

## **CHAPTER – VIII**

### **ENVIRONMENT ISSUES**

<b>Failure to adhere to recommendations of NEERI for environmental safe mining</b>	<b>8.1</b>
<b>Failure to comply with the conditions stipulated for diversion of forest land</b>	<b>8.2</b>
<b>Execution of reclamation works</b>	<b>8.3</b>
<b>Failure to monitor the plantations raised by the lessees</b>	<b>8.4</b>
<b>Levy and collection of Environment Protection Fee for diversion of non-forest land for mining purposes</b>	<b>8.5</b>
<b>Air, noise and water pollution due to mining</b>	<b>8.6</b>
<b>Mining without consent from KSPCB</b>	<b>8.7</b>
<b>Monitoring of conditions stipulated in the Consent for Establishment</b>	<b>8.8</b>
<b>Mining without environmental clearance</b>	<b>8.9</b>
<b>Filing of annual environment statement</b>	<b>8.10</b>
<b>Planting and maintenance of trees in quarry leases</b>	<b>8.11</b>
<b>Conclusion</b>	<b>8.12</b>
<b>Recommendations</b>	<b>8.13</b>



## CHAPTER VIII - ENVIRONMENT ISSUES

The environmental effects associated with mining activities start at the exploration stage, extend through the extraction and processing of minerals and continue even after the closure of mines. Legislation for mining requires an environmental impact assessment to be carried out before a mine is developed and operated in an environmentally sound manner with the least adverse impact on the environment.

In this chapter we discuss the compliance with legislations dealing with environment protection and other regulatory orders issued for safe, sustainable, scientific and environment friendly mining operations. A few cases of non-compliance with such legislations and regulatory orders are brought out in the succeeding paragraphs.

### 8.1 Failure to adhere to recommendations of NEERI for environmental safe mining

In order to integrate the environmental concerns with the developmental activities (inviting specific reference to scientific mining in the Bellary-Hospet region) as also to plan and implement appropriate strategies for the protection of environment and maintenance of ecological balance in the region, the State Government through DMG requested National Environmental Engineering Research Institute (NEERI), Nagpur for conducting Regional Environmental Impact Assessment Study in Bellary-Hospet Region.

After considering the present status of the ore reserves and mining activity of Bellary district, NEERI in its Report (April 2004) proposed for a phase-wise increase in annual iron ore production, compatible with environmental preservation. The proposal specified the extraction of ore ranging from 16 million MT during the period 2005-10 to 34 million MT during the period 2026-30. The report had also recommended extraction of 16 million MT of iron ore from 2004-05 to 2009-10.

The phase wise increase was made considering the status of the ore reserve and to facilitate the dumping of overburdens and its restoration within a five year plan period, during which overburdens would be well stabilised by planting acclimatise vegetation cover. As suitable dumping areas are limited on hill ranges, this production schedule was devised to suit the dumping requirements and possibilities existing in the ground.

We observed that the iron ore production made by the lessees in Bellary district was more than the production recommended by NEERI. The excess ranged from 108 per cent to 211 per cent during the period from 2006-07 to 2009-10 as shown below:

Year	Recommended annual production in the NEERI report in million MT	Production of iron ore in Bellary district in million MT	Excess production in million MT	Percentage variation from the recommended production
2006-07	16	33.26	17.26	108
2007-08	16	44.30	28.30	176
2008-09	16	49.81	33.81	211
2009-10	16	33.37	17.37	109

As the recommended production proposed in the NEERI report was scientifically arrived at and also compatible with the environmental requirements keeping in view the ore resource and dumps, the adherence to such a schedule was very much necessary for the conservation of the ore and to cause as little damage as possible to the environment. Increase in the production in huge proportions over the recommended quantity lead to unscientific mining and irreparable damage to the environment.

After this being pointed out by us, the Director DMG in exit conference stated that the report was not accepted by the State Government. However, the documentary evidence of the Government rejecting the report was not produced to us.

