



TAMIL NADU POLLUTION CONTROL BOARD

Proceedings. No. T2/TNPCB/33718/VLR/2018-2, dated:26.11.2018

Sub: TNPCB - Industries – Remediation of contaminated site of M/s. Tamilnadu Chromates and Chemicals Limited (M/s. TCCL), Plot No.25, SIPCOT Industrial complex, Ranipet, Walajah Taluk, Vellore District - Directions issued - under Provisions of Section 5 of Environmental (Protection) Act, 1986 - regarding.

- Ref:**
1. D.O.Letter No 12-68/201-HSMD dated 16/11/2011 addressed by the Secretary, Ministry of Environment & Forests, Government of India to the Chief Secretary to Government of Tamilnadu.
 2. CPCB letter F.No B-29016/59(1)/HWMD/NCEF (1-19)/ 2014/2754 dated 05.08.2014
 3. CPCB D.O. Letter No 290167 / 59 (1)/ HWMD / NCEF(7) /2015 / 7251 dated 15.11.2016 .
 4. Govt. Letter No.18115/EC.2/2011-28 dt. 9.10.2017
 5. Orders of the Hon'ble High Court of Judicature at Madras in W. P. No 40831 of 2005 and W.P No 49861 of 2006 dated 08.09.2010
 6. Proceedings. No. T2/TNPCB/33718/VLR/2017,dated: 27 .4.2018
 7. Letter dated 05.06.2018 received from DESK LAW ASSOCIATES your counsel
 8. LR No TNPCB/DEE/VLR/CC/MISC-173/2018 dated 05.07.2018
 9. LR No 18115/EC.2/2011-31 dated 01.08.2018 received from Principal Secretary to Government Environment & Forests Department

Whereas, during the course of operation of M/s. Tamilnadu Chromates and Chemicals Limited (M/s.TCCL), Plot No.25, SIPCOT Industrial complex, Ranipet, Walajah Taluk, Vellore District, the unit has dumped approximately 2.27 lakh tons of hexavalent chromium bearing waste on open land over an area of about 2 Hectares to a height of 3 to 5 meters without taking any precaution to contain ground water pollution due to the leachate and its impact on public health and environment.

Whereas , the unit was under your management during the period 1990-98 and approximately 52,480 Tons of Hexavalent Chrome bearing wastes were reported to be generated when the said unit of M/s Tamilnadu Chromates and Chemicals was managed and functioned under your management.

Whereas, the studies conducted by TNPCB through various agencies revealed that the sub-soil and ground water in the area is contaminated with hexavalent chromium and trivalent chromium and the contamination has spread upto a distance of nearly 2.5 km away from the dumpsite.

Whereas, the waste generated and dumped at the premises of M/s. Tamilnadu Chromates and Chemicals Limited is process residues generated from the process operation 38, ie., Chemical processing of Ores containing heavy metals such as Chromium, Manganese, Nickel, Cadmium etc(waste stream 38.1). Based on Schedule II, the waste is identified as Class A4 - Chromium and/or Chromium (III) compounds where the leachable constituent of Chromium (VI)/(III) should be less than 5 mg/l. But the leachate concentrations are in the range of 51 to 69 mg/l. Hence the said wastes are hazardous waste attracting the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 notified under the Sections 6, 8 and 25 of the Environment (Protection) Act, 1986.

Whereas, as per section 8 of the Environment Protection Act, 1986 as amended, "No person shall handle or cause to be handled any hazardous substance except in accordance with such procedure and after complying with such safeguards as may be prescribed". Accordingly the chromium bearing waste should have been handled in compliance with the provisions of Hazardous Wastes (Management and Handling) Rules, 1989 as amended in 2000. At present, wastes are to be handled in compliance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 which has been notified in supersession of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 .

Whereas, the unit of M/s. Tamilnadu Chromates and Chemicals Limited has neither taken any steps nor initiative to handle the hazardous waste generated by it by complying with the provisions of Section 8 of the Environment (Protection) Act, 1986 and Rule 4 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 notified under the said Act.

Whereas, as per Rule 4 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016,

"(1) For the management of hazardous and other wastes, an occupier shall follow the following steps, namely:-

- (a) prevention;
- (b) minimization;
- (c) reuse,
- (d) recycling;
- (e) recovery, utilisation including co-processing;
- (f) safe disposal.

