Environmental Assessment
Jasodhpur Industrial Area
Kotdwar, Uttarakhand

Centre for Science and Environment
New Delhi
## Contents

**Executive Summary** ............................................................................................................................................................ 4

1. **Introduction....................................................................................................................................................................... 5**  
   1.1 Jasodharpur Industrial Area........................................................................................................................................... 6  
   1.2 Location........................................................................................................................................................................... 6  

2. **Technology......................................................................................................................................................................... 9**  
   2.1 Induction Furnace.............................................................................................................................................................. 9  
   2.2 Reheating Furnace............................................................................................................................................................. 9  

3. **History of Protests............................................................................................................................................................... 10**  

4. **Monitoring and Enforcement status: UEPPCB................................................................................................................. 11**

5. **CSE Visits.............................................................................................................................................................................. 13**  
   5.1 People’s Concerns............................................................................................................................................................. 13  
   5.2 Factory Visits................................................................................................................................................................. 13  
   5.3 Conclusion and Recommendations.................................................................................................................................... 23  

**Annexures ........................................................................................................................................................................... 26**

**References........................................................................................................................................................................... 88**
Jasodhpur Industrial Area (JIA) of the State Infrastructure and Industrial Development Corporation of Uttarakhand (SIDCUL) has about 20 factories producing steel using induction furnaces. Situated near Kotdwar town of Pauri Garhwal district in Uttarakhand, JIA was set up in 1996-97.

Since 2008, the local communities have been complaining and agitating against the pollution from factories in the JIA. Their main concerns are air pollution and improper solid waste disposal. After protests in 2008 and 2009 also the Uttarakhand Environment Protection and Pollution Control Board (UEPPCB) allowed the factories to operate with no concrete action. In December 2011, the people aggrieved by the increasing pollution levels, decided to come on the streets. They blocked the road to the industrial area and refused to move till their demands were met. One of the demands of the people was to get an environmental assessment of the area done by the New-Delhi based NGO Centre for Science and Environment (CSE).

The UEPPCB in December 2011 requested CSE to carry out an environmental impact assessment of JIA. CSE agreed to do the study. The CSE study involved a preliminary visit to JIA, collection of information from various sources, comprehensive survey of the operating factories and interaction with various stakeholders.

The key findings of the CSE study are:

- The factories in JIA are operating without a consent to operate and hence are operating illegally. The UEPPCB is not granting consents to these factories but still allowing them to operate which is beyond our understanding. This situation is clearly untenable: allowing the factories to operate without a consent and then asking them to meet standards
- The pollution control equipment in these factories is highly inadequate causing massive pollution
- Solid waste disposal is a major problem and the current slag dumping site on the bank of river Sigaddi Srot at Sigaddi is unplanned and will lead to huge water and land pollution during rainy season.

Our main recommendation is that these factories should not be allowed to function without a consent to operate. All illegal factories should be shut down with immediate effect till the UEPPCB gives them the consent. UEPPCB should grant them consent only when it is sure that these factories will be able to meet the pollution norms. Simultaneously, factories should be given three months to upgrade their pollution control equipment to meet the norms. CSE’s assessment identifies that currently none of the factories at JIA can meet the norms due to highly inadequate pollution control equipment. Within the same three months a common effluent treatment plant should also be set up at JIA to treat the effluent from wet scrubbers of all the factories. As much as possible the slag should be reused and additional three months should be used to set up a landfill site for the slag being generated in these factories different from the present one.

Also, electricity meters should be installed at all pollution control equipment to keep a tab on their electricity consumption. UEPPCB and SIDCUL should ensure proper disclosure of the pollution status of the area due to the JIA factories. Those who comply to conditions within this time frame should be allowed to operate and others should be closed.

CSE offers to survey the status of the implementation of recommendations of its report in six months time.
Environmental Assessment of Jasodharpur Industrial Area

Final Report

1. Introduction

The Uttarakhand Environment Protection and Pollution Control Board (UEPPCB) vide Letter No.: UEPPCB/ROH/Misc./2011/2004 dated December 12, 2011 asked the Centre for Science and Environment (CSE) to carry out an environmental impact assessment (EIA) of Jasodharpur Industrial Area (JIA) near Kotdwar town in Pauri Garhwal district of Uttarakhand (Annexure I: Copy of the UEPPCB letter). CSE replied by stating that instead of an EIA, it will carry out an environmental assessment of JIA to understand the ground realities.

The methodology adopted for the assessment started with a preliminary visit to the area to understand the situation and familiarise with the issues around the JIA. A CSE representative visited the area in December 2011 for this preliminary survey. Then data and information was collected from the UEPPCB about the industrial area like number and capacities of factories, show cause/closure notices served, complaints filed, etc. Following the analysis of the information obtained from UEPPCB and the preliminary visit report, a final visit to the area was carried out. The second CSE visit was in March 2012 when the team carried out a comprehensive study visiting every operational factory, the slag dump area at Sigaddi, affected people and the UEPPCB in Dehradun.
This final report is a compilation of the preliminary survey, information from UEPPCB, stakeholder perception and the final survey.

1.1 Jasodharpur Industrial Area

The Jasodharpur Industrial Area was set up in Kotdwar in the year 1996-97. The JIA was under the Uttar Pradesh State Industrial Development Corporation when it was established. It was only in the year 2011 that the same was transferred to the State Infrastructure and Industrial Development Corporation of Uttarakhand (SIDCUL). As per the UEPPCB, there are 24 factories in the industrial area spread over 90 acres. The UEPPCB pegs the number of operational factories as 18 (see Table 1: List of factories in Jasodharpur Industrial Area). The factories together have a capacity of 13,930 metric tonnes per month (MT/m) of MS Ingot and 8,450 MT/m of bar. This amounts to 1.67 lakh MT/annum for ingot and 1.01 lakh MT/annum for bar. At the time of site visit in March 2012, only 17 factories were operational.

All the factories at JIA which are producing MS ingots use induction furnaces. In March 2012, fifteen of the visited factories were producing ingots. Each of these have two furnaces but at the time of inspection only one was operational and one was on stand-by. The factories that produce bars have reheating furnace. At the time of visit in March, only two of the operational factories had reheating furnaces. Slag produced in these factories was originally dumped within the industrial area but is now being dumped at a designated site near Sigaddi. This site was designated by the Sub-Divisional Magistrate (SDM) of Kotdwar following the December 2011 protests (Annexure III: Copy of permission to dump slag at Sigaddi).

1.2 Location

Kotdwar is a small town located at the border of Uttarakhand and Uttar Pradesh. JIA is located near Kotdwar tehsil of Pauri Garhwal district. JIA lies between 78.42°E, 29.77°N and 78.43°E, 29.77°N.

The maximum temperature recorded in the month of June is 45°C at Kotdwar. Temperature descends to a minimum of 1.3°C in January, and mean monthly

<table>
<thead>
<tr>
<th>Name of the factory</th>
<th>Product</th>
<th>Capacity (in MT/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kukretn Steel</td>
<td>MS Ingot</td>
<td>750</td>
</tr>
<tr>
<td>Shree Sidhballi Sugar, Unit I</td>
<td>MS Ingot</td>
<td>1200</td>
</tr>
<tr>
<td>Shree Dhanvarsha Steels</td>
<td>MS Ingot</td>
<td>70</td>
</tr>
<tr>
<td>Sant Steels &amp; Alloys</td>
<td>MS Ingot</td>
<td>600</td>
</tr>
<tr>
<td>Uttaranchal Iron &amp; Ispat, Unit I</td>
<td>MS Bar</td>
<td>1800</td>
</tr>
<tr>
<td>Uttaranchal Iron &amp; Ispat, Unit II</td>
<td>MS Ingot</td>
<td>2160</td>
</tr>
<tr>
<td>Kotdwar Steels</td>
<td>MS Ingot</td>
<td>1300</td>
</tr>
<tr>
<td>Sumo Steels</td>
<td>MS Ingot</td>
<td>1500</td>
</tr>
<tr>
<td>Himgiri Ispat</td>
<td>MS Ingot</td>
<td>950</td>
</tr>
<tr>
<td>Pushkar Steels</td>
<td>MS Ingot</td>
<td>1000</td>
</tr>
<tr>
<td>HRJ Steels</td>
<td>MS Ingot</td>
<td>550</td>
</tr>
<tr>
<td>Jai Mateshwari Steels</td>
<td>MS Ingot</td>
<td>750</td>
</tr>
<tr>
<td>Poddar Alloys</td>
<td>MS Ingot</td>
<td>850</td>
</tr>
<tr>
<td>Bhagyaashree Steels &amp; Alloys</td>
<td>MS Ingot</td>
<td>900</td>
</tr>
<tr>
<td>JN Ispat</td>
<td>MS Flat, Angle, Tee Barete</td>
<td>400</td>
</tr>
<tr>
<td>Amritvarsha Udhyog</td>
<td>MS Ingot</td>
<td>600</td>
</tr>
<tr>
<td>PL Steels</td>
<td>MS Ingot</td>
<td>750</td>
</tr>
<tr>
<td>Shree Sidhballi Sugar, Unit II</td>
<td>TMT Bar</td>
<td>6250</td>
</tr>
</tbody>
</table>

Source: Information provided by UEPPCB (Annexure II)
temperature for the region ranges from 25°C to 30°C. Rainfall is recorded from mid-June till mid-September and the average annual rainfall is 218 cm.

Rajaji National Park is at a distance of about 34 km and Jim Corbett National Park at 18 km from JIA (see Figure 1: National parks around JIA). The area is also a declared elephant corridor – the Rajaji-Corbett corridor which has two forest ranges: Laldhang and Kotdwar. The corridor lying near the Kotdwar town, connects the elephant population of Rajaji and Corbett National Parks (see Figure 2: Elephant Corridor near Kotdwar). The Kotdwar-Lansdowne road and the heavy traffic along with the difficult topography of the area prevent elephants from crossing. The JIA

**Figure 1: National parks around JIA**

![Figure 1: National parks around JIA](source)

**Figure 2: Elephant Corridor near Kotdwar**

![Figure 2: Elephant Corridor near Kotdwar](source)
falls within the elephant corridor as does the slag dump site at Sigaddi. The dump area Sigaddi is about three km from the industrial area (see Figure 3: Slag dump area - Sigaddi). The dump area is close to the Sigaddi growth centre - another industrial area. The slag is being dumped in a designated plot which is at the river bank and very close to the river bed. The river Sigaddi Srot is a seasonal rain-fed river and is also a tributary of River Ganga.10

Figure 3: Slag dump area - Sigaddi

Source: Centre for Science and Environment, New Delhi
2. Technology

2.1 Induction Furnace

Induction furnace is an electric furnace in which metal is heated using induction. Although invented in 1877, the wide use of induction furnace started only after 1927\textsuperscript{11}. The heat needed to melt the raw materials is generated using electricity and its electromagnetic effect. The raw material which may range from scrap to sponge iron is fed into the furnace. The capacities of an induction furnace range from about a kg to a 100 tonnes but the popular capacity range is: 1-5 tonnes.

There are two types of induction furnaces:

Coreless: This kind of induction furnace has copper coils through which electricity is supplied to create the desired amount of heat. The coils are covered by a material that has a high melting point which in turn covered by a pot of a heat resistant material. The raw material is fed into the pot and the heat from copper coils melts it. All the factories at JIA are using coreless induction furnaces.

Core/Channel: The working is similar to the coreless induction furnace. The only difference is the presence of a heated core.

After melting, the metal is poured into a mould. This may be done in two different ways – the tilting type furnace or the lower tap furnace. The former is where the furnace is tilted on a one-sided hinge to pour the molten metal into a mould and the latter is where the furnace is fixed and a tap is open at the bottom of the furnace to pour the molten metal into the mould. At JIA, all the induction furnaces are tilting type ones.

The selection of a proper power rating for the furnace is very important for achieving the proper melting temperature. The power depends on material and capacity to be melted, desired cycle time, etc\textsuperscript{12}. Specific power consumption norm in induction furnace is 620 kWh/tonne of liquid metal\textsuperscript{13}. Practically achievable optimum value of specific energy consumption is 625–650 kWh/tonne\textsuperscript{14}. Specific power consumption of a typical coreless type induction furnace is 500 kWh/tonne of liquid metal produced\textsuperscript{15}. \textbf{At JIA about 1,100–1,200 kWh/tonne of electricity is being used leaving huge scope for improvement.} The Uttarakhand government should design a programme to upgrade technology in these factories to reduce electricity consumption.

2.2 Reheating Furnace

This is the main equipment in a rolling mill. The raw materials are billets, ingots, slabs, etc. Fuel used is either coal, gas or oil and the furnaces can be bottom fired or top fired.
3. History of protests

The JIA is near the residential area. The industry claims that the residential area has grown in size only after the industrial cluster was established. People complained of health issues due to air pollution and adverse impact due to disposal of slag in agricultural fields in 2008. The government says that it was helpless as the land on which the industrial estate was present did not belong to Uttarakhand government at that time. In 2008, the land was under the UPSIDC which got transferred to SIDCUL only in December 2011. A group was formed to resolve the matter. The group had public representatives and people from industries and the government. After the protest, the factories made certain promises like installing a stack, marking out a slag dumping zone, developing a green belt, not using coal illegally in their reheating furnaces to avoid air pollution, etc. This group was to inspect and check whether these promises are fulfilled or not. People allege that the movement and the group thus formed was foiled by the industry and the government.

In December 2008, the Kissan Mahasabha Sangharsh Samiti of Kotdwar filed a complaint with the UEPPCB about pollution from factories at JIA. Local residents staged another protest in November 2011 after they found that repeated complaints also were not being met with appropriate action. People from affected villages assimilated at the entrance of the industrial cluster for the dharna. Trucks carrying raw material were not allowed to enter the industrial area as the local residents blocked the road. The protest went strong from November 27 to December 6. The people of villages Maganpur, Haldukhata, Jasodharpura were present in dharna at the time of the visit. Main demands/concerns of the protesting people were:

- Centre for Science and Environment (CSE), New Delhi should carry out an environmental assessment of the area.
- The SDM should order all such factories shut those found flouting pollution norms during his inspection.
- Till the UEPPCB submit their report, the JIA factories should remain shut.
- Factories using coal illegally should be shut.
- These demands will be considered accepted only when the SDM gives a written acceptance.
- The JIA should be moved from the densely populated area.
- Legal cases filed against those protesting should be withdrawn.