## 8.2 Failure to comply with the conditions stipulated for diversion of forest land

The MoEF, Government of India stipulated conditions for diversion of forest land for non-forestry purposes which *inter alia* provide that compensatory afforestation shall be raised over identified non-forest land at the cost of user agency, demarcation of the proposed forest area shall be carried out by erecting cement concrete pillars at the cost of user agency and the State Government shall raise and maintain a safety zone and will also raise and maintain the plantation over an area of one and half times of the extent of the safety zone of the degraded forest land at the project cost.

On verification of the lease register in two Divisional forest offices<sup>1</sup>, we noticed shortfall in compliance with the conditions stipulated while agreeing to diversion of forest land for mining purposes as brought out

below:

- Afforestation in degraded forest area at one and half times of the safety zone area was not done to an extent of 261.26 ha in 72 mines in Bellary and to an extent of 19.90 ha in nine mines in Chitradurga.
- Regeneration of safety zone area was not done to an extent of 308.48 ha in 58 mines in Bellary and to an extent of 13.3 ha in nine mines in Chitradurga.
- Fencing around the safety zone was not done to an extent of 264.645 ha in 65 mines in Bellary and in an extent of 36.42 ha in 14 mines in Chitradurga.
- Compensatory plantations to an extent of 2573.89 ha were not raised in 43 mines in Bellary.

The DCF (Territorial), Bellary replied that afforestation of degraded forest areas and compensatory plantations would be taken up in the subsequent years and regeneration of safety zone areas would be done after release of funds. Regarding fencing of the safety zone areas, the reply stated that the Hon'ble Supreme Court of India had constituted a committee to carryout survey works

<sup>1</sup> Bellary, Chitradurga.

of all the ML areas, after which fencing and afforestation works would be taken up.

DCF (Territorial), Chitradurga replied that the MLs of the Division were being re-surveyed and verified by the CEC appointed by the Hon'ble Supreme Court of India and the balance works would be carried out during the next years.

However, the fact remained that the conditions of afforestation, safety zone, etc., stipulated with a view to reduce adverse impacts of mining on the environment and to check encroachments/overlapping of lease area remained unexecuted to the extent mentioned above.

### 8.3 Execution of reclamation works

As per the conditions stipulated by the Forest Department for diversion of forest land for mining purposes, reclamation plan shall be executed by the user agency from the very first year of mining and an annual report shall be submitted to the Nodal officer i.e., Chief Conservator of Forests. Further, as per the conditions prescribed by IBM in the mining plan, working shall be undertaken in blocks. Working in the second and subsequent blocks shall not be taken up until completion of working in the first block and execution of reclamation works in that block.

As ascertained from IBM, as against an area of 1317.40 Ha (covered by overburden waste dumps) was proposed to be reclaimed/rehabilitated by the lessees, an area of 416.72 Ha (31.6 per cent) was taken up for the same and the balance area of 900.68 Ha was not reclaimed/rehabilitated. Similarly, out of the total topsoil to be preserved in 47.32 ha, top soil in an extent of 9.74

ha (20.6 per cent) only was utilised.

A review of the lease register in the office of the DCF (Territorial), Bellary revealed that an amount of ₹ 277.17 lakh was collected from 22 lessees towards execution of reclamation charges out of which reclamation works were completed in respect of only five lessees.

When we pointed out the failure to take up of reclamation works in respect of the remaining 17 lessees, forest authorities stated that the reclamation works would be taken up after the exhaust of ore body i.e. closure of mines only. The logic of the Department of Environment and Forest is at variance with the conditions prescribed by the IBM that the working of mines in subsequent blocks should not be undertaken without reclamation of the worked block and need to be resolved in the interest of environment.

#### 8.4 Failure to monitor the plantations raised by the lessees

According to the provisions of the Environment Impact Assessment Notification published by the Central Government, the projects having an extent of more than 5 Ha have to obtain the environmental clearance from MoEF. This was made mandatory for the mining industry to mitigate the environmental hazards caused as a result of the mining operations. While issuing the Environmental Clearance, the MOEF, puts a condition that adequate plantation shall be raised by the lessee in the ML area in consultation with the local Forest Department including selection of plant species.