(2) The occupier shall be responsible for safe and environmentally sound management of hazardous and other wastes.



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(3) The hazardous and other wastes generated in the establishment of an occupier shall be sent or sold to an authorised actual user or shall be disposed of in an authorised disposal facility.

(4) The hazardous and other wastes shall be transported from an occupier's establishment to an authorised actual user or to an authorised disposal facility in accordance with the provisions of these rules.

(5) The occupier who intends to get its hazardous and other wastes treated and disposed of by the operator of a treatment, storage and disposal facility shall give to the operator of that facility, such specific information as may be needed for safe storage and disposal.

(6) The occupier shall take all the steps while managing hazardous and other wastes to-

(a) contain contaminants and prevent accidents and limit their consequences on human beings and the environment; and

(b) provide persons working in the site with appropriate training, equipment and the information necessary to ensure their safety."

Whereas as per the provisions of Rule 3-21 of the rules , "occupier" in relation to any factory or premises, means a person who has, control over the affairs of the factory or the premises and includes in relation to any hazardous and other wastes, the person in possession of the hazardous or other waste.

Whereas, as per the provisions of the Rule 23 -1 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, the occupier, importer or exporter and operator of the disposal facility shall be liable for all damages caused to the environment or third party due to improper handling and management of the hazardous and other waste

Whereas , as per the provisions of the Rule 23-2 Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, the occupier and the operator of the disposal facility shall be liable to pay financial penalties as levied for any violation of the provisions under these rules by the State Pollution Control Board with the prior approval of the Central Pollution Control Board

Whereas, as per the provisions of the Section 9(1) , 9 (2) and 9 (3) of Environment (Protection) Act, 1986 , "(1) Where the discharge of any environmental pollutant in excess of the prescribed standards occurs or is apprehended to occur due to any accident or other unforeseen act or event, the person responsible for such

discharge and the person in charge of the place at which such discharge occurs or is apprehended to occur shall be bound to prevent or mitigate the environmental pollution caused as a result of such discharge and shall also forthwith--

(a) intimate the fact of such occurrence or apprehension of such occurrence; and

(b) be bound, if called upon, to render all assistance, to such authorities or agencies as may be prescribed.

(2) On receipt of information with respect to the fact or apprehension on any occurrence of the nature referred to in sub-section (1), whether through intimation under that sub-section or otherwise, the authorities or agencies referred to in sub-section (1) shall, as early as practicable, cause such remedial measures to be taken as necessary to prevent or mitigate the environmental pollution.

(3) The expenses, if any, incurred by any authority or agency with respect to the remedial measures referred to in sub-section (2), together with interest (at such reasonable rate as the Government may, by order, fix) from the date when a demand for the expenses is made until it is paid, may be recovered by such authority or agency from the person concerned as arrears of land revenue or of public demand."

Whereas, the study report furnished by M/s. ERM India Pvt. Ltd. describes the interim measures to contain further contamination of the site.

Whereas, the Tamil Nadu Pollution Control Board obtained a proposal from NEERI, Nagpur, to treat surface run off water, leachate generated from site during rainy season. Accordingly the tentative cost of providing the leachate treatment is Rs. 80.36 Crores.

Whereas, the scope of work contemplated by Tamil Nadu Pollution Control Board involves consulting services and procurement plan for goods, works and non-consulting services and it covers equipments at site (Ranipet) and at TNPCB Central Laboratory, remediation works of M/s. TCCL site (Excavation and related works), Post remediation works of M/s. TCCL site, green belt development in SLF area and establishment of laboratory building.

Whereas the Secretary to Government, MoEF Government of India vide D.O. 1st cited informed the Chief Secretary to Government, Government of Tamilnadu about the initiative taken for remediation of various contaminated sites in India under the NCEF. According to the funding pattern, 40 % of the project cost including the cost involved for the preparation of Detailed Project Report (DPR) is to be borne by the Government of India and 60 % of the project cost requires to be borne by the State Government either directly or by entering into Public -Private Partnership (PPP) leveraging expected appreciation in the value of the de-contaminated land. The State Government should also



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invoke the Polluter Pays Principle to the extent feasible to meet the project cost. The State Government is to decide the detailed funding on case to case basis, depending on the potential for use of the remediated land, identification of polluters, their capacity to pay , possible revenue sharing etc., Thus, besides option of polluter pays principle ,public private partnership or a combination of both can be explored.