Dharna got lifted on December 6 when the government agreed to certain demands raised by the people. One of agreed demand was that CSE should be the agency that should be given the responsibility of conducting an environment assessment of the area. The SDM’s assessment and subsequent closure of the factories was also agreed with. Although request for shutting of factories which were causing pollution and using coal illegally was also made to the government the industries have not been shut. Nor has the demand that the JIA be moved away been met.
In February 2009, the UEPPCB carried out a detailed inspection of the JIA based on complaints of pollution (Annexure IV: Copy of the complaint letter)\(^{16}\). The complaint was filed by the Kissan Mahasabha Sangharsh Samiti Kotdwar in December 2008\(^{17}\). The inspection was carried out by SDM Kotdwar, District Industrial Association Kotdwar, UEPPCB Dehradun and factory owners along with the representatives of the Sangharsh Samiti\(^{18}\). The team carried out the inspection for 16 factories, 13 out of these were operating either without a consent under air or water act.

Most of these factories had not even applied for the consent while a few had applied but not received it (see Table 2: UEPPCB Inspection in February 2009). But the UEPPCB did nothing to rectify this illegality of operating without consent. All of them did not have any proper slag disposal and stacked the crushed slag within their premises. Fifty per cent of the inspected factories, had non operational wet scrubbing systems and more than 50 per cent had small hood size leading to improper suction of air emissions. Also in 50 per cent of the inspected factories, particulate matter (PM) was found more than the prescribed standard of 150 mg/Nm\(^3\). There is a big question mark on the PM data. PM monitoring has been shown for factories that did not even have a stack according to the UEPPCB’s own inspection for instance, Sant Steels and Alloys.

Some factories exhibited excessive fugitive emissions within the premises while three of the inspected factories, did not have a stack. The only action taken was that the consent application of the flouting factories was declined but without closing down these factories which defies the very purpose of a consent to operate. It was merely mentioned in these inspection reports that action should be taken but no records were provided by the UEPPCB.

### Table 2: UEPPCB Inspection in February 2009

<table>
<thead>
<tr>
<th>Name of factory</th>
<th>Water scrubber operational</th>
<th>Improper suction</th>
<th>Proper slag disposal</th>
<th>Air consent</th>
<th>Water consent</th>
<th>PM (mg/Nm(^3))</th>
<th>Small Hood</th>
<th>Stack</th>
<th>Misc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Himgiri Ispat</td>
<td>No</td>
<td>No</td>
<td>Declined</td>
<td>Declined</td>
<td>Declined</td>
<td>220.65</td>
<td>Yes</td>
<td>Fugitive emissions</td>
<td></td>
</tr>
<tr>
<td>JN Ispat</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Not applied</td>
<td>Not applied</td>
<td>215.38</td>
<td>Yes</td>
<td>Fugitive emissions</td>
<td></td>
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<tr>
<td>Kotdwar Steels</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Declined</td>
<td>Declined</td>
<td>121.63</td>
<td>Yes</td>
<td>Fugitive emissions</td>
<td></td>
</tr>
<tr>
<td>Poddar Alloys</td>
<td>Not applied</td>
<td></td>
<td>Not applied</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Uttaranchal Iron &amp; Ispat II</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Declined</td>
<td>Declined</td>
<td>181.2</td>
<td>Yes</td>
<td>Shut during inspection (since 3 months)</td>
<td></td>
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<td>Uttaranchal Iron &amp; Ispat I</td>
<td>No</td>
<td></td>
<td>Declined</td>
<td>Declined</td>
<td>Declined</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sumo Steels</td>
<td>No</td>
<td>No</td>
<td>Not applied</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jai Mateshwari Steels</td>
<td>No</td>
<td></td>
<td>Not applied</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sant Steels &amp; Alloys</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Not applied</td>
<td>Not applied</td>
<td>128.86</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pushkar Steels</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Applied</td>
<td>Applied</td>
<td>145.75</td>
<td>No</td>
<td>Fugitive emissions</td>
<td></td>
</tr>
<tr>
<td>Amritvarsha Udhyog</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Declined</td>
<td>Declined</td>
<td>199.39</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>Shree Sidhbal Sugar I</td>
<td></td>
<td></td>
<td>No</td>
<td>Applied</td>
<td>Applied</td>
<td>137.39</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Kukreti Steels</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Not applied</td>
<td>Not applied</td>
<td>178.63</td>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>Shree Dhanvarsha Steels</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Not applied</td>
<td>Not applied</td>
<td>204</td>
<td>Yes</td>
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<td></td>
</tr>
<tr>
<td>Bhagyashree Steels &amp; Alloys</td>
<td>No</td>
<td>No</td>
<td>Not applied</td>
<td></td>
<td></td>
<td>189</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRJ Steels</td>
<td>Yes</td>
<td>No</td>
<td>Applied</td>
<td>Applied</td>
<td>Applied</td>
<td>90.45</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: UEPPCB Inspections - February 2009 (Annexure V)
to prove that any action was taken following the February 2009 inspections.

Following the December 2011 protests, seven factories were given show cause notices on December 7 and they had to file their replies by December 22 (Annexure VI: Copies of show cause notices). All of them were served notices under Section 31 (A) of the Air (Prevention and Control of Pollution) Act 1981 based on pollution complaints. Although the inspections for these factories were carried out on August 11, 2011 they were served notices only in December after the protest. Factories that were served show cause notices and inspection findings are given below:

- **Pushkar Steels:** The factory did not have proper hood collection and suction system for collection and disposal of fumes. The air pollution control devices were not operational and there was no arrangement of proper disposal of slag.
- **HRJ Steels:** The factory did not have proper hood collection and suction system for air pollution control. Also, other control devices were not operational and there was no arrangement of proper disposal of slag.
- **Kotdwar Steels:** The factory did not have proper hood collection and suction system for collection and disposal of fumes. Also, the air pollution control devices were not operational and there was no arrangement of proper disposal of slag.
- **Himgiri Ispat:** The factory did not have proper hood collection and suction system for collection and disposal of fumes. Also, the air pollution control devices were not operational and there was no arrangement of proper disposal of slag.
- **Shree Sidhball Sugar, Unit II:** The factory changed its reheating fuel from furnace oil to coal without prior permission of the UEPPCB.
- **Poddar Alloys:** The factory installed a reheating furnace without the prior permission of the UEPPCB and was using coal as the fuel.
- **Uttaranchal Iron & Ispat:** The factory did not have proper hood collection and suction system for air pollution control. Also, other control devices were not operational and there was no arrangement of proper disposal of slag. The factory has installed a gasifier plant without the permission of the UEPPCB.

According to UEPPCB, none of these factories have a consent to establish or operate at present. An RTI filed in 2008 reveals that these factories were granted a No Objection Certificate (NOC) by the Uttar Pradesh Pollution Control Board, Lucknow the copy of which was not available with the UEPPCB (Annexure VII: Copy of RTI response). According to the UEPPCB, they are unable to grant a consent to operate as none of these factories in the JIA is meeting their standards satisfactorily. The UEPPCB informs that these factories apply for a consent every year but fail to meet their standards leading to a ‘no consent’ situation. Essentially, all the factories are operating illegally. But the UEPPCB is solely responsible for this situation where factories without a consent to operate are functioning without any deterrence when they should be shut down immediately. The lax attitude of the UEPPCB is responsible for the present pollution situation of JIA.

Factories visited say that pollution is not as big a problem in the area as it is being made out to be. They allege that when the industrial area was set up, there was no population around but with economic opportunities that the JIA has brought, people have shifted nearby only in recent years. On the other hand, a number of villagers claim to be living in the area for more than 30 years. The factory owners do acknowledge that no one wants to live near the industrial area due to noise and pollution.
5. CSE Visits

CSE visited the Jasodharpur Industrial Area first in December 2011. During this visit, affected people presented their concerns and demands to CSE. Also, the CSE representative visited about three factories and the slag dump area. CSE also visited the outskirts of the Rajaji National Park where some slag dumps were found. The visit confirmed people’s allegations that air pollution and solid waste disposal is an issue.

In March 2012, CSE did a more comprehensive visit and factory inspection of JIA. The representative visited the Sigaddi slag dump site and found that slag was still being dumped there unscientifically. The dump site will cause immense water pollution during rains as a lot of slag is also being stacked on the river bed of the seasonal river. A number of slag hills were observed scattered at various places near JIA and Sigaddi. However, no slag was seen dumped on the outskirts of the Rajaji National Park where road construction work was going on. People informed that all the previously dumped slag has been utilised to build roads in that area.

5.1 People’s Concerns

Most of the people complained of air pollution, noise pollution and improper solid waste disposal (Annexure VIII: Testimonials). People allege that the air pollution has created a number of respiratory disorders like cough and asthma. People claim that there is so much dust and smoke from the factories that even during summers they cannot open their windows for some fresh air. Another concern brought forward was that some bird species have completely vanished from the area.

Others claim that the air and solid waste pollution is affecting the agricultural fields. The slag generated in the factories comes to their fields with rains and has destroyed the fertility. One person said that where initially 800 m² of land gave about 0.2 tonnes wheat²⁰, today not even 0.05 tonnes is being produced. People also point out that due to loud noise from the factories they are unable to sleep at night. Some people allege that because of pollution from factories handicapped children are being born. Many residents claimed that they have been residing in the area for more than 30 years.

People allege that the level of air pollution is so high in the area that visibility becomes an issue, especially in the morning hours. Many claim that there is no toilet facility for workers in the factories because of which they defecate in the open. During rains, this flows down into the villages and is a great hygienic, health and aesthetic concern.

Some people claim that about 40 per cent of the area’s population is engaged in the factory by either being directly or indirectly employed. Also, owing to the industrial area, a number of local shops like milk vending, kirana, vegetable and fruit shops, etc., have come up and are providing steady income. Also, these shops have translated into better accessibility to things for local residents as well. People say that these factories do not follow the standards laid down by the government on pollution. If compliance to these standards can be ensured then the factories will further help in improving the economic and living standards of the residents. Some people allege that about 50 labourers have died in different accidents in the factories in the last 4-5 years without any action from the government or industry.

5.2 Factory Visits

Each of the operational factories was inspected by the CSE team. One inspection of JIA was done at 4.30 am on March 26, 2012. Day inspections were carried out on March 26 and 27, 2012.

Air pollution was observed during the day inspection but the air pollution observed in the early morning visit was huge. There was rampant flouting of norms by emitting smoke through the roofs of the factories. The pollution extent was so high that the visibility was affected and remained so for a long time. The common observation on visiting these factories was that most of them do not have any technical staff looking after the factory which are being managed by accounts manager, labour contractor or linesman. There were 17 operational factories at the time of inspection (see Figure 4: JIA Layout). The factories were asked to fill out a questionnaire asking them details of production, water and electricity use, raw material use and sourcing, slag generation, etc. Most companies did not have proper records of all these parameters and gave approximate information.
Emissions escaping through the roof of a JIA factory

Non-operational suction device at a JIA factory

Poor housekeeping and unorganised work conditions – a characteristic of factories at JIA
Conventional wet scrubber systems, mostly non-operational, a common pollution abatement equipment at JIA factories.
CSE visit brings out the fact that factories at JIA are operating in a highly unorganised way. In both the CSE visits, immense air pollution levels were observed. Stacks were seldom seen to be used. Most of the emissions were being emitted from the roofs of the factories which implied that the emissions were not being captured by the pollution control equipment. Also, the air pollution within the factory premises was huge making the working environment extremely unhealthy. The air pollution levels imply that the pollution control equipment in all the factories, even if present, is highly inadequate. Details of the information from the questionnaires and inspection are given below:

1. Shree Sidhbali Sugar, Unit II: This factory, established in 2009, has one reheating furnace with an annual capacity of 70,000 tonnes per annum (TPA) while the permissible annual capacity according to UEPPCB is 75,000 TPA\(^2\). The furnace uses 8,000–10,000 litres (l) of furnace oil per day to produce 200–250 tonnes\(^2\) of product. The factory has a wet scrubbing system. The factory has 85 full time staff. The factory has its own dumping site within the industrial area (opposite Pushkar steel). About 2.5–3 per cent waste is generated in the factory but the process manager had no estimate of the quantity of waste generated everyday. Housekeeping within the factory is extremely poor. The factory was the one that was served a show
cause notice for using coal illegally in their reheating furnace. The company however, denied this during the inspection. The scrubbing system was found operational at the time of inspection but nothing was being emitted from the chimney which puts a question mark on whether the emission capturing through the suction hood is happening or not.

2. Kotdwar Steels: Established in 1997, it covers an area of about 5,180 m². The factory has two induction furnaces of five tonne capacity each but at a given time only one of the furnaces is operational. One cycle/batch/heat is for three hours and the factory operates about four heats per day implying a capacity of about 8,000 TPA while the permissible capacity is 15,600 TPA.

The factory has a hood suction system and a wet scrubbing system in place for pollution abatement. Sponge iron, scrap and cast iron are used as raw material in the furnace in the ratio of 50 per cent, 25 per cent and 25 per cent, respectively. At the same time, the company claims that for every tonnes of steel production, it uses 0.3 tonne of sponge iron, 0.25 tonne of cast iron and 0.7 tonne of scrap which gives a ratio of 56 per cent scrap, 20 per cent cast iron and 24 per cent sponge iron. While the sponge iron is being sourced from Chhattisgarh, Jharkhand and Madhya Pradesh, scrap and cast iron are from Ghaziabad and Delhi.

Close to six tonnes of slag is produced each day which is being dumped in the land near Sigaddi. The company claims that if the raw material is of ‘bad’ quality then smoke will be emitted throughout the cycle. For producing one tonne of product, the company uses 1,300 units (kWh) of electricity. About 25,000–50,000 l of water is used per day which includes water for cooling, plantation, domestic consumption, etc., and this is being sourced through one tube well of the company. The company employs 80 people including daily wage labourers out of which it is claims 80 per cent are locals while 20 per cent are from Bihar. The company states that when the industrial area was set up, there was no population around the area and only in the last 2-4 years houses have come up.

At the time of inspection, although the hood and scrubber were operational, there was a huge amount of smoke/pollutant escaping the hood leading to high fugitive emissions. This points to the inadequacy of the pollution control equipment. Housekeeping was very poor at the factory.

