

Case Note: Case dealing with closure of mines having an adverse effect on the surrounding ecosystem, which included the siltation of a river.

This document is available at www.ielrc.org/content/e0612.pdf

2006(14)SCALE87, (2006)10SCC491

IN THE SUPREME COURT OF INDIA

Decided On: 15.12.2006

T.N. Godavarman Thirumulpad

v.

Union of India (UOI) and Ors.

Hon'ble Judges:

Y.K. Sabharwal, C.J., Arijit Pasayat and S.H. Kapadia, JJ.

JUDGMENT

Arijit Pasayat, J.

1. These I.As. are in essence oft shoot of a judgment of this Court in IA 670 of 2001 in Writ Petition (C) 202 of 1995 in K.M. Chinnappa (applicant in T.N. Godavarman Thirumulpad v. Union of India and Ors.. It related to the question whether functioning of Kudremukh Iron and Ore Company Ltd. (in short 'KIOCL') was having adverse effect on the environment and ecosystem. In paras 51 and 52 of the judgment it was inter alia directed as follows:

51. Taking note of the factual background and the legal position highlighted above, we think it proper to accept the time period fixed by the Forest Advisory Committee constituted under Section 3 of the Conservation Act. That means mining should be allowed till the end of 2005 by which time the weathered secondary ore available in the already broken area should be exhausted. This is, however, subject to fulfilment of the recommendations made by the Committee on ecological and other aspects.

52. The modalities as to how these have to be worked out shall be done in the manner recommended by the Committee. It was submitted by the learned Counsel for the State of Karnataka that the recommendation made about transfer of buildings and other infrastructure to the Forest Department of the State Government at book value is not acceptable to it. This is a matter which can be considered by the Committee on an appropriate motion being made by the State before it. The modalities to be adopted to effectuate the order passed by this Court and recommendations of the Committee shall be worked out by the Ministry of Environment and Forests, the State Government and the Company under the supervision and guidance and monitoring of the Committee.

Unfortunately the Central Government for reasons best known to it notwithstanding the clear position indicated in the judgment construed that the expression "Committee" meant "Forest Advisory Committee" (in short 'FAC'). There was no scope for taking the stand in view of what has been stated in para 5 of the judgment. It has been stated that FAC is also a statutory committee. By order dated 20th January, 2006 it has been observed that the constitution of the Monitoring Committee is not in consonance with the directions of this Court.

2. Learned Counsel appearing for KIOCL submitted that in line with direction of this Court and keeping in view the Rule 23C of the Mineral Conservation and Development Rules, 1988 (in short the 'Rules') which became operative with effect from 10.4.2003, an approved final Mine Closure Plan was submitted. Views of expert bodies were taken. It has been stated that in line with the statutory prescriptions, which even though became operative after the judgment various steps have been taken. Indian Bureau of Mines (in short the 'IBM') has also given its report. It is, therefore, stated that though IIT Delhi was asked to give its view but that has no relevance. If there would have been non-compliance with the statutory requirement of Rule 23C of the Rules, it would have exposed it to penal consequences. In essence the stand is taken that IIT Delhi's report should not be accepted and the following modalities on the other hand should be adopted.

(a) It would utilize its machinery and workmen for the purpose of achieving slope stability by excavating the 33.81 hectares on the basis that out of the net profit generated by the mining operation, 50% of the net profit would be paid over to a fund to be established and operated by a committee constituted by the Government of Karnataka or in any other manner directed by this Court or a high powered statutory committee created for this purpose (in the nature of the Tennessee Valley Authority) for the purpose of utilizing this 50% net profit for rehabilitation and eco-restoration for the Kudremukh Forest Area. (b) On a rough estimate, the 50% of net profit is likely to be in the range of Rs.50 to 75 crores per annum, for the purpose of rehabilitation and eco-restoration of the Kudremukh National Park and also establishing and promoting sustainable environmental development and eco- tourism in the area. Towards this end, the existing buildings and infrastructure could also prove useful. (c) If this proposal is accepted, an amount in the range of (approximately) Rs.150 Crores to 225 Crores could be available to the fund during the period of about 3 years which would be necessary for excavating 33.81 hectares.