We noticed that responsibility to ensure correctness of the quantum of seedlings, reported in the mining plan by the lessees, as raised, its proper maintenance and periodical survival status has not been fixed either by DMG or by the Forest Department of GOK.

We checked mining plans in respect of 12 lessees in two<sup>2</sup> test-checked offices and found

that a total of 35.92 lakh seedlings were reported by these lessees as planted by them during the period from 2006 to 2011. The DDs of DMG did not ascertain the factual position regarding actual number of seedlings raised and their survival status in consultation with the Forest Department.

After we pointed out, the Department replied that survival status of the plantations would be pursued with the Forest Department and action would be taken to maximise the survival rate. In the exit conference the Additional PCCF stated that the plantations raised by the lessees were not monitored and the survival status was really very low.

#### 8.5 Levy and collection of Environment Protection Fee for diversion of non-forest land for mining purposes

Government of Karnataka imposed (February 2009) levy and collection of Environment Protection Fee (EPF) at the rate of ₹ 84000 per Ha on the non-forest land permitted to use for mining/quarrying. The order was made effective for both ongoing as well as fresh mining/quarrying leases. The EPF was to be collected by the DMG and remitted under the Head of account "0406-01-800-0-11-EPF" and periodical reconciliation of the figures were also required to be done by DMG.

As per the information obtained from the Director, DMG, we noticed that against an amount of ₹ 238.23 crore due to be collected towards EPF, an amount of ₹ 102.82 crore was collected from the lessees leaving an arrears of ₹ 135.41 crore for collection as

at the end of (March 2011).

<sup>2</sup> Chitradurga and Hospet

We noticed that periodical reconciliation of departmental figures with that of treasury figures was not done by DMG. We also noticed that the Head of Account “0406-01-800-0-11-EPF” was not in operation in the budget even as at the end of March 2011. Evidently, the amounts collected towards EPF could have been misclassified under other budget heads and diverted for purposes other than for which it was specified.

When we referred the above position to the Finance Department, the Director was asked (April 2012) to furnish the details of actual credits made towards EPF and expenditure booked out of it and instructed to ensure that all the deposits towards EPF are made under ‘0406-01-800-0-11-EPF’ only and the figures are reconciled periodically.

Regarding adoption of the rate of ₹ 84,000 per Ha for collection towards EPF, we noticed that the Department did not assess the actual impact of mining/quarrying on environment taking into various factors such as the type of mineral extracted, extent of area involved, actual working period in a year, extent of impact on environment, etc., before arriving at the rate for levying EPF. Instead, it decided to levy fee at a common rate of ₹ 84,000 per Ha for all the leases irrespective of whether it was for major or minor mineral. Consequently, the lessees approached Hon’ble High Court which in its interim order directed the Department to collect fifty *per cent* of the amount in cash and the remaining fifty *per cent* in the form of Bank guarantee.

The Secretary, Ecology and Environment Department replied (April 2012) that further action would be taken only after deciding the legality of the issue in question by the Hon’ble High Court. It was further replied (May 2012) that guidelines with regard to imposing EPF uniformly throughout the country had not been issued by the Central Government though request in this regard was submitted (July 2009) by the department.

The Finance Department (August 2012) accepted that it was not possible to reconcile the credits already made under EPF and instructed the DMG to collect and remit EPF into the designated Head of Account “0406-01-800-0-11” and to reconcile on monthly basis. The Treasury was also advised to activate the above Head of Account for receiving credits of EPF from DMG.

The Chief Minister addressed a letter (August 2012) to the Hon’ble Minister of State for Environment and Forest, Government of India, emphasising the need for an uniform policy applicable to the entire nation with regard to imposing EPF for mining in non-forest land by adopting the principles of compensatory afforestation and NPV being levied in case of diversion of forest land.