3. PL Steels: Is operating since April 2009 and covers an area of 4,050 m². The factory has two induction furnaces of three tonne capacity each but only one is operational at any given time. One heat period is 2.5–3 hours and the factory operates six heats per day implying a production of 6,500
TPA while the permissible production is 9,000 TPA. Raw materials used are 90 per cent scrap and rest is cast iron. Sponge iron is sometimes used depending on availability and price. Scrap is sourced from Ghaziabad and Delhi. One tonne of raw material gives 0.8 tonne of product. The factory produces one tonne of slag per day and this is disposed off in the land near Sigaddi. The company pegs its water requirement at 5,000 l per day through its own tube wells/bores. It uses 1,100 units of electricity to produce one tonne of steel. The company employs 32 workers in all. The placement of the hood was not correct at the time of inspection and most of the emissions were going away from the hood causing immense fugitive emissions within the work zone. Housekeeping is very poor within the factory premises and the scrubber was not operational.

4. Uttaranchal Iron and Ispat, Unit I: Established in 1997, the factory was originally called RL Steel and belonged to a different owner. It was named Uttaranchal Iron and Ispat in November 2002. The factory produces TMT bars only and has a reheating furnace of capacity 30,000 TPA or 110 TPD while the permissible production is 21,600 TPA. Fuel used is furnace oil (FO) @65–70 l of FO/tonne of product. MS ingots produced by Unit II of the same company is utilised by this factory for making TMT rods. The factory also has to purchase some raw material from outside. The factory has a wet scrubbing system in place for pollution abatement whose operation status could not be ascertained. Spread over an area of 90,000 m², the factory employs about 80 workers. The company agrees that it was using coal as the reheating furnace fuel before November 2011 since it was cheaper. However, after the local protest in December 2011, they have only been using FO.

5. Uttaranchal Iron and Ispat, Unit II: Established in April 2005, the factory has two induction furnaces of six tonnes capacity each and is spread over an area of 13,000 m². At a given time only one is operational while the other remains on stand-by. The annual production of the factory is 22,000 TPA while the permissible production is 25,900 TPA. Each heat cycle lasts for (3.5–4) hours and the factory operates about three heats per day implying a production of about 24 tonnes per day or about 9,000 TPA. Thus there is some problem with the data provided by the company. The factory uses scrap (80 per cent), sponge iron and cast iron (together 20 per cent) as raw materials. For producing one tonne of steel 1.16 tonne of raw material is fed in. The scrap is sourced from Delhi and Ghaziabad. The factory uses 1,000 units of electricity per tonne of product produced.

There is a moving hood suction system and wet scrubber in place at the factory for pollution abatement. The factory produces about three tonnes of slag everyday and the same is being dumped at the Sigaddi dump site which the company has not seen. The factory employs 35 workers out of which 30 are permanent. During inspection it was observed that the hood was in place and operational as was the scrubber. But the fugitive emissions within the factory premises raise concerns about the inadequacy of the pollution control equipment. Housekeeping was extremely poor in the factory.

6. Sumo Steels: The factory was established in 2005 and has two induction furnaces. Each with a capacity of five tonnes/heat, one remains on stand-by while the other is operational. One heat period is about (3–4) hours and the factory operates four heats/day. The annual capacity of the factory is 7,200 tonnes and the permissible annual production is 18,000 TPA. Scrap (80 per cent), sponge iron and cast iron (together 20 per cent) are used as raw materials. To produce five tonnes of product six tonnes of scrap is to be fed in the furnace. Scrap is sourced from Delhi and Uttar Pradesh. The factory produces 0.5 tonne of
slag everyday which is being dumped at the Sigaddi site. The factory has wet scrubbing and a moving suction hood system installed for pollution abatement. It uses 5,000 l of water per day from tankers and uses 700 units of electricity to produce one tonne of product. There are 34 workers in the factory out of which 12 are permanent. The area of the factory is 5,600 m². At the time of the inspection, the hood was not over the furnace and it was alleged that some repair work is being undertaken. The furnace was being operated without any pollution abatement equipment causing all the emissions to escape into the atmosphere and causing fugitive emissions. Housekeeping at the factory is dismal.

7. Jai Mateshwari Steels: Established in 2004, the factory has two induction furnaces of three tonne/heat capacity each making the annual production 6,500 tonnes and the permissible production limit is 9,000 TPA²⁸. Area of the factory is 4,032 m². Each heat period is about 2.15 hours and the factory operates six heats in a day. Raw materials used are sponge iron (50 per cent) and scrap (50 per cent). For producing three tonnes of product, 3.5 tonnes of raw material is fed in. While the scrap is sourced from Delhi and Uttar Pradesh, sponge iron comes from Chhattisgarh (Raigarh and Raipur). The factory produces three tonnes of slag every day which is dumped at the Sigaddi site. The factory employs 40 workers out of whom 25 are permanent. Four thousand litres of water is used everyday drawn from company’s own bore wells and 1,300 units of electricity is used per tonne of product. In spite of a hood and scrubber in place, the emissions inside the factory near the furnace were very high indicating that the equipment was non operational or inadequate. Housekeeping was poor.

8. Sant Steels and Alloys: Established in 1996, the factory covers an area of 4,000 m². It has two induction furnaces of 3.8 tonnes capacity each. Each heat period is (3-3.5) hours and the factory operates seven heats per day which implies annual capacity of about 9,500 tonnes while the permissible capacity is 7,200 TPA only²⁹. Raw materials are sponge iron (50 per cent) and scrap (50 per cent). The sponge iron is from Chhattisgarh and the scrap is from Delhi and Uttar Pradesh. For producing 3.8 tonnes of product, 4.75 tonnes of raw material is fed in. The factory produces 2.7 tonnes of slag everyday which is being dumped at the Sigaddi site. Pollution control equipment at the factory includes a moving hood suction system and a wet scrubber. There are 32 workers and daily wage labourers employed by the factory. It uses 1,400 units of electricity to produce one tonne of slag daily.
product. The factory could not provide any data on the water use and there were visibly high fugitive emissions inside the factory premises pointing to the inadequacy of the pollution control equipment. The factory has poor housekeeping.

9. Pushkar Steels: The factory has been in operation since 1997. There are two induction furnaces in the factory with four tonnes/heat capacity each and the annual production is 6,000 tonnes and the permissible annual production is 12,000 TPA. Each heat period is (2.5-3) hours and the factory operates three heats a day. The factory uses scrap (70 per cent) and sponge iron (30 per cent). The former is from Delhi and the latter from Chhattisgarh and Madhya Pradesh. For producing four tonnes of product, five tonnes of raw material is fed in. The factory produces one tonne of slag everyday which is dumped at the Sigaddi site. Covering an area of 6,000 m², the factory employs 98 workers which includes 30 daily wage labourers. The factory uses 3,000 l of water per day and 1,400 units of electricity to produce one tonne of product. Pollution control equipment is wet scrubber and a moving hood suction system and although found operational, their adequacy is a big question given the fugitive emissions inside the factory premises. Poor housekeeping observed at the factory.

10. Amritvarsha Udhyog: Established in 1997, the factory has two induction furnaces of four tonne/heat capacity each. The factory uses scrap (50 per cent) and sponge iron (50 per cent) as raw materials. For four tonnes of product, five tonnes of raw material is needed. Pollution control equipment at the factory consists of a moving hood suction system and a wet scrubber. The factory did not have a stack at the time of inspection and the hood suction system was not working leading to heavy fugitive emissions. No factory representative was available at the time of inspection. The annual permissible capacity is 7,200 TPA. Housekeeping is poor at the factory.

11. Shree Sidhbal Sugar, Unit I: The factory was established in 2003 and has two induction furnaces of five tonne/heat capacity each. One heat period is three hours and the factory operates eight heats everyday which means 40 tonnes of production/day and 14,400 TPA. The permissible production limit is 14,400 TPA. Raw materials are sponge iron (50 per cent) and scrap (50 per cent). The former
is from Chhattisgarh and the latter from Uttar Pradesh. The factory produces three tonnes of slag everyday which is being dumped at the Sigaddi site. The factory covers an area of 5,500 m² and employs 80 workers. There is a moving hood suction system and a wet scrubber for pollution abatement. But the hood suction system was not functional at the time of inspection which resulted in high fugitive emission in the factory premises. The factory uses 3,000 l of water per day from its own bore well and 1,300 units of electricity for producing one tonne of product. Housekeeping with the factory is very poor.

12. Kukreti Steel: Was established in 1997. The factory has two induction furnaces of four tonne/heat capacity each. One heat period is three hours and the factory operates six heats per day which means 8,600 TPA and the permissible limit is 9,000 TPA. Scrap (80 per cent) and sponge iron (20 per cent) are used as raw materials. For producing four tonnes of product, five tonnes of raw material is fed in. The factory produces three tonnes of slag everyday which is dumped at the Sigaddi site. There is a moving hood suction system and a wet scrubber for pollution abatement. But the hood suction system was not functional at the time of inspection which resulted in high fugitive emission in the factory premises. The factory uses 3,000 l of water per day from its own bore well and 1,300 units of electricity for producing one tonne of product. Housekeeping with the factory is very poor.

13. Shree Dhanvarsha Steels: The factory started its operations in 1997 but remained shut for a period of four years. It has two induction furnaces of five tonne/heat capacity each. Each heat period is four hours and the factory operates five heats per day implying a production of 9,000 TPA while the sanctioned capacity is 12,000 TPA alleges the company. However, as per UEPPCB, the sanctioned limit is 840 TPA. Raw materials used are sponge iron (50 per cent) and scrap (50 per cent). For producing five tonnes of product 5.75 tonnes of raw material is fed in. The factory produces three tonnes of slag everyday which is dumped at the Sigaddi site. There is a moving hood suction system and a wet scrubber for pollution abatement. The factory uses 5,000 l of water everyday (own bore well) and 1,300 units of electricity per tonne product. The factory covers an area of 5,000 m² and employs 80 workers out of which 20 are daily wage labourers. The last UEPPCB visit to the factory was in December 2011. The pollution control equipment, although operational, were ineffective leading to fugitive emissions within the factory premises. Housekeeping at the factory was extremely poor.

14. HRJ Steels: The factory has two induction furnaces of 3.8 tonne/heat capacity each. Each heat cycle is three hours and the factory operates six heats per day implying 8,000 TPA production while the permissible limit is only 6,600 TPA. Sponge iron (50 per cent) and scrap (50 per cent) are used as raw materials. For producing four tonnes of product, five tonnes of raw material is fed in. The factory produces one tonne of slag everyday. For pollution control, the factory has a moving hood suction system and a wet scrubber. At the time of inspection, both the pollution control systems were not operational causing very high fugitive emissions. Housekeeping is dismal at the factory. The factory could not provide any data on water and electricity use. It employs 80 workers.

15. Bhagyashree Steels & Alloys: The factory was established in 1997 and has two induction furnaces of 3.8 tonnes/heat capacity each. One heat period is three hours and the factory operates seven heats per day implying a capacity of 9,600 TPA and the permissible limit is 10,800 TPA. Scrap is the raw material used and is sourced from Gujarat and Maharashtra. For 3.8 tonnes of product, 4.5 tonnes of raw materials is fed in. The factory produces one
tonne of slag everyday which is dumped at the Sigaddi site. There is a moving hood suction system and a wet scrubber for pollution abatement. Spread over an area of 6,400 m² the factory employs 40 workers most of whom are not locals. It uses 6,000 l of water everyday from the company's own bore well and 1,500 units of electricity per tonne of product. Although found operational at the time of inspection, the pollution control equipment proved highly ineffective given the escaping emissions from the furnace and the fugitive emissions in the factory. Poor housekeeping was observed.

16. Poddar Alloys: Started operations in 1996 but was shut and started again in 1999. The factory has two induction furnaces of 3.75 tonnes/heat capacity each. One heat cycle is three hours and the factory operates eight heats per day implying 9,500 TPA capacity and the permissible limit is 10,200 TPA. Scrap (70 per cent) and sponge iron (30 per cent) are used as raw materials. Scrap is sourced from Delhi and sponge iron from Chhattisgarh. For producing 3.75 tonnes of product, 4.5 tonnes of raw material is fed in. Slag production is 2.5 tonnes per day which is dumped at the Sigaddi site. Pollution abatement equipment includes wet scrubber and a moving hood suction system. Covering an area of 8,000 m² the factory employs 60 workers. Water used in the factory is 6,000 l/day from own tube wells and 1,300 units of electricity is used for producing one tonne of product. The factory was served a show cause notice in 2009 after which it changed the motor for operating the suction system and replaced the hood. But none of this seems to have helped the factory which still exhibited fugitive emissions even with operational pollution control equipment. Housekeeping was poor at the factory premises.

17. Himgiri Ispat: Was established in May 2005. The factory has two induction furnaces of five
tonne/heat capacity each. Each heat period is three hours and the factory operates six heats everyday implying 10,500 TPA capacity while the permissible capacity is 11,400 TPA\textsuperscript{38}. Raw materials used are scrap (80 per cent) and sponge iron (20 per cent). The former is from Delhi and Uttar Pradesh while the latter is from Chhattisgarh. For producing five tonnes of product, eight tonnes of raw material is fed in. The factory produces seven tonne of slag everyday which is dumped at the Sigaddi site. There is a moving hood suction system and a wet scrubber for pollution abatement. There are 40 workers employed by the factory out of which 28 are permanent. The factory covers an area of 3,632 m\textsuperscript{2}. It uses 15,000 l of water per day from own bore well. Thousand units of electricity is used to produce one tonne of product. The factory was served a show cause notice by the UEPPCB in March 2012 after which they replaced the hood and installed a motor with higher power rating but according to the company this has not improved the situation and air pollution still persists. But the factory exhibited relatively less fugitive emissions and the workers wore helmets and shoes even though they looked new.

5.3 Conclusion and Recommendations

1. Illegal operations: As informed by the UEPPCB, these factories are operating without a consent to operate. This is the most surprising scenario where the UEPPCB seems to be not doing its task properly. The UEPPCB is allowing the defaulting factories to operate without a consent and cause huge pollution without taking any strict action against them. What is more surprising is the fact that these factories apply for a consent every year which is rejected by UEPPCB on the grounds of not satisfying conditions. This reflects the lax attitude of the regulator which has played its part in the environmental degradation of the area.

Recommendations:
- All factories working without a consent should be shut down with immediate effect till the time the UEPPCB grants them a consent to operate.
- UEPPCB should grant the consent to operate to factories which they feel will be able to meet norms.

2. Factories at JIA are polluting: As evident from the factory inspection, air pollution control equipment was found either non functional or inadequate leading to high levels of pollution. Also, the wet scrubbers installed were not operational in most of the factories. Even though repeated notices have been issued to these factories and protests have happened in the area, the problem persists.

