

RESEARCH FOUNDATION FOR SCIENCE

v.

UNION OF INDIA AND ANR.

SEPTEMBER 6, 2007

[DR. ARIJIT PASAYAT AND S.H. KAPADIA, JJ.]

*Ship Breaking—Hazards Associated with—On direction by Supreme Court, Union of India constituting a Committee of Technical Experts (TEC) to suggest infrastructural stability and adequacy of Ship Breaking at Alang Ship Breaking Yard—Norms recommended by TEC—Approved by Court—Held: It is desirable that the Government of India formulates a comprehensive Code incorporating the recommendations—Until the Code comes into play, the recommendations shall be operative by virtue of this order—Until further orders, the officials and Institutions mentioned in the order shall oversee the arrangements—Ecology—Disposal of hazardous waste—Legislation—Amendment in relevant statutes suggested.*

*Research Foundation for Science Technology National Resource Policy v. Union of India and Anr., [2005] 10 SCC 510, referred to.*

CIVIL ORIGINAL JURISDICTION : Writ Petition (Civil) No. 657 of 1995.

Under Article 32 of the Constitution of India.

WITH

S.L.P. No. (c)16175 of 1997 C.A. No. 7660 of 1997.

Suo moto Cont. Pet. (C) No. 155 of 2005 in W.P. (C) 657 of 1995.

Gopal Subramanian, R. Mohan, ASGs, Manjit Singh, J.S. Attri, AAGs, Mukul Rohtagi, TS Doabia, Sanjay Parikh, A.N. Singh, Jitin Sahni, Ravinder Reddy, S. Udaya Kumar Sagar, Bina Madhavan, Mahesh Agarwal, Vinod Ravani, Gaurav Goel, Rishi Agrawala, E.C. Agrawala, Atul Y. Chitale, Suchitra A. Chitale, S. Srivastava, A. Subba Rao, Satyakam, Ashok Bhan, Kiran

- A Bhardwaj, Rajni Ohri Lal, DS Mahra, Ajay Sharma, Vijay Panjwani, Manoj Saxena, Rajnish Kr. Singh, Rahul Shukla, TV George, KN Madhusoodhanan, R. Sathish, Minakshi Sarma (for M/s Corporate Law Group) Anukul Raj, Rituraj Biswas, Gopal Singh, U. Hazarika, Satya Mitra, Sumita Hazarika, V.G. Pragasam, S. Joseph Aristotle, S. Prabu Ramasubramanian, JR Das, Swetaketu Mishra, SR Mohanty (for Sinha & Das), Sanjay R. Hedge, Amit Kr. Chawla, B Vikas Bansal, Anil Kr. Jha, Khwairakpam Nobin Singh, Hemantika Wahi, Pinky, Shivangi, Sangeeta Singh, Raj Panjwani, D.N. Goburdhan, Pinky Anand, Ramesh Singh, Nina Gupta, Neha Sharma, Swigin George, A. Subhashini, P. Parmeswaran, B. Vijayalakshmi Menon, Shomona Khanna, Gaurav Agrawal, A. Mariarputham, Aruna Mathur, Anil Katiyar, Ashok Mathur, Bina Gupta, B. C Krishna Prasad, Binu Tamta, D.N. Mishra, Ejaz Maqbool, K.B. Rohtagi, Manik Karanjwala, J.B. Dadachanji & Co. Pramod Swarup, Pradeep Misra, Riku Sarma (for Corporate Law Group) Sushma Suri, Urmila Sirur, Shakil Ahmed Syed, S. Janani, Ravindra Kumar, Rakesh K. Sharma, Radha Shyam Jena, Anitha Shenoy, BV Balram, Jay Savla, Atishi Dipankar, V.N. Raghupathy, Jayshree. Wad (for J.S. Wad & Co.), Nikhil Nayyar, Vibha Datta Makhija, Kamendra Mishra, D Yashraj Dingra, Ashwani Bhardwaj, Asha G. Nair, K.K. Gupta, Anil Kumar Jha, Vijay Pratap Singh, Aruneshwar Gupta, Manish Kumar, K.B. Rohrtagi, A. Subhashini, Neha, Rakesh K. Sharma, Anil Shrivastav, Vikrant Singh Vais, Kamendra Mishra, Mohanprasad Meharia, Ajay Sharma and Yashpal Dingra for the appearing parties.