## **8.6 Air, noise and water pollution due to mining**

The Karnataka State Pollution Control Board (KSPCB) was formed (1974) with a view to control pollution. The different kinds of pollution due to mining activities are air pollution during extraction and transportation of minerals, water pollution on account of tailings and waste dump and noise pollution due to blasting in open area.



Source : Ore Dumped near a Lake at Sandur

Scrutiny of the activities of KSPCB indicated the following details of inspections conducted during the years from 2006-07 to 2010-11 in three field units (Chitradurga, Bellary and Tumkur) are as under:

Year	Number of mines				
	Inspected by office of the District Environment officer	Inspected by office of the Chairman, KSPCB	Not adhered to the conditions prescribed in the consents issued	Recommended for suspension for non-adherence of conditions	Recommended for closure for non-adherence of conditions
2006-07	150	1	14	10	10
2007-08	154	0	4	3	3
2008-09	154	2	0	0	0
2009-10	153	3	3	3	3
2010-11	141	4	3	3	4
<b>TOTAL</b>	<b>752</b>	<b>10</b>	<b>24</b>	<b>19</b>	<b>20</b>

We noticed that guidelines/standards for controlling air, noise and water pollutions in respect of minor mineral quarries were not evolved by MoEF. In terms of one of the conditions prescribed by MoEF in respect of major minerals, while according environment clearances, four ambient air quality monitoring (AAQM) stations shall be established by the lessee for monitoring air quality in consultation with KSPCB. No standards of ambient air quality were prescribed by KSPCB till September 2010.

Regarding establishment of AAQM stations, the KSPCB replied that none of the mines had installed permanent AAQM stations and the lessees were getting air quality monitored through private laboratories/agencies.

We observed the failure of KSPCB to monitor in the following cases:



### 8.6.1 Transportation of iron ore by Road/Rail

The KSPCB, while giving consent for establishment for extraction/expansion of iron ore, imposed a condition to the effect that the transportation of iron ore shall be done through railway wagon only to prevent air pollution.

In one test-checked office<sup>3</sup>, we observed that 79 permits were issued to three MLs<sup>4</sup> for transportation of 4,49,043 MT of iron ore valued at ₹ 35.42 crore from mining area to the destination i.e. Chennai, Mangalore, Belekere, Karwar and Gujarat by road. In all these

cases, compliance or to the prescribed conditions by the lessee was not monitored by KSPCB.

In reply, KSPCB stated that the condition was stipulated with an intention to check air pollution due to spill over of minerals during transportation, overloading of roads, etc., and the condition was advisory in nature.

However, we suggest that as the economics of fuel consumption on account of transportation by rail has other added advantages like reduction in the green house gas emissions and containing of excessive pollution, including resultant carbon emission, the same may be consideration by the Government.

### 8.6.2 Dumping of copper tailings in open space

Rule 33 of MCD Rules 1988 stipulate that the waste rocks/ tailings produced during mining shall be stored in separate dumps and should be properly secured to prevent escape of material in harmful quantities which may cause degradation of environment. Wherever backfilling is not feasible, the waste dumps shall be suitably terraced and stabilized through vegetation or otherwise. Such tailings shall be deposited and disposed in a specially prepared tailing disposal area and shall not be allowed to flow away and cause land degradation or damage to agricultural field, pollution of surface water bodies and ground water.

We noticed in Chitradurga that two leases (relating to Hutti Gold Mines Limited) granted for extraction of copper ore were remained idle since 1995 and copper ore tailings (COT) were found to be despatched during 2007-08 to 2009-10. Thus, COT were lying in the open space for 15 years

without being suitably terraced and stabilised through vegetation. Adverse effects of the same on the environment could not be ruled out.

<sup>3</sup> Chitradurga.

