

**INSTRUCTIONAL ORDER
PE MSR RULE 2013
MANUAL SCAVENGING
NHRC GUIDELINES
SUPREME COURT GUIDELINES
REGARDING PREVENTION OF
WORKER FROM HAZARDOUS ENTRY
IN TO SEWERAGE SYSTEM**



DELHI JAL BOARD

Dir(S&DM)

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**DELHI JAL BOARD : GOVT OF NCT OF DELHI
OFFICE OF THE CHIEF EXECUTIVE OFFICER
VARUNALAYA PHASE-II, KAROL BAGH, NEW DELHI**

No. CEO/DJB/2017/ 182

Date 14.08.2017

INSTRUCTIONAL ORDER

Attention is drawn towards Instructional Order no. 179 dated 09.08.2017 regarding prevention of workers from hazardous entry into sewerage system. Though the aforesaid order has clearly spell out precautionary steps to avoid any unfortunate incident, as a matter of abundance precaution it is once again reiterated that :

- 1) No manual entry in any sewerage system will be permitted.
- 2) No human contact with sewerage will be allowed without the prescribed protected gear.
- 3) As every division has been given 10 SG Beldars, the Executive Engineer concerned is directly responsible for their safe deployment and working. Any evidence of manual entry into sewerage system will invoke the strictest penalty against the EE concerned.
- 4) As per the Instructional order dated 09.08.2017, all Executive Engineers were asked to conduct sensitisation workshop and demonstration of safety gear to not only DJB workers but also to Supervisors, Contractors, their labours, Contractors registered with DJB and all persons working with sewerage system. The aforesaid workshop is to be positively carried out in every division on Thursday 17.08.2017 and 18.08.2017.

Compliance report to this effect is to be submitted to Member (Dr).



(KESHAV CHANDRA)
Chief Executive Officer

- 1) Member(Dr)/Member (WS)
- 2) All Chief Engineers
- 3) All SEs/Director (SDM)
- 4) All EEs

**DELHI JAL BOARD : GOVT. OF NCT OF DELHI
OFFICE OF THE CHIEF EXECUTIVE OFFICER
VARUNALAYA PHASE-II, KAROL BAGH, NEW DELHI**

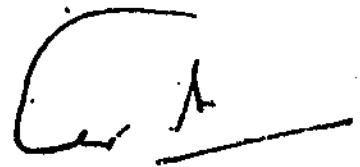
No. CEO/DJB/2017/179

47847

Dated : 09.08.2017

INSTRUCTIONAL ORDER

All the officers of DJB, involved in the sewerage maintenance and project works, have been sensitized time and again to ensure that no human entry into sewerage system which endangers human life should be permitted. Only in the rarest of the rare situation where human entry cannot be avoided, it has to be ensured that all prescribed safety equipments are not only be provided but their application is also ensured strictly. All Chief Engineers should personally ensure that adequate number of such safety equipments are available with them at various locations. All Executive Engineers should also hold a sensitisation programme in their respective divisions calling all workers, supervisors, prospective contractors and registered contractors on this issue urgently. Further, no human entry in such locations will be allowed without Executive Engineer's written order.



(KESHAV CHANDRA)
Chief Executive Officer

- 1) Member (Dr)/(WS)
- 2) All Chief Engineers
- 3) All SEs/ Director (SDM)
- 4) All EEs.

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Jr. Dir. (S.M.)	
DELHI JAL BOARD	
Dairy No.	669
Date	16.8.17

DELHI JAL BOARD	
Dairy No.	628
Date	10/8/17

(2)

OFFICE OF THE MEMBER (DRAINAGE)
DELHI JAL BOARD: GOVT. OF NCT OF DELHI
VARUNALAYA PHASE-II: KAROL BAGH
NEW DELHI-110005

No.F-2(2)MIDR/2015 876 - 879

Dated: 10.12.2015

Subject: Recommendations of the committee constituted by Chief Secy. vide
O.O. No. CS/6590 dated 01.12.2015 regarding guidelines for
cleaning of septic tanks/ STPs.

Member (Dr) has desired that copies of the guidelines finalized by the
Committee and recommended to Delhi Govt. for implementation may be
forwarded to CEs/ Dir.(SDM) for record and future reference in Delhi Jal
Board. Accordingly, the same is enclosed for further necessary action please.

Encl: As above.

PS TO MEMBER (DRAINAGE)

1. CE(Dr)Proj-I & II
2. CE(SDW)
3. Director (S&DM)

Ref: Recommendations of the committee constituted by Chief Secy. vide O.O. No. CS/6590 dated 01.12.2015 regarding guidelines for cleaning of septic tanks/sewage treatment plants.

In pursuance to the orders issued by CS, meeting of the committee was held on 03.12.2015 in the office of Member(DR) at DJB head office. Meeting was attended by the following officers:-

1. Sh. O.P. Mishra, Addl. Secy (Home), 2. Dr. Rajender Dhar, Addl. Labour Commissioner, 3. Sh. Alok Sharma, DS (UD) GNCTD, 4. Sh. Diwakar Agrawal, CPM, PWD
5. Sh. Vilas Rampal, AO (Labour Welfare), DJB

At the outset of the meeting it was apprised to the members of the committee that under Section 7 "Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (MS Act, 2013), no person/ authority or agency engage or employ either directly or indirectly any person for hazardous cleaning of a sewer or septic tank. Since, the MS Act, 2013 has come into force w.e.f. 06.12.2013, hazardous cleaning of sewers/septic tanks is a prohibited activity from 06.12.2014.

Though, these guidelines are largely being followed by the authorities/ local bodies but privately people continue to engage persons to clean their septic tanks/ sewers without protective gears, therefore there is a necessity to educate the public to abide by the guidelines of MS Act, 2013 and avoid manual cleaning under hazardous conditions. It is defined under the act that hazardous cleaning by an employee, in relation to a sewer or septic tanks means its manual cleaning by such employee without the employer fulfilling his obligation to provide protective gear and other devices and ensuring observance of safety precautions, as may be prescribed or provided in any other law, for the time being in force or rules made thereunder.

The committee examined the existing guidelines and precautions to be followed for safety of the persons engaged in cleaning of the septic tanks/sewerage facilities under hazardous conditions or otherwise in general. After deliberating on all the aspects related to the issue and vulnerability to accidents due to presence of poisonous gases, the committee has finalized following guidelines to be followed while undertaking cleaning, repairs & maintenance of sewerage facilities/septic tanks.

PRECAUTIONS TO BE TAKEN WHILE CLEANING OPERATIONS

i) Precautions before commencing the operation:

1. As far as possible mechanised cleaning should be undertaken at the work place. In case it is not feasible to do so, no single person should be allowed to undertake the work of cleaning of sewerage facility.
2. There should be minm. of two employees present all the time and one of them shall be trained and experienced. The supervisor shall remain present at all times.

3. In the peak summer season entry of the person into the sewer manhole/septic tank should not be allowed between 11 AM to 4 PM when concentration of gases is expected to be high.
4. First aid box to meet the emergency should be available at the work place before commencing the work. Keep the emergency contact numbers of ambulance, Police, Fire Brigade handy for use to provide immediate relief in case of any accident.
5. It is the responsibility of the person who has engaged the labour to clean the septic tank/sewage plant to apprise them about the "Do's & Don'ts" in advance to ensure safety.
6. Before undertaking the work, the manholes of the chamber/septic tank/sewers should be kept open for minimum 4 hr. duration to ensure sufficient cross ventilation.
7. Before under taking the work it will be the duty of the employer to note down name of the person, his address, family whereabouts and emergency contact numbers of his near dear ones so that they can be contacted in case of emergency.

