lucknow and the SPCB / CPCB once in six months.	within the plants, downwind direction where the EIA studies were conducted monitored quarterly along with one sampling point at the location where ground level concentration was predicted to be the highest. Monthly monitoring is being carried out in plant area. Data on ambient air quality and stack emission is being submitted regularly as stipulated and attached here. (Annexure-III).
4	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	All industrial waste water is being treated as per stipulated standards and reused for industrial purpose. The domestic effluent is being treated to ensure stipulated quality and used for plantation.
5	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime)	All noise generation equipments like DGs and Air compressor are installed with acoustic hoods, enclosure and noise level ensured within prescribed limit.
6	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Initial Medical examination of each employee is being done before starting any work. The periodic medical examination being carried out for the relevant occupational hazards at a frequency, as per statutory requirements.
7	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Storm water, ponds are made for use after appropriate treatment as explained in point A6 above. Water screening study of buffer zone & core zone was conducted as per CGWB guidelines and found that plant area is in Tarain. water table in the plant area is very high. Hence, recharge of ground water is not possible. As per observation from the study. We can

		recharge water 30 Km away in forest area for which request to forest department, reply is awaited.
8	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	Environment protection measures and safeguards recommended in the EIA/EMP report has been implemented for Socio-Economic development activities baseline study has been conducted with help of external agency. Action plan for implementation of recommendations in study is made and being ensured in phased manner.
9	The requisite funds shall be earmarked towards the capital cost and recurring cost/annum for environmental protection measures and judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	A sufficient fund is made available for operation and maintenance of the facility during operation phase. The said funds not been diverted for any other purpose.
10	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	There were no written suggestions/representations received from anybody while processing the proposal Nevertheless, the copy of the clearance letter has been sent to the Panchayat, Zila Panchayat, Municipal Corporation and Urban Local Body (SIDCUL). The work is under progress to upload EC and its compliance reports on company's website and same will be completed shortly.
11	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; RSPM, SO ₂ , NO _x and Lead (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects	Compliance status is being submitted to Regional Office of the MOEF, the respective Zonal Office of CPCB and the SPCB. Provision to upload compliance status on company website is under progress. Display board on criteria pollutants

	shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	provided at main gate.
12	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF at Lucknow, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Lucknow / CPCB / SPCB shall monitor the stipulated conditions.	Being complied.
13	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.	Environmental statement of every year is being submitted to Regional Office MoEF, CPCB and UEPPCB. Provision to upload environment status in the company website is under progress and will be ensured.
14	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office at Lucknow.	Noted and published in newspapers of Dainik Jagaran and Amar Ujala. Copies have been submitted to Regional office at Lucknow.along with reply of letter No. IV/ENV/Utr/Ind-34/110/2011/156 dated 08.06.2011 on 20.07.2011. and to CPCB Regional office Lucknow and UEPPCB Dehardun
15	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	The land development work was commenced on 01.06.2011.Trial production started in third week of March 2012.. Financial closure of the project done in financial year 2013-14.

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production started in third week of
March 2012.. Financial closure of the
project done in financial year 2013-
14.

Annexure - I

S.No.	Month	Analysis	Stack -1 Attached to Zinc Furnace	Stack -2 Attached to Zinc Furnace	Stack of Lead Plant
1	Oct-14	PM(mg/Nm ³)	17.5	21.3	41.8
2		SO ₂ (mg/Nm ³)	7.94	8.69	19.7
3		NO _x (mg/Nm ³)	19.8	20.7	107.8
4		CO(mg/Nm ³)	-	-	-
5		Lead(mg/Nm ³)	<1.0	<1.0	<1.0
6	Nov-14	PM(mg/Nm ³)	14.3	18.6	36.2
7		SO ₂ (mg/Nm ³)	6.8	8	16.5
8		NO _x (mg/Nm ³)	22	24.2	98
9		CO(mg/Nm ³)	-	-	-
10		Lead(mg/Nm ³)	<1.0	<1.0	<1.0
11	Dec-14	PM(mg/Nm ³)	13.9	16.2	31.2
12		SO ₂ (mg/Nm ³)	7.2	7.8	19.7
13		NO _x (mg/Nm ³)	19.5	20.5	105.2
14		CO(mg/Nm ³)	-	-	-
15		Lead(mg/Nm ³)	<1.0	<1.0	<1.0
16	Jan-15	PM(mg/Nm ³)	19.8	24.8	43.2
17		SO ₂ (mg/Nm ³)	8.6	10.3	16.4
18		NO _x (mg/Nm ³)	22.1	22.1	102.8
19		Lead(mg/Nm ³)	<1.0	<1.0	<1.0
20	Feb-15	PM(mg/Nm ³)	17.8	21.5	40.5
21		SO ₂ (mg/Nm ³)	9.2	8.4	14.3
22		NO _x (mg/Nm ³)	24.5	25.2	108.7
23		Lead(mg/Nm ³)	<1.0	<1.0	<1.0
24	Mar-15	PM(mg/Nm ³)	15.9	18.7	38.9
25		SO ₂ (mg/Nm ³)	10.5	7.9	15.9
26		NO _x (mg/Nm ³)	21.5	24.3	112.5
27		Lead(mg/Nm ³)	<1.0	<1.0	<1.0