3. It is further submitted that in the judgment at paras 49 and 51 had permitted mining of the weathered secondary ore in the already broken up area till the end of 2005, as this Court expected that the weathered ore would be exhausted. But in reality, about 20 million tons of weathered ore are still available in already broken up area. This should be permitted to be used as it is likely to generate revenue of about rupees 25 crores per annum. If this is permitted nearly rupees 300 crores would be available to the Kudremukh Authority for Eco Restoration Fund which would be able to bring about dramatic change in the eco-system of the Kudremukh National Park.

4. Per contra, learned Amicus Curiae has submitted that this Court clearly directed closure of mining operation by the end of 2005. Time was not given for running the mines for profit, but as a winding down period at the end of which mining should have been closed. The operations during the period had to be under the supervision of the Monitoring Committee which in turn function under the supervision of Central Empowered Committee (in short 'CEC'). What KIOCL wants now is to continue mining of 8 to 9 lakh tonnes of ore.

5. We have considered rival submissions. IIT, Delhi was appointed vide order dated 24th February, 2006. It has been found that KIOCL has used the concerned period for carrying on commercial operations without taking necessary steps for winding down operations. On 10th May, 2006 an affidavit was filed by KIOCL taking the stand that there was likelihood of serious pollution of Bhadra river if KIOCL was not allowed to do the operations for the purpose of avoiding pollution. IIT, Delhi did not consider the exercise necessary. It has been pointed out by learned Amicus Curiae that contrary to what KIOCL thought to be inevitable, there was no damage whatsoever despite heavy monsoon. It is to be noted that the IIT, Delhi in its report has observed that the solution has to be found by experts and the heart-beat of that solution is the stability of the slopes involving "no or minimal disturbance to the unbroken area". It is noted that at various times, petitions have been filed practically with a view to undo what had been definitely held to be imperative by this Court.

At this juncture, it would be appropriate to take note of what IIT, Delhi stated in its various reports.

6. In their report dated 12th April, 2006 on the Stability of Slope and related issues during mine closure of KIOCL, it was inter alia observed as follows:

3.0 Observations on Stability of Slopes

Based on the above methodology, the following observations are made concerning the stability of the slopes.

(a) The excavated slopes of the mine exist at varying degrees of steepness with benches of variable widths.

(b) Some slopes are stable with grass growing on them; others are observed to show signs of surficial erosion/debris flow/mud flow; yet others show signs of planar slippage or slides of limited depth.

(c) The instability of slopes at specific locations is observed to be on account of (i) excessive steepness, (ii) inadequate strength of soil/rock mass under saturated condition and (iii) seepage pressure exerted by infiltrating rain water during monsoons.

(d) Saturation of mine slopes and seepage pressure exerted on the slopes appear to be the two factors that have the greatest role in instability of slopes since these slopes are

reported to be relatively stable during dry months and become unstable during monsoons. Saturation reduces the strength of the soil/rock mass and seepage pressure induces downward movement.

4.0 Observations on Instability of North West Part of the Mining Area

One part of the mining area on the north western side is observed to be particularly susceptible to slope instability due to collection of water in a catch pit constructed at the base of the broken area, above the unbroken area. The catch pit was constructed by excavation during mining operations and is observed to cause the following effects:

- (a) The unbroken area on the downstream side of the catch pit is being destabilized as the collected water seeps into the unbroken area;
- (b) When the catch pit overflows, uncontrolled flow of water cascades downhill in the form of surface water laden with silt which eventually reaches the Bhadra River at the base of the unbroken area; this has also resulted in the formation of gullies and erosion channels in the unbroken area.

5.0 Observations on Slope Stability Aspects in the Closure Plan

Slope stability aspects have been covered in the following reports in the Closure Plan:

Report of NIRM: Slope Stability Investigations at Kudremukh Iron Ore Mines
Report of CWPRS: Desk Studies on Stability of Hill Slopes in Mining Area at Kudremukh Iron Ore Mine, Karnataka

The Closure Plan proposes stabilization of the slopes by flattening them and also by additional excavation of slopes in the broken region as well as the unbroken portion in the northwestern part of the mine. This would be followed by revegetation of slopes for controlling erosion of fine material. Check dams have been proposed to prevent siltation of the Bhadra River during the initial stages till vegetative growth gets established and causes reduction in silt erosion.

7. The following are the observations on slope stability aspects in the closure plan:

(a) The suggested methodology of stabilizing the north west part of the mine by deep excavation in the unbroken portion over an area of 33.81 hectares can be one alternative but not necessarily the only one. Other methods which would minimize disturbance to the unbroken area could have been examined.