Whereas CPCB being the executing agency for the above project has awarded the contract to M/s. ERM India Private Limited for preparation of Detailed project report and providing consultancy services for the remediation of chromium contaminated area at Ranipet, Tamil Nadu at a cost of Rs. 2,97,08,815/- vide letter under reference 2nd cited

Whereas the Chairman CPCB vide the D.O letter 3rd cited has informed that it is expected that an amount of approximately Rs. 120 Crores would be required for executing the remediation works. Whereas the said cost is tentative and actual cost can be arrived only after detailed engineering design and proposal is submitted.

Whereas, vide the reference 4th cited, Government in E &F Department has instructed the TNPCBd that necessary direction may be issued to M/s. Tamilnadu Chromates and Chemicals Limited under Section 9(1) and 9 (2) of Environment (Protection) Act, 1986 for recovering the cost under Polluter pay principle and carry out remediation.

Whereas, the Hon'ble High Court of Judicature at Madras clubbed the petitions together and directed vide order dated 12.01.2010 (which is read in order dated 08.09.2010- Order 5th cited in the reference) that petitioners in both the Writ Petitions should remit Rs. 15 Lakhs (by Thiru Ashok Balasubramaniam) and Rs 35 Lakhs (by TIDCO) to the Tamilnadu Pollution Control Board for violation of the conditions imposed by the Board while granting the consent .TIDCO has remitted Rs. 35,00,000/- towards cost of remediation charges as per NEERI recommendation vide CR. No. 47015 dated 10.02.2010 .However there are no records available with the Board evidencing that you have remitted Rs. 15 Lakhs on your part.

Whereas, the High Court in it's order dated 08.09.2010 has taken on record that TNPCB has furnished proposal for remediation of chrome contaminated site at Ranipet for World Bank funding through Ministry of Environment & Forests. As the petitioners have paid the amount in compliance with the directions of the court there is no action at this point of time. In case the Pollution Control Board is not in a position to get necessary aid from World Bank it is open for them to restore the proceedings".

Whereas as the Tamilnadu Pollution Control Board was unable to get any aid or grant from the World Bank for funding the remediation and clean up of the chrome contaminated site at the premises of M/s. Tamilnadu Chromates and Chemicals Limited (M/s.TCCL), Plot No.25, SIPCOT Industrial complex, Ranipet, Walajah Taluk, Vellore District and whereas the Board is left with no other option but to restore the proceedings and take further action to recover the funds for remediation of the said chrome contaminated site from you .

Whereas, the waste generated and dumped at the premises of M/s. Tamilnadu Chromates and Chemicals Limited is process residues generated from the process operation 38 listed in Schedule 1 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 notified under the Sections 6, 8 and 25 of the Environment (Protection) Act, 1986, ie., Chemical processing of Ores containing heavy metals such as Chromium, Manganese, Nickel, Cadmium etc(waste stream 38.1) . Based on Schedule II, the waste is identified as Class A4 - Chromium and/or Chromium (III) compounds where the leachable constituent of Chromium (VI)/(III) should be less than 5 mg/l. But the leachate concentrations are in the range of 51 to 69 mg/l. Hence the said wastes are hazardous waste attracting the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 notified under the Sections 6, 8 and 25 of the Environment (Protection) Act, 1986. This waste dump is still leaching Hexavalent Chromium and Total Chromium bearing leachate and there is continued contamination of ground water and soil .

Whereas, as per section 8 of the Environment Protection Act, 1986, the chromium bearing waste should have been handled in compliance with the provisions of Hazardous Wastes (Management and Handling) Rules, 1989 as amended in 2000. At present, wastes are to be handled in compliance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 which has been notified in supersession of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 .

Whereas the following directions under the section 5 of the Environment (Protection) Act, 1986 in respect of environmental damages caused by the unit was issued to you, vide the reference 6th cited ,invoking the provisions of Sections 9(1), 9(2), 9 (3), and 5 of the Environment (Protection) Act, 1986:

To immediately remit Rs. 15,00,000/-- as per the orders of the Hon'ble High Court as principle amount.



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Besides you were also directed to show cause as to why proportionate cost and further interest on the principle at reasonable rate should not be recovered from you towards the cost of remediation and cleanup which is likely to be incurred for restoring the damaged components of the environment during the tenure period when the unit of M/s. Tamilnadu Chromates and Chemicals Limited, Ranipet, Vellore District, was under your management.

