

CHAPTER 7

ADHERENCE TO OTHER REGULATORY CONDITIONS FOR PROTECTION OF ENVIRONMENT

Mining companies are required to follow various rules, regulations and guidelines for mine closure activities, fly ash dumping, use of hazardous wastes, corporate social responsibility and directives of State Pollution Control Boards issued from time to time.

7.1 Closed Mines

There is a need for closure of mine on completion of the process of economical extraction as mining deposits are exhausted. Planning for mine closure is necessary and is to be done systematically so as to ensure safety, post closure monitoring, control of safety hazards, decommissioning of infrastructure, closure of entries to the mine, management of final voids, reclamation of vegetation / forest, financial aspects and closure costs.

A proper mine closure plan aims at leaving the area safe and not as a burden to the society, ensuring that it is a source of sustainable livelihood of local community in a self-sustaining ecosystem.

Audit test checked the records relating to closed mines and observed the following:

7.1.1 Mine Closure Status Reports

GoI issued (August 2009) guidelines for preparation of Mine Closure Plan (MCP) and stipulated that all coal mine owners, operating the mines without the approval of MCP, obtain approved MCP within a period of one year there from (by August 2010) or two years in advance of mine closure, whichever was earlier. For mines closed prior to August 2009, CIL stipulated (November 2016) that mine closure status reports (MCSR) be prepared.

We observed that for 35 mines of ECL (**Annexure – II**) which were closed between April 1946 and July 2009 (including six mines which were closed prior to nationalization), it did not prepare (November 2018) MCSR.

ECL stated (November 2018) that work relating to MCSR was assigned to CMPDIL in May 2018. No reason was found on record for the delay in entrustment of the work to CMPDIL.

7.1.2 Escrow account for mine closure expenses

For financial assurance of mine closure expenses, an escrow account was to be opened by the subsidiary with a scheduled bank in consultation with the Coal Controller Organization (CCO) and money equivalent to the expenses to be covered periodically, be deposited at prescribed rates. Up to 80 *per cent* of the total amount deposited including interest accrued in the escrow account or the expenditure incurred towards progressive mine closure in the past five years, whichever is less, could be claimed from CCO towards reimbursement of mine closure expenses.

7.1.2.1 Gorbi mines of NCL was declared (July 1997) as abandoned due to the exhaustion of coal reserve. MCP prepared (November 2008) by CMPDIL and approved (April 2010) by the BoD of NCL, projected the mine closure expenses to be ₹ 23.00 crore. However, no action was initiated by NCL for mine closure on the plea that National Green Tribunal (NGT) raised the issue of providing an old / abandoned mining pit to NTPC for fly ash dumping. The inaction was not justified as we observed that the matter under consideration by NGT did not prevent NCL to undertake mine closure activities at Gorbi mines.

7.1.2.2 In accordance with the Guidelines issued (January 2013) by the Ministry, final MCP along with the details of the updated cost estimates for various mine closure activities and the amount deposited in the Escrow Account was to be submitted to the Ministry, at least five years before the intended final closure of mine.

The projected life of Jhingurdah and Kakri mines of NCL lapsed during 2015-16. Yet 18.25 million tonnes (MT) of residual coal reserves were estimated in Jhingurdah (8.24 MT) and Kakri (10.01 MT) mines. This required OB removal to the extent of 53.77 million cum in Jhingurdah (39.02 million cum) and Kakri (14.75 million cum). The filling of mine void is thus necessitated, thereby entailing revision of MCP originally approved.

NCL stated (October 2018) that MCP of Jhingurdah project was updated. We observed that while MCP relating to Jhingurdah project was updated, NCL did not update the MCP relating to Kakri project. Further NCL did not deposit the additional amounts relating to mine closure expenses of these projects in the escrow account so far (October 2018).

7.1.2.3 We also observed that NCL did not conclude MoU with NTPC till January 2019 for utilizing the abandoned mine void of Gorbi mines for fly ash dumping as discussed in para 7.1.3.1 *infra*. Meanwhile, delay in firming up the decision as regards mine closure resulted in escalation of mine closure expenses to ₹ 33.44 crore, imposing additional burden to the extent of ₹ 10.44 crore. We further observed that NCL did not earmark this additional amount required for mine closure.