(b) In addition, the following aspects have not been covered in the Closure Plan:

- i) A surface water drainage plan for the entire mining area indicating location of surface water drains at the benches and along the perimeter of the base of the mining area;

- ii) Methodology for periodic removal and relocation of silt collected in check dams and catch pits;
- iii) Provision of bio-geotechnical engineering measures for assisting vegetative growth in problematic areas where regular debris flow or mud flow is observed;
- iv) Stability measures for north west part of the mine such as elimination of collection of water and overflow of water from the existing catch pit as well as stabilization measures for the unbroken area destabilized by the catch pit;
- v) The measures listed at (i) to (iv) above could result in significant additional costs.

6.0 Conclusions and Recommendations

- (a) The slopes are not stable in the present state and need stabilization.
- (b) If the mine is abandoned without stabilization of the slopes, as indicated earlier, it will result in excessive silt discharge due to erosion as well as in the sliding of the slopes at some locations in future years.
- (c) The north west part of the mine needs immediate attention and remedial measures to prevent the possible occurrence of large scale movement during the forthcoming monsoon.
- (d) A Closure Plan is necessary for stabilizing the slopes. The Closure Plan proposed at present is well conceptualized but falls short of adequacy in detailing (as indicated in 5.0 (a) and (b) above). This is perhaps so because there is inadequate experience in the country regarding closure of mines of such size in a short time. The regulations relating to closure have been notified only in recent years in the country and it will take time for the expertise to develop fully.
- (e) It is suggested that the task of mine closure be given, on a turnkey basis, to an Organization having requisite experience in similar works (on design- and-build basis). Such an Organization can be selected through a global competitive bid. It should be the responsibility of such an Organization to reanalyze the stability of slopes and then draw up a Closure Plan and execute it with minimum disturbance to unbroken area of the mine. KIOCL could assist such an Organization in executing the closure. Since the execution of closure would involve a large expenditure and a time frame of several years for vegetation to be established, such a task could be overseen by a special cell/nodal agency created for this purpose.
- (f) The award of work as listed in (e) above could take several months. Till then, KIOCL need to monitor and maintain the slopes (in the entire mine area in general and the northwestern portion in particular) as well as maintain/operate the silt control measures at the site.

8. Again on 12th June, 2006 the report of Expert Committee made certain observations on the basis of presentation made by KIOCL officers on various dates. The observations were to the following effects:

Officers of KIOCL, headed by Mr. J.N. Kini, Director (Production & Projects), made a presentation at IIT Delhi on 8th June 2006 on the measures taken to for controlling silt and for stability of north western portion. A report was also submitted containing conceptual design and detailed design of water pollution control measures. The following were present:

Mr. J.N. Kini KIOCL

Mr. K.S. Kasinath. KIOCL

Mr. G. Pai, KIOCL

Mr. MK. Rajagopalan, KIOCL

Prof. G.V. Rao, Member, Expert Committee

Prof. K.G. Sharma, Member, Expert Committee

Prof. Manoj Datta, Member, Expert Committee

All the three members of the Expert Committee visited the mine site on 10th and 11th June 2006 to study the measures taken.

9. The following are the observations of the Expert Committee members on the basis of the presentation by KIOCL officers, report submitted by them and the site visit.

Silt Control Measures

1. It is observed that concerted efforts have been made by KIOCL for controlling the flow of silt from the mine site to the Bhadra river in the form of drainage channels, catchpits, berms and dykes, check bunds and check dams.

2. From amongst the two main pollution control dams, one is observed to be nearly full (PCD 1) whereas significant storage capacity exists in the other (PCD2).

3. Attempts have been made by KIOCL, to the extent feasible, to empty the reservoir behind PCD1 and these have been abandoned with the onset of monsoons. Further attempts can be tried during periods of extended lull in the monsoon, if any.

4. Diversion of silt laden water has been made at select locations from drainage channel of PCD1 to the drainage channel of PCD2.

5. It is stated by officers of KIOCL that the storage capacity of the main catchpit before PCD2 as well as the reservoir of PCD2 is sufficient to hold most of the silt for the present monsoon. However measures have to be taken for handling the silt of future years.

6. The upstream slope of PCD2 is observed to exhibit evidence of piping. Remedial measures such as provision of geotextile filter and plugging have been undertaken by KIOCL. Suitable long term measures may be taken up after the monsoons. Careful monitoring of both PCD2 and PCDI may be done during and after the monsoons.