Annexure - I-A

S.No.	Month	PARAMETER	Lead Plant Working Floor	Zinc Furnace Top floor	Zinc casting m/c area
1	Oct-14	SPM ($\mu\text{g}/\text{m}^3$)	0.429	0.328	0.405
2		SO ₂ ($\mu\text{g}/\text{m}^3$)	0.015	0.013	0.012
3		NO _x ($\mu\text{g}/\text{m}^3$)	0.026	0.029	0.025
4		Pb(mg/m ³)	<0.1	<0.1	<0.1
5	Nov-14	SPM ($\mu\text{g}/\text{m}^3$)	0.402	0.342	0.386
6		SO ₂ ($\mu\text{g}/\text{m}^3$)	0.012	0.016	0.009
7		NO _x ($\mu\text{g}/\text{m}^3$)	0.023	0.027	0.021
8		Pb(mg/m ³)	<0.1	<0.1	<0.1
9	Dec-14	SPM ($\mu\text{g}/\text{m}^3$)	0.428	0.332	0.364
10		SO ₂ ($\mu\text{g}/\text{m}^3$)	0.014	0.015	0.011
11		NO _x ($\mu\text{g}/\text{m}^3$)	0.02	0.023	0.018
12		Pb(mg/m ³)	<0.1	<0.1	<0.1
13	Jan-15	SPM ($\mu\text{g}/\text{m}^3$)	0.436	0.346	0.422
14		SO ₂ ($\mu\text{g}/\text{m}^3$)	0.014	0.015	0.014
15		NO _x ($\mu\text{g}/\text{m}^3$)	0.028	0.027	0.028
16		Pb(mg/m ³)	<0.1	<0.1	<0.1
17	Feb-15	SPM ($\mu\text{g}/\text{m}^3$)	0.459	0.328	0.449
18		SO ₂ ($\mu\text{g}/\text{m}^3$)	0.016	0.013	0.012
19		NO _x ($\mu\text{g}/\text{m}^3$)	0.022	0.029	0.032
20		Pb(mg/m ³)	<0.1	<0.1	<0.1
21	Mar-15	SPM ($\mu\text{g}/\text{m}^3$)	0.468	0.305	0.469
22		SO ₂ ($\mu\text{g}/\text{m}^3$)	0.014	0.016	0.015
23		NO _x ($\mu\text{g}/\text{m}^3$)	0.025	0.032	0.034
24		Pb(mg/m ³)	<0.1	<0.1	<0.1