<sup>4</sup> Canara Minerals (ML No.2556), Lakshmi Narasimha Mining Company (ML No.2566), Sri. Praveen Chandra (ML No.2294)



Copper Ore Tailings dumped at Chitradurga

When we brought the above omissions to the notice of KSPCB during entry conference (December 2011), the KSPCB stated that these mines were not inspected and no water samples were also collected/analysed as the mines were not working and agreed to conduct inspection. Subsequently, the mining areas were inspected by KSPCB authorities on (December 2011) and reported that

- The waste dumps were not covered with geo-coir mat and plantations were not done on the surface of the waste dumps which lead to erosion during rainy season.
- Copper ore tailings were being disposed off to a firm for using as micronutrients in agriculture and permission for the same was not obtained from the KSPCB.
- The mining authorities had not taken adequate measures to avoid erosion of ore dumps and no water-sprinkling facilities were provided.
- Metalling of the road for vehicle movement was not done by the mining authorities resulting in generation of fugitive emission on the agriculture land.

Further, analysis of water samples of three borewells and one open well around the mine area conducted (December 2011) by KSPCB indicated that the results were not conforming to the stipulated standards.

## 8.7 Mining without consent from KSPCB

According to Air (Prevention & Control of pollution) Act 1981 and Water (Prevention & Control of Pollution) Act 1974, the mining projects shall obtain consent for establishment (CFE) from KSPCB, which will be valid for five years. They shall also obtain the consent for operation (CFO) from KSPCB each year in which standards for emission and waste management are fixed. While granting CFE, mining authorities shall obtain environment clearance from MoEF, Department of Ecology and Environment of the State Government before commencing mining and CFO shall be issued only after the above statutory clearances are obtained.

On verification of 73 MLs in three Deputy Director offices<sup>5</sup>, we noticed, non-compliance with relevant provisions of the Air Act and Water Act in 20 cases, as brought out in the following paragraphs.

**8.7.1** In one case (ML 958: M/s Latha Mining Company, Tumkur), the CFO granted to the lessee for extraction of 2400 MT of iron ore per

annum was lapsed in June 2006. While sanction for expansion of production of iron ore to 5 lakh MT was issued (July 2007) by KSPCB, CFO for the expanded quantity and Environmental clearance from the Department of Ecology and Environment was not granted to the lessee (July 2009).

Meanwhile, KSPCB during inspection noticed (April 2008) that the lessee had continued to produce iron ore in the absence of CFO and environmental clearance and the quantity thus produced during 2006-08 was 706107 MT. Further verification in audit revealed that the total production of iron ore made during 2006-09 was 954161 MT. This production was not reported to IBM and no inspection was also conducted by IBM during this period. Hence, 954161 MT of iron ore produced during 2006-09 in the absence of CFO and environmental clearance is unauthorised. The value of the mineral thus extracted worked out to ₹ 90.15 crore. No reply has been furnished by DD, Tumkur.

**8.7.2** In one case (ML 2600: M/s Matha Minerals, Tumkur), the environmental clearance was granted in March 2007 and issue of CFO by KSPCB was still pending. Meanwhile, 587635 MT of iron ore was extracted by the lessee during 2004-07. Out of this, 107455 MT of iron ore was produced in excess over the quantity approved in the mining plan during 2006-07 and 356466 MT of iron ore which was produced without approved mining plan during the 2004-2006 has been commented in the earlier paragraphs. The value of the remaining 123714 MT of iron ore which was done with out environmental clearance works out to ₹ 9.76 crore. Reply has not been furnished by DD, Tumkur.

**8.7.3** In one case (ML 2087: Kumaraswamy Mining Co: Hospet), 56275 MT of iron ore was extracted by the lessee during 2008-09 and 2009-10 whereas

<sup>5</sup> Chitradurga, Hospet, Tumkur.

environmental clearance was accorded by the State Level Environment Impact Assessment Authority in January 2011 and CFE was granted by KSPCB in March 2011. In addition, the lessee was permitted to extract only manganese ore and extraction of iron ore during the above period was not included in the ML as already commented in the earlier paragraphs. Reply has not been furnished by DD, Hospet.