Whereas, In the letter 7th cited, your counsel has stated that you have taken ample steps to cover the wastes dump using polythene sheets and have undertaken drainage construction works along the boundary where the dump is located at cost of Rs. 25 Lakhs. It is also stated that the officials of TNPCB visited the said site to ascertain the facts and that you were under the genuine impression that the cost incurred for the above would be treated in lieu of the payment of Rs.15 lakhs to be made by you to TNPCB. In the said reply, your counsel has also stated that you have decided to approach the Hon'ble High Court to explain the High Court of the above circumstances and get waiver for the payment which was ordered to be paid. Till such time the High Court clarifies this issue, the Board has been requested not to take any action on this issue.

Whereas, it is evident that you have not remitted Rs .15 lakhs to the Board as per the High Court Order. Whereas there is no record in the file as evidence that you have spent Rs. 25 Lakhs to cover the wastes dump using polythene sheets and also to have undertaken drainage construction works along the boundary where the dump is located .Besides there is no evidence about inspection by officials of TNPCB of the said site to ascertain the facts.

Whereas, the District Environmental Engineer, Vellore vide the reference 8th cited has also reported that there is no evidence in the form of Records/ Inspection Report/Documents and Photos available in the file regarding the action taken by the management of M/s Tamil Nadu Chromates & Chemicals Limited or by SIPCOT to cover the waste dump/pile.

Whereas, the District Environmental Engineer has reported the following that in the article published with photos under the heading "Pollution unchecked" in the "FRONTLINE" DATED September 19, 1997 regarding health issues of chromium pollution of M/s. TCCL. In the article it is stated that Thiru. Ashok Balasubramanian took charge as Managing Director of M/s. TCCL in June, 1991 and over nine-tenths of the accumulated solid waste remained uncovered, even as, a part of the waste was

covered by poor quality tarpaulin sheets. Photos published showed partly covered accumulated sludge (chromium sludge) at the factory premises.

Whereas, the site of M/s. Tamil Nadu Chromates and Chemicals Limited at Plot No. 25, SIPCOT Industrial Complex, Ranipet, Vellore district was inspected jointly by JCEE(M)/Vellore Zone, DEE/Vellore, AEE/Vellore and Project Officer/SIPCOT on 03.07.2018 and the following is reported.

1. The industry shed & ETP are found in dilapidated condition. The Northern side compound wall is found in damaged condition.
2. Tarpaulin pieces are found on the waste dump/pile surface at various places. It appeared that tarpaulin might have been used to cover the accumulated dump/pile partially and this would have worn out in course of time due to weather condition.
3. Leachate from the waste dump/pile is found flowing in yellow colour in the existing drain running outside the premises on the eastern side adjacent to neighbor unit of M/s. Thirumalai Chemicals Ltd.
4. Proper brick work drain is not available around the waste dump/pile and earthen drain is existing all around the compound wall.

Whereas, the District Environmental Engineer, Vellore's report reveals that no tangible measures were taken to provide a proper cover to the Hexavalent Chromium bearing dump with adequate grouting and measures to prevent run off of wastes from the dump and to prevent the contamination of ground water due to generation of leachate and there is continued contamination of soil and ground water due to the generation of leachate from the unit.

Whereas, the Principal Secretary to Government of Tamilnadu vide the reference 9th cited has conveyed the commitment of the State Government for sanction and release of 60% cost towards the Govt. share for Total Project Cost which also includes the remediation of the chrome contaminated site of Tamilnadu Chromates & Chemicals Ltd., at Ranipet, Vellore District and the cost of preparation of the Detailed Project Report (DPR) and to release 60% i.e., Rs. 1,78,25,289/- to CPCB towards the cost for preparation of DPR by M/s. ERM India Pvt Limited.

Whereas, as per the present estimate made by the consultant, M/s ERM India Pvt Limited, the capital cost for the project option involving, Stabilisation & Secure Landfill was Rs. 194 Crores. The capital expenditure cost for ex-situ treatment of ground water is tentatively worked out to be Rs.9-12 crores. The total tentative project capital cost as estimated by the consultant is Rs. 206 Crores. The said cost is tentative and it is likely to vary. Besides, to sustain the project and for remediation of the site necessary provisions will have to be made for providing the operating expenditure till the site is remedied.