S.No				
1	Oct-14	pH	6.97	7.02
2		TDS(mg/L)	678	990
3		Total Suspended Solids(mg/L)	134	28
4		COD(mg/L)	144	230
5		Oil & Grease(mg/L)	7.0	<4
6		BOD (mg/L)	520.7	53.5
7		Total Hardness (mg/L)	194	21
8	Nov-14	pH	6.81	6.95
9		TDS(mg/L)	702	884
10		Total Suspended Solids(mg/L)	158	32
11		Total Hardness (mg/L)	130	192
12		Oil & Grease(mg/L)	9.0	<4
13		COD(mg/L)	461.8	64.8
14		BOD (mg/L)	172	24
15	Dec-14	pH	7.47	7.43
16		TDS(mg/L)	768	520
17		Total Suspended Solids(mg/L)	184	28
18		Total Hardness (mg/L)	192	148
19		Oil & Grease(mg/L)	6.0	<4.0
20		COD(mg/L)	428.9	59.8
21		BOD (mg/L)	165	21
22	Jan-15	pH	7.24	7.89
23		TDS(mg/L)	820	610
24		Total Suspended Solids(mg/L)	158	22
25		Total Hardness (mg/L)	182	159
26		Oil & Grease(mg/L)	9.0	<4.0
27		COD(mg/L)	491.4	58.8
28		BOD (mg/L)	190	23
29	Feb-15	pH	7.18	7.72
30		TDS(mg/L)	720	488
31		Total Suspended Solids(mg/L)	152	26
32		Total Hardness (mg/L)	205	124
33		Oil & Grease(mg/L)	7.0	<4.0
34		COD(mg/L)	493.7	63.9
35		BOD (mg/L)	178	23
36	Mar-15	pH	7.15	7.69
37		TDS(mg/L)	804	520
38		Total Suspended Solids(mg/L)	148	32
39		Total Hardness (mg/L)	220	130
40		Oil & Grease(mg/L)	6.0	<4.0
41		COD(mg/L)	466.2	79.8
42		BOD (mg/L)	170	25

1	Oct-14	PM ₁₀ (µg/m ³)	93.2	75.2	81.6	62.5
2		PM _{2.5} (µg/m ³)	56.4	42.4	51.3	31.4
3		SO ₂ (µg/m ³)	19.8	9.6	12.4	8.6
4		NO _x (µg/m ³)	31.6	23.1	29.8	17.2
5		CO(mg/m ³)	<1.15mg/m ³	<1.15mg/m ³	<1.15mg/m ³	<1.15mg/m ³
6		Pb(µg/m ³)	<0.1	<0.1	<0.1	<0.1
7		Nickel (µg/m ³)	<15.0	<15.0	<15.0	<15.0
8		As(µg/m ³)	<0.1	<0.1	<0.1	<0.1
9		O ₃ (µg/m ³)	<10.0	<10.0	<10.0	<10.0
10		NH ₃ (µg/m ³)	<20.0	<20.0	<20.0	<20.0
11		C6H6(µg/m ³)	<1.0	<1.0	<1.0	<1.0
12	PAH((as Benzo (α) Pyrid	<1.0	<1.0	<1.0	<1.0	
13	Nov-14	PM ₁₀ (µg/m ³)	86.3	71.8	76.9	66.1
14		PM _{2.5} (µg/m ³)	52.8	40.3	46.2	34.8
15		SO ₂ (µg/m ³)	17.9	11.6	15.3	7
16		NO _x (µg/m ³)	35.2	28.1	31.8	19.4
17		CO(mg/m ³)	<1.15mg/m ³	<1.15mg/m ³	<1.15mg/m ³	<1.15mg/m ³
18		Pb(µg/m ³)	<0.1	<0.1	<0.1	<0.1
19		Nickel (µg/m ³)	<15.0	<15.0	<15.0	<15.0
20		As(µg/m ³)	<0.1	<0.1	<0.1	<0.1
21		O ₃ (µg/m ³)	<10.0	<10.0	<10.0	<10.0
22		NH ₃ (µg/m ³)	<20.0	<20.0	<20.0	<20.0
23		C6H6(µg/m ³)	<1.0	<1.0	<1.0	<1.0
24	PAH((as Benzo (α) Pyrid	<1.0	<1.0	<1.0	<1.0	
25	Dec-14	PM ₁₀ (µg/m ³)	89.3	75.6	80.5	61.9
26		PM _{2.5} (µg/m ³)	55.6	43.9	49.2	38.7
27		SO ₂ (µg/m ³)	15.3	9.6	13.8	8.9
28		NO _x (µg/m ³)	39.6	25.2	29.6	21.5
29		CO(mg/m ³)	<1.15mg/m ³	<1.15mg/m ³	<1.15mg/m ³	<1.15mg/m ³
30		Pb(µg/m ³)	<0.1	<0.1	<0.1	<0.1
31		Nickel (µg/m ³)	<15.0	<15.0	<15.0	<15.0
32		As(µg/m ³)	<0.1	<0.1	<0.1	<0.1
33		O ₃ (µg/m ³)	<10.0	<10.0	<10.0	<10.0
34		NH ₃ (µg/m ³)	<20.0	<20.0	<20.0	<20.0
35		C6H6(µg/m ³)	<1.0	<1.0	<1.0	<1.0
36	PAH((as Benzo (α) Pyrid	<1.0	<1.0	<1.0	<1.0	
37	Jan-15	PM ₁₀ (µg/m ³)	91.6	77.5	80.2	64.2
38		PM _{2.5} (µg/m ³)	53.4	40.6	48.7	34.8
39		SO ₂ (µg/m ³)	21.7	11.8	13.6	10.4
40		NO _x (µg/m ³)	33.6	26.1	31.7	18.6
41		CO(mg/m ³)	<1.15mg/m ³	<1.15mg/m ³	<1.15mg/m ³	<1.15mg/m ³
42		Pb(µg/m ³)	<0.1	<0.1	<0.1	<0.1
43		Nickel (µg/m ³)	<15.0	<15.0	<15.0	<15.0
44		As(µg/m ³)	<0.1	<0.1	<0.1	<0.1
45		O ₃ (µg/m ³)	<10.0	<10.0	<10.0	<10.0
		NH ₃ (µg/m ³)	<20.0	<20.0	<20.0	<20.0