E The Order of the Court was delivered by

**DR. ARIJIT PASAYAT, J. 1.** By order dated 17.2.2006 in the present W.P.(C) No.657/1995 this Court passed the following order:

- F “It is brought to our notice that the ship Clemenceau has been directed to be taken back to France. Therefore, immediate controversy relating to Clemenceau ship seems to be over. But the problem is a recurring one. First and foremost requirement as of today is to find out the infrastructural stability and adequacy of the ship breaking yard at Alang. It has to be found out whether the same are operational/
- G operating in a way that environmental hazards and pollution are avoided and/or equipped to meet the requirements in that regard. For that purpose, it is necessary to constitute a Committee of technical experts who can, after obtaining views and inviting suggestions from those who would like to give them to find out whether the infrastructure
- H as existing at Alang presently is adequate. If according to the

Committee, it is not adequate it shall indicate the deficiencies, and shall also suggest remedial measures to upgrade the infrastructural facilities. For this purpose, Union of India shall, as early as practicable, constitute a Committee of technical experts, some of them having Navy background, preferably retired officers, The Committee shall submit its report to this Court within eight weeks. The expenses of the Committee shall be met by the Ministry of Environment and Forests. Since at various points of time various guidelines have been indicated, it would be appropriate if they are properly codified to be followed scrupulously by all concerned including the Government authorities. The matter is adjourned by ten weeks"

2. Subsequently, time for submission of report was extended from time to time. It appears that in compliance with the aforesaid order the Ministry of Environment and Forests after getting views of the concerned ministries and organizations constituted a Committee for recommending on issues relating to Ship Breaking. In terms of order of the Ministry dated 24.3.2006 the Committee was headed by the then Secretary, Ministry of Environment and Forests and comprised of experts from reputed organizations like National Institute of Occupational Health (NIOH), Ahmedabad, Indian Toxicological Research Centre (ITRC), Lucknow, retired Naval Officers, Academicians from Indian Institutes of Technology (IITs) of Kharagpur and Chennai and Central Pollution Control Board (CPCB). The Committee after examining various materials and details has submitted its report. During its various sittings, agencies and individuals were called for discussions. They included the Gujarat Maritime Board (in short 'GMB'), Department of Ports, Govt. of Gujarat, representatives of Alang-Sosiya Ship Breakers' Association (in short 'ASSBA Breakers'), Gujarat Pollution Control Board (in short 'GPCB'), Department of Customs, Alang, Directorate of Industrial Safety and Health (in short 'DISH' of Govt. of Gujarat), Representatives of Workers at Alang Sosiya Yard, Assistant Labour Commissioner, Gujarat Enviro Protection and Infrastructure Ltd. (in short 'GEPIL'), operators of Treatment, Storage and Disposal Facility (in short 'TSDF') at Alang. The Committee as it appears from the reports has undertaken a very elaborate and detailed study of the problems and has also suggested valuable norms and solutions. It has focused on the "Hazards Associated with Ship Breaking" under this broad head. Reference has been made to hazards in ship breaking industry, occupational and health issues, primary preparation and breaking, occupational health hazards associated with different stages of ships, secondary breaking and sorting and handling of hazardous materials. It has also focused on ships of special concern and the assessment

A of hazardous wastes and potentially hazardous materials. It has also referred to occupational health and safety issues at Alang-Sosiya Yard and the asbestos related issues. Reference has been made to studies conducted by National Institute of Occupational Health and Workers evaluation of State and the Demonstration facility for Asbestos Removal. It has categorized the "ships of special concern" as follows:

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3. Table-2.1. Categories of Ships of "Special Concern"

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Sl.No.	Category	Nature of Concern	Essential Infrastructure and Precautions Necessary
1.	Warships	Large quantities of PCBs, ACMs	Adequate infrastructure at the yard to handle the identified quantities, adequate approved infrastructure of disposal facilities nearby, adequately trained staff, strict monitoring by SPCB/SMB
2.	Large Passenger Liners	Large quantities of PCBs, ACMs	Adequate infrastructure at the yard to handle the identified quantities, adequate approved infrastructure of disposal facilities nearby, adequately trained staff, strict monitoring by SPCB/SMB
3.	Nuclear Powered Ships	Residual Radiation Level	Monitoring by AERB/Health Physics Department

			of BARC of residual radiation level and if found higher than the permissible limits to recommend measures for decontamination. Reactors, cores and all radioactive wastes to be removed by owner before last voyage for breaking
4.	Deep Draft Ships requiring to be beached at 1.5 K.M. or more from the shore base line	Distance from the Beach during beaching	Extra precautions in transferring hazardous materials or materials containing hazardous substances to avoid spillage into the sea.
5.	IMDG	Hazardous Residues in Cargo Tanks	Adequate infrastructure at the yard to handle the identified quantities, adequate approved infrastructure of disposal facilities nearby, adequately trained staff, strict monitoring by SPCB/SMB
6.	FPSO/Offshore Platforms	Beaching difficulties	Extra precautions in transferring hazardous materials or materials containing hazardous substances to avoid spillage into the sea.

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A 4. The recommended process for anchoring, beaching and breaking needs to be quoted:

B “3. Upon entry into the Port area, a ship is allowed to be anchored by dropping one or more anchors to the seabed. This prevents drifting of the ship, tethers it to one spot, and enables boarding from boats. A ship at anchor may lift its anchors, and sail away. Anchoring of ships is thus fully reversible.

C Beaching refers to running aground on the beach a ship meant for breaking by the beaching method. This ship is sailed into the beach under its own power or is towed by barges. A beached ship is rendered immobile, and cannot usually be refloated. Beaching is thus irreversible.

D “Ship Breaking” is the process of dismantling a vessel's structure for scrapping or disposal whether conducted at a beach, pier, dry dock or dismantling slip. It includes a wide range of activities, from removing all gear and equipment to cutting down and recycling the ship's infrastructure.

E It may be mentioned that a ship at anchor, or while otherwise afloat, requires to be fully manned, with at least generators running. These involve significant costs. There is little possibility of hazardous materials embedded in the ship's equipment or structure being released to the environment, till the stage of ship breaking. Accordingly, the Committee considered that it is not necessary to require ships to remain outside Port limits, or outside the territorial waters, or the Exclusive Economic Zone (EEZ), pending decision on its being permitted to anchor, or beach.

F 3.1. *Recommended Process for Anchoring:*

G The ship owner or recycler should submit the following documents well in advance of the arrival of the ship for recycling for a desk review by the SMB in consultation with SPCB and Customs Department:

- H (a) Name of the Ship  
(b) IMO Identification No.  
(c) Flag

(d) Call Sign A

(e) Name of the Master of the Ship and his nationality

(f) List of the crew

(g) GRT/NRT/LDT of the ship with supporting documents B

(h) Assessment of hazardous wastes/hazardous substances: In the structure of the ship, and on board as far as practicable by reference to the ship's, drawings, technical specifications, ship's stores, manifest, in consultation with the ship builder, equipment manufacturers and others as appropriate. In the case of ships of special concern, in addition to identification and marking of all areas containing hazardous wastes/hazardous substances, quantification of such wastes/substances would also be necessary. C