NCL stated (October 2018) that with the proposed fly ash dumping by NTPC in mine voids, the incremental amount for mine closure may not be required. The reply is not tenable as it is merely speculative and does not factor in time value of mine closure cost, which was originally estimated by CMPDIL as early as in November 2008.

7.1.2.4 Against amounts deposited by MCL towards mine closure expenses into the designated escrow account in various tranches from time to time, claims amounting to ₹ 220.39 crore relating to eight mines³⁴ were pending settlement as at the end of March 2018. Of this, claims amounting to ₹ 1.93 crore were pending with CCO as at the end of March 2018. We observed that out of the residual amount of ₹ 218.46 crore, claims amounting to ₹ 67.21 crore was preferred by MCL with CCO during September-December 2018, while claims amounting to ₹ 151.25 crore were yet to be forwarded by CMPDIL to CCO for settlement and these were pending for want of related audit reports.

7.1.3 Ecological restoration of closed mine

A plan for the ecological restoration of the mined out area and for land use was to be prepared with details of cost involved. The ToR of MoEF&CC for preparation of EIA-EMP of the clusters / mines stipulated that the abandoned quarries / mined out pits / voids relating to pre-nationalization period be properly backfilled and biologically reclaimed. Filling of mine voids with fly ash has been considered as one of the viable options to the coal companies. Fly ash in bulk quantity can be utilised in stowing of underground mines in lieu of sand and filling up abandoned open cast mine voids. These results in higher percentage of utilization of fly ash generated which is otherwise a major pollutant.

Fly ash dumping

7.1.3.1 MOC identified (November 2016) Gorbi mine of NCL for fly ash dumping. Vindhyachal Super Thermal Power Station, a unit of NTPC expressed (January 2017) its interest to conclude MoU with NCL for utilizing the abandoned mine void of Gorbi mines for fly ash dumping. The Core committee of the National Green Tribunal (NGT) directed (January 2017) NCL to provide closed Gorbi mine to NTPC for fly ash dumping and to complete the process of signing of MOU with NTPC within one month i.e. by February 2017. While evaluating the proposal, DGMS observed (January 2017) that safety of operations needed to be exercised and scientific study along with necessary statutory clearances were required to be obtained from MoEF before commencement of the ash dumping by the NTPC. We observed that NCL concluded

³⁴ Bhubaneswari OCP, Samaleswari OCP, Lakhanpur OCP, Talchar UG, Mandira UG, Belpahari OCM, Lilari OCP and Jagannath OCP

MoU with NTPC only in January 2019 after lapse of 24 months. By virtue of this arrangement, NCL shifted the onus of obtaining all statutory clearances before commencement of fly ash dumping on NTPC. The delay in concluding MoU by 24 months, was thus avoidable.

7.1.3.2 MCL did not adopt a uniform policy for the dumping of fly ash. It permitted Talcher Thermal Power Station (TTPS), a unit of NTPC, to dump fly ash at Jagannath OCP and firmed up (February 2011) rates to be paid by TTPS for fly ash dumping. It also permitted Bhusan Steel Limited (BSL) to dump 5.58 lakh cum of fly ash from March 2014 to February 2016 at Jagannath OCP for a consideration of ₹ 1.23 crore. However, no charge was fixed for fly ash dumping by TTPS at South Balanda mines although a subsisting MoU concluded (July 2004) with TTPS provided for its review arising out of new developments in posterity. This deprived MCL of revenue amounting to ₹ 4.78 crore³⁵.

MCL stated (October 2018) that action would be taken to raise bills on TTPS for fly ash dumping in South Balanda mines. Further developments are awaited (November 2018).

7.1.3.3 Between April 2009 and December 2014, ECL permitted five thermal power plants³⁶ to dump 201.26 lakh cum of fly ash in eight abandoned mines³⁷, without any charges, thereby being deprived of revenue amounting to ₹ 142.89 lakh³⁸.

7.1.3.4 We also observed that fly ash generated in the process of power generation by Kathara Captive Power Plant of CCL was dumped in the open space, posing environmental hazard. CCL stated (November 2018) that action would be taken to utilise the fly ash for filling the mine voids. Further developments are awaited (November 2018).