Compliance Status of Environment Clearance (October 2014 to March 2015)

(Reference: EC-51/10/265 dated 16.03.2010)

1. Name of the Project: Hindustan Zinc Ltd. Pantnagar Silver Plant

2. Location of the Project: Plot No.2, Sector-14,
IIE SIDCUL.Pantnagar
Dist.: Udhamsingh Nagar (Uttarakhand)

3. Product and Production wise capacity:

Product:-Refined Silver (500TPA)

By products: 1.Antimony concentrate (1400TPA)

2. Bismuth concentrates (140TPA)

3. Copper Matte (140TPA)

4. Oxidation Slag (840TPA)

Sr. No	Specifications	Status
A	Specific conditions:	
1	Water requirement shall not exceed 350KLD, which shall be sourced from the bore well, waste water from all the processes shall be taken to common effluent treatment plant (CETP) of IIE, Pantnagar, US Nagar, and Domestic water shall be treated through appropriate capacity sewage treatment plant (STP). The treated water shall then be taken to lagoons from where it shall be utilized for cooling, flushing, gardening and green belt development, cooling water shall be re-circulated. No waste water shall be discharged outside the plant boundary and 'Zero discharge' shall be strictly adhered to.	<p>Water requirement total water withdrawal ensured always within the stipulated limit of 325 m³/day for Silver plant.</p> <p>An ETP plant of 87 KLD has been installed in-house to treat and reuse the effluent generated as against the earlier plan of sending it to the CETP of IIE Pantnagar, US Nagar. Till date is no effluent generation from process so, now ETP is not in operation.</p> <p>STP of 30 KLD installed to treat the effluent from Silver plant and Melting & Casting unit in same complex.</p> <p>No wastewater is being discharged outside the plant and zero discharge is maintained.</p>
2	The unit shall install noble furnace (1nos) of 14 MT/day capacities. Cupel furnaces (2nos) of 2.5MT/day capacity and induction furnaces (3nos) of 0.6MT/day capacity with appropriate capacity fumes collection system, bag filters and stack height.	<p>Erection and commissioning of Noble Lead Furnace (1 nos), Cupel furnaces (2 Nos), induction furnaces (3 nos) completed as per stipulation. The pollution control systems installed include the following,</p> <ul style="list-style-type: none"> • Fume Collection System-Capacity 85,602 Nm³/Hr • Efficient Bag filters to maintain the emission as per norms