After desk review by SMB/SPCB/Customs, a decision will be taken regarding permission for anchorage of the ships. *In case, permission is refused by any one of these three agencies, the ship owner would be entitled to both a review and appeal. SMB and Customs Dept. would separately notify the procedure therefor along with the time frames and consequences of not adhering to the time frames. In the case of SPCB, while review would be done by an appropriate authority of the SPCB itself, the appeal would lie with the CPCB since there are no specific legal provisions governing this. Once a decision is taken to accord permission for anchorage, instructions for safe anchorage would be issued by the SMB.* D

### *3.2 Recommended Process for Beaching:*

For obtaining beaching permission, the recycler has to submit documents as per Annexure - I of the GMB notification dated 05th July 2003. At anchorage, the ship would be boarded by representatives of Customs Dept./ SPCB/ Explosives Dept./AERB to verify the submissions/data provided for desk review. If considered necessary, an adequate and representative sample may be used for the verification. E

For oil tankers, Gas Free and Fit for Hot Working certificate should also be submitted in respect of oil cargo tanks and slop tanks. F

After verification, beaching permission will be given by SMB based on clearance granted by all the above/concerned departments/agencies. Again in the event of refusal to grant permission for beaching the G

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A ship owner shall be entitled to a review and appeal on the lines of provisions governing anchorage. Thereafter, the recycler pays customs duty and takes charge of the ship.

*3.3 Recommended Process for Breaking:*

B The ship recycling plan is an important document. It has two components i.e. Ship Specific Dismantling Plan, and Recycling Facility's Management Plan. To obtain permission for recycling, the recycler is currently required to submit application in Form 2 of GMB's notification dated 05th July 2003 along with the documents specified therein. In addition, the ship recycler should also submit a Dismantling Plan and a copy of the Recycling Facility's Management Plan, along with approval of SPCB therefor.

*3.3.1. Recycling Facility Management Plan:*

D Before granting authorization to the recycling facilities, the SPCB should ensure that the Plan has been adopted by the Board, or the appropriate governing body of the company, and should include:

E (a) A policy with focus on adequate worker safety and the protection of human health and environment the establishment of goals leading to the minimization, and ultimately elimination of the adverse effects on human health and the environment caused by ship recycling.

(b) A system for ensuring the implementation of the requirements set out in national regulations, the achievement of goals set out in the policy of the company, and a commitment to continual improvement of the procedures used in ship recycling operations.

F (c) Identification of roles and responsibilities of supervisors, contractors, and workers.

(d) A programme for appropriate training of workers and availability of adequate PPEs and material handling equipment.

G (e) An emergency preparedness and response plan for the plot.

(f) A system for monitoring the performance of the ship recycling operations.

H (g) A system for reporting how, the ship recycling operations would be performed, including system for reporting discharges, emissions,

and accidents causing damage or potential to cause damage to workers' safety, human health and the environment, due to handling of hazardous wastes, and materials containing hazardous substances. A

**3.3.2. Ship Specific Dismantling Plan:**

Before starting the recycling process, the recycler should submit a Dismantling Plan to the authorities, which should include: B

(a) Details about the ship, and in particular, a fair assessment of hazardous wastes/hazardous materials.

(b) Ship breaking schedules with sequence of work. C

(c) Operational work procedures.

(d) Availability of material handling equipment and PPEs.

(e) Plan for removal of oil and cleaning of tanks.

(f) Hazardous waste handling and disposal plan. D

(g) "Gas-free and fit for hot work" certificate issued by the Department of Explosives, or any competent agency authorized by the Department of Explosives.

(h) Identification and marking of all non-breathable spaces by the Recycler. E

(i) Identification and marking of all places containing/likely to contain hazardous substances/hazardous wastes.

(j) Confirmation to the effect that ballast water has been exchanged in the high seas. The tasks should address all the three phases of recycling, i.e. F

(i) Preparation phase

(ii) Dismantling phase

(iii) Waste stream management. G

(k) Asbestos being a major area of concern, the scheme for removing asbestos, and asbestos containing materials (ACMs) on board, and on shore, should be specifically provided. The plan should include arrangements for handling treatment and disposal. Locations having H

**A** asbestos/ACMs should be marked before commencing dismantling operations.

(l) Systems and procedures to be followed to document and keep track of all hazardous waste generated during recycling, as well as hazardous substances found on board the ship, and their transport to the disposal facility or registered recycling facility should be provided."