**8.7.4** In 17 other cases<sup>6</sup> (5 cases in Tumkur, 8 cases in Chitradurga and 4 cases in Hospet), mining was permitted without the consent from KSPCB during 2006-07 to 2009-10 and production of 31.52 lakh MT of iron ore valued at ₹ 299.60 crore was reported during this period.

After receiving our observation, the DD, Chitradurga replied that notices were served to the lessees concerned calling for their explanation. Replies from the DDs, Hospet and Tumkur were yet to be received (October 2012).

The DMG in the exit conference accepted that there were instances of production without KSPCB Clearance and Environment Clearance and that all the clearances are now taken care of through e-permit system.

## **8.8 Monitoring of conditions stipulated in the Consent for Establishment**

### **Three Deputy Director offices<sup>7</sup>**

According to paragraph VI (2) of the CFE of mines, the mining authority shall take up tree plantation year after year during rainy seasons either under compensatory afforestation or on their own to preserve the environment and nature *status quo* in the mining area and two percent of the annual turnover shall be earmarked every year for this purpose. Conditions were also stipulated to provide for rainwater harvesting and ground water recharging immediately after obtaining CFE and two percent of the profit was to be earmarked for the maintenance of roads used for transportation. It also required that the lessee had to maintain good roads around the mining area as a social obligation.

We noticed that KSPCB has not monitored whether the mining companies have earmarked two *per cent* of their annual turnover towards afforestation. In terms of information furnished by two Companies<sup>8</sup>, one company<sup>9</sup> whose total turnover during the period from 2006-07 to 2011-12 was ₹ 1528.60 crore,

<sup>6</sup> Out of these, comment regarding production excess over mining plan has already been made vide paragraph 6.2.2 earlier in two cases (ML. 2585; ML 2566), comment regarding production without mining plan vide paragraph 6.2.1 (2) in one case (ML 2220) and comment regarding excess production declared to DMG vide paragraph 6.2.7.1 in two cases (ML 2313 and ML 2290).

<sup>7</sup> Chitradurga, Hospet, Tumkur.

<sup>8</sup> Mysore Minerals Limited, Sandur Manganese and Iron Ore Limited.

<sup>9</sup> Sandur Manganese and Iron Ore Limited.

spent an amount of ₹ 10.23 crore (constituting 0.67 per cent of the total turnover) only towards afforestation. The other Company<sup>10</sup> whose total turnover during the period from 2008-09 to 2010-11 was ₹ 907 crore, spent an amount of ₹ 0.27 crore (constituting 0.02 per cent of the total turnover) only towards afforestation.

We also further observed that KSPCB was not aware whether lessees had invested in rainwater harvesting and ground water recharging immediately after obtaining CFE. Compliance with the condition regarding maintenance of road and earmarking two per cent of the profit towards maintenance of the roads was also not verified by KSPCB.

In reply, KSPCB stated that the main focus of the KSPCB was to implement provisions of Water Act and Air Act. Consent conditions like afforestation, soil conservation, etc., were more of advisory in nature and were stipulated as supplement conditions for environmental clearance and IBM should have enforced them. Further, for carrying out specific measures to control the damage to environment and ecology, MoEF brought out (October 2010) standards for emission and discharge in respect of iron ore mines only and the same would be incorporated by the KSPCB in the future consents. Regarding earmarking two per cent of the profit for maintenance of the roads, it is replied that it was difficult to impose this condition in cases where the mines were in forest area as the lessees were not getting permission from the Forest Department for asphaltting the road. In cases of leases falling in non-forest land, compliance of the conditions would be reviewed by the KSPCB.

Reply of the KSPCB relating to monitoring the implementation of the conditions like afforestation, soil conservation by the lessees is not tenable since the KSPCB had itself stipulated the conditions and adherence to the conditions by the lessees was required to be watched by the KSPCB.

### 8.9 Mining without environmental clearance

On verification of 73 MLs in three<sup>11</sup> DD offices, we noticed that production of 1791766 MT of iron ore valued at ₹ 163.28 crore was made in 13 cases<sup>12</sup> without environmental clearance during 2006-07 to 2008-09.