		<ul style="list-style-type: none"> Stack of 40 meter height with appropriate monitoring port hole and platform.
3	The project authority shall install LDO fired DG set of 500 KVA with acoustic enclosure and appropriate stack height.	Installation of HSD fired 500 KVA DG with acoustic enclosure and stack of 20 m height completed.
4	The project authority shall strictly maintain air emission effluent discharge standards as per the rules.	Noted and being complied.
5	Hazardous chemicals and hazardous waste shall be stored and disposed as the hazardous waste (management, handling and transboundary) Rules 2008.	<p>Appropriate storage facilities have been made for storing Hazardous Chemicals.</p> <p>Authorization under Hazardous waste (management, handling and transboundary movement) rules granted by UEPPCB in CCA of 2014-15, application for renewal of CCA FY-2015-16 submitted to UEPPCB.</p>
6	One-third of the total area of the project shall be developed as green belt with suitable species of plants as per the CPCB guidelines	Till date, 10,000 No's saplings have been planted. The greenbelt of 38% area has been covered.
7	The project authority shall carry out regular ground water quality monitoring of the area, particularly for metal contents at least two different locations, permanent ambient air quality monitoring station shall also be installed in the premises to assess ambient air quality	Ground water quality being monitored for the metals contents quarterly, from plant bore wells. Continuous Ambient Air monitoring station is under ordering stage, However Air quality monitoring is being carried out from four locations inside the plant selected as per wind direction pattern & established in consultation with UEPPCB.
8	The project authority shall obtain "Consent to Establish" and "Consent to operate" from UEPPCB.	<p>UEPPCB has granted the following,</p> <ul style="list-style-type: none"> Consent to establish (Letter No.UEPPCB/HO/NOC-1509/2010/18 dated 01.04.2010) Consolidated Consent Authorization for is granted by UEPPCB and was valid up to 31.03.2015. Application of Renewal for the period 2015-16 submitted to UEPPCB and it is pending at HO-UEPPCB.
9	The project authority shall obtain the	<ul style="list-style-type: none"> NOC obtained from Central Ground Water

	necessary permission NOC from the respective regulatory authorities prior to operation for the unit.	Authority (CGWA) for groundwater withdrawal <ul style="list-style-type: none"> • NOC obtained from Airport Authority of India (AAI) for Stacks. • License obtained for fuel storage from Chief Controller of Explosives (CCOE).
10	The project authority shall submit the compliance report of Environment Clearance in every six months to the authority.	Being Complied.
11	The 'Environmental Clearance" is valid for silver refining process only	Noted.
B	General conditions:	
1	The project authorities shall strictly adhere to stipulation made by the UEPPCB	Noted and is being complied.
2	No further modification or expansion shall be carried out without prior approval of the competent authority. In case of deviations or alterations in the project proposal from those submitted to this authority for the clearance, a fresh reference shall be made to the authority to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted and complied.
3	At no time the emissions shall exceed the prescribed limits in the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	All the emission are being maintained within prescribed limit.
4	The gaseous emissions (Sox, NOx, CO, VOC and HC) and particulate matter along with RSPM levels from various process units shall conform to the standards prescribed by the concerned authorities from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.	Gaseous emissions of SOx, NOx, CO and Particulate matter being carried periodically. Emission levels are being ensured as per the stipulations. Attached here for reference. (Annexure-I).
5	The locations of ambient air quality monitoring stations shall be reviewed in	Ambient air quality monitoring location finalized including downwind direction at the