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Whereas the Tamilnadu Pollution Control Board has also been instructed vide the Government Letter 9th cited to trace out TCCL erstwhile/ present directors and to fix responsibility to collect their share of 30% (in addition to G.O.I share of 40 % and State share of 30 %), otherwise Tamilnadu Pollution Control Board will have to bear this cost.

Whereas, the Tamilnadu Pollution Control Board intends to invoke the Polluter Pays Principle and obtain the funds from the erstwhile management of M/s Tamilnadu Chromates and Chemicals to meet the project cost and the operation cost involved in the remediation of the contaminated site. Whereas under the tenure of your management, approximately 0.525 Lakh Tonnes of Hexavalent Chromium bearing Hazardous Waste was generated and disposed in the premises of M/s. TCCL.

Whereas in continuation to the directions issued vide the reference 6th cited , the Tamil Nadu Pollution Control Board hereby issues the following directions under the section 5 of the Environment (Protection) Act, 1986 for causing environmental damages and by invoking the provisions of Sections 9(1), 9(2) and 9 (3), the Board directs the Management of M/s. Tamilnadu Chromates and Chemicals Limited to take all measures for remedying or mitigating any pollution caused due to the presence in the stream or well and also to compensate for the expenses to be incurred for remediation of the environment affected and compensate as per the Polluter Pays Principle.

1. To make an immediate deposit of Rs. 15 lakhs towards compliance of the orders of the Hon'ble High Court of Judicature at Madras in W. P. No 40831 of 2005 and W.P No 49861 of 2006 dated 08.09.2010
2. To make an immediate deposit of Rs 41.24 Lakhs towards the Polluters contribution for finalization of the Detailed Project Report which has been estimated proportionate to the quantity of wastes disposed and dumped when the company was under your management.
3. The tentative cost of remediation works out to Rs.206 Crores of which 60% i.e Rs.123.6 Crores. You are instructed to contribute the proportionate share of remediation costs to be incurred in future in proportion to the quantity of wastes generated during your tenure.
4. To furnish the present address of other Directors of the company namely
 - a. Thiru. R.K. Kumar
 - b. Thiru. Mohammed Hashim
 - c. Thiru. K.K. Mohaiadeen

- d. Thiru. N.V. Krishnamurthy
- e. Tmt. Rajeshwari Balasubramaniam
- f. Thiru. A.N. Srinivasa Rao
- g. Thiru. Osman Ali Khan
- h. Thiru. D.N. Sharma
- i. Thiru. B. Chandran
- j. Thiru. K. Venkatram
- k. Thiru. S. Venkatakrisnan
- l. Thiru. D. Mahalingam
- m. Thiru. V. Balasubramaniam
- n. Thiru. P .N. Devarajan
- o. Thiru. S. Susai
- p. Thiru. K .Venkatraman
- q. Thiru. D. Sridharan

Whereas, as per the Section 15 of the Act states that "whoever fails to comply with or contravenes any of the provisions of this Act, or the rules made or orders or directions issued thereunder, shall, in respect of each such failure or contravention, be punishable with imprisonment for a term which may extend to five years or with fine which may extend to one lakh rupees or with both, and incase the failure or contravention continues, with additional fine which may extend to five thousand rupees for every day during which such failure or contravention continues after the conviction for the first such failure or contravention.

Besides You are also directed to furnish reply on the above within 15 days failing which necessary penal action will be taken as per the provisions of Section 15 of the Environment (Protection) Act, 1986 .

It is informed that non-receipt of any reply within 15 days will be construed that you have no satisfactory explanation to offer for the above said contravention and legal action will be taken against you on merits in accordance with law.

V. R. S. Srinivasan
For Chairman 29/11/18
30/11/18

To

Thiru. Ashok Balasubramaniam
S/o Mr V. Balasubramaniam
A-98 New Friends Colony
New Delhi – 110 085



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Copy to

1. The Principal Secretary to Government
Environment and Forests Department
Secretariat
Chennai -600 009
2. The Member Secretary,
Central Pollution Control Board,
Parivesh Bhawan,
CBD-cum-Office Complex
East Arjun Nagar, Delhi – 110 032
3. The Joint Chief Environmental Engineer (Monitoring),
Tamil Nadu Pollution Control Board,
Vellore – for information and follow up action
4. The District Environmental Engineer,
Tamil Nadu Pollution Control Board,
Vellore – for information and follow up action.

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