ii) Precautions during operations

8. The person engaged for cleaning the septic tanks/ sewers is not allowed to consume alcohol or take any drugs. Also the persons who are not physically fit should not be allowed to undertake the work.
9. The persons engaged for the job will be essentially required to wear the protective gear as per requirement of the work place.
10. The protective gear and safety equipment shall comprise of the equipments mentioned in clause (d) of sub-section (1) of section (2) of MS Act, which is as following
 - (i) Safety body clothing/safety body harness/safety belt (ii) Normal face mask (iii) Safety torch (iv) Hand gloves (v) Safety goggles (vi) Safety helmet (vii) Emergency medical oxygen resuscitator Kit (viii) Gas Monitor (ix) Head lamp (x) Reflecting jacket (xi) Guide pipe set (xii) Safety Tripod set (xiii) Wadder suit (xiv) Chlorine Mask (xv) Air compressor for blower (xvi) Modular Airlines Supply Trolley System (xvii) Full face mask (xix) Safety Gumboots (xx) Raincoat.
11. If there is appearance of white foam and no live cockroach then there is strong possibility of presence of poisonous gases in that chamber. Use litmus paper/gas detector to confirm the same. Give sufficient time by opening the chamber to open sky and if possible use air blowers to allow the gases to escape before taking up the work.
12. Do not depend on the presence of the foot rests fixed in the chamber wall since there is a possibility that with passages of time grip/hold of the footrest has given way and it may not be strong enough to take the load. Always use rope ladder after testing its carrying strength.
13. No person should be allowed to continue to work or stay in the chamber for more than 15 minutes at a stretch. The persons outside the chamber should remain in conversation

conversation with the person/persons inside the chamber to ensure their well being. In case of uneasiness to the person working inside the chamber a signal shall be given by shaking the rope attached his safety harness so that he can be pulled out of the chamber.

14. Smoking or carrying open fire flame in the near vicinity of the work place should not be allowed. Any electric installation should also be not switched on or switched off near the place of work. If electric wires happen to be nearby, they should be properly insulated.
15. No tools or equipment should be placed near the edge of the manhole to avoid any injury to the worker due to sudden fall of the equipment inside the manhole.

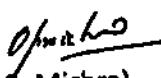
iii) Precautions post operations

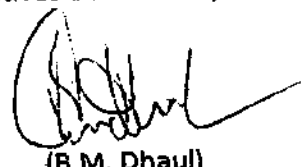
16. Do not leave the injured person alone and avoid gathering of mob around him.
17. Occurrence of any accident resulting into injury/death if any at septic tank/sewage plant shall be informed to labour /police deptt. Immediately. Injuries/death suffered while undertaking cleaning/maintenance/repairs of the sewerage systems shall be dealt with either under ESI Act, 1948, if applicable or under " The Employees Compensation Act, 1923 " or any other Group Insurance as the case may be for the purposes of compensation to the injured person/legal heirs as the case may be.
18. Compensation to be paid to the family members of the victims shall be in accordance with the Hon'ble Supreme Court verdict dated 27.03.2014 in Writ Petition No.583 of 2003 (Safai Karamchari Andolan & Others Vs UOI & Ors).
19. The committee also recommends appointment of inspectors to identify the insanitary latrines as defined under section 20 of the MS Act.

STATUTORY REQUIREMENTS

20. The state Govt. is also required to confer powers to the Judicial Magistrate for trials against the offenders under section 21, 22 & 23 of the MS Act.
21. It is further suggested that distt. and state level committees be constituted under section 24,25,26,27,28 of the MS Act, 2013 by Delhi Govt. to ensure implementation of all the provisions made for prohibition of employment as manual scavengers.
22. There is need for advocacy and IEC activity through the media including film, Newspaper, radio etc. for engaging and educating the general public about the MS Act, 2013. Therefore committee recommends that necessary initiatives be taken by the Govt. in this direction.


(Dr. Rajender Dhar)
Addl. Labour Commr


(O.P. Mishra)
Addl. Secy(Home)


(B.M. Dhaul)
Member(DR),DJB


(Alok Sharma)
Dy Secy (UD)


(Divakar Aggarwal)
CPM (PWD) Approval

OFFICE OF THE MEMBER (DISINTEGRATION)
DELHI JAL BOARD: GOVT. OF NCT OF DELHI
VARUNALAYA PH-III: KAROL BAGH: NEW DELHI

No.DJB/Member (Dr.)/2012/

6110577

Dated: 12.10.12

INSTRUCTIONAL ORDER

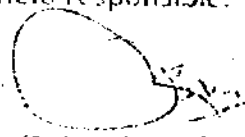
During visit of CEO, DJB to various Sewage Treatment Plants, it has been observed that concerned Executive Engineers are not paying proper attention towards upkeep of the plants, security & safety measures and officials were wandering without identify cards.

The following instructions are therefore issued for strict compliance:

1. All staff deployed on DJB installations and posted in the offices at STPs shall wear their identity cards and entry of unauthorized persons should be prohibited.
2. Safety equipments and first aid box shall be properly maintained at all STPs/SPSS.
3. All safety measures shall be diligently followed at all the STPs/SPSS.
4. A board displaying the precaution/ safety measures to be followed at STPs shall be fixed at a prominent place.
5. A board with DOs and DORTs at the STPs shall also be displayed at prominent place.
6. All staff shall be available at their duty places and nobody will leave his/her duty place without written permission of the Executive Engineers/AE /JE.
7. Proper upkeep and cleanliness shall be maintained at STPs/SPSS and offices.

EE/AE/JE concerned shall ensure strict compliance of above. In case of lapse in compliance of the above instructions concerned EE/AE/JE shall be held responsible.

Dr (Dr.)
TJS


(R.L. MAHOR)
MEMBER (DR.)

All EEs(SDV)/ Civil & E&M Maintenance

AC III

(7)

OFFICE OF MEMBER (DRAINAGE)

DELHI JAL BOARD

GOVT. OF NCT OF DELHI

NO. DJB/M(Dr.)2012/89445

Dated: 23-8-12

INSTRUCTIONAL ORDER

Protection & safeguard of its workers working in hazardous conditions like cleaning of sewers etc. is obligatory on the part of DJB. To avoid accidents due to suffocation, drowning, physical injuries and exposure to toxic material in the sewerage system, it is essential that adequate safety measures are in place & proper precautions are taken. To ensure that all safety measures are taken, several instructional orders have been issued from time to time.

The following guidelines/precautions are being reiterated and must be religiously followed to avoid any accident:-

1. No man entry should be allowed in the manhole without issue of Work Permit by the competent authority.
2. All Safety Equipments like Helmets, Gum Boots, Hand Gloves, Body Suit, Hand Blowers, Gas Detector, Folding ladder, Resuscitation apparatus, safety belt, oxygen cylinder etc. must be available in adequate numbers and maintained in working condition by the Store in Charge.
3. As far as possible, Mechanised cleaning operations should be carried out. Deep Pit Work Stations should be procured in adequate numbers by the Executive Engineers as per their requirement. Work Permit System must be followed regularly.
4. Man entry should be allowed only after checking that the level of poisonous gases in the manhole is within the permissible limits. The level of gases must be checked by the Gas Detector. The permissible limits of various gases are tabulated:-

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S.No	GAS	MAXIMUM LIMIT FOR 1 HOUR EXPOSURE	MAXIMUM LIMIT FOR 8 HOUR EXPOSURE
1.	CO	0.04% by volume in air	0.005% by volume in air
2.	H ₂ S	0.02% by volume in air	0.001% by volume in air
3.	CH ₄	Probably no limit provided oxygen percentage is sufficient	1% by volume in air
4.	O ₂	Oxygen level should be 19.5 - 21% by volume in air	

It would be safer to consider limits of 8 hours exposure.

5. Ventilation of the manhole must be maintained by opening 2-3 manholes upstream & downstream sides. Blowers, if necessary, must be operated at least 30 minutes before start and during cleaning operations.
6. The workers should not be allowed to work in sewer for more than 15 minutes in a single stretch. It should be ensured that all required safety equipments are available and are being used by the sewer workers.
7. In peak summer season, man entry in sewer manholes may not be allowed between 11 AM and 4 PM.
8. The equipments required in case of rescue of the worker should be available outside the manhole/work area.
9. First Aid Box with all required medicines (with in expiry date) must be readily available in case of any emergency.
10. Dps and Don'ts for safe working in each unit should be displayed. Printed or written operating and maintenance schedules should be displayed near to each equipment in the language understood by all operating staff.
11. Proper ventilation is required to be made in raw sludge pump houses and return sludge pump houses and other buildings in the plant. Units should have sufficient number of exhaust fans.
12. Smoking or carrying open flames in and around digesters and gas holders should be prohibited.
13. All electrical installations, wirings etc. shall be provided and maintained as per Indian Electricity Rules and standards approved by the department.