	consultations with UEPPCB and additional stations shall be installed if required in the downward direction as well as where max ground level concentrations are anticipated	plant in consultation with UEPPCB.
6	The stacks of appropriate height as per the central pollution board guidelines shall be provided to control the emissions from various vents.	Adequate stack height is provided as per CPCB guidelines: <ul style="list-style-type: none"> • 40 m stack height for furnace off gases • 30 m stack height with NOx scrubber provided in electrolyte section • 20 m height for 500 KVA DG set
7	All liquid raw materials shall be stored in storage tanks and drums. Closed handling systems for chemicals and solvents will be provided. Magnetic seals shall be provided for pumps agitators for reactors for reduction of fugitive emissions. Solvent traps shall be installed wherever necessary. Reactor generating solvent vapors will be connected to condensers with receivers.	Proper storage yard is constructed for storing of all raw materials and all necessary precautions taken to handle such material to reduce fugitive emissions and other impacts.
8	All venting equipment shall have vapor recovery system. All the pumps and other equipments where there is likelihood of HC leakages shall be provided with leak detection and repair (LDAR) systems and LEL indicators and Hydrocarbon detectors. Provision for immediate isolation of such equipment, in case of leakage shall also be made. The company shall provide a well defined leak detection system and repair (LDAR) program for quantification and control of fugitive emissions. The detector's sensitivity shall be in ppm levels	Not applicable as we do not handle any hydrocarbons.
9	The company shall undertake following waste minimization measures: Metering and control of quantities of active ingredients to minimize waste, reuse of by-products from the process as raw materials or as raw material substitutes in other processes Use of automated filling to minimize spillage Use of closed feed system into batch reactors Venting equipment through vapor recovery system, use of high pressure hoses for equipment cleaning to reduce waste water generation	<ul style="list-style-type: none"> • All active ingredients are measured and controlled to ensure minimum waste • The by-products are being reused as raw materials in other processes of HZL's sister units • Maximum automation has been adopted in the design of the equipments to arrest spillages. • Hygiene ventilation systems have been installed to arrest fugitive emissions.
10	Fugitive emission in the work zone environment, products and raw material	Hygiene ventilation systems have been installed to arrest fugitive emissions. Work

	storage area shall be regularly monitored. The emissions shall conform to the limits imposed by the UEPPCB, Central Pollution Control Board. Dust powder from the formulation process shall be collected by dust extractor.	zone monitoring is being done monthly, In the Raw material handling, process and finished good area and emission maintained below the limit.
11	The project authorities shall strictly comply with the rules and guidelines under manufacture, storage and import of hazardous chemicals rules, 1989 as amended in October, 1994 and January, 2000 and Hazardous waste (management and handling) rules, 1989 as amended from time to time. Authorization from UEPPCB shall be obtained for collection, treatment, storage and disposal of Hazardous waste. All transportation of hazardous chemical shall be as per the MV act 1989.	Appropriate storage facilities have been installed for storing Hazardous Chemicals. Authorization for the year 2014-15 of Hazardous waste under Hazardous Waste Rules 2008 granted by UEPPCB along with CCA, application for renewal has been submitted of year 2015-16 to UEPPCB, pending HO-UEPPCB.
12	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc on all sources of noise generation. The ambient noise levels shall confirm to the standard prescribed under Environment (protection) act 1986 rules, 1989 viz 75 dB(A) (day time) and 70dB(A) (Night time)	Various noise reduction measures are adopted, to ensure compliance to Ambient noise standards, at the design stage of the projects as: <ul style="list-style-type: none"> • Acoustic enclosure provided for DG set and all the necessary provision made in compressor area. Noise level monitoring is being done and ensured within limit.
13	Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the factories act.	Being complied.
14	Training shall be imparted to all employees on Safety and health aspects of Chemical handling. Pre-employment and routine periodical medical examination for all the employees shall be undertaken on regular basis.	Trainings to all employees on Safety and health aspects of Chemical handling are being provided time to time. The periodic medical examination is being carried out for the relevant occupational hazards at a frequency, as per statutory requirements.
15	The company shall harvest surface as well as rain water from the roof tops of the buildings proposed in the expansion project and storm water drains to recharge the ground water	A rain water storage ponds of capacity of 2542 1500 & 841 cum is constructed inside the property area for storing the rainwater for reuse after appropriate treatment, if required. We have conducted Water screening study of buffer zone &