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5. It has also suggested sequence of steps/process for grant of clearance by SMB/SPCB/Customs Department for ships destined for dismantling at Ship Breaking Yards. The same reads as follows:

**C** (i) The removal of asbestos dust and fibres and its handling should be done in a wet condition.

(ii) On shore removal of asbestos should be done in enclosures maintained under negative pressure, with filters for outgoing air and wastewater. The applicable BIS specifications should be adhered to in respect of such enclosures.

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(iii) For ships of "Special Concern", where asbestos/ACMs quantities are the Special Concern, asbestos/ACMs removal on board should be done in enclosures maintained under negative pressure with arrangements for filtration of outgoing air and wastewater. For other ships, the practice of wet removal of asbestos on board may be adequate with the use of appropriate PPEs.

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(iv) The asbestos and broken pieces of ACM's sheets/panels thus removed should be packed in leak proof synthetic packets and disposed of at secured landfills where the packets should be solidified by mixing with cement. Recovered and usable ACMs sheets/panels may be sold for reuse as permitted by law.

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(v) PPEs like masks under positive pressure (or masks or respirators meeting BIS specifications for asbestos handling) should be provided to all the workers engaged in asbestos removal.

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(vi) Asbestos fiber concentrations should be monitored regularly.

6. The report contains recommendations on management of occupational safety and health issues and handling of hazardous materials and hazardous wastes. The report also identifies the stake holders. It is pointed out that the agencies responsible for ensuring compliance with the regulations in Gujarat

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are GMB, DISH, Govt. of Gujarat, GPCB, Customs and the Petroleum Safety Organisation. Reference has also been made to Workers Welfare issues. Summary of the recommendations has been categorised into four categories i.e. immediate, short term, medium term and long term. A

7. We have heard learned counsel for the parties at length. There is unanimity that the report is a comprehensive one. Certain suggestions have been given by Mr. Parekh to the effect that there should be additional precaution for de-contamination. It is suggested that before leaving port in a foreign country a certificate that it is totally de-contaminated should be obtained. We find many practical difficulties in accepting this suggestion. In fact the decontamination aspect has been taken care of in the report. The authorities in India can without the certificate at the stage of anchorage verify and come to a conclusion that if the ship is contaminated same is to be sent back. B C

8. In *Research Foundation for Science Technology National Resource Policy v. Union of India and Anr.*, [2005] 10 SCC 510 while dealing with the aspect of ship breaking. It was noted as follows: D

(2) Ship-breaking:

We accept the following recommendations of HPC:

"(1) Before a ship arrives at port, it should have proper consent from the authority concerned or the State Maritime Board, stating that it does not contain any hazardous waste or radioactive substances. AERB should be consulted in the matter in appropriate cases. E

(2) The ship should be properly decontaminated by the ship owner prior to the breaking. This should be ensured by SPCBs. F

(3) Waste generated by the ship-breaking process should be classified into hazardous and non-hazardous categories, and their quantity should be made known to the authority concerned or the State Maritime Board. G

(4) Disposal of waste material viz, oil, cotton, dead cargo of inorganic material like hydrated/solidified elements, thermocol pieces, glass wool, rubber, broken tiles, etc. should be done in a proper manner, utilising technologies that meet the criteria of an effective destruction efficiently of 99.9 per cent, with no generation of persistent organic pollutants, H