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afety of the sewer workers is the collective responsibility of DJB. The Safety & Disaster Management Cell conducts regular awareness programme/training to educate the sewer worker about the hazards of working in sewers. It is obligatory on the part of every office of DJB involved in sewer cleaning/hazardous operations to ensure that the sewer workers are working in safe working environment. It is instructed that the safety guidelines and instructional orders be followed in true spirit by all concerned.

Sd/-
MEMBER (DRAINAGE)

All Executive Engineers

Copy To:

- 1 CEO. for kind information
- 2 All Chief Engineers; to ensure implementation of the guidelines instructions.
- 3 All SEs; ----do----
- 4 Director(S&DM)
- 5 Joint Director(Safety)/Joint Director(DM)
- 6 All Dy. Directors (S&DM)


MEMBER (DRAINAGE)

816
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DELHI JAL BOARD
OFFICE OF THE MEMBER (WS/DR.)
VARUNALAYA, PH-II, KAROL BAGH, DELHI-05

No. DJB/Mem.(Dr.)/2010/

30926

Dt. 05-04-10

CIRCULAR

Instructions have been issued time and again for implementing of safety precautions at the place of work. However, it is observed that importance of implementation of these orders have not been sincerely conveyed to all working levels within the department. This has been a cause of concern for DJB. Important instructions given in NHRC guidelines relating to causes of accidents, precautions to be taken and use of safety equipments have been summed up as under which may be given effect to -

Accidents in sewer lines:

For cleaning of the sewers, either manually or mechanically, it becomes necessary for the workers to go down in the manhole and sometimes into the body of the sewers. The risks to which the workers are exposed while working in the sewer are as under:-

- a) Suffocation (Asphyxiation) as a result of oxygen deficiency or poisoning due to gases or vapors.
- b) Physical injury
- c) Infection
- d) Drowning
- e) Harmful Industrial effluents
- f) Others

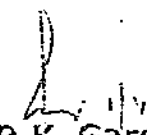
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(11)

Precautions:

- Ventilate the sewer line by opening two or three manholes on both the sides where work is to be carried out.
- Where it is desirable to use the blowers, operate these for atleast 30 minutes before start and during cleaning operations to ventilate the lowest working levels.
- Use safety harness and life line before entering the sewer line. Two helpers at the top should be provided for each person.
- Test for hazardous gases before entry of a person into the sewer line and also in between if the operations are for a longer time.
- For extended jobs the gas tests shall be repeated every three minutes while men are in the sewer.
- Presence of H₂S can be detected by use of the lead acetate paper available in the market.
- To ensure the presence of minimum required level of Oxygen in the sewer line, a safety lamp is inserted into the manhole.
- If the gas or oxygen deficiency is present and it is not practicable to ventilate adequately before workers enter, a hose mask shall be worn and extreme care shall be taken to avoid all sources of ignition.
- Test manhole runs or steps for structural safety before using.
- Ensure that where portable ladders are used they are properly sealed or fixed.
- Allow no smoking or open flame and guard against sparks.
- Provide helmets to the workers working in the manhole.
- Sewage levels should be checked in the manhole and the same should be not more than 1.5 ft.
- Rise of water level or sudden breeze in the sewer may be taken as warning of possible flooding.

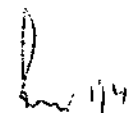
- Safety Equipments - Breathing apparatus, air blowers, safety belt, helmets, gloves, litmus paper, first-aid kits, gas detectors, oxygen masks, gum boots, exhaust fan, rope, gas meter etc.
- Sign Board showing men at work, works in progress and warning sign etc. must be provided at the work place.
- The agency will have to provide adequate potable fire extinguishers at the work area and take all adequate precautions against fire hazard.
- The contracting agency will have to provide and maintain sufficient, proper and efficient Life saving and First aid appliances at the works.


(Er. R.K. Garg)
Member (WS./DR.)

DDOs

Copy to:

1. C.E.O - for kind information
2. C.V.O - do -
3. Member (A)/(F) - do -
4. All CEs
5. All SEs/Dir (A&P)/Dir.(Fin.)


Member (WS./DR.)

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OFFICE OF THE MEMBER (ADMN.)
DELHI JAL BOARD, GOVT. OF NCT OF DELHI,
VARUNALAYA PHASE-II, JHANDEWALAN
KAROL BAGH, NEW DELHI-110005.

No. DJB/M (Admn.)/2008/ 758

Dated:- 18-03-08

INSTRUCTIONAL ORDER

Ensuring the Safety of workers during execution of work either through departmental labourer or by the contractors is the utmost responsibility of DJB. Instructions for ensuring safety have been issued time to time from various offices of DJB. The following guidelines/ codes must be followed by all to ensure the safety of the workers.

1. NHRC GUIDELINES AND NORMS
Issued vide letter No. DJB/member (Dr.)/2002/2293 dated 29.11.2002 and reiterated by Director (S&DM) vide No. F(1)/DJB/Dir.(S&DM)/2006/869 to 919 dated 29.5.2006.

These guidelines cover all important aspects related to the operation and maintenance of the sewers and manholes like sewer cleaning equipments and procedures, potential hazards and precautions, safety equipments and simple tests for detection of gases and oxygen deficiency, selection of sewer workers & safety guidelines for men working in the sewers to ensure the safety of the workers.

These guidelines are to be followed by all during sewerage maintenance works & must be included in the tender conditions.

2. DJB SAFETY CODE
Available on the DJB web site.
DJB Safety Code details out the procedures to be followed for ensuring safety during various construction activities and while working in sewers and man holes.
DJB Safety Code should form a part of the conditions of the contract.

Dr (S & DM)

3. REGARDING COMPENSATION TO BE PAID TO THE WORKERS.
Issued vide DJB/Member (Dr.) 2008/9308 dated 20.2.2008 is an obligatory condition on the part of the contractor and must be included in the tender specifications for all kinds of sewer works

"The successful bidder shall ensure that the safety measures mentioned in the contract conditions are followed strictly. In case of any accident/death, the contractor shall be liable to pay minimum compensation as provided under Workmen Compensation Act-1923. In case of failure, DJB shall have the right to make the compensation & recover the amount from the contractor. Further DJB reserves the right to debar the firm from tendering/black listing if the above condition is not adhered to be the firm/contractor."

4. CONSTITUTION OF SAFETY COMMITTEES

A Safety Committee at each JE (Sewer Store) comprising of JE (Sewer)/SI and a mate for ensuring availability of safety equipments in working conditions & their regular usage, adoption of proper work permit system & reporting to concerned Executive Engineer regarding any safety related issues/accidents must be constituted. Monthly reports of the implementation of above must be given by the Safety Committee to the concerned ZE/EE. Regular monitoring to be undertaken at the level of SE & CE on monthly and quarterly basis.

It is reiterated that the above guidelines must be followed in true letter & spirit for ensuring the safety of workers. The above guidelines, if not available with any division, may be collected from the office of Director (S&DM).