	and use the same water for the various activities for the project to conserve fresh water.	core zone as per CGWB guidelines and found that plant area falls in Tarain. Water table in the plant area is very high. Hence, recharge of ground water is not possible. As per observation from the study. We can recharge water 30 Km away in forest area for which request submitted to forest department, reply is awaited.
16	The project authority shall also comply with all the environmental protection measures and safeguards proposed in the EIA- EMP report. All the recommendations made in respect of environmental management and risk mitigation measures relating to the project shall be implemented	Environment protection measures and safeguards recommended in the EIA/EMP report has been implemented for Socio-Economic development activities baseline study has been conducted with help of external agency. Action plan for implementation of recommendations in study is made and being ensured in phased manner.
17	The company will undertake all relevant measures for improving the socio-economic condition of the surrounding areas. CSR activities will be undertaken by involving the local villages and administration.	Socio-Economic development activities commensurate to the need of the local surrounding villages being implemented with the help of administration in surrounding area, as committed.
18	The company shall undertake Eco-development measures including community welfare measure in the project area for the overall improvement of environment.	Noted and being complied as a part of CSR activities as above (point B17).
19	A separate environmental management cell equipped with full fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.	Environment laboratory is set up with requisite facilities for environment monitoring and management.
20	The authority may revoke / suspend the environment clearance if implementation of any of the condition is not satisfactory and also the authority reserves the right to stipulate additional condition(s) if found necessary. The project authority in a time bound manner will implement these conditions.	Noted
21	The stipulated conditions, will be enforced, inter alia under the provisions of Water (Prevention and control of Pollution) Act,1974, The Air (Prevention and Control of Pollution) Act,1981, The Environment (Protection)Act,1986, Hazardous Waste	Noted

	(Management and Handling) Rules,2003,2008 and the Manufacture and Use and import of Hazardous chemical rules,1989 and the Public Liability Insurance act,1991, along with their amendments and rules.	
22	The Authority reserves the right to stipulate additional condition(s), if found necessary. The company in the time bound manner shall implement these conditions.	Noted and shall be complied.
23	The Environment clearance is valid for five years from the date of issue of Environment clearance or Commissioning of the project whichever earlier. The Project authority shall inform to the authority as well as UEPPCB the date of start of the project and its completion.	Noted. Project activities are started in May 2010 and Plant commissioning done in the month of Dec.2011. and accordingly informed to SEIAA & UEPPCB.
24	The implementation of the project vis-à-vis the environmental act shall be monitored by the team of the Authority. A six monthly compliance status report shall be submitted to authority shall be posted on the website of the company.	Six monthly compliance report being submitted to UEPPCB and work is under progress to make provision to upload Six month compliance report on Company's website, same will be ensured shortly.
25	The Project authority shall inform the public that the project had been accorded the environment clearance by the authority and copies of the clearance letter are available with the UEPPCB, may also be seen at the website of the state board. This shall be advertised within 7 days from the date of issue of clearance letter, at least in two local news paper that are widely circulated in the region, of which one shall be the vernacular language of the locality concerned and a copy of the same shall be forwarded to SEIAA and UEPPCB.	Advertisement published in two newspapers i.e. Dainik Jagran and Amar Ujala. Copy of the same submitted to SEIAA and UEPPCB.

S.No.	Month	Analysis	stack attached to furnace	Stack of NOX Scrubber
1	Oct-14	PM(mg/Nm ³)	38.2	10.7
2		SO ₂ (mg/Nm3)	25.9	5.9
3		NO _x (mg/Nm3)	80.7	14.3
4		CO(mg/Nm3)	-	-
5		Lead(mg/Nm3)	<1.0	<1.0
6	Nov-14	PM(mg/Nm ³)	29.8	12.4
7		SO ₂ (mg/Nm3)	18.6	4.1
8		NO _x (mg/Nm3)	72.1	16.8
9		CO(mg/Nm3)	-	-
10		Lead(mg/Nm3)	<1.0	<1.0
11	Dec-14	PM(mg/Nm ³)	34.8	15.2
12		SO ₂ (mg/Nm3)	16.3	5.8
13		NO _x (mg/Nm3)	90.5	14.7
14		CO(mg/Nm3)	-	-
15		Lead(mg/Nm3)	<1.0	<1.0
16	Jan-15	PM(mg/Nm ³)	40.7	12.3
17		SO ₂ (mg/Nm3)	23.4	6.2
18		NO _x (mg/Nm3)	83.6	15.4
19		Lead(mg/Nm3)	<1.0	<1.0
20	Feb-15	PM(mg/Nm ³)	35.9	21.3
21		SO ₂ (mg/Nm3)	21.7	8.4
22		NO _x (mg/Nm3)	90.6	19.8
23		Lead(mg/Nm3)	<1.0	<1.0
24	Mar-15	PM(mg/Nm ³)	31.9	14.6
25		SO ₂ (mg/Nm3)	19.2	7.4
26		NO _x (mg/Nm3)	96.7	19
27		Lead(mg/Nm3)	<1.0	<1.0