7.1.3.5 There are different practices followed in subsidiaries towards use of fly ash for filling mine voids. While MCL allowed fly ash dumping in their mine voids, MoEF&CC imposed (January 2015) restriction on fly ash utilization in the mine voids of ECL. The issues on use of fly ash in coal mines were discussed (July 2016) in a meeting held between CIL, CMPDIL and its Ministry with MoEF&CC and it was concluded that fly ash contained significant quantities of hazardous leachable trace elements which could contaminate ground water. In absence of uniform policy, CIL

³⁵ Calculated for the period from April 2011 to March 2018 at rates prescribed for TTPS for dumping of fly ash at Jagannath mines.

³⁶ Mejia Thermal Power Station, Durgapur Thermal Power Station and Durgapur Steel Thermal Power Station of Damodar Valley Corporation, Balaji Construction and Maithon Power Limited

³⁷ Parascoli (W), Dhandadih, Paracea, Topsis patch, Old Belbad, J.K.Nagar (Nimcha fire trench), Mandman and Lakhimata.

³⁸ Calculated at the minimum rate of Re.0.71 per cubic meter charged by Jagannath OCP of MCL

stated (November 2018) that NITI Aayog was seized of the matter and that a comprehensive policy was under finalization by them.

The Ministry also stated (April 2019) that utilization of fly ash in mines involved several technical, environmental & safety issues. This needs addressal in the Fly Ash Notification, 2009. The expert committee constituted in this regard by the NITI Aayog has deliberated the issue in detail and proposed that MoEF&CC should revisit the condition stipulated in the existing EC for fly ash utilization and modify them in consonance with the fly ash notification. The circular and guidelines of MoEF&CC for utilization of fly ash shall be followed by all concerned. Further developments are awaited (April 2019).

In the Exit Conference, the Ministry stated (May 2019) that a uniform policy would be adopted based on the recommendations of NITI Aayog.

7.1.3.6 During joint inspection of sampled mines, we found that Sheebpur mines (closed in 1984) of ECL, was left with a mine void. We observed that several brick kilns operated alongside the mining area. ECL did not initiate action for filling this void which offered scope for illegal mining or any accident.



Pic. 13: Para No.7.1.3.6: Mine void at Sheebpur closed mine of ECL



Pic. 14: Para No. 7.1.1: Improper closure of Dalmiya UG pit at ECL closed prior to nationalisation

7.2 Adherence to Regulatory conditions

7.2.1 Production in excess of quantities permitted in CTO

The EC and FC issued by MoEF&CC permitted the maximum quantity of coal to be extracted from the mines after compliance of various measures specified therein. In accordance with the Water (Prevention and Control of Pollution) Act 1974 and section 31A of Air (Prevention and Control of Pollution) Act 1981 read with clause 3.2 of the guidelines, operation of plant or facility prior to obtaining consent attracted pollution charges equivalent to five times the CTE fee. However, coal could be extracted only to the extent quantities permitted under CTE /CTO for each mine, notwithstanding the fact that EC permitted higher quantities.

Audit test checked the compliance of various statutory conditions in the 28 sample mines and 2 washeries and observed the following:

7.2.1.1 Sonapur Bazari OCP under ECL was permitted to extract coal to the extent of 12 MTPA since March 2016 under the EC granted by MoEF&CC. However, CTO issued by West Bengal State Pollution Control Board (WBSPCB) in June 2016 permitted extraction of only 8 MTPA. Yet, Sonapur Bazari produced 8.93 MT coal during 2016-17 thereby violating the condition in CTO.

ECL stated (November 2018) that production was within the permitted quantity under EC. The reply is not tenable as the quantity specified in CTO was not to be exceeded.

7.2.1.2 We observed that MCL did not obtain the requisite consent in advance of increased production. Consequently, between April 2013 and June 2017, OSPCB levied pollution charges amounting to ₹ 6.57 crore for production of coal in excess of the quantities permitted in the CTE in nine mines³⁹. MCL was thus saddled with avoidable payment of penal charges which is a pointer to systemic lapse.

MCL stated (October 2018) that the process of grant of EC was long drawn and in the instant case of nine mines it ranged from 13-76 months and that due to huge demand, coal was produced in excess in national interest.