- A and complete containment of all gaseous, liquid and solid residues for analysis and, if needed, reprocessing. Such disposed-of material should be kept at a specified place earmarked for this purpose. Special care must be taken in the handling of asbestos wastes, and total quantities of such waste should be made known to the authorities concerned.
- B The Gujarat Pollution Control Board should authorise appropriate final disposal of asbestos waste.
- (5) The ship-breaking industries should be given authorization under Rule 5 of the HW Rules, 2003, only if they have provisions for disposal of the waste in environmentally sound manner. All authorisations should be renewed only if an industry has facilities for disposal of waste in environmentally sound manner.
- C (6) The State Maritime Board should insist that all quantities of waste oil, sludge and other similar mineral oils and paint chips are carefully removed from the ship and taken immediately to areas outside the beach, for safe disposal.
- D (7) There should be immediate ban of burning of any material whether hazardous or non-hazardous on the beach.
- E (8) The State Pollution Control Board (of Gujarat and other coastal States where this ship-breaking activity is done) be directed to close all units which are not authorised under the HW Rules.
- (9) That the plots where no activities are being currently conducted should not be allowed to commence any fresh ship-breaking activity unless they have necessary authorisation.
- F (10) The Gujarat PCBs should ensure continuous monitoring of ambient air and noise level as per the standards fixed. The Gujarat PCBs be further directed to install proper equipment and infrastructure for analysis to enable them to conduct first-level inspection of hazardous material, radioactive substances (wherever applicable). AER shall be consulted in such cases.
- G (11) The Gujarat SPCB will ensure compliance with the new Gujarat Maritime Board (Prevention of Fire and Accidents for Safety and Welfare of Workers and Protection of Environment during Ship breaking Activities) Regulations, 2000, by the Gujarat Maritime Board and should submit a compliance report to the Court within one year of the coming into force of the said Regulations.
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(12) The notification issued by GMB in 2001 on gas free for hot work, should be made mandatory and no ship should be given a beaching permission unless this certificate is shown. Any explosion irrespective of the possession of certification should be dealt with sternly and the licence of the plot-holder should be cancelled and the Explosives Inspector should be prosecuted accordingly for giving the false certificate.

(13) A complete inventory of hazardous waste on board of ship should be made mandatory for the shipowner. And no breaking permission should be granted without such an inventory. This inventory should also be submitted by GMB to SPCBs concerned to ensure safe disposal of hazardous and toxic waste.

(14) The Gujarat Maritime Board and Gujarat SPCB officers should visit sites at regular intervals so that the plot-owners know that these institutions are serious about improvement in operational standards. An inter-ministerial Committee comprising Ministry of Surface Transport, Ministry of Steel, Ministry of Labour and Ministry of Environment should be constituted with the involvement of labour and environment organisations and representatives of the ship-breaking industry.

(15) SPCBs along with the State Maritime Boards should prepare landfill sites and incinerators as per CPCB guidelines and only after prior approval of CPCB. This action should be taken in a time-bound manner. The maximum time allowed should be one year.

(16) At the international level, India should participate in international meetings on ship-breaking at the level of the International Maritime Organisation and the Basel Convention's Technical Working Group with a clear mandate for the decontamination of ships of their hazardous substances such as asbestos, waste oil, gas and PCBs, prior to export to India for breaking. Participation should include from Central and State level.

(17) The continuation or expansion of the Alang ship-breaking operations should be permitted subject to compliance with the above recommendations by the plot-holders.

(18) That the above conditions also apply to other ship-breaking activities in other coastal States."

- A 9. It is desirable that the Government of India shall formulate a comprehensive Code incorporating the recommendations and the same has to be operative until the concerned Statutes are amended to be in line with the recommendations. Until the Code comes into play, the recommendation shall be operative by virtue of this order. Until further orders, the officials of Gujarat Maritime Board, the concerned State Pollution Control Board, officials of the
- B Customs Department, National Institute of Occupational Health (in short 'NIOH') and Atomic Energy Regulatory Board (in short 'AERB') shall oversee the arrangement. The Collector of the district shall be associated when the actual dismantling takes place. Within three weeks the Central Government shall notify the particular authorities. The vetting of the documents to be
- C submitted for the purpose of grant of permission for ship breaking shall be done by the authorities indicated above.

10. It is ordered accordingly.

R.P.

Matters disposed of.