Recommendation:
- The JIA factories should be asked to upgrade their pollution control equipment within a period of three months to meet the norms (Annexure IX: Technology Options). The UEPPCB is to provide technical assistance for upgradation of pollution control equipment in each factory. Installation of stacks, proper hoods and wet scrubbers should be made mandatory in all the factories.

3. Pollution control equipment non-operational: Many of the factories were not using their pollution control equipment at the time of inspection.

Recommendations:
- To ensure that the pollution control equipment is being used, separate electricity meters should be installed at all the equipment. The electricity consumption from these meters should be monitored by the UEPPCB.
- SIDCUL should set up a facility to monitor ambient air quality in and around JIA, within a period of three months. They should monitor ambient air quality in JIA as well as residential areas regularly. The monitoring station should be located taking into consideration the prominent wind direction and residential areas.
- Regular and rigorous monitoring of these factories needs to be undertaken by the UEPPCB. Surprise night inspections need to be increased as most of the residents complain that the factories cause most air pollution at night which was also verified by CSE’s visit. Those found flouting norms should be dealt with severely by means of heavy fines, closure, etc.
- A Common Effluent Treatment Plant (CETP) needs to be set up within the industrial area to ensure that the effluent from the individual scrubbers is treated. The treated effluent should be reused within the factory premises. A time period of three months should be given for setting up the CETP at JIA.

4. Slag disposal is leading to massive pollution: Slag was found dumped within factory premises at
a number of places. Within JIA also there are two big dumps of slag. When questioned, the companies shrug the responsibility of handling this slag claiming it is ‘old slag’. Following the December 2011 protests, slag is being dumped at Sigaddi in an unscientific manner. This is being done irresponsibly with companies outsourcing transportation of slag from JIA to the Sigaddi site. Villagers claim that these trucks often dump slag anywhere on their way to the dump site to ensure they get more trips and hence more income.

Recommendations:
- **It is important that solid waste (slag) be reused as much as possible.** Common uses of steel slag are as construction material after blending with fly ash and lime, construction fill, etc. This can also be used as an aggregate in concrete. The Australian (iron and steel) Slag Association puts forth the following uses of steel slag: sealing aggregate, asphalt aggregate, rail ballast, pavement base and subbase layers, engineering construction fills, subsoil drains and grit blasting. The Indian Bureau of Mines (IBM) counts uses of steel slag as a barrier material remedy for waste sites where heavy metals tend to leach into the surrounding environment. Steel slag forces the heavy metals to drop out of solution in water runoff because of its high oxide mineral content. IBM further states that steel slag has been used successfully to treat acidic water discharges from abandoned mines.
- For the rest of the slag, it is imperative to have a designated land for landfilling till the time an appropriate use for the same is found. Thus the district administration should identify an alternate piece of land for storing slag. Six months should be given for designing a new and scientific landfill site.
- **The old slag lying at JIA needs to be removed from JIA.** This should be either reused or disposed in the new landfill site.

5. **Disclosure**: The status of pollution in the surrounding areas of JIA should be made public.

Recommendations:
- **UEPPCB should disclose the quarterly inspection reports and electricity consumption data of the factories.**
- **SIDCUL should ensure that the ambient air quality data is put in public domain every month.**

6. **Poor raw material quality leading to more emissions**: Poor raw material was seen to be causing a lot of air pollution at JIA. The quality of raw material used depends on the furnace used. Most of the factories in the JIA use scrap as raw
material and some also use sponge iron. The scrap being purchased for factories in JIA is from kabadies. Hence, the quality of the scrap is very poor leading to high pollution. Using scrap is environmentally sound provided that adequate control equipment is put in place to avoid and minimise air pollution.

Recommendation:
- Proper quality control of raw material being used at the factories is to be carried out.

7. Other Recommendations:
- Unpaved roads in JIA are adding to the already high levels of air pollution. These need to be black topped to avoid fugitive emissions.
- Water consumption in these factories is very high and unaccounted for. Everyone has individual tubewells. Water consumption needs to be controlled and optimised. Water meters should be installed in all factories.
- Energy consumption is very high. It can be reduced by one-third by giving proper technical assistance to factories. This should be done by JIA and Uttarakhand government.
- Proper sanitation facilities should be provided to the workers at JIA.

CSE offers its services to check the environmental status of JIA and the status of implementation of the recommendations of its report after six months.
Annexure I

Copy of the UEPPCB letter

कृष्णा बालू गौर
उत्तराखण्ड पर्यावरण संरक्षण एवं प्रदूषण नियंत्रण बोर्ड
ई-118, नेहरू कलोनी, हरीद्वार रोड, देहरादून

पंजीकृत: 12/12/11

सेवा में,
श्री हलकार,
श्री श्री राम एवं श्री विनायकजी, नं. 41, इलाहाबाद, तहसील, उन्नाव, देहरादून-110062

मोदियो,
इस पत्र के माध्यम से आपको उत्तराखण्ड बोर्ड में स्वामित्व जलवायु प्रदूषण विभाग, जलवायु प्रदूषण विभाग, जलावद-पौर्वी जलवायु के संबंध में अपना काम करने का आयोजन किया जा रहा है। तथा 90 एकड़ क्षेत्रफल में रखे इस वैश्विक क्षेत्र में लगभग 24 टैंक उड़ान (इंडरक्स फर्म्स एवं रिटेलिंग फर्म्स) स्थापित है। इंडस्ट्रीलुक्स में आपका स्कीप तथा समय प्राप्त का प्रमुख कार एमएसएस एंजैट का उपयोग तथा रिटेलिंग फर्म्स से एमएसएस एंजैट से एमएसएस बार, एंजैट अवलोकन के उपयोग दिया जाता है। न्यूडेक्स 2000 से वैश्विक क्षेत्र में रखी हुई उड़ानों की स्थापना के लिए सावधानीपूर्वक क्षेत्र में स्थापित टैंक उड़ानों के द्वारा पर्यावरण पर उन्हें समर्थन प्रदान किए गए। भारतीय विदेश अवमान के साथ सुनिश्चित की गई और भारतीय सरकार द्वारा सुनिश्चित की गई।

इस पत्र में आपके अनुरोध के साथ, विशेष योग्यता भारतीय प्रदूषण नियंत्रण अभियान के समन्वय में आपके संचालन द्वारा क्षेत्र का निरीक्षण कर अपना प्रसार बोर्ड का प्रतिबंध करने का कदम करवा रहे हैं। विवरण के निरीक्षण हेतु राज बोर्ड द्वारा आपके विवेचन साइटों का निरीक्षण किया जाएगा।

वर्ष 2019 की हार्दिक शुभ कालकालों सहित।

[संदेश]

भारतीय अवमान

प्रदूषण नियंत्रण केंद्र, उत्तराखण्ड पर्यावरण संरक्षण एवं प्रदूषण नियंत्रण बोर्ड, देहरादून को सूचित करें।

श्रीमती अविकारी
### Annexure II

**Information provided by UEPPCB**

List of industrial units in Jasodharpur industrial estate with their present production details as per online submission:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Industry</th>
<th>Details of Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M/s Kukreti Steel Pvt. Ltd  E-73-76 &amp; F-23-27 Industrial Area, Jashodharpur, Kotdwar</td>
<td>MS Ingot-750 MT/M</td>
</tr>
<tr>
<td>2</td>
<td>M/s Shree Siddhiv Sugar Ltd. Plot No. E-67-71, Jashodharpur Ind. Area, Kotdwar</td>
<td>MS Ingot-1200 MT/M</td>
</tr>
<tr>
<td>3</td>
<td>M/s Shree Dhanvarsha Steels Ltd. Ind Area, Jashodharpur Ind. Area, Kotdwar</td>
<td>MS Ingot-70 MT/M</td>
</tr>
<tr>
<td>4</td>
<td>M/s Sant Steels &amp; Alloys Pvt. Ltd Plot No. 1, Ind Area, Jashodharpur, Kotdwar</td>
<td>MS Ingot-600 MT/M</td>
</tr>
<tr>
<td>5</td>
<td>M/s Uttaranchal Iron &amp; Ispat Ltd (Unit-I) Plot No. 3 &amp; 4, UPSIDC Ind. Area, Jashodharpur, Kotdwar</td>
<td>MS Bar-1800 MT/M</td>
</tr>
<tr>
<td>6</td>
<td>M/s Uttaranchal Iron &amp; Ispat Ltd (Unit-II) Plot No. 5, 6 &amp; 7, Ind. Area, Jashodharpur, Kotdwar</td>
<td>MS Ingot-2160 MT/M</td>
</tr>
<tr>
<td>7</td>
<td>M/s Kotdwar Steels Ltd Block-E, Jashodharpur Ind. Area, Kotdwar</td>
<td>MS Ingot-1300 MT/M</td>
</tr>
<tr>
<td>8</td>
<td>M/s Sumo Steels Pvt. Ltd Plot No. E-45, 50, Jashodharpur Ind. Area, Kotdwar</td>
<td>MS Ingot-1500 MT/M</td>
</tr>
<tr>
<td>9</td>
<td>M/s Himgrhi Ispat, Plot No. E-27, 28, 39, 46, Jashodharpur Ind. Area, Kotdwar</td>
<td>MS Ingot-950 MT/M</td>
</tr>
<tr>
<td>10</td>
<td>M/s Puskar Steels Pvt. Ltd Plot No. D-23 to D-25, Ind. Area, Jashodharpur, Kotdwar</td>
<td>MS Ingot-1000 MT/M</td>
</tr>
<tr>
<td>No.</td>
<td>Company Name</td>
<td>Address</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>11</td>
<td>M/s HRJ Steels Pvt. Ltd. Plot No. F-12 to 22, Jashodhpur, Dotdwar</td>
<td>MS Ingot-550 MT/M</td>
</tr>
<tr>
<td>12</td>
<td>M/s Jai Mateshwari Steels Pvt. Ltd Plot No. E-51, Jashodhpur, Kotdwar</td>
<td>MS Ingot-750 MT/M</td>
</tr>
<tr>
<td>13</td>
<td>M/s Poddar Alloys Pvt. Ltd. E-29, E-38, Jashodhpur Ind. Estimate, Jashodhpur, Kotdwar</td>
<td>MS Ingot-850 MT/M</td>
</tr>
<tr>
<td>14</td>
<td>M/s Bhagyashree Steels &amp; Alloys Pvt. Ltd. Plot No. E-17-24, Jashodhpur, Kotdwar</td>
<td>MS Ingot-900 MT/M</td>
</tr>
<tr>
<td>15</td>
<td>M/s JN Ispat Pvt. Ltd. Plot No. E-16, Ind. Area, Jashodhpur, Kotdwar</td>
<td>MS Flat, Angle, Tee Barete-400 MT/M</td>
</tr>
<tr>
<td>16</td>
<td>M/s Amritvarsha Udhyog Ltd. D-1, D-2, D-12, D-13, UPSIDC Ind. Area, Jashodhpur, Kotdwar</td>
<td>MS Ingot-600 MT/M</td>
</tr>
<tr>
<td>17</td>
<td>M/s PL Steels Pvt. Ltd. Plot No. Plot No. E-59-63, Jashodhpur Ind. Area, Kotdwar</td>
<td>MS Ingot-750 MT/M</td>
</tr>
<tr>
<td>18</td>
<td>M/s Shree Sidhvali Sugar Ltd Unit-II, Plot No. B-3/1, 3/2, 3/3, Jashodhpur Ind. Area, Kotdwar</td>
<td>TMT Bar- 6250 MT/M</td>
</tr>
</tbody>
</table>
Annexure III

Copy of permission to dump slag at Sigaddi
Annexure IV

Copy of the complaint letter

उपरोक्त विवरण आपके पत्र सम्म - 815/30-उट्टराखण्ड [09-10] दिनांक पीढ़ी नवम्बर 10, 2009 का सम्पन्न प्रणय करते हुए जानते है। इस सम्बन्ध में आपको अन्वेषण करना है कि स्टील मालिकों द्वारा भूखाया जा चुके दूध को सम्बन्ध में निकालना गया है। उपरोक्त उद्देश्यों के अनुसार संदर्भ में अनुरक्षनक वास्तविक दृष्टि से दृष्टिकोण संदर्भ में संदर्भण के अनुसार दृष्टि संदर्भण के साथ निर्देशन किया गया था। इसके उपरान्त उद्देश्यों के अनुसार संदर्भण पर अनुरक्षनक वास्तविक दृष्टि संदर्भण के परामर्श अनुकूल कर दी। तथा अन्य उद्देश्यों के दृष्टि विशेष कार्यालयों के अनुसार संदर्भण के परामर्श अनुकूल कर दी। तथा अन्य साधनों के दृष्टि विशेष कार्यालयों के अनुसार संदर्भण के परामर्श अनुकूल कर दी। तथा अन्य साधनों के दृष्टि विशेष कार्यालयों के अनुसार संदर्भण के परामर्श अनुकूल कर दी। तथा अन्य साधनों के दृष्टि विशेष कार्यालयों के अनुसार संदर्भण के परामर्श अनुकूल कर दी। तथा अन्य साधनों के दृष्टि विशेष कार्यालयों के अनुसार संदर्भण के परामर्श अनुकूल कर दी। तथा अन्य साधनों के दृष्टि विशेष कार्यालयों के अनुसार संदर्भण के परामर्श अनुकूल कर दी।
UEPPCB inspections - February 2009

Annexure V
4. इलाकों की जांच-बायो संख्या में अनुपात वोडिज बायो मूल्यात्मक विभाजन की गयी है।

5. इलाकों की जांच-बायो संख्या में अनुपात वोडिज बायो मूल्यात्मक विभाजन की गयी है।

6. इलाकों की जांच-बायो संख्या में अनुपात वोडिज बायो मूल्यात्मक विभाजन की गयी है।

7. इलाकों की जांच-बायो संख्या में अनुपात वोडिज बायो मूल्यात्मक विभाजन की गयी है।

8. इलाकों की जांच-बायो संख्या में अनुपात वोडिज बायो मूल्यात्मक विभाजन की गयी है।

9. इलाकों की जांच-बायो संख्या में अनुपात वोडिज बायो मूल्यात्मक विभाजन की गयी है।
10. मैं पुस्तक स्टील (310) सिंह, पीठ न—कि—23, 24, 25, जसोलपुर, आयोगिक क्षेत्र, कोट्टासर— उद्योग का निरीक्षण उद्योग प्राधिकृत श्री समता सिंह, मंत्री के उपस्थिति में किया गया। उद्योग में 3 टन हल्का की इंकलन फर्नी शामिल है। इंकलन क्षेत्र से हल्का हुआ, आईडेंटिफिकेशन फर्नी (20 एच.पी.), बाहर स्थित सिस्टम स्थापित है। इंकलन की ऊंचाई 65 मिटर है। यात्रा प्रदूषण निष्पादन यात्रा का संचालन किया जा रहा था।