The DD, Chitradurga replied that notices were issued to five lessees calling for explanation for the above omissions. Replies from the DDs, Hospet and Tumkur are yet to be received.

<sup>10</sup> Mysore Minerals Limited.

<sup>11</sup> Chitradurga, Hospet, Tumkur.

<sup>12</sup> Out of these, comment regarding production without approved mining plan/in excess over the approved mining plan in two cases (ML 2584 and ML 2522) has already been made vide paragraph 6.2.2, comment regarding excess production in DMG in one case (ML 1842) has already been made vide paragraph 6.2.7.1 and comment regarding mining without consent from KSPCB in eight cases (ML 1957, ML 2313, ML 2436, ML 2585, ML 2566 ML 2524, ML 2141 and ML 1842) has already been made vide paragraph 8.7.

## 8.10 Filing of annual environment statement

Rule 14 of the Environment (Protection) Rules, 1986, stipulates every person carrying on an industry requiring consent under Section 25 of the Water (Prevention and control of pollution) Act, 1974 or under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981, shall submit an environmental statement for the financial year ending on 31 March to the concerned State Pollution Control Board (SPCB) on or before 30 September of every year. Further, as per Section 15 of the Environment (Protection) Act, 1986, penalty up to ₹ 1 lakh shall be levied for contravention of these Acts/Rules and in case of repeated failures an additional fine which may extend to ₹ 5,000 per day shall be levied.

We noticed in three<sup>13</sup> DD offices, that only ten to forty per cent of the lessees had submitted an environmental statement during the period from 2006-07 to 2010-11. We also observed from the records of KSPCB that penalty for non-submission of environmental statements was not levied by KSPCB. In the absence of the Environmental Statement, the Board could not keep a watch over the areas like discharge of pollutants, management of solid waste etc. which required attention on a periodical basis.

In reply, KSPCB stated that most of the information sought in the format was not relevant to mines and does not allow the Board to draw any meaningful conclusion. Hence, MoEF would be addressed suggesting amendment to the format specially to suit the mines in order to arrive at noteworthy conclusions.

## 8.11 Planting and maintenance of trees in quarrying leases

As per Rule 37 of Granite Conservation and Development Rules 1999, every lease holder shall take immediate measures for planting in the leased area such number of trees as are sufficient to improve the environment and to minimise effects of land degradation during the entire period of such lease. He shall also look after such tree plantations during the subsistence of the lease.

We noticed from the review of the ornamental stone quarry records in four<sup>14</sup> DD offices that the information regarding details of trees planted and maintained by

each lease holder during the currency of lease was not available in the lease files.

The DD, Chamarajanagar replied that the areas granted for quarrying are in rocky belt and unfit for cultivation. Hence, the revenue authorities would be requested to spare alternative lands for this purpose. However, no efforts were

<sup>13</sup> Chitradurga, Hospet, Tumkur.

<sup>14</sup> Bangalore (Rural), Chamarajanagara, Chitradurga, Tumkur.

made by the mining authorities to consult with forest authorities for an alternative green cover.

Thus, adverse impacts on environment due to sufficient number of trees not being planted in and around the lease area and consequent land degradation could not be ruled out.

### **8.12 Conclusion**

The guidelines suggested by NEERI report were not implemented resulting in mining not compatible with environmental preservation. DMG did not monitor adherence to the conditions by the lessee prescribed in clearances issued by Pollution Control Board and MoEF. The Head of Account “0406-01-800-0-11-EPF” could not be made operational and the receipts of EPF were not reconciled with treasury records at periodical intervals.

### **8.13 Recommendations**

We recommend that:

1. The Government may issue instructions for taking necessary measures for proper accounting of the plantations raised by the lessees and monitor their periodical survival status in coordination with Forest Department.
2. The Government may take up the matter for framing the guidelines/standards for controlling air, noise and water pollution in respect of minor mineral quarries with MoEF.