(X. K. Mahto)
Member (Administration)

All Chief Engineers

Copy to:-

1. ✓ CEO, for kind information.
2. M(W)/M(Dr.)
3. All SE's for ensuring compliance, S.E.
4. Director (S&DM)


Member (Administration)

(15)

✓
~~Amr~~

No. F 1(9)/Dir. (S&DM)/2007/

Date:-19.02.07

A comprehensive list of Do's and Don'ts for ensuring safety of the sewer workers while entering the sewer lines/manholes has been prepared. It should be ensured by the Engineer in charge that it is followed invariably by all the sewer workers:-

DO

1. Place easily readable and clear warning signals firmly embedded and supported well ahead of work area.
2. Provide Red Lanterns or electric light signals during night.
3. Place barricades or diversion boards indicating signs to channelise the traffic.
4. Barricade the opened manholes as well as trenches.
5. Keep a first aid box properly stocked including washing bottles to wash away skin and eyes.
6. Ventilate the sewer line by opening 2 or 3 manholes at least one hour before start of operations on both sides where work is carried out.
7. Test for hazardous gases before entry of a person into the sewer line and also in between if the operation is carried out for a longer time. Nobody should be allowed to go inside the manhole if the content of gases is beyond the permissible limits. The silt should be disturbed by suitable means to remove the entrapped gases. Wear gas masks as a precautionary measure.
8. Use the air blowers for ventilation or gas masks, if required.
9. Test and use the safety harness and life line before entering the sewer line.
10. Use safety helmets while working in the manhole.
11. Use protective body suit or use Oil (Coconut or sweet oil) on the body before entering into the manholes and take bath immediately after completing the work.
12. Use rubber hand gloves and boots before entering into the manhole.
13. Keep finger nails short and well trimmed.
14. Try each ladder step or rung carefully before putting the full weight on it to guard against insecure fastening due to corrosion of the of the rung at the manhole.
15. Wash hands with soap and hot water before taking food or smoking and keep fingers out of nose, mouth and eyes.
16. Wash all contaminated parts of the body after the work is completed.
17. Mix the scum well with sewage before entering into the manhole.
18. Leave the manhole at once if there is an unusual or peculiar smell.
19. Check carefully that all men have left the sewer of manhole.

DON'TS

1. Do not keep any material or tools near the edge which can fall into the manhole and injure the workman.
2. Do not enter the manhole without wearing your protective body suit, safety belts, gloves, gum boots etc.
3. Do not go inside the manhole during afternoon in summers when the temperature is high.
4. Do not work inside the manhole for more than 15 minutes at a stretch.
5. Do not smoke or use safety lamp inside the sewer or manhole.
6. Do not walk along a sewer inside without a lifeline with a person holding your lifeline standing outside.
7. Do not enter the manholes without written permission of ASI/SI/JE/ZE concerned.
8. Do not enter if the concentration of the hazardous gases is more than the permissible level.
9. Do not throw lighted match sticks in the manhole.
10. Do not leave any manhole or trench unmanned and/or properly barricaded.

The Don'ts may be read in conjunction with the Do's while entering the sewer lines/ manholes.

Director (Safety & Disaster Management)

Copy to-

1. PA to CEO for kind information of the latter pls.
2. Member(A), Member(Water Supply), Member (Drainage) for information pls
3. All Chief Engineers for information and with a request to issue strict guidelines for effective implementation.
4. All SE's for information and with a request to give it wide publicity for effective implementation. (5 spare copies enclosed)
5. Consultant (PR) with the request to get the Hindi translation of the above text printed in Varun Patrika and also arrange for Handouts with relevant sketches for distribution.

(17)

Director (Safety & Disaster Management)

GYANENDRA SRIVASTAVA
IAS
MEMBER (ADMINISTRATION)



DELHI JAL BOARD
Govt. of NCT of Delhi
VARUNALAYA PHASE-II
KAROL BAGH, NEW DELHI-110005
Tel. : (0) 23650466
Fax : 23650155

Dated : 20.06.2005

DO No. DJB/M(A)/2005/

Subject : Prevention of injury and death.
Observing Work Permit System.

Dear colleague,

As you are aware, on 24th May 2005, a JE and Beldar died while working on sewer lines. In the wake of this, Member(DR) have issued guidelines vide DO NO. DJB/M(Dr)/2005/142277 to 142317 dt. 14.10.2004(copy enclosed) addressed to all CEs requesting them to bring to the notice of all JEs/ZEs/EEs the imperative of observing safety precautions while working in hazardous conditions. With a view to prevent death and injuries, a system of Work Permit has also been introduced vide Member(DR)'s Order no. DJB/M(Dr)/2005/67722 to 67812 dt. 27.05.2005 (copy enclosed).

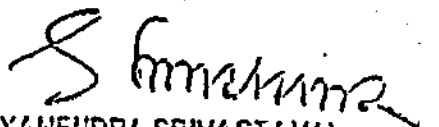
It has however been noticed that the instructions of Member(Dr) to scrupulously observe safety measures and especially the newly introduced work permit system is not been observed. There continues to be a casual attitude towards safety measures. Even after these orders, due to lack of safety drill some incidents have occurred where workers have narrowly escaped serious injuries.

I am writing this to impress upon you to follow the Work Permit System without fail in order to prevent injuries and deaths. In case JE/ZE/EE fail to observe the Work Permit System, it shall be their personal responsibility with attended consequences.

As a long term measure, the Board has approved creation of a Department of Safety and Disaster Management. A separate detailed order in that regard is being issued. At the ground level, it is the JE/ZE/EE who is to ensure that henceforth while working, there is no injury or death.

Regards

Yours sincerely,


(GYANENDRA SRIVASTAVA)

ALL JEs/ZEs/EEs

SAVE IT
WHILE YOU
STILL CAN.

Water

100% Natural, 0% Replaceable.

(18)

67722-012

11

DELHI JAL BOARD
OFFICE OF THE MEMBER (Dr)
VARUNALAYA PHASE-II: KAROL BAGH: NEW DELHI

No : DJB/Mem(Dr)/2005/ 67722-012 Dated : 27.05.2005
INSTRUCTIONAL ORDER 30

Subject : Work permit for departmental labour working
under sewerage system.

It has been observed that number of deaths have taken place in Delhi Jal Board while working in the sewerage system in Delhi. There are number of instructions/guidelines and manuals which are to be followed by the workers/officers/officers working in sewerage system. It has been decided that a work permit duly signed by Zonal Engineer, Maintenance or Asstt. Engineer for the plants shall be issued by them to the Jr. Engineer on all works to be undertaken on the sewerage system during the day.

Before granting the work permit to the Jr. Engineer he will ensure that the safety equipments are used by the workers before going into the deep sewers. The Zonal engineers must have sufficient stock of safety equipments and issue the same by name to the workers and keep a record in a leather bound register which should be checked by an Executive Engineer every fortnightly. Workers should be advised to use safe equipment like safety belt, Gas Mask, Rope, Oxygen Cylinder etc. before undertaking sewer work.

The four copies of the work permit may be made and one copy should be sent to Executive Engineer, one to Suptdg. Engineer, one to Jr. Engineer and one copy should be retained in the office of Zonal Engineer.

Rakesh Sethi
(RAKESH SETHI)
MEMBER (Dr)

C.E.(C)/III/IV/IV/SDW
All S.Es. (Dr)C & Maintenance
S.Es. (SDW)/III/IV
All E.Es. Civil & E&M under Drainage side.

Copy for kind information to :-
1. CEO (DJB),
2. Member (A)/Member (Fin)/Member (V/S)

(19)



भारत का राजपत्र The Gazette of India

असाधारण

EXTRAORDINARY

भाग II — खण्ड 1

PART II — Section 1

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं. 35] नई दिल्ली, बुधवार, सितम्बर 19, 2013/ भाद्र 28, 1935 (सक)
No. 35] NEW DELHI, THURSDAY, SEPTEMBER 19, 2013/ BHADRA 28, 1935 (SAKA)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि वह अलग संकलन के रूप में रखा जा सके।
Separate paging is given to this Part in order that it may be filed as a separate compilation.

MINISTRY OF LAW AND JUSTICE

(Legislative Department)

New Delhi, the 19th September, 2013/Bhadra 28, 1935 (Saka)

The following Act of Parliament received the assent of the President on the 18th September, 2013, and is hereby published for general information:—

THE PROHIBITION OF EMPLOYMENT AS MANUAL SCAVENGERS AND THEIR REHABILITATION ACT, 2013

No. 25 of 2013

[18th September, 2013.]

An Act to provide for the prohibition of employment as manual scavengers, rehabilitation of manual scavengers and their families, and for matters connected therewith or incidental thereto.