11. मैं जल मालवानी, पीठ न—कि—51, जसोलपुर, आयोगिक क्षेत्र, कोट्टासर—उद्योग का निरीक्षण श्री रोहित उद्योग प्राधिकृत के साथ किया गया। निरीक्षण के समय उद्योग में वर्ध घटी गई राशि उद्योग प्राधिकृत द्वारा यह बताया गया था। इंकलन के लिए 5 मेटल से बना हुआ है। उद्योग में 3 टन हल्का की इंकलन फर्नी का उपयोग किया गया। इंकलन की ऊंचाई 65 मिटर है। बाहर स्थित सिस्टम स्थापित है। यात्रा प्रदूषण निष्पादन यात्रा का संचालन किया जा रहा था।

12. मैं एच.आर.पी. (210), पीठ न—12—22, जसोलपुर, आयोगिक क्षेत्र, कोट्टासर—उद्योग का निरीक्षण उद्योग प्राधिकृत श्री हरेंद्र सुपा, इलेक्ट्रॉनिक क्षेत्र के उपराध्यक्ष में किया गया। उद्योग में 3 टन हल्का की इंकलन फर्नी का उपयोग किया गया। इंकलन की ऊंचाई 65 मिटर है। बाहर स्थित सिस्टम स्थापित है। यात्रा प्रदूषण निष्पादन यात्रा का संचालन किया जा रहा था। उद्योग में जल्‌ उद्योग प्राधिकृत के बैंकसियर्स में पाए गए।

13. मैं इंडस्ट्रियल रिलाई, जसोलपुर, आयोगिक क्षेत्र, कोट्टासर—उद्योग का निरीक्षण उद्योग प्राधिकृत श्री अश्विन सिंह, प्राधिकृत के उपराधिकृत में किया गया। उद्योग में 4 टन हल्का की इंकलन फर्नी शामिल है। इंकलन क्षेत्र से हल्का, आईडेंटिफिकेशन फर्नी (20 एच.पी.), बाहर स्थित सिस्टम स्थापित है। इंकलन की ऊंचाई 65 मिटर है। यात्रा प्रदूषण निष्पादन यात्रा का संचालन किया जा रहा था।

14. मैं भारतीय रेल में 12, जसोलपुर, आयोगिक क्षेत्र, कोट्टासर—उद्योग का निरीक्षण उद्योग प्राधिकृत श्री आशा कुमारी, प्राधिकृत के उपराधिकृत में किया गया। उद्योग में 3 टन हल्का की इंकलन फर्नी शामिल है। इंकलन क्षेत्र से हल्का, आईडेंटिफिकेशन फर्नी (20 एच.पी.), बाहर स्थित सिस्टम स्थापित है।
15. नौ अनुसार उद्योग लिंग, जलशेषपुर, वायुत्पक्षीय केंद्र, कोटदास- उद्योग का निरीक्षण उद्योग प्रतिनिधि श्री अरविंद श्याम-सिंह की सहायता में किया गया। उद्योग में 3 टन श्रमिक की इंद्रधनुष फैक्ट्री स्थापित है। आईडीसीडी कैन (15 एच.मी.)। वातावरण संरक्षण सिस्टम एवं 74 फिट लंबी पिञ्जरी स्थापित है। हुड का आकार छोटा है। बायो प्रदूषण नियंत्रण यंत्रांकों का संचालन किया जा रहा था। रेल का परिसर में 12 बार दीवार प्रयोग गया। इसके हेतु कामशरीर, सैंपलर एवं इंजन स्थापित है। उद्योग में स्थापित पिञ्जरी से जलित पावनाल का अनुमोदन किया गया। अनुमोदन आयोग के अनुसार Particulate Matter की मात्रा 199.39 Mg/N Cubic Meter आई हो जिसे निर्धारित गानक्षे से अधिक है। तय: उद्योग की बायो-बायो सादतित्व अवमूल्य की संरचना बोर्ड मुक्तालय की गयी है।

16. नौ जोशेपो इब्राहिम (सोलेंग मिल), ई-16, जलशेषपुर, वायुत्पक्षीय केंद्र, कोटदास- उद्योग का निरीक्षण उद्योग प्रतिनिधि श्री अहमद अहमद, प्रकाश की सहायता में किया गया। उद्योग में 480 सोलेंग मिल स्थापित है। आईडीसीडी पैन एवं वादर संरक्षण सिस्टम संचालन की आवश्यकता में नहीं थी। किसी की कंपाइल 70-80 फिट है जिसमें स्टेंक्स अनुच्छेद हेतु पॉर्ट्रॉल/पॉर्टफल निर्माण नहीं है। उद्योग परिसर से बाहर उद्योग से जलित भरने उद्वैहा पाया गया। जिमसान का लाभ जल-बायो सादति हेतु आवश्यक नहीं किया गया। उद्योग के निदेश विभिन्न कार्यवाही की संरचना बोर्ड मुक्तालय की गयी है।

17. शिकायतिकारणी द्वारा यो भेंग कर्षण संरक्षणकारण हेतु स्थापित इकाई भी बड़ी गयी, जिसका पूर्ववर्त निरीक्षण किया गया तथा शिकायतिकारणी द्वारा अपनत संरक्षण किया गया कि यह बहुत अधिक जल तथा मेरपुर के अधिक संरक्षण की जा रही है। निरीक्षण के लिये इकाइयों में कई भी उद्योग प्रतिनिधित्व उपस्थित नहीं था। निरीक्षण के समय कई मात्रा की अनियमित प्राप्त हुई। भेंग कर्षण सूचना के निदेश विभिन्न कार्यवाही की संरचना बोर्ड मुक्तालय की गयी है।

(एस.के. इमरई) वैद्यकीय सहायक
(खॉचे वाले मिल) वैद्यकीय सहायक
(प्रभास नारायण) वैद्यकीय सहायक
(श्री कुमार सिंह) सहायक वैद्यकीय अभिकारी
Annexure VI

Copies of show cause notices

To,

M/S Puskar Steel Pvt. Ltd.,
D, 23-25, Industrial Area
Jasodhpur, Koidwar,
Distt. Pauri Garhwal
(Uttarakhand)

Sub.: Show cause Notice under Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981- reg.

Whereas, the Central Government has made the Air (Prevention and Control of Pollution) Act 1981 and vide provisions of these acts every air/water polluting/process unit is required to obtain consent to establish and consent to operate from the respective State Pollution Control Board.

Whereas, Induction furnace falls under red category of highly air polluting nature industry for which emission standards are defined in the Environment (Protection) Act 1986, and

Whereas, at the time of inspection of the unit on dated 11.08.2011 by Regional Office Dehradun, it was found that the unit has not provided appropriate fumes collection hood and suction system for collection and disposal of fumes. Air pollution control devices were also not in operation properly and the unit has not provided arrangement for slag disposal, and

Whereas, the unit has not replied the letter issued by the Regional Officer, Dehradun vide letter even No. dated 22.09.2011, and

Whereas, the Board has received complaints regarding air pollution and unauthorized disposal of slag by Steel units; and

In exercise of the power conferred under the Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981, as amended time to time, you are directed to show cause within 15 days of issue of this letter to the undersigned why the unit should not be closed down under the provisions of above Act and concerned authority be directed to discontinue your power and water supply of the unit.

\[(Jai Raj)\]
Member Secretary

Copy to:
1. The Chairperson, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for kind information please.
2. Regional Officer, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for information and necessary action.

\[([Member Secretary])\]
To,

M/S HR. Steel Pvt. Ltd.,
F-12-22, Industrial Area
Jasadarpur, Kotdwar,
Distt. Pauri Garhwal
(Uttarakhand)

Sub.: Show cause Notice under Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981-reg.

Whereas, the Central Government has made the Air (Prevention and Control of Pollution) Act 1981 and vide provisions of these acts every air/water polluting process unit is required to obtain consent to establish and consent to operate from the respective State Pollution Control Board.

Whereas, Induction furnace falls under red category of highly air polluting nature industry for which emission standards are defined in the Environment (Protection) Act 1986, and

Whereas, at the time of inspection of the unit on dated 11.08.2011 by Regional Office Dehradun, it was found that the unit has not provided appropriate fumes collection hood and suction system for collection and disposal of fumes. Air pollution control devices were also not in operation properly and the unit has not provided arrangement for slag disposal, and

Whereas, the unit has not replied the letter issued by the Regional Officer, Dehradun vide letter even No. dated 22.09.2011, and

Whereas, the Board has received complaints regarding air pollution and unauthorized disposal of slag by Steel units; and

In exercise of the power conferred under the Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981, as amended time to time, you are directed to show cause within 15 days of issue of this letter to the undersigned why the unit should not be closed down under the provisions of above Act and concerned authority be directed to discontinue your power and water supply of the unit.

(Jai Raj)
Member Secretary

Copy to:
1. The Chairperson, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for kind information please.
2. Regional Officer, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for information and necessary action.

Member Secretary
To,
M/S Kotdwar Steel Ltd.,
Block - E, Industrial Area Jasodharpur
Kotdwar, Distt. Pauri Garhwal
(Uttarakhand)

Sub.: Show cause Notice under Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981- reg.

Whereas, the Central Government has made the Air (Prevention and Control of Pollution) Act 1981 and vide provisions of these acts every air/water polluting/processing unit is required to obtain consent to establish and consent to operate from the respective State Pollution Control Board.

Whereas, Induction furnace falls under red category of highly air polluting nature industry for which emission standards are defined in the Environment (Protection) Act 1986, and

Whereas, at the time of inspection of the unit on dated 11.08.2011 by Regional Office Dehradun, it was found that the unit has not provided appropriate frames collection hood and suction system for collection and disposal of fumes. Air pollution control devices were also not in operation properly and the unit has not provided arrangement for slag disposal, and

Whereas, the unit has not replied the letter issued by the Regional Officer, Dehradun vide letter even No. dated 22.09.2011, and

Whereas, the Board has received complaints regarding air pollution and unauthorized disposal of slag by Steel units; and

In exercise of the power conferred under the Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981, as amended time to time, you are directed to show cause within 15 days of issue of this letter to the undersigned why the unit should not be closed down under the provisions of above Act and concerned authority be directed to discontinue your power and water supply of the unit.

/Jai Raj/
Member Secretary

Copy to:
1. The Chairperson, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for kind information please.
2. Regional Officer, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for information and necessary action.

Member Secretary
To,
M/S Himgiri Ispat Pvt. Ltd.,
Plot No. E-27&28, 39&40,
Industrial Area Jasodharpur
Kotdwara, Distt. Pauri Garhwal

Sub: Show cause Notice under Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981- reg.

Whereas, the Central Government has made the Air (Prevention and Control of Pollution) Act 1981 and vide provisions of these acts every air/water polluting/ process unit is required to obtain consent to establish and consent to operate from the respective State Pollution Control Board.

Whereas, Induction furnace falls under red category of highly air polluting nature industry for which emission standards are defined in the Environment (Protection) Act 1986, and

Whereas, at the time of inspection of the unit on dated 11.08.2011 by Regional Office Dehradun, it was found that the unit has not provided appropriate fumes collection hood and suction system for collection and disposal of fumes. Air pollution control devices were also not in operation properly and the unit has not provided arrangement for slag disposal, and

Whereas, the unit has not replied the letter issued by the Regional Officer, Dehradun vide letter even No. dated 22.09.2011, and

Whereas, the Board has received complaints regarding air pollution and unauthorized disposal of slag by Steel units; and

In exercise of the power conferred under the Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981, as amended time to time, you are directed to show cause within 15 days of issue of this letter to the undersigned why the unit should not be closed down under the provisions of above Act and concerned authority be directed to discontinue your power and water supply of the unit.

(Jai Raj)
Member Secretary

Copy to:
1. The Chairperson, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for kind information please.
2. Regional Officer, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for information and necessary action. 
To,
M/S Sidhbal Sugar Ltd. (Unit-2)
B-3/1, 3/2 and 3/3,
Industrial Area Jasodhpur
Kotdwar, Distt. Pauri Garhwal
(Uttarakhand)

Sub.: Show cause Notice under Section-31(A) of the Air (Prevention and Control of Pollution)
Act 1981- reg.

Whereas, the Central Government has made the Air (Prevention and Control of Pollution)
Act 1981 and vide provisions of these acts every air/water polluting/process unit is required
to obtain consent to establish and consent to operate from the respective State Pollution
Control Board.

Whereas, Induction / Reheating furnace falls under red category of highly air polluting
nature industry for which emission standards are defined in the Environment (Protection)
Act 1986, and

Whereas, at the time of inspection of the unit on dated 21.11.2011 by Regional Office
Dehradun, it was found that the unit has changed fuel from furnace oil (FO) to Coal without
prior permission of the Board, and

Whereas, the Board has received complaints regarding air pollution caused by the steel
units, and

In exercise of the power conferred under the Section-31(A) of the Air (Prevention and
Control of Pollution) Act 1981, as amended time to time, you are directed to show cause
within 15 days of issue of this letter to the undersigned why the unit should not be closed
down under the provisions of above Act and concerned authority be directed to discontinue
your power and water supply of the unit.

(Ja. Raj)
Member Secretary

Copy to:
1. The Chairperson, Uttarakhand Environment Protection & Pollution Control Board,
   Dehradun for kind information please.
2. Regional Officer, Uttarakhand Environment Protection & Pollution Control Board,
   Dehradun for information and necessary action.
To,
M/S Poddar Alloys Pvt. Ltd.
E-29 to 30 & E-34 to 38, Industrial Area
Jasodharpur, Kotdwar,
Distt. Pauni Garhwal (Uttarakhand)

Sub.: Show cause Notice under Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981- reg.

Whereas, the Central Government has made the Air (Prevention and Control of Pollution) Act 1981 and vide provisions of these acts every air/water polluting/process unit is required to obtain consent to establish and consent to operate from the respective State Pollution Control Board.