7.2.2 Production in excess of mining plan

In accordance with the modified (February 2015) approved mining plan of Basundhara (W) of MCL, 3.0 MT of coal was to be extracted during 2015-16 against which MCL produced 3.728 MT. We observed that Deputy Director of Mines (DDM), Odisha levied (June 2017) penalty of ₹ 50.97 crore invoking the provisions of the MMDR Act. We also observed that violation of mining plan was affirmed (August 2017) by the Hon'ble Supreme Court and that MCL did not dispute the demand till March 2018. We further observed that MCL created (March 2018) a provision of ₹ 50.97 crore in its books for discharge of the liability.

MCL stated (October 2018) that production in excess of the mining plan was resorted to off-set shortfall in production in other mines.

7.2.3 Operation of units without EC, CTE and CTO

The sequence of obtaining Environment Clearance, Consent to Establish and Consent to Operate for mines and washeries is discussed in para 1.2.2 *supra*. We observed that as at the end of March 2018, 16 units relating to two subsidiaries comprising of mines (13) and washeries (3) were being operated without valid EC (9), CTE (1) and CTO (6) as follows:

³⁹ Lakhanpur, Samaleswari, Belpahar, Hirakhand Bundia, Orient 4, Lajkura, Lingaraj, Ananta and Orient 3

**Table 13: Operation of mines/washeies without EC, CTE and CTO in
BCCL and CCL**

Sl. No.	Subsidiary	Operations without				
		EC		CTE		CTO
		Mines	Washerries	Mines	Washerries	Mines
1	BCCL	4	3	-	-	2
2	CCL	2	-	1	-	4
TOTAL		6	3	1⁴⁰	-	6⁴¹

Operation of these units as detailed in the **Annexure – III** was in violation of the regulatory mechanism. As these Units were being operated without obtaining EC, CTE and CTO, adequacy of the mitigative measures in vogue to handle environmental pollution as prescribed under various rules / regulations could not be assessed.

BCCL and CCL accepted (November 2018) the audit observation and stated that necessary corrective actions had been taken.

7.2.4 Infertuous expenditure

Wild Life Protection Act, 1972 and Wild Life (Protection) Amendment Act, 2006, prohibit unsustainable use of land within the tiger reserve area. National Environment Policy, 2006 and CIL's Policy 2012 are committed to protect the wild life in compliance of Article 48(A) of the Constitution.

We observed that a proposal which was approved (March 1988) by the BOD of CCL for Hurilong UG coal project, was rejected (August 1998) by MoEF on the plea that the location was in close proximity to the Palamau tiger reserve. Yet, CCL, while following up (August 2007) the matter with MoEF&CC, acquired 6.58 acre non forest land and constructed service building, besides equipping the area with overhead electricity transmission line and two inclines - 100 metres and 77 metres long for mining. These facilities were created at a cost of ₹ 2.98 crore. However, MoEF&CC rejected (October 2007) the subsequent proposal also and hence the expenditure of ₹ 2.98 crore was rendered infertuous.

CCL stated (November 2018) that at present there was no activity in the Hurilong UG coal project.

7.3 Hazardous Substance Management

Hazardous wastes in coal mines include used / spent oil and wastes / residue containing oil arising out of the process of industrial operation using mineral / synthetic oil as lubricant in hydraulic systems or other applications, chemical sludge from waste water

⁴⁰ Other than the mines which did not have EC, as this was prerequisite for CTE

⁴¹ Other than the mines which did not have CTE as this was prerequisite for CTO

treatment and oil and grease skimming residue resulting from the process of purification of air, water and waste water.

Hazardous Wastes (Management, Handling and Trans boundary Movement) Rules, 2008, which was in vogue till March 2016, and Hazardous and other Wastes (Management and Trans boundary Movement) Rules, 2016 (Rules) which was applicable thereafter defined hazardous waste as any waste which could endanger health or environment. Their handling, generation, collection, storage, packaging and transportation required authorization from the SPCB under the Rules. The Rules also stipulated that these wastes could be stored only up to ninety days.

7.3.1 Storage and associated risks

7.3.1.1 As at the end of March 2018, two items of hazardous wastes were held in stock by two subsidiaries for a period exceeding 90 days as detailed below.