WHEREAS promoting among the citizens fraternity assuring the dignity of the individual is enshrined as one of the goals in the Preamble to the Constitution;

AND WHEREAS the right to live with dignity is also implicit in the Fundamental Rights guaranteed in Part III of the Constitution;

AND WHEREAS article 46 of the Constitution, *inter alia*, provides that the State shall protect the weaker sections, and, particularly, the Scheduled Castes and the Scheduled Tribes from social injustice and all forms of exploitation;

AND WHEREAS the dehumanising practice of manual scavenging, arising from the continuing existence of insanitary latrines and a highly iniquitous caste system, still persists in various parts of the country, and the existing laws have not proved adequate in eliminating the twin evils of insanitary latrines and manual scavenging;

AND WHEREAS it is necessary to correct the historical injustice and indignity suffered by the manual scavengers, and to rehabilitate them to a life of dignity.

BE it enacted by Parliament in the Sixty-fourth Year of the Republic of India as follows:—

CHAPTER I

PRELIMINARY

Short title,
extent and
commence-
ment.

1. (1) This Act may be called the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013.

(2) It extends to the whole of India except the State of Jammu and Kashmir.

(3) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint:

Provided that the date so notified shall not be earlier than sixty days after the date of publication of the notification in the Official Gazette.

Definitions.

2. (1) In this Act, unless the context otherwise requires,—

(a) “agency” means any agency, other than a local authority, which may undertake sanitation facilities in an area and includes a contractor or a firm or a company which engages in development and maintenance of real estate;

(b) “appropriate government”, in relation to Cantonment Boards, railway lands, and lands and buildings owned by the Central Government, a Central Public Sector Undertaking or an autonomous body wholly or substantially funded by the Central Government, means the Central Government and in all other cases, the State Government;

(c) “Chief Executive Officer”, in relation to a Municipality or Panchayat, means, its senior-most executive officer, by whatever name called;

(d) “hazardous cleaning” by an employee, in relation to a sewer or septic tank, means its manual cleaning by such employee without the employer fulfilling his obligations to provide protective gear and other cleaning devices and ensuring observance of safety precautions, as may be prescribed or provided in any other law, for the time being in force or rules made thereunder;

(e) “insanitary latrine” means a latrine which requires human excreta to be cleaned or otherwise handled manually, either *in situ*, or in an open drain or pit into which the excreta is discharged or flushed out, before the excreta fully decomposes in such manner as may be prescribed:

Provided that a water flush latrine in a railway passenger coach, when cleaned by an employee with the help of such devices and using such protective gear, as the Central Government may notify in this behalf, shall not be deemed to be an insanitary latrine.

(f) “local authority” means,—

(i) a Municipality or a Panchayat, as defined in clause (e) and clause (f) of article 243P of the Constitution, which is responsible for sanitation in its area of jurisdiction;

(ii) a Cantonment Board constituted under section 10 of the Cantonments Act, 2006; and

(iii) a railway authority;

(g) “manual scavenger” means a person engaged or employed, at the commencement of this Act or at any time thereafter, by an individual or a local authority or an agency or a contractor, for manually cleaning, carrying, disposing of, or otherwise handling in any manner, human excreta in an insanitary latrine or in an open drain or pit into which the human excreta from the insanitary latrines is disposed of, or on a

41 of 2006.

railway track or in such other spaces or premises, as the Central Government or a State Government may notify, before the excreta fully decomposes in such manner as may be prescribed, and the expression "manual scavenging" shall be construed accordingly.

Explanation.—For the purpose of this clause,—

(a) "engaged or employed" means being engaged or employed on a regular or contract basis;

(b) a person engaged or employed to clean excreta with the help of such devices and using such protective gear, as the Central Government may notify in this behalf, shall not be deemed to be a 'manual scavenger';

(h) "National Commission for Safai Karmacharis" means the National Commission for Safai Karmacharis constituted under section 3 of the National Commission for Safai Karmacharis Act, 1993 and continued by Resolution of the Government of India in the Ministry of Social Justice and Empowerment *vide* No.17015/18/2003-SCD-VI, dated 24th February, 2004 and as amended from time to time;

(i) "notification" means a notification published in the Official Gazette and the expression "notify" shall be construed accordingly;

(j) "occupier", in relation to the premises where an insanitary latrine exists, or someone is employed as a manual scavenger, means the person who, for the time being, is in occupation of such premises;

(k) "owner", in relation to the premises where an insanitary latrine exists or someone is employed as a manual scavenger, means, the person who, for the time being has legal title to such premises;

(l) "prescribed" means prescribed by the rules made under this Act;

(m) "railway authority" means an authority administering railway land, as may be notified by the Central Government in this behalf;

(n) "railway land" shall have the meaning assigned to it in clause (32A) of section 2 of the Railways Act, 1989;

(o) "sanitary latrine" means a latrine which is not an 'insanitary latrine';

(p) "septic tank" means a water-tight settling tank or chamber, normally located underground, which is used to receive and hold human excreta, allowing it to decompose through bacterial activity;

(q) "sewer" means an underground conduit or pipe for carrying off human excreta, besides other waste matter and drainage wastes;

(r) "State Government", in relation to a Union territory, means the Administrator thereof appointed under article 239 of the Constitution;

(s) "survey" means a survey of manual scavengers undertaken in pursuance of section 11 or section 14.

(2) Words and expressions used and not defined in this Act, but defined in the Cantonments Act, 2006, shall have the same meanings respectively assigned to them in that Act.

(3) The reference to a Municipality under Chapters IV to VIII of this Act shall include a reference to, as the case may be, the Cantonment Board or the railway authority, in respect of areas included within the jurisdiction of the Cantonment Board and the railway land, respectively.

Act to have
overriding
effect.

3. The provisions of this Act shall have effect notwithstanding anything inconsistent therewith contained in the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993 or in any other law, or in any instrument having effect by virtue of any other law.

46 of 1993.

CHAPTER II

IDENTIFICATION OF INSANITARY LATRINES

Local
authorities to
survey
insanitary
latrines and
provide
sanitary
community
latrines.

4. (1) Every local authority shall,—

(a) carry out a survey of insanitary latrines existing within its jurisdiction, and publish a list of such insanitary latrines, in such manner as may be prescribed, within a period of two months from the date of commencement of this Act;

(b) give a notice to the occupier, within fifteen days from the date of publication of the list under clause (a), to either demolish the insanitary latrine or convert it into a sanitary latrine, within a period of six months from the date of commencement of this Act:

Provided that the local authority may for sufficient reasons to be recorded in writing extend the said period not exceeding three months;

(c) construct, within a period not exceeding nine months from the date of commencement of this Act, such number of sanitary community latrines as it considers necessary, in the areas where insanitary latrines have been found.

(2) Without prejudice to the provisions contained in sub-section (1), Municipalities, Cantonment Boards and railway authorities shall also construct adequate number of sanitary community latrines, within such period not exceeding three years from the date of commencement of this Act, as the appropriate Government may, by notification, specify, so as to eliminate the practice of open defecation in their jurisdiction.

(3) It shall be the responsibility of local authorities to construct community sanitary latrines as specified in sub-sections (1) and (2), and also to make arrangements for their hygienic upkeep at all times.

Explanation.—For the purposes of this section, “community” in relation to railway authorities means passengers, staff and other authorised users of railways.

CHAPTER III

PROHIBITION OF INSANITARY LATRINES AND EMPLOYMENT AND ENGAGEMENT AS MANUAL SCAVENGER

Prohibition of
insanitary
latrines and
employment
and engage-
ment of
manual
scavenger.

5. (1) Notwithstanding anything inconsistent therewith contained in the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993, no person, local authority or any agency shall, after the date of commencement of this Act,—

46 of 1993.

(a) construct an insanitary latrine; or

(b) engage or employ, either directly or indirectly, a manual scavenger, and every person so engaged or employed shall stand discharged immediately from any obligation, express or implied, to do manual scavenging.