Whereas, Induction furnace falls under red category of highly air polluting nature industry for which emission standards are defined in the Environment (Protection) Act 1986, and

Whereas, at the time of inspection of the unit on dated 21.11.2011 by Regional Office Dehradun, it was found that the unit has installed reheating furnace without prior permission of the Board and using coal along with pulverising system for coal, and

Whereas, the Board has received complaints regarding air pollution caused by the steel units, and

In exercise of the power conferred under the Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981, as amended time to time, you are directed to show cause within 15 days of issue of this letter to the undersigned why the unit should not be closed down under the provisions of above Act and concerned authority be directed to discontinue your power and water supply of the unit.

(Jai Raj)
Member Secretary

Copy to:
1. The Chairperson, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for kind information please.
2. Regional Officer, Uttarakhand Environment Protection & Pollution Control Board, Dehradun for information and necessary action.

(Member Secretary)
REGD. POST/AD

To,

M/S Uttarakhand Iron & Ispat Ltd.,
Plot No. 3 & 4,
Industrial Area Jasodharpur
Kotdwar, Distt. Pauri Garhwal
(Uttarakhand)

Sub.: Show cause Notice under Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981 - reg.

Whereas, the Central Government has made the Air (Prevention and Control of Pollution) Act 1981 and vide provisions of these acts every air/water polluting process unit is required to obtain consent to establish and consent to operate from the respective State Pollution Control Board.

Whereas, Induction furnace falls under red category of highly air polluting nature industry for which emission standards are defined in the Environment (Protection) Act 1986, and

Whereas, at the time of inspection of the unit on dated 11.08.2011 by Regional Office Dehradun, it was found that the unit has not provided appropriate fumes collection hood and suction system for collection and disposal of fumes. Air pollution control devices were also not in operation properly and the unit has not provided arrangement for slag disposal, and

Whereas, the unit has installed Gassifier plant without prior permission of the Board, and

Whereas, the unit has not replied the letter issued by the Regional Officer, Dehradun vide letter even No. dated 22.09.2011, and

Whereas, the Board has received complaints regarding air pollution and unauthorized disposal of slag by Steel units; and

In exercise of the power conferred under the Section-31(A) of the Air (Prevention and Control of Pollution) Act 1981, as amended to time to time, you are directed to show cause within 15 days of issue of this letter to the undersigned why the unit should not be closed down under the provisions of above Act and concerned authority be directed to disconnect your power and water supply of the unit.

(Jai Raj)
Member Secretary

Copy to:
1. The Chairperson, Uttarakhand Environment Protection & Pollution Control Board,
Dehradun for kind information please.
2. Regional Officer, Uttarakhand Environment Protection & Pollution Control Board,
Dehradun for information and necessary action.

Member Secretary
Annexure VII
Copy of RTI response
विन्दु संख्या—1. कोटदरार सिकंदर जसोबलसूर, औद्योगिक इकाईयाँ (Steel Industry) की सूची—

1. M/S Amrit Varsha Udhyog.
2. M/S HRJ Steels.
3. M/S Shree Sidhbal Sugar Ltd.
4. M/S Sant Steels Pvt. Ltd.
5. M/S Bhagyalaxmi Steel & Alloys Pvt. Ltd.
6. M/S Uttarakhand Iron & Ispat, Unit- I, Pvt. Ltd.
7. M/S Kukreti Steels Ltd.
9. M/S Uttarakhand Iron & Ispat Ltd.
10. M/S Sumo Steels Pvt. Ltd.
12. M/S Sant Steel Pvt. Ltd.

विन्दु संख्या—2. विन्दु संख्या—2. के सम्बन्ध में अंग्रेजी कराना है कि उल्टार प्रदेश प्रदूषण को उसके प्रदेश हथरस से अनापरति निर्मित की गयी है। उसकी प्रति प्राप्त करने हेतु उल्टार प्रदेश प्रदूषण नियंत्रण बोर्ड, लखनऊ को चिट्ठा लिखा गया है (पत्र की प्रति संलग्न)

विन्दु संख्या—3 एवं 5, बोर्ड द्वारा उपयोगी के परीक्षण संस्करण अधिनियम 1986 के अनुसार मानकों के पालन के उपयोग ही सहमति दी जाती है। कार्यालय द्वारा निरीक्षण से जनित उल्टार का अनुशरण किया जाता है तथा प्रदूषण नियंत्रण बोर्डों की जानक पत्र की जाती है। तदरमर्कु कल यह सभी पत्रांकों में परीक्षण सहमति निर्मित की जाती है।

विन्दु संख्या—4. तर्कमान में ऐसी इकाईयाँ को पहली आवश्यक में स्थापना की अनुमान प्रदान नहीं की जाती है।
Annexure VIII

Testimonials

[Handwritten text in Hindi]

Date: 25/03/12

Signature

Nagarik

09760066362
थे कुली पहले से अभी केवल भी बिना की जीती की गुलामा पड़ा है।

१) छोटे धर है अर्थ है जब रोकना वह वह है सही जगीय सलाह प्रदर्श करते हैं तो तो इसे होले के होले होला जा-तक बैठी है।

२) नैचरान दांती से चारि तहन धुमधुम भरी पड़ती है।

३) नानी स्मारा नहीं है तो मित निजी जो। शुद्ध सहारा जादी गुपर अंधा। ० रहता है।

४) मिझी की सिक्की मामा सिवासी-० मुकुट निषिद्ध है।

५) दिन के दांग दंग नहीं कई दिन।

६) निविद्या दुष्कर दुख दाशा है भुख मूला।

७) मापन घुड़िया-२ दक्षिणाय दोहा। भासी दल आज इक्कू दिया।

24 28 92
(4) कैसी अ र ए स ल ए थी वाली पेशणीयाँ

(1) सुभिन्न शेष म एक केवल के देवीयों से होना पेशावर था कि कहा कहाँ जेडल या या।

यह कैसी चाली है वो वाल है अन लोग ज्युड़े के कामों ये बड़े भी नहीं कि एक बड़ी भुविया है। भर ने कई है वो बाली है।

(2) जो बाल है कोई अंजन है जाते है जुड़े हुए के 
अत्र एक अली की जार-जार जो-जो के अंदर खिलाते है। के बाली भी लेखर बाली पेशावर हैं। अदालत लेन अली की जार-जार जो-जो के अंदर खिलाते है।

(3) वाली एक बाली है जो अन देवीयों ली जा चुके है। जी का एक लिया पेशावर होती है। भर ने अपने कुछ आदर्श रहती है। वह जान हो सके किसी के सकता है अदालत जाती है। वह जान हो सके किसी के सकता रहती है। भर ने अपने कुछ आदर्श रहती है। वह जान हो सके किसी के सकता है।
(5) ਤੋਂ ਕਹਿ ਲਾਗੀ। ਕਈ ਸਥਾਨ ਕਲਾਕਾਰ ਦੇ ਕੌਰ ਹਨ।
ਬਹੁਤ ਰੂਪਵਾਨੀ ਸੀ ਕਿ ਗੁਡੀ ਦੀ ਦੁਕੜੀ ਰੂਪਵਾਨੀ ਸੀ।
ਸੁੰਦਰਮੀਲਨ ਜਾਂ ਕੁਕੀ ਮੌਲਾਵੀ ਸੀ ਸਿੱਖਿਆ।
ਇਸ ਲਈ ਮੇਂ ਸਤਿਕਾਰ ਕੀ ਕਾਰਨ ਤੇ ਹੁੰਦੇ ਹਨ।

ਪ੍ਰੋਸ੍ਤਾਵ ਹੈ। ਜੋ ਸੰਸਾਰ ਨਹੀਂ ਹੋ ਜਾਰਾਂ
ਹਨ। 

ਦੀਰਿਸ਼ਾ ਦੇ ਰਾਜੇ ਜੁਟਾ ਕੂਟ ਹੇਲੋ ਜੁਟਾਨਾ ਕਾਫ਼ੀ
ਪੂਰਵਕਾ ਦੀ ਵਿਆਪਕ ਅਲੀ ਮਸ਼ਹੂਰ ਅਧਾਰ ਹੰਦਾ
ਰੁੱਖ ਹੈ। ਕੁਕੀ ਜਾਂ ਸੁੰਦਰ ਸੂਰੀ ਵਿਚ ਕੋਈ ਹੀ
ਪ੍ਰਦਰਸ਼ਨ ਨਹੀ ਕੀ ਨਹੀ ਥੋਲੀ ਕੀ ਜਾਰਾਂ
ਜਜ਼ਜਜਜਜਜ਼ਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਜੰਪੜਾ ਪਰਾਗਣ ਹੈ।

ਸਤਿਕਾਰ ਜਾਂ ਕਲਾਕਾਰ ਦੇ ਕੌਰ ਹਨ।

ਦੀਰਿਸ਼ਾ ਦੇ ਰਾਜੇ ਜੁਟਾ ਕੂਟ

੧੫/੩/੨੦੧੨
(6)

ਪ੍ਰਸ਼ਨ: ਸਹਲਤ ਸਾਰਮਾਨ
ਗੁਰਮੁਖ ਜੋਗਧਰਸੂਰ
ਪ੍ਰਵਾਸੀ ਕੰਨ੍ਹਾਲਾਇੰਦਰ

ਨਿਸ਼ਚਾ ਮੈ,
ਗੀਨਾਲੀ ਕੁਰਾਣ ਲਾਵਾਣ
ਨਿਸ਼ਚਾ ਮੈ।

ਹਲਕੀ,
ਕਾਰਨ ਸਭਲੋਖ ਦੇਖ ਮੇ ਅਨਾਮ ਨਿਜਾਂਕ ਦੀਆਂ
ਆਪਣੀ ਰਾਹਾਂ ਉਮਾਂ ਹੈ, ਹੁਨਾਂ ਦੇਖ ਮੇ ਨਿਸ਼ਚਾ ਨਹੀਂ
ਅਜਾਕ ਦੇ ਹਨ।

1) ਪਹਿਲੀ ਕੁਰਾਣ ਦੇ ਕਾਲ ਦੀਆਂ
2) ਬਿਨਾ ਕਵਿ ਦੇ ਕਾਰਨ ਇਕ ਸੰਗਠਨ ਦੀਆਂ
3) ਇਕ ਕਵਿ ਦੇ ਕਾਰਨ ਇਕ ਸੰਗਠਨ ਦੀਆਂ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

1) ਸੰਗਠਨ ਨਾਲ ਕਾਲ ਹੈ
2) ਸੰਗਠਨ ਨਾਲ ਕਾਲ ਹੈ
3) ਸੰਗਠਨ ਨਾਲ ਕਾਲ ਹੈ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਰਨ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ

ਤੁਹਾਡੀਆਂ ਦਾ ਕਾਲ ਹੈ

ਕੰਕਾਰੀ ਅਤੇ ਅਲਪੁਰੁਸ਼ ਜੀ ਨੇ ਕੀਤੀ
1. राष्ट्रवादी विद्युवादी

2. स्वतंत्रता की स्थिति

3. न्याय की स्थिति

4. सामाजिक स्थिति

5. प्राकृतिक स्थिति

6. राष्ट्रीय स्थिति

7. राजनीतिक स्थिति

8. अर्थव्यवस्था की स्थिति

9. वाणिज्य की स्थिति

10. सामाजिक स्थिति
मैंसी से दौरे वाली वर्तमानी
मैंसी से यात्रा से पैदल साधक ही रही थी
मैंसी के बुधुर से महान उद्दाहरण ही रही थी,
उस चमक दर उस साल के रूप रहा था
इस पूर्व से ही श्री सोहन बैनी ने उसे हिमाल कर
रही है। पूरी उदाहरण ही रही है, मैंसी का श्रीमता
वहाँ रहा था। बूढ़ियों की परिभाषा भी। प्रेमानी
साहब सीवाजी
नाम सोनियारे
अर कीरन देसाई
देवी खुशी बनाना।
हेल्लो!
शैक्षी से सांस लेने से भी भीनसानी होती है, शैक्षी के दुख से लोग बिसार मद सकते हैं। शैक्षी के शीर्ष वहे लेजोगे पहन एक मद नहीं पाते।

इसीसे दादा दादी यहां 35 काल की बहें हैं दादा ने कहा था आस्थान बाला होता है फिर लेखिन शैक्षी के दुख से बहुवर्ण देयशा आस्थान काल। दिवार देला है।

25-1031/12

श्रीमता नाम - श्रीवास्ती देवरानी
काल - २०
उम्र - 12 वर्ष
मां - हक्कराना तर्केन्द्र
भी दे हैं बहुत। जाने ेका को नहीं ले जा सकता है।

हां अब तो माफ़ कर दोग्ये। अब तो माफ़ कर दोग्ये।

जानो अब तो माफ़ कर दोग्ये। अब तो माफ़ कर दोग्ये।

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हां अब तो माफ़ कर दोग्ये। अब तो माफ़ कर दोग्ये।

एक बार भी माफ़ कर दोग्ये अब तो माफ़ कर दोग्ये।

25.3.2012
ਅਸੀਟ ਕਰੀ ਵਾਣੀ ਕਾ ਦੀ ਦੁਆਰਾ ਆਕਸ਼ੀਤ ਹੋਣ ਦਾ ਦੋਹਾ ਹੋਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਡਾਕਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ ਦੀ ਵਿੱਚੋਂ 

(1) ਮੇਲੀ ਖੁਸੀ ਹੋਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ 

(2) ਮੇਲੀ ਖੁਸੀ ਹੋਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ 

(3) ਫੇਰੋ ਖੁਸੀ ਹੋਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ 

(4) ਮੇਲੀ ਖੁਸੀ ਹੋਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ 

(5) ਮੇਲੀ ਖੁਸੀ ਹੋਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ 

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(7) ਫੇਰੋ ਖੁਸੀ ਹੋਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ 

(8) ਫੇਰੋ ਖੁਸੀ ਹੋਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ 

(9) ਮੇਲੀ ਖੁਸੀ ਹੋਣ ਦੀ ਵਿੱਚ ਬਾਬਾਲਾ ਖੁਸੀ ਹੋਣ ਦੀ ਜਾਨਵਰਾਣ
8-

9-

10-

25/3/2012

SHRIDHANAND DHIVANI
4. भविष्य में विशेष उच्चार जी के समर्थक के लिए के लिए -
5. पूजा - श्रावण का पूजन
6. स्त्रीलिंग पर उपहार
7. स्वाक्षर श्रद्धा की पूजन
8. अतिरिक्त के कृपया विनिमय पर पूजन
9. पूजन पर उपहार

नाम - जुनीता
पाप - अंतरिक्ष
दिनांक - 25-03-2012
व्यक्तियों के द्वारा विभिन्न शक्तियों की परिवर्तनीयता