Table 14: Storage of hazardous waste in the mines/washery of CCL and MCL

Sl. No.	Subsidiary	Item of waste	Quantity	Unit where lying	Period of holding
1	CCL	Washery rejects	26 lakh tonnes	Kathara washery	Over 13 years
		Burnt / Used oil	227.54 KL	Rajrappa OCM	Exceeding 90 days
2	MCL	Burnt / Used oil	101.59 KL	Bharatpur mine	Exceeding 90 days

We observed that MCL stored burnt / used oil in excess of the authorised quantities (62 KL). We further observed that as at the end of March 2018, eight⁴² mines and two washeries of three subsidiaries handled hazardous wastes without obtaining the authorization from the respective SPCBs. Besides, while Basundhara (W) handled the hazardous waste without authorization from OSPCB from April 2014 to September 2017, Lakhanpur handled them without authorization from April 2015 to February 2017. We further observed that Basundhara (W) did not initiate advance action for renewal of authorization for handling hazardous wastes during the above period and that the application was filed with OSPCB only in April / September 2017.

MCL stated (October 2018) that actions had been taken for auctioning of burnt oil. CCL accepted (November 2018) the fact and stated that necessary actions would be taken for early disposal of old rejects and burnt oil. Further developments are awaited (November 2018).

7.3.1.2 Under clause 23 of Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2016, the subsidiaries were to obtain insurance cover as contemplated under Section 4 of the Public Liability Insurance Act, 1991, as a safeguard against liability for damages caused to the environment or third party due to

⁴² Kathara OCM (including washery) of CCL, Sonepur Bazari, Jhanjra, Dabor and Kunustoria of ECL, DBOCP, Putki Balihari and Moonidih mines (till July 2017) and Bhojudih Washery of BCCL.

improper handling and management of hazardous and other wastes. We observed that NCL and SECL did not handle the hazardous wastes in excess of the prescribed limits and hence did not attract the provisions of the Rules. However, none of the other subsidiaries complied with this and thus remained exposed to risks. MCL stated (October 2018) that the projects were directed to comply with the provisions of the Act. Further developments are awaited (November 2018).

7.3.2 Under recovery of burnt oil

Lubricating oil is used in the engines of HEMM deployed for extraction of coal. During the course of oil change and maintenance, the used oil (burnt oil) is drained out. A Committee constituted (November 2014) by NCL for fixing the norms for recovery of burnt oil recommended equipment-wise rates of recovery.

The equipment-wise norms prescribed for recovery of burnt oil and the actual recovery during the period from 2014-18 in three mines (Nigahi, Khadia and Jayant) were as follows:

Table 15 : Status of recovery of burnt oil in NCL

(All figures in percentage)

Equipment	Norm	Actual recovery		Mines in which under recovery was observed
		Minimum	Maximum	
Dumper	50	19.76	43.24	Nigahi
Dozer	37	14.94	34.32	Nigahi and Khadia
Dragline	29	1.12	14.39	Jayant and Khadia
Drill	27	10.19	24.47	Nigahi and Khadia
Shovel	17	2.57	15.10	Jayant and Khadia

While confirming (October 2018) that scope existed for minimizing oil leakage, NCL stated that the HEMMs deployed exceeded their technically estimated life. NCL further stated that action was on hand to replace the HEMMs which outlived their life so as to arrest leakage of burnt oil and prevent its ill-effects due to contamination. Further developments are awaited (November 2018).

7.3.3 Payment of water cess at higher rates

As per the provisions of the Cess Act, water cess at rates specified was collected for utilization for the purposes specified in the Act, *ibid*. Compliance with the standards laid down by GoI under EP Act, 1986 entitled the consumer for payment of water cess at concessional rates. We observed that MCL failed to install meters as stipulated under the Cess Act and to submit waste water analysis report and hence could not avail of concessional rates of cess. The saving it had to forego on account of this non-compliance was in the amount of ₹ 2.48 crore during 2013-18 as detailed in **Annexure – IV**.

MCL accepted (October 2018) the audit observation and stated that no water cess was paid from July 2017 due to abolition of the relevant Act.

7.4 Corporate Social Responsibility

Mining of coal has adverse impact on the ecosystem and biodiversity in and around the areas where the mines are in operation. Therefore, projects need to be designed on the principle of sustainable development with due consideration for environment, conservation, safety, quality and aspirations of the community around it. Expenditure on CSR is required to be incurred for activities relating to protection and safeguard of environment and for maintaining ecological balance.