(2) Every insanitary latrine existing on the date of commencement of this Act, shall either be demolished or be converted into a sanitary latrine, by the occupier at his own cost, before the expiry of the period so specified in clause (b) of sub-section (1) of section 4:

Provided that where there are several occupiers in relation to an insanitary latrine, the liability to demolish or convert it shall lie with,—

(a) the owner of the premises, in case one of the occupiers happens to be the owner; and

(b) all the occupiers, jointly and severally, in all other cases:

Provided that the State Government may give assistance for conversion of insanitary latrines into sanitary latrines to occupiers from such categories of persons and on such scale, as it may, by notification, specify:

Provided further that non-receipt of State assistance shall not be a valid ground to maintain or use an insanitary latrine, beyond the said period of nine months.

(3) If any occupier fails to demolish an insanitary latrine or convert it into a sanitary latrine within the period specified in sub-section (2), the local authority having jurisdiction over the area in which such insanitary latrine is situated, shall, after giving notice of not less than twenty one days to the occupier, either convert such latrine into a sanitary latrine, or demolish such insanitary latrine, and shall be entitled to recover the cost of such conversion or, as the case may be, of demolition, from such occupier in such manner as may be prescribed.

6. (1) Any contract, agreement or other instrument entered into or executed before the date of commencement of this Act, engaging or employing a person for the purpose of manual scavenging shall, on the date of commencement of this Act, be terminated and such contract, agreement or other instrument shall be void and inoperative and no compensation shall be payable therefor.

Contract, agreement, etc., to be void.

(2) Notwithstanding anything contained in sub-section (1), no person employed or engaged as a manual scavenger on a full-time basis shall be retrenched by his employer, but shall be retained, subject to his willingness, in employment on at least the same emoluments, and shall be assigned work other than manual scavenging.

7. No person, local authority or any agency shall, from such date as the State Government may notify, which shall not be later than one year from the date of commencement of this Act, engage or employ, either directly or indirectly, any person for hazardous cleaning of a sewer or a septic tank.

Prohibition of persons from engagement or employment for hazardous cleaning of sewers and septic tanks.

8. Whoever contravenes the provisions of section 5 or section 6 shall for the first contravention be punishable with imprisonment for a term which may extend to one year or with fine which may extend to fifty thousand rupees or with both, and for any subsequent contravention with imprisonment which may extend to two years or with fine which may extend to one lakh rupees, or with both.

Penalty for contravention of section 5 or section 6.

9. Whoever contravenes the provisions of section 7 shall for the first contravention be punishable with imprisonment for a term which may extend to two years or with fine which may extend to two lakh rupees or with both, and for any subsequent contravention with imprisonment which may extend to five years or with fine which may extend to five lakh rupees, or with both.

Penalty for contravention of section 7.

10. No court shall take cognizance of any offence punishable under this Act except upon a complaint thereof is made by a person in this behalf within three months from the date of the occurrence of the alleged commission of the offence.

Limitation of prosecution.

CHAPTER IV

IDENTIFICATION OF MANUAL SCAVENGERS IN URBAN AND RURAL AREAS AND THEIR REHABILITATION

11. (1) If any Municipality has reason to believe that some persons are engaged or employed in manual scavenging within its jurisdiction, the Chief Executive Officer of such Municipality shall cause a survey to be undertaken to identify such persons.

Survey of manual scavengers in urban areas by Municipalities.

(2) The content and methodology of the survey referred to in sub-section (1) shall be such as may be prescribed, and it shall be completed within a period of two months from its commencement in the case of Municipal Corporations, and within a period of one month in the case of other Municipalities.

(3) The Chief Executive Officer of the Municipality, in whose jurisdiction the survey is undertaken, shall be responsible for accurate and timely completion of the survey.

(4) After completion of the survey, the Chief Executive Officer shall cause to be drawn up a provisional list of persons found to be working as manual scavengers within the jurisdiction of his Municipality and fulfilling the eligibility conditions as may be prescribed, shall cause such provisional list to be published for general information in such manner, as may be prescribed, and shall invite objections to the list from the general public.

(5) Any person having any objection, either to the inclusion or exclusion of any name in the provisional list published in pursuance of sub-section (4), shall, within a period of fifteen days from such publication, file an objection, in such form as the Municipality may notify, to the Chief Executive Officer.

(6) All objections received in pursuance of sub-section (5), shall be enquired into, and thereafter a final list of persons found to be working as manual scavengers within the local limits of the municipality, shall be published by it in such manner, as may be prescribed.

(7) As soon as the final list of manual scavengers, referred to in sub-section (6) is published, the persons included in the said list shall, subject to the provisions of sub-section (2) of section 6, stand discharged from any obligation to work as manual scavengers.

Application
by an urban
manual
scavenger for
identification.

12. (1) Any person working as a manual scavenger in an urban area, may, either during the survey undertaken by the Municipality in pursuance of section 11, within whose jurisdiction he works, or at any time thereafter, apply, in such manner, as may be prescribed, to the Chief Executive Officer of the Municipality, or to any other officer authorised by him in this behalf, for being identified as a manual scavenger.

(2) On receipt of an application under sub-section (1), the Chief Executive Officer shall cause it to be enquired into, either as part of the survey undertaken under section 11, or, when no such survey is in progress, within fifteen days of receipt of such application, to ascertain whether the applicant is a manual scavenger.

(3) If an application is received under sub-section (1) when a survey under section 11 is not in progress, and is found to be true after enquiry in accordance with sub-section (2), action shall be taken to add the name of such a person to the final list published under sub-section (6) of section 11, and the consequences mentioned in sub-section (7) thereof shall follow.

Rehabilita-
tion of
persons
identified as
manual
scavengers
by a Muni-
cipality.

13. (1) Any person included in the final list of manual scavengers published in pursuance of sub-section (6) of section 11 or added thereto in pursuance of sub-section (3) of section 12, shall be rehabilitated in the following manner, namely:—

(a) he shall be given, within one month,—

(i) a photo identity card, containing, *inter alia*, details of all members of his family dependent on him, and

(ii) such initial, one time, cash assistance, as may be prescribed;

(b) his children shall be entitled to scholarship as per the relevant scheme of the Central Government or the State Government or the local authorities, as the case may be;

(c) he shall be allotted a residential plot and financial assistance for house construction, or a ready-built house, with financial assistance, subject to eligibility and willingness of the manual scavenger, and the provisions of the relevant scheme of the Central Government or the State Government or the concerned local authority;

(d) he, or at least one adult member of his family, shall be given, subject to eligibility and willingness, training in a livelihood skill, and shall be paid a monthly stipend of not less than three thousand rupees, during the period of such training;

(e) he, or at least one adult member of his family, shall be given, subject to

eligibility and willingness, subsidy and concessional loan for taking up an alternative occupation on a sustainable basis, in such manner as may be stipulated in the relevant scheme of the Central Government or the State Government or the concerned local authority;

(f) he shall be provided such other legal and programmatic assistance, as the Central Government or State Government may notify in this behalf.

(2) The District Magistrate of the district concerned shall be responsible for rehabilitation of each manual scavenger in accordance with the provisions of sub-section (1) and the State Government or the District Magistrate concerned may, in addition, assign responsibilities in his behalf to officers subordinate to the District Magistrate and to officers of the concerned Municipality.

14. If any Panchayat has reason to believe that some persons are engaged in manual scavenging within its jurisdiction, the Chief Executive Officer of such Panchayat shall cause a survey of such manual scavengers to be undertaken, *mutatis mutandis*, in accordance with the provisions of section 11 and section 12, to identify such person.

Survey of manual scavengers in rural areas by Panchayats.

15. (1) Any person working as a manual scavenger, in a rural area, may, either during the survey undertaken by the Panchayat within whose jurisdiction he works, in pursuance of section 14 or at any time thereafter, apply, in such manner, as may be prescribed, to the Chief Executive Officer of the concerned Panchayat, or to any other officer authorised by him in this behalf, for being identified as a manual scavenger.

Application by a rural manual scavenger for identification.

(2) On receipt of an application under sub-section (1), the Chief Executive Officer shall cause it to be enquired into, either as part of the survey undertaken under section 14 or when no such survey is in progress, within fifteen days of receipt of such application, so as to ascertain whether the applicant is a manual scavenger.

16. Any person included in the final list of manual scavengers, published in pursuance of section 14 or added thereto in pursuance of sub-section (2) of section 15 shall be rehabilitated, *mutatis mutandis*, in the manner laid down for urban manual scavengers in section 13.

Rehabilitation of persons identified as manual scavengers by a Panchayat.

CHAPTER V

IMPLEMENTING AUTHORITIES

17. Notwithstanding anything contained in any other law for the time being in force, it shall be the responsibility of every local authority to ensure, through awareness campaign or in such other manner that after the expiry of a period of nine months, from the date of commencement of this Act,—

Responsibility of local authorities to ensure elimination of insanitary latrines.

(i) no insanitary latrine is constructed, maintained or used within its jurisdiction; and

(ii) in case of contravention of clause (i), action is taken against the occupier under sub-section (3) of section 5.

18. The appropriate Government may confer such powers and impose such duties on local authority and District Magistrate as may be necessary to ensure that the provisions of this Act are properly carried out, and a local authority and the District Magistrate may, specify the subordinate officers, who shall exercise all or any of the powers, and perform all or any of the duties, so conferred or imposed, and the local limits within which such powers or duties shall be carried out by the officer or officers so specified.

Authorities who may be specified for implementing provisions of this Act.

19. The District Magistrate and the authority authorised under section 18 or any other subordinate officers specified by them under that section shall ensure that, after the expiry of such period as specified for the purpose of this Act,—

Duty of District Magistrate and authorised officers.

(a) no person is engaged or employed as manual scavenger within their jurisdiction;

(b) no one constructs, maintains, uses or makes available for use, an insanitary latrine;

(c) manual scavengers identified under this Act are rehabilitated in accordance with section 13, or as the case may be, section 16;

(d) persons contravening the provisions of section 5 or section 6 or section 7 are investigated and prosecuted under the provisions of this Act; and

(e) all provisions of this Act applicable within his jurisdiction are duly complied with.

Appointment
of inspectors
and their
powers.

20. (1) The appropriate Government may, by notification, appoint such persons as it thinks fit to be inspectors for the purposes of this Act, and define the local limits within which they shall exercise their powers under this Act.

(2) Subject to any rules made in this behalf, an inspector may, within the local limits of his jurisdiction, enter, at all reasonable times, with such assistance as he considers necessary, any premises or place for the purpose of,—

(a) examining and testing any latrine, open drain or pit or for conducting an inspection of any premises or place, where he has reason to believe that an offence under this Act has been or is being or is about to be committed, and to prevent employment of any person as manual scavenger;

(b) examine any person whom he finds in such premises or place and who, he has reasonable cause to believe, is employed as a manual scavenger therein, or is otherwise in a position to furnish information about compliance or non-compliance with the provisions of this Act and the rules made thereunder;

(c) require any person whom he finds on such premises, to give information which is in his power to give, with respect to the names and addresses of persons employed on such premises as manual scavenger and of the persons or agency or contractor employing or engaging them;

(d) seize or take copies of such registers, record of wages or notices or portions thereof as he may consider relevant in respect of an offence under this Act which he has reason to believe has been committed by the principal employer or agency; and

(e) exercise such other powers as may be prescribed.

(3) Any person required to produce any document or thing or to give any information required by an inspector under sub-section (2) shall be deemed to be legally bound to do so within the meaning of section 175 and section 176 of the Indian Penal Code.

45 of 1860.

(4) The provisions of the Code of Criminal Procedure, 1973, shall, so far as may be, apply to any such search or seizure under sub-section (2) as they apply to such search or seizure made under the authority of a warrant issued under section 94 of the said Code.

2 of 1974.

CHAPTER VI

PROCEDURE FOR TRIAL

Offences to
be tried by
Executive
Magistrate.

21. (1) The State Government may confer, on an Executive Magistrate, the powers of a Judicial Magistrate of the first class for the trial of offences under this Act; and, on such conferment of powers, the Executive Magistrate, on whom the powers are so conferred, shall be deemed, for the purposes of the Code of Criminal Procedure, 1973, to be a Judicial Magistrate of the first class.

2 of 1974.

(2) An offence under this Act may be tried summarily.

Offence to be
cognizable
and non-
bailable.

22. Notwithstanding anything contained in the Code of Criminal Procedure, 1973, every offence under this Act shall be cognizable and non-bailable.

2 of 1974.

23. (1) Where an offence under this Act has been committed by a company, every person who, at the time the offence was committed, was in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly.

Offences by companies.

(2) Notwithstanding anything contained in sub-section (1), where any offence under this Act has been committed by a company and it is proved that offence has been committed with the consent or connivance of, or is attributable to, any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation.—For the purposes of this section,—

(a) "company" means any body corporate and includes a firm or other association of individuals; and

(b) "director" in relation to a firm, means a partner in the firm.

CHAPTER VII

VIGILANCE COMMITTEES

24. (1) Every State Government shall, by notification, constitute a Vigilance Committee for each district and each Sub-Division.

Vigilance Committees.

(2) Each Vigilance Committee constituted for a district shall consist of the following members, namely:—

(a) the District Magistrate—Chairperson, *ex officio*;

(b) all members of the State Legislature belonging to the Scheduled Castes elected from the district—members:

Provided that if a district has no member of the State Legislature belonging to the Scheduled Castes, the State Government may nominate such number of other members of the State Legislature from the district, not exceeding two, as it may deem appropriate.

(c) the district Superintendent of Police—member, *ex officio*;

(d) the Chief Executive Officer of,—

(i) the Panchayat at the district level—member, *ex officio*;

(ii) the Municipality of the district headquarters—member, *ex officio*;

(iii) any other Municipal Corporation constituted in the district—member, *ex officio*;

(iv) Cantonment Board, if any, situated in the district—member, *ex officio*;

(e) one representative be nominated by the railway authority located in the district;

(f) not more than four social workers belonging to organisation working for the prohibition of manual scavenging and rehabilitation of manual scavengers, or, representing the scavenger community, resident in the district, to be nominated by the District Magistrate, two of whom shall be women;

(g) one person to represent the financial and credit institutions in the district, to be nominated by the District Magistrate;

(h) the district-level officer in-charge of the Scheduled Castes Welfare—Member-Secretary, *ex officio*;

(i) district-level officers of Departments and agencies who, in the opinion of the District Magistrate, subject to general orders, if any, of the State Government, have a significant role to play in the implementation of this Act.

(3) Each Vigilance Committee, constituted for a Sub-Division, shall consist of the following members, namely:—

(a) the Sub-Divisional Magistrate—Chairperson, *ex officio*;

(b) the Chairpersons and the Chief Executive Officers of Panchayats at intermediate level of the Sub-Division, and where Panchayats at intermediate level, do not exist, Chairpersons from two Panchayats at Village level to be nominated by the Sub-Divisional Magistrate—member, *ex officio*;

(c) the Sub-Divisional Officer of Police—member, *ex officio*;

(d) Chief Executive Officer of—

(i) the Municipality of the Sub-Divisional headquarters—member, *ex officio*; and

(ii) Cantonment Board, if any, situated in the Sub-Division—member, *ex officio*;

(e) one representative to be nominated by the railway authority located in the Sub-Division—member, *ex officio*;

(f) two social workers belonging to the organisation working for the prohibition of manual scavenging and rehabilitation of the manual scavengers, or representing the scavenger community resident in the Sub-Division, to be nominated by the District Magistrate, one of whom shall be a woman;

(g) one person to represent the financial and credit institutions in the Sub-Division, to be nominated by the Sub-Divisional Magistrate;

(h) the Sub-Divisional level officer in-charge of Scheduled Castes welfare—Member-Secretary, *ex officio*;

(i) Sub-Divisional level officers of Department and agencies who in the opinion of the Sub-Divisional Magistrate, subject to any general orders of the State Government or the District Magistrate, have a significant role to play in the implementation of this Act—member, *ex officio*.

(4) Each Vigilance Committee constituted at district and Sub-Divisional level shall meet at least once in every three months.

(5) No proceeding of a Vigilance Committees shall be invalid merely by reason of any defect in its constitution.

25. The functions of Vigilance Committee shall be—

(a) to advise the District Magistrate or, as the case may be, the Sub-Divisional Magistrate, on the action which needs to be taken, to ensure that the provisions of this Act or of any rule made thereunder are properly implemented;

(b) to oversee the economic and social rehabilitation of manual scavengers;

(c) to co-ordinate the functions of all concerned agencies with a view to channelise adequate credit for the rehabilitation of manual scavengers;

(d) to monitor the registration of offences under this Act and their investigation and prosecution.

Functions of
Vigilance
Committee.

26. (1) Every State Government shall, by notification, constitute a State Monitoring Committee, consisting of the following members, namely:—

State
Monitoring
Committee.

(a) the Chief Minister of State or a Minister nominated by him—Chairperson, *ex officio*;

(b) the Minister-in-charge of the Scheduled Castes Welfare, and such other Department, as the State Government may notify;

(c) Chairperson of the State Commissions for Safai Karamcharis, and Scheduled Castes, if any—member, *ex officio*;

(d) representatives of the National Commission for Scheduled Castes, and Safai Karamcharis—member, *ex officio*;

(e) not less than two members of the State Legislature belonging to the Scheduled Castes, nominated by the State Government:

Provided that if any State Legislature has no member belonging to the Scheduled Castes, the State Government may nominate the members belonging to the Scheduled Tribes;

(f) the Director-General of Police—member, *ex officio*;

(g) Secretaries to the State Government in the Departments of Home, Panchayati Raj, Urban Local Bodies, and such other Departments, as the State Government may notify;

(h) Chief Executive Officer of at least one Municipal Corporation, Panchayat at the district-level, Cantonment Board and railway authority as the State Government may notify;

(i) not more than four social workers belonging to organisation working for the prohibition of manual scavenging and rehabilitation of manual scavengers, or, representing the scavenger community, resident in the State, to be nominated by the State Government, two of whom shall be women;

(j) State-level head of the convener Bank of the State Level Bankers' Committee—member, *ex officio*;

(k) Secretary of the Department of the State Government dealing with development of the Scheduled Castes—Member-Secretary, *ex officio*;

(l) such other representative of Departments of the State Government and such other agencies which, in the opinion of the State Government, are concerned with the implementation of this Act.

(2) The State Monitoring Committee shall meet at least once in every six months and shall observe such rules of procedure in regard to the transaction of business at its meetings as may be prescribed.

27. The functions of the State Monitoring Committee shall be—

Functions of
the State
Monitoring
Committee.

(a) to monitor and advise the State Government and local authorities for effective implementation of this Act;

(b) to co-ordinate the functions of all concerned agencies;

(c) to look into any other matter incidental thereto or connected therewith for implementation of this Act.

28. Every State or Union territory Government and Union territory administration shall send such periodic reports to the Central Government about progress of implementation of this Act, as the Central Government may require.

Duty of
States or
Union
territories to
send periodic
reports to the
Central
Government.

29. (1) The Central Government shall, by notification, constitute a Central Monitoring Committee in accordance with the provisions of this section.

Central
Monitoring
Committee.

(2) The Central Monitoring Committee shall consist of the following members, namely:—

(a) The Union Minister for Social Justice and Empowerment—Chairperson, *ex officio*;

(b) Chairperson of the National Commission for Scheduled Castes—member, *ex officio*;

(c) Minister of State in the Ministry of Social Justice and Empowerment—member, *ex officio*;

(d) Chairperson, National Commission for Safai Karamcharis—member, *ex officio*;

(e) the Member of the Planning Commission dealing with development of the Scheduled Castes—member, *ex officio*;

(f) three elected members of Parliament belonging to Scheduled Castes, two from the Lok Sabha and one from the Rajya Sabha;

(g) Secretaries of the Ministries of,—

(i) Social Justice and Empowerment, Department of Social Justice and Empowerment;

(ii) Urban Development;

(iii) Housing and Urban Poverty Alleviation;

(iv) Drinking Water and Sanitation;

(v) Panchayati Raj;

(vi) Finance, Department of Financial Services; and

(vii) Defence,

members, *ex officio*;

(h) Chairman, Railway Board—member, *ex officio*;

(i) Director-General, Defence Estates—member, *ex officio*;

(j) representatives of not less than six State Governments and one Union territory, as the Central Government may, notify;

(k) not more than six social workers belonging to organisation working for the prohibition of manual scavenging and rehabilitation of manual scavengers, or, representing the scavenger community, resident in the country, to be nominated by the Chairperson, two of whom shall be women;

(l) Joint Secretary, Department of Social Justice and Empowerment in the Ministry of Social Justice and Empowerment, looking after development of Scheduled Castes—Member-Secretary, *ex officio*;

(m) such other representatives of Central Ministries or Departments and agencies which, in the opinion of the Chairperson, are concerned with the implementation of this Act.

(j) The Central Monitoring Committee shall meet at least once in every six months.

30. The functions of the Central Monitoring Committee shall be,—

(a) to monitor and advise the Central Government and State Government for effective implementation of this Act and related laws and programmes;

(b) to co-ordinate the functions of all concerned agencies;

(c) to look into any other matter incidental to or connected with implementation of this Act.

Functions of
the Central
Monitoring
Committee.

31. (1) The National Commission for Safai Karamcharis shall perform the following functions, namely:—

Functions of
National
Commission
for Safai
Karamcharis.

- (a) to monitor the implementation of this Act;
- (b) to enquire into complaints regarding contravention of the provisions of this Act, and to convey its findings to the concerned authorities with recommendations requiring further action; and
- (c) to advise the Central and the State Governments for effective implementation of the provisions of this Act.
- (d) to take *suo motu* notice of matter relating to non-implementation of this Act.

(2) In the discharge of its functions under sub-section (1), the National Commission shall have the power to call for information with respect to any matter specified in that sub-section from any Government or local or other authority.

32. (1) The State Government may, by notification, designate a State Commission for Safai Karamcharis or a State Commission for the Scheduled Castes or such other statutory or other authority, as it deems fit, to perform, within the State, *mutatis mutandis*, the functions specified in sub-section (1) of section 31.

Power of
State
Government
to designate
an appropri-
ate authority
to monitor
the imple-
mentation of
this Act.

(2) An authority designated under sub-section (1) shall, within the State, have, *mutatis mutandis*, the powers of the National Commission for Safai Karamcharis as specified in sub-section (2) of section 31.

CHAPTER VIII

MISCELLANEOUS

33. (1) It shall be the duty of every local authority and other agency to use appropriate technological appliances for cleaning of sewers, septic tanks and other spaces within their control with a view to eliminating the need for the manual handling of excreta in the process of their cleaning.

Duty of local
authorities
and other
agencies to
use modern
technology
for cleaning
of sewers, etc.

(2) It shall be the duty of the appropriate Government to promote, through financial assistance, incentives and otherwise, the use of modern technology, as mentioned in sub-section (1).

34. No suit, prosecution or other legal proceeding shall lie against an appropriate Government or any officer of the appropriate Government or any member of the Committee for anything which is in good faith done or intended to be done under this Act.

Protection of
action taken
in good faith.

35. No civil court shall have jurisdiction in respect of any matter to which any provision of this Act applies and no injunction shall be granted by any civil court in respect of anything, which is done or intended to be done, by or under this Act.

Jurisdiction of
civil courts
barred.

36. (1) The appropriate Government shall, by notification, make rules for carrying out the provisions of this Act, within a period not exceeding three months from the date of commencement of this Act.

Power of
appropriate
Government
to make rules.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

- (a) the obligation of an employer, under clause (d) of sub-section (1) of section 2;
- (b) the manner in which the excreta fully decomposes under clauses (e) and (g) of sub-section (1) of section 2;
- (c) the manner of carrying out survey of insanitary latrine and publishing list thereof under clause (a) of sub-section (1) of section 4;
- (d) procedure of giving notice and recovering cost of demolition of an insanitary latrine under sub-section (3) of section 5;
- (e) content and methodology of the survey under sub-section (2) of section 11;

(f) the eligibility conditions for identification