1. मन के विकास में भाग है, जो शिक्षित कला का प्रशिक्षण चैत्याकोट्स से होती है।
2. प्रत्येक के आपके अध्ययन को संबंधित आदर्शों के साथ अपने अध्ययन की गति पूरा होने के लिए, जमानत के अन्तर्गत उनके अभ्यास को उड़कर हमारे
3. शासन राजनीति शिक्षित रहने के लिए
4. पुष्पों (आंशिक, आकाश, आदि) अगर भी स्वयं को
5. आस्था चाहना करना हिंसात्मक होता है।
6. स्वाधीनता हारनी, शर्मियों की कामिनी शामिल होती है।
7. अब तक कोई नई रण नहीं है, हालांकि अब जाना जाता है।
8. उसके आधिकारिक अधिकारों के अधिकारों से अधिकार होते है, जब भी वे विनिवेश नहीं होते है।
9. परे विश्वास नहीं पर मुक्ति के सिविया।
10. मेरा सकारात्मक भाव प्रसंग के लिए।

२५ मार्च २०१२
क्रम नहीं दर्ज किया गया है। यह उपर्युक्त वाक्य इस प्रकार है कि मांग वर्ग के लिए जीने का जीना बहुत मुश्किल है। इसीलिए इसे नामांकन रखकर दिया गया है। इसके बाद यह दिखा रहा तो मंगन पूर्ण हो नहीं गया। यह सब चेतावनी से निकलकर आया। इसलिए किसी भी वस्तु को बहुत गलत हेतु देखा है, जिसले उठाया तो जो अनाज है।

यहाँ तक कि उनु P.S. D. के हुआ या नक्शा वर्तमान राजनीति का, शायद उस नक्शे के लिए किसी गोला हो रही है, जैसे कि लिखित, सब के।

सब स्त्रोत से यह सार है, यह सब हर किसी को सरकार की गुलाम भी नहीं करके रहा है। वैसे ही देखने के दोहरे जागरण विस्तारित करने का यह गोला हो रहा है। इसमें यह सार है कि देश इन्शाफिया गांव के लिए इसी जागरण विस्तारित करने का किसी भी वस्तु को बहुत गलत हेतु देखा है, जिसले उठाया तो जो अनाज है।

हमारे नौ लाखों 30 वर्षों से धरती पर जो उस समुद्र (जीते हुए) में अनुशासन के कानों परिवर्तन का भाग है, यदि इन गोलों का ऐसा रहोगा तो विभिन्न संपत्तियों के बालक लागत ही रहे। इसलिए इन्हें जो रहे इनके निकलने वाले हुए हैं। इसके बाद इनके लिए यह बोला है कि इस नशा के दोहरे जागरण विस्तारित करने का किसी भी वस्तु को बहुत गलत हेतु देखा है। अब रूप की यह सरकार हो गई है और वर्तमान में वर्तमान नतीजों के लिए इसके लिए इसी विधि विस्तारित करने है।
विवरण

आलाउद्दीन फेकरीकर सिद्दिकी जहानाबाद पूरे उद्योग के महत्वपूर्ण सेवकों में से एक हैं।

1. फेकरीकर से बच्चों को अक्सर उद्योग के विभागों में शुरूआत के बारे में जानते हैं तथा उन्हें यह समझ दिया है कि उनका मन नहीं राखी है।

2. फेकरीकर ने बच्चों को अक्सर अपने जीवन के सपनों से पहले अपने शाही नाम के लिए सीखने के लिए उपयोग करने का निर्देश दिया है।

3. जहानाबाद द्वारा किसी भी महत्वपूर्ण के लिए उद्योग के विभाग के महत्वपूर्ण सेवकों के लिए दृष्टि की उनकी शिक्षा अंतर्निहित थी। इनके द्वारा उन्हें उनके जीवन के लिए सीखने का निर्देश दिया।

4. वहां 25 वर्ष से निवास कर रहे हैं फेकरीकर।

भारत सरकार के संस्थानों में से विभागों में विविध उद्योगों में कार्यरत कर रहे हैं।
(1) Pollution has become a very very dangerous problem as we are having its harmful impact in every aspect of our life whether it is cleanliness, about purity of water, about air etc.

(2) All the walls of the house has a thick layer of harmful ingredients coming out from local iron industries.

(3) The clothes which we wear has dampened up with dusts.

(4) The water also is not pure for drinking as harmful ingredients coming out from factories is affecting the purity of water.

(5) The soil is also affected by the harmful ingredients coming out from industries as it is affecting its fertility. The harmful ingredients are making the soil infertile.

(6) The air around us is filled with harmful smoke. Due to this to open windows is resulting in filling of harmful industries ingredients into our house.

(7) All the trees and the plants of our atmosphere locality has lost their lush green colour. A thick layer of harmful ingredients from the industries is seen on the leaves of the trees.

At last, it is impossible for us to live in such atmosphere. The harmful ingredients is also resulting in many harmful diseases. The dust & the smoke is polluting the air & the polluted air is affecting
the lungs of the common people. This can be seen as a beginning of the situation of real life danger to the common people as this can result in life threatening diseases like asthma, cancer etc.

Shubham Debbar
Age: 17 yrs
Vill. Jabalpur (Katihar)
Date: 28-March-2012
सेवा में 
श्रीमान अकबर

सविन्द्र निवेदन को उपकार है कि हमें यह खुशी है । उसके अंतर्गत जैसे ही हमें उसे कही । अधिक उपकार

(1) श्रीमती जगराना की श्रीमती मिलना
(2) विशिष्ट बर के अभी अक्सर नहीं जाना ही कहीं
(3) निकला तार अ सहायता निकल का बाहर निकली बाँड़ रोजगार में कोई
(4) माधवान्द जी सहायता भर के घर में भविष्य में जीवन की परम्परा उसे कहीं की रोजगार निरंतर आयी रहित जिन्हें श्रीमती रिश्ते से उन्हें लाना भी होगा। श्रीमती मिला और बताया कि अर्थ-भाजन करते हैं।
(5) निकट जी के इस काम वर्तमान में जो नेटिकलेश्ण जो कहीं तो होता है।
(6) इसे कहा जा उसी तरह के किसी भी काम को ज्ञात करें।

(1) इस निवेदन के अन्त में के पहले कालिया 30-32 साल से
(2) इसे अब सी तो फिर तो बढ़ जाएंगे हैं। सबसे तरा जितना
(3) हमें अभी से चाहिए फिर नहीं चाहिए है।
(4) इसी रीति से हमें 2 कीटने में हो गए हैं।
(5) निकट पर भविष्य में भविष्य में जो जीवन का खेल दें जाए।
(6) चीर है दें जो नहीं चीर हैं।
जिसे लक्षित नाम ताली पढ़ी दें लिख परेकानी है।

(१) मांजेल भी जय के सराह है जय है।
(२) इस बच्ची के बादगरी मरी उपायो - सरपंची जी

साल देवी
विश - एम.एल.एस.
पी.एच.सी.सी - कार्यालय बांधी

दातेः
25/3/12

AASHA DEVI
65
(1) इस वर्ष के लिए एक विशेष अनुकूलन की होगी।

- [दिसंबर के अनुसार] ने यह अनुमान करते हुए कि इसी समय में कार्य की होगी।
- [चैत्र के अनुसार] ने यह अनुमान करते हुए कि इसी समय में कार्य की होगी।

इस वर्ष के लिए एक विशेष अनुकूलन की होगी।

(संवर्कित)
सन् 1988 में वह अंग्रेज़ी विद्याभेद से क्लास्टर परिसर के जिले में किया शिक्षक। हिंदी उपकरण से उसी की स्थापना के दिन से उस दिन तक उसे अपनी संपत्ति की पहली बात से मानवता में मारबूत रही। वह उस वक्त तक वहाँ रहा। उस दिन उसने अपनी कामधेयता को शुरु करते हुए उसकी पहली के अनुसार बचाया था। उसी के अपनी दोस्तों को जोड़ने के लिए काम किया था। उसके अनुसार उसने काम किया था। उसके परिवार के अनुसार उसके अनुसार बचाया था। उसके अनुसार उसके परिवार के अनुसार बचाया था। उसके परिवार के अनुसार बचाया था। उसके परिवार के अनुसार बचाया था। उसके परिवार के अनुसार बचाया था। उसके परिवार के अनुसार बचाया था। उसके परिवार के अनुसार बचाया था।

इस अवसर के अंतराल में उसने अपनी पहली कार्यक्रम की उपलब्धि को हिंदी उपकरण से उसी की बात से मानवता में मारबूत रही। वह उस दिन चाहें हो जाते हुए उसकी पहली के अनुसार बचाया था। उसके अनुसार उसके परिवार के अनुसार बचाया था। उसके परिवार के अनुसार बचाया था। उसके परिवार के अनुसार बचाया था। उसके परिवार के अनुसार बचाया था।

28-03-2012 अंतिम समय

(प्राकृतिक लेखन से लिखा)
देखिए लिए सबसे बड़ी परेशानी है। फिर यहाँ जाने के बीच है, जो बैठक आये है नवीन नोटक की घोषणा का चलन है।

बेहद मजबूत की साख के अनेक परेशानियों का सामना करना पड़ा उनके सुख की चर्चा का काम है। वे अब कभी आने की लिखी पेंट दर उठाने की कोशियों का सामना करने पड़े।

आइए हमें यह जानना, वे होते हैं। अगर आपका पालन नहीं, तो अपनी जीवन की रचना करना होगा, राजा का लिंग साधन होगा।

पर जो बात बाहर मानने थे सबसे फूल पढ़े हैं उसका भूषण बनना राहता है। उसकी कहानी का पूरा अर्थ नहीं है वह बहुत अच्छी जीवन की सुधाएँ जिसने समझा आपके बाहर का मान।

तोइं आप के तुरंत आवश्यक उपकरण है।

(हाथ में लिखा)

25/31
दीखिए जैसे आज चित्रकृत है,

जब तक रानी की जिम्मियों को फूल बना दिया है वहाँ दे जाए,

तर यहाँ जीवन विश्वास के साथ बना दिया है,

के साथ जीवन विश्वास के साथ बना दिया है.

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लेखन आगे लगाएँ।
सेवावी के सुखशान,
1. किसी दोनों की अपनी नींद में दोनों ही नागिन अच्छे हैं।
2. इनके मौलिक नींदें हैं, अन्य के नींदें नहीं हैं। इसके लिए अन्य के नींदें हैं।
3. इनके नींदी नींदी हो जाय तो उन्हें उठाए जाय।
4. यदि वे स्वतंत्र हों, तो उन्हें उठाए जाय।
5. यदि वे अपनी नींद में नहीं हैं, तो उन्हें उठाए जाय।
6. अन्य के नींदी नींदी हो जाय तो उन्हें उठाए जाय।
7. यदि वे अपनी नींद में नहीं हैं, तो उन्हें उठाए जाय।

उपरोक्त उद्देश्य से, निर्देशक

[Signature]

[Date]
(26) पहले पहल, से दोनों लिख बिड़ले ही पर बड़ा खुशी कैसे नै?

1. मेरे-को है कई लोगों के बारे असन का नाम (सीरलोगिङ) कैसे लिखे हैं।

2. इसकी से बाहर वहाँ आए लोगों को जानने के लिए बिरस्त से तीन बार को है।

3. इसके लिए वहाँ अवस्था में नहीं दिखाई दे पाते जो नहीं है।

4. पहले हो कितने लोगों के लिए लिखा कितने लोगों पर लिखा जाता है।

5. इसके पूरे लोगों के लिए बिड़ले हो।

6. जैसे-जैसे हुआ अवधि तो लोग चक ले तो बंद करते हैं।

7. इन्हें तभी रहने की तैयार नहीं करने की आशा की है। अर्थातो उस समय तक कहीं न कहीं या आधी हुई तो बिड़ला हो। जो बिड़ला हो अब उसका माफ कीया।

(25-3-2012)
(21) निकट परिवार वालों से कोई उपलब्धता नहीं थी।

1. इसके बाद, अधिक लोगों के सामने आया। उन्होंने कहा कि उन्होंने अपने पास खाना लेने के लिए लोगों के खाने की आवश्यकता समझते रहे।

2. क्या बताइए कि अब तक किसी भी लोग कोई असर नहीं हुआ है? इसे ख्याल रखना नीति की धारणा की थी।

3. इन लोगों के लिए यह मजबूरी थी कि यह असर नहीं हो। उन्होंने अपने लाल ना फानी पर अन्य काम छोड़ रखा।

4. यह अनुभव अभी भी नहीं है।

5. यदि हमें गूंजता है कि पूरी तरह से अंतरिम हो, तो हमें होगी समझ।

6. इसके लिए कोई उपलब्धता नहीं थी।
चौथे, विभेद के सिद्धि आज तारीख की ओर पाठियों जो हैं, परन्तु इतने कम हैं कि वे इतनी ही निर्देशित न बना। यह अब है, जिस वर्ष में तो बना। अब तक, वर्ष आने वाली अब वर्ष है, जो समस्त का शुभ वर्ष है। किसी जो इसकी आने चाहते हैं, उन्होंने इस तिथि का खास पाठ बनाना। इस लिए यह माना कर पाता है। से दोनों की तरह उन्होंने उसी गर्मी तक नहीं चला। कर दे उन्होंने अब से तरह लगा जाना है।
74

1. शक्तियों के द्वारा उनकी दर्शनी की सिंहार
   लेकिन आज तो उसकी हंसी की सलाह मानी जाती थी।

2. तो तो दोस्तों को प्रदर्शित व उनकी सार्थकता को
   जो पत्र लिखे तो भाले गुज़ार रहे हैं। अन्य से
   कभी तत्काल होते जब जाने जा रहे हैं लेकिन कर्म के
   अंतरगत उन्हें करने दिया जाए।

3. इन दोस्तों के कवर्त । वह हर विभाग व अलग हुक्कियाँ
   होता है। उपाधियाँ की रामगी खरे आती है।

4. बाबू जी के कवर्त के कारण अगर मुझे सदा
   वही जाता है तो वह अपने क्षेत्र में जाता है।
   जिसमें फटकार खोदी जाती हैं जो आता है।

(Signature)
सेवा में

कांग्रेसी दुल्हन-धीरुली
ली. पू. खिं, नई दिल्ली

संदेश

आत्मान्निक संगठन, छोटोहरूका सिपाही, छोटोहरूका गोल्ड, वारियर गोल्ड क्षेत्र में स्वतंत्रता से अन्तर से निम्न लागू और जैसा जनता मानता है कि स्वतंत्रता से लेते से लेते तक उन दोस्तोंके बीच में प्रशंसा, भूलना, सामाजिक उद्देश्य, व समाज के उत्तराधिकार के बनाना कुछ भी नहीं किया है, उन दोस्तों में अधिको जो वल्लिडन के अंतराल कुछ अंतरा नहीं किया है।