In accordance with the specific condition of EC granted by the MoEF&CC to subsidiaries, five rupees per tonne of coal produced was to be earmarked for activities under CSR. The amount was to be spent for community development under CSR activities. We observed that the subsidiaries collectively expended only 41 *per cent* of the overall amount mandated by MoEF&CC during 2013-18.

The shortfall in actual expenses across subsidiaries ranged between 40 *per cent* and 87 *per cent* as detailed below:

Table 16: Shortfall in actual CSR expenses against mandated by MoEF&CC
(₹ in crore)

Subsidiary	CSR mandated by MoEF&CC	Actual CSR Expenses	Shortfall (2) – (3)	Percentage of (4) to (2)
(1)	(2)	(3)	(4)	(5)
BCCL	86.33	51.99	34.34	40
CCL ⁴³	32.96	13.11	19.85	60
ECL ⁴⁴	62.60	21.26	41.34	66
MCL ⁴⁵	59.95	22.63	37.32	62
NCL ⁴⁶	54.80	30.58	24.22	44
SECL ⁴⁷	193.51	63.16	130.35	67
WCL ⁴⁸	14.21	1.78	12.43	87
TOTAL	504.36	204.51	299.85	59

BCCL stated (November 2018) that its CSR expenses were based on corporate budgetary allocations. CCL, ECL and SECL stated (November 2018) that provision for CSR expenses was made in the books at two *per cent* of average net profits for the immediate preceding three financial years as mandated under the Companies' Act 2013. CCL further stated that project-wise allocation of CSR fund was not made. MCL and

⁴³ Piparwar OCM and AKK OCM

⁴⁴ Except Rajmahal and Kalidaspur

⁴⁵ Lakhanpur (May 2014) and Lingaraj (November 2015) mines

⁴⁶ Nigahi and Bina mines

⁴⁷ Gevra, Kusmunda and Dipka mines (2014-15 onwards)

⁴⁸ Majri, Wani and Umrer Areas

NCL stated (October 2018) that their overall corporate expenses under CSR exceeded the budgeted amount during 2013-18. WCL stated (October 2018) that their overall corporate expenses under CSR exceeded the amount mandated by MoEF&CC. The Ministry also endorsed (April 2019) the views of the Managements.

In the Exit Conference, the Ministry stated (May 2019) that even if a subsidiary was not obliged as per financial parameters provided in the Company's Act 2013, the CIL policy on CSR provided for CSR funding @ Rs.2.0 per tonne. Additionally, CIL also deposited fund under District Mineral Fund (DMF) for expenditure on development of local area which also had CSR activities in its envelope.

The above contentions are not tenable as the point at issue is the shortfall in CSR expenses at specific mines mandated by MoEF&CC without reference to the Companies' Act / consolidated budgetary allocations under CSR. Further, the principle of sustainable community development around specific mines is to be duly considered for which the expenses under CSR was mandated by MoEF&CC so as to avoid lopsided development.

Audit Summation

35 mines of ECL which were closed between April 1946 and July 2009 (including six mines which were closed prior to nationalization), did not have Mine Closure Status Report. Fly ash generated in the process of power generation by Kathara Captive Power Plant of CCL was dumped in the open space, posing environmental hazard. In MCL, Deputy Director of Mines, Odisha levied (June 2017) penalty of ₹ 50.97 crore invoking the provisions of MMDR Act for production of coal in excess of the mine plan. As at the end of March 2018, 16 units relating to two subsidiaries comprising mines (13) and washeries (3) were being operated without valid Environment Clearance (EC in 9 units), Consent to Establish (CTE in 1 unit) and Consent to Operate (CTO in 6 units). Consequently, the adequacy of the mitigative measures in vogue to handle environmental pollution as prescribed under various rules / regulations could not be assessed. EC for Hurilong Underground (UG) coal project which was in close proximity to the Palamau tiger reserve, was rejected (August 1998) by MoEF. In advance of obtaining the EC, CCL acquired and destroyed 6.58 acre non forest land and constructed infrastructural facilities at a cost of ₹ 2.98 crore, which rendered infructuous. Further, MCL did not install meters and submit waste water analysis report as stipulated under the Cess Act and hence could not avail of concessional rates of cess.