7. It is observed that silt laden water from the north-west portion does not reach either PCDI or PCD2 but overflows from the low lying area in the north west portion into the Bhadra river through an erosion gully. A gabion structure has been constructed to control the silt but the possibility of silt overflow during heavy rains can not be ruled out. Additional measures are required to control the silt release from this area. KIOCL has proposed the re-profiling of the north west portion to enable the silt laden water to reach PCD2. This would take around 6 months and can be taken up only after the monsoons. Other alternatives with conceptual and detailed plans need to be considered for this problem.

Stability of North-West portion

1. The stability of the North-West region is observed to be slightly improved on account of non-accumulation of water in the low-lying area.

2. However, the stability could still be affected due to the presence of erosion gully because of overflowing water.

3. Complete access to the periphery of the low-lying area is not available due to the absence of benches and access roads.

4. It is important that a few alternate solutions be conceptualized with the following features for the north west region as long term measures:

- (a) Minimal accumulation of water,
- (b) Drainage channel to reach PCD2,
- (c) Benches to stabilize steep slopes,
- (d) Access road all around the low-lying area, and
- (e) Sealing of opening(s) to the erosion gully(ies).

Final Remarks

KIOCL may prepare revised conceptual designs and remedial measures on the basis of the observations made in this report.

10. On 13.7.2006 the opinion of IIT, Delhi in the background of the affidavit filed by KIOCL on 10th May, 2006 was as follows:

"The Expert Body of IIT Delhi has studied the affidavit filed by KIOCL. The following are the views of the Expert Body in respect of item 3 titled "Achieving Slope Stability in the Entire Mine Area".

1. For stability of slopes of the mine area, the scope of work defined by KIOCL to NIRM for their study did not specify the condition of "no or minimal disturbance to unbroken area". As a consequence, the NIRM report presents only one solution, which disturbs the broken area. It does not give any other alternative solutions.

2. Other reports by IIT Kharagpur, CMRI Dhanbad, Monitoring Committee, CWPRS Pune, use the report of NIRM as the bases of analysis, hence give recommendations similar to that of NIRM.

3. As stated in the earlier Report submitted by the Expert Body on 10th April 2006, it is reiterated that a solution to the stability of slopes with no or minimal disturbance to unbroken area is feasible.

4. Flattening of unstable slopes by excavation in broken area along with appropriate drainage and silt control measures can improve stability of the mined area. For this purpose the mechanism already suggested at item 6(e) of Expert Body Report dated 10th April 2006 submitted to Hon'ble Supreme Court may be adopted.

11. The significant aspects in the aforesaid report are as follows:

(a) The scope of work defined by KIOCL to NIRM for their study did not specify the condition of "no or minimal interference to unbroken area".

(b) Other reports (i.e. of IIT, Kharagpur, CMRI, Dhanbad, Monitoring Committee, CWPRS, Pune used NIRM's report as the foundation for analysis and, therefore, their recommendations were similar to those of NIRM.

(c) Solution to the stability of slopes with no or minimal disturbances to unbroken area is feasible.

(d) By adopting certain measures, stability of the mined area can be improved.

12. In the background of what has been noted above, and keeping in view the suggestions and recommendations of IIT, which we find to be founded on rational basis, we direct as follows:

(i) On the basis of the report dated 10.04.2006 of IIT Delhi through a Global Competitive Bid an Agency to be selected for:

(a) re-analysing the stability of slopes

(b) drawing up of mine closure plan and

(c) implementation of the above plan.

(ii) IIT Delhi shall draw up detailed terms for the work to be done, consistent with the basic paradigm of "no or minimal disturbance to unbroken area" and submit to this Court within a period of four weeks for further directions.

(iii) The Ministry of Mines, Government of India, shall designate an officer to take over possession of the mines immediately. IIT Delhi shall depute a team of experts to go and do a survey of the mines and the surrounding area and submit a report to this Court regarding any immediate step(s) that need to be taken during the interregnum till the appointment of the expert agency. IIT Delhi can ask the designated officer to take any necessary steps on an emergent basis.

(iv) The expenditure for the purpose of inviting global competitive bid and evaluation such as on advertisement etc. may initially be met out of Rs.19 crores deposited by the KIOCL, and which are presently lying with the Adhoc- CAMPA.

(v) If any funds are required in excess of the aforesaid amount, the Agency, or the Designated Officer shall move this Court for necessary directions.

I.A.s are accordingly disposed of.