उदाहरण- सरकार गाने गाने बुलाने का जनता के विषय मुख्य करने नहीं उठाया है। तत्पर नहीं था जो जनता के नाम पर विनाशकी हुआ है। उन अन्यायित्वों को झोंकने हुए लोगों के बारे में इसी शब्दों में राजनीति करते हैं। अपने स्वार्थ में शिक्षा उठाने के अन्य उठानों को और सारा चार मार्गों नहीं है। स्वतंत्रता से जाने वाले होने के लिए हमें चुनौती देते हैं। वे सरकार के बाद अन्य जनता भी अपने जो विचार अपने अन्य भाषियों के बीच सरकार तक अंतर को जनता को चाहते है न कोई मानना है, वैसे मनमोहक के बोलँ रक्षा अन्य के बीच भाषा है। उनसे राजस्व में विवाद हुआ जिसका अर्थ है लाभकारिता ही भी जाना जाएगा।

अभिव्यक्ति के पूर्व
भी कृपया दें
विभागः- ३२, ३३, ३४, ३५, ३६, ३७
भागः- १, २, ३, ४, ५, ६, ७, ८, ९
नाथों पुरुषों आज अिराको पालन कर्ने स्वीकार गरेका छौँ।

1. स्वातन्त्र्य राष्ट्रिय संविधान - मात्र यथार्थता से कार्य, भएस्क, उत्तेजना के समर्थन होने अवश्य राजा भए जान्छ।

2. राजस्वाधीनता को संपादन - राजस्वाधीन राज्य बनने वाले दलील का खाम देओ। ते साथी शाखाको वित्त विभाग, पुलिस आदि समस्त कार्यान्वयन रहेका जीवन र बन्धर्य विभाग हरेकी नेकी दोस्री समस्त करेका जाएका हुनुहो।

3. प्रमाणताहरू दवाइँ - पहिलो दिनहरूमा।

4. समयमा पर्वत परिवहनको लागि तैनातिहरू हुनेछन्।

5. दुई छौँ देराती बारी से धीरे, आसमानस्तरीय गुलाम को जाने वाली गर्नुहोस्।
सदस्य क्षेत्र पंचायत जशोधरपुर/मगनपुर

बिथौ-दुरगढ़ा, पौड़ी गढ़वाल (उत्तराखंड)

निवासी

ग्राम जशोधरपुर
पो-कलालपाटी, कोटद्वार
पौड़ी गढ़वाल (उत्तराखंड)
गो-9568367447, 9568367448

पत्रांक

दिनांक 24/03/12

[Handwritten text in Hindi]

[Signature]

[Stamp]
पर्याप्त सामग्री नहीं लानी योजना करेंगे।
सेंटर के साथ एक एन्क्रान्स में तारी डिली (आलवर)
विंदु नागरिकता समिति के प्रदर्शन के रूप में...

गांव में, आज कहीं नहीं खुश होते हैं जो गांव के किसी भी।
उन्होंने कई बार ड्यूटी के पास खुद का काम करते हैं। इस पत्र के नीचे जो कहा जा रहा से रीती शायद उन्होंने कहा तो समझने के लिए तो जरूरी है...।

गांव में ज्यादा लोग लाने के स्कूल रहते हैं। वे लाने के लिए जाने जा रहे लोगों में नहीं मिलती योजना की है। जनगणना के लिए यह तय की गई है।

मुख्य तौर पर गांव में महंगे हैं। गांव में दो राष्ट्रीय राजधानी राहतीं हैं।

अंततः गांव में ज्यादा लोग लाने के स्कूल रहते हैं। वे लाने के लिए जाने जा रहे लोगों में नहीं मिलती योजना की है। जनगणना के लिए यह तय की गई है।

91
उसके चाहे लाल बर्बर सहा ने उनके लिए तिलक तो दिया था। जिन्होंने उसके साथ साथ उसे जीने के लिए क्षमादान की गई थी। उसने उसके लिए ये साधन दिया था जिसके लिए उसने उसके लिए कोई क्षमादान नहीं किया था। उसने उसके लिए ये साधन दिया था जिसके लिए उसने उसके लिए कोई क्षमादान नहीं किया था।
इस अनुष्ठान में निम्न बाज़ी करना जरूरी है जबकि यह निम्न करना जरूरी है।

(लेखक के नाम)

(लेखक के नाम)

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Air Pollution Control Equipment

All the factories operating in JIA have installed a moving suction hood and wet scrubber as pollution control equipment. But the design of the hood is such that it does not capture most of the emissions because of which fugitive emission is a huge problem in the area. Also, the furnace operators and slag removers demand putting up a huge fan behind them while they are working to provide relief from the high temperatures in the area. This causes the pollutant to blow away from the hood and causes fugitive emission and poor suction. Another handicap that the factories admitted to was the need to access the furnace every now and then during a cycle to feed raw material which means the hood should be moved and should be at a certain distance from the furnace.

Hoods are the first component of the air pollution control system and are of critical importance. If they fail to capture the pollutant, the overall collection efficiency of the system is reduced. Pollutants not captured by hoods become fugitive emissions (see Diagram 1: Importance of Hoods). Slight changes in the ability of the hood to capture pollutants can have a large impact on the total fugitive and stack emissions released into the atmosphere. Enclosing hoods are used where access to the furnace is required. Another common classification is enclosing, receiving and capturing. Enclosing hoods surround the point where the contaminants are generated (see Diagram 2: Enclosing hood). It is preferred whenever possible. Receiving hoods are designed to receive or catch the emissions from a source that has some initial velocity or movement (see Diagram 3: Receiving hood). Capturing hoods are located next to an emission source without enclosing it (see Diagram 4: Capturing hood). For induction furnaces, receiving hoods are the most appropriate.

Hoods are generally designed to operate under negative static pressure implying that the pressure outside the hood should be greater than the pressure inside the hood. The fan, located downstream from the hood, creates the suction that draws the air into the hood. Since air from all directions moves toward the low-pressure hood, it must be as close as possible to the process equipment in order to capture the pollutant-laden air and not just the surrounding air. The shape of the hood and its size, location, and rate of airflow each play an important role in design considerations. In order to optimise hood design:

- Hood should be located as close to the source (furnace) as possible.
- Hood should be placed in a way that it does not allow the pollutant to deviate from its

Diagram 1: Importance of Hoods

![Diagram 1: Importance of Hoods](source: Anon, Control of Particulate Matter Emissions – Student Manual, Environmental Protection Agency and the National Association of Clean Air Agencies, US, pg. 3)
natural path as much as possible.

- Hood should be larger or of the same size as the source to prevent any pollutant escape.
- Air jets can be placed to improve performance of the hood (see Diagram 5: Hood with air jets/curtains).
- Flanges can be used to block the movement of unwanted air into the hood (see Diagram 6: Hood with flanges). Recommended width of the flange is equal to the square root of the hood area. Flanges help to block the movement of clean air into the hood and also prevent cross draft of air which disturbs the intended path of pollutant into the hood. The hood and flanges should encompass or cover the source of pollutant.
- The hood should be located in a way that the operator is never between the contaminant source and the hood. (See Diagram 7: Operator's Position).
- The air should travel from source of the contaminant and into the hood with enough velocity to adequately capture the contaminant.

The most effective hoods are those that use the minimum exhaust air flow rate so that there is...
maximum pollutant control. The hood effectiveness depends on capture velocity which is the air velocity at any point in front of a hood or at a hood opening necessary to overcome opposing air currents and to capture the contaminated air at the point by causing it to flow into the hood. Typical capture velocities in different conditions may range from 0.254 m/s to 10.16 m/s (see Table 1: Capture Velocities). Generally, a high toxicity pollutant released from a small source into rapidly moving air current, requires high capture velocity. For estimation, the equation that can be used is:

$$Q = V_h (10X^2 + A_h)$$

where, $Q$ = actual volumetric flow rate  
$X$ = distance from hood to source  
$V_h$ = hood capture velocity at distance $X$  
$A_h$ = area of hood opening = $\pi d^2 / 4$ ($d$ = diameter of the hood opening)

In case of a flanged hood, the following equation is to be used:

$$v_c = 1.33 \frac{v_o A}{(A + 10 x^2)}$$

where, $q$ = air volume flow  
$A$ = duct area  
$v_c$ = capture air velocity at distance $x$ from exhaust outlet  
$v_o$ = air velocity at the exhaust outlet opening  
$d$ = diameter of exhaust outlet  
$x$ = distance from exhaust outlet

Area of the hood depends on the shape and size of the hood and thus flow rates change with different sized hoods (see Table 2: Hoods and air volume). Canopy hoods are the most widely used hoods at JIA. In the canopy hoods, volume will depend on perimeter of the hood, distance from the pollutant source and the velocity of air between the source and the hood (see Diagram 8: Canopy hoods).

<table>
<thead>
<tr>
<th>Table 1: Capture Velocities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Condition of material release</strong></td>
</tr>
<tr>
<td>With no velocity into quiet air</td>
</tr>
<tr>
<td>At low velocity into moderately still air</td>
</tr>
<tr>
<td>Active generation into zone of rapid air motion</td>
</tr>
<tr>
<td>With high velocity into zone of very rapid air</td>
</tr>
</tbody>
</table>

**Source:** Anon, Control of Particulate Matter Emissions – Student Manual, Environmental Protection Agency and the National Association of Clean Air Agencies, US, pg. 3.

**Table 2: Hoods and air volume**

<table>
<thead>
<tr>
<th><strong>Hood type</strong></th>
<th><strong>Description</strong></th>
<th><strong>Aspect ratio</strong></th>
<th><strong>Air volume</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Slot</td>
<td>0.2 or Less</td>
<td>Q=3.7</td>
<td></td>
</tr>
<tr>
<td>Flanged slot</td>
<td>0.2 or Less</td>
<td>$Q = 2.8 LVX$</td>
<td></td>
</tr>
<tr>
<td>Plain opening</td>
<td>0.2 or Greater and round</td>
<td>$Q = V (10 x^2 + A)$</td>
<td></td>
</tr>
<tr>
<td>Flanged Opening</td>
<td>0.2 or Greater and round</td>
<td>$Q = 0.75 V (10 x^2 + A)$</td>
<td></td>
</tr>
<tr>
<td>Booth</td>
<td>To suit work</td>
<td>$Q = VA = VWH$</td>
<td></td>
</tr>
<tr>
<td>Canopy</td>
<td>To suit work</td>
<td>$Q = 1.4 PVD$</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** John E Mutchler, Local Exhaust Systems, ACGIH, pg. 602.
Water Scrubbers

A wet scrubber is a device where the flue gases are pushed against down falling water (liquid) current. The particulate matter along with water droplets fall down and get removed. In JIA, the wet scrubbers installed by the factories were found to be inadequate. CSE is recommending that factories change their wet scrubber design.

National Productivity Council (NPC), Chennai has come out with a cost effective design of wet scrubbers after a detailed investigation of the emissions from the furnaces at Coimbatore, Tamil Nadu. The characteristic of the process gas for which it has developed the wet scrubber is similar to the gas being released from induction furnaces in JIA.

The NPC wet scrubber (see Diagram 9: NPC wet scrubber design) is simple in fabrication and installed on-line with the process. The water spray wet scrubber is designed concurrent to gas flow rate at the exit of the cupola furnace. A set of water spray nozzles scrub the dust laden gases. The scrubber water is collected in a sump to allow settling and separate the sludge and the clear water is re-circulated to the scrubber by centrifugal pump. Periodically, the settled sludge is collected dried and disposed. The operating cost is only the power consumption. A separate meter can be installed to check whether the wet scrubber is operating or not.

According to NPC, the performance efficiency of the scrubber is high and can easily meet the particulate emissions norms of 150 mg/NM$^3$. The performance efficiency of the scrubber in Cupola furnaces of Coimbatore is given in table 3.

### Table 3: Scrubber efficiency values

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameter</th>
<th>Designed values</th>
<th>Measured values</th>
<th>Emission Standard by TNPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Flow rate of gases, NM3/hr</td>
<td>3000</td>
<td>2300</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Dust emissions after the scrubber, mg/NM$^3$</td>
<td>&lt; 150</td>
<td>47</td>
<td>150</td>
</tr>
<tr>
<td>3</td>
<td>Sulfur dioxide concentration, mg/NM$^3$</td>
<td>300 - 400</td>
<td>&lt; 50</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: VSS Bhaskara Murty, Low Cost Air Emissions Control System For Cupola Furnaces - Success story, National Productivity Council, Chennai, pg. 4
References

1. As per conversations with local residents, industry representatives, Uttarakhand Environment Protection and Pollution Control Board on March 24-28, 2012


3. JN Ispat Pvt. Ltd. was not operational.

4. Land allotted by SDM, Kotdwar after December 2011 protests.


6. ibid

7. AJT Johnsingh & AS Negi, Operation Eye of the Tiger – India, Final Report submitted to the Save The Tiger Fund For the period April 1996 – June 2003, pg. 10

8. AP Singh & R Chalisgaonkar, 2006, Restoration of Corridors to facilitate the movement of wild Asian elephants in Rajaji-Corbett Elephant Range, Uttarakhand and Uttar Pradesh State Irrigation Departments, Roorkee, pg. 7

9. ibid


16. UEPPCB Letter No.: UEPPCB/ROD/Complaint/Misc/09/4324 dated February 7, 2009

17. ibid

18. ibid

19. As informed by Mr PK Joshi, RO, UEPPCB

20. One bigha = 800 m² and 1 quintal = 0.1 tonne

21. UEPPCB letter no. UEPPCB/ROD/Misc/2011-12/2546 dated March 5, 2012

22. Depends on power availability

23. UEPPCB letter no. UEPPCB/ROD/Misc/2011-12/2546 dated March 5, 2012

24. ibid

25. ibid

26. ibid

27. ibid

28. ibid

29. ibid

30. ibid

31. ibid

32. ibid

33. ibid

34. ibid

35. ibid

36. ibid

37. ibid

38. UEPPCB letter no. UEPPCB/ROD/Misc/2011-12/2546 dated March 5, 2012


42. ibm.nic.in/slagironandsteel.pdf as viewed on May 9, 2012.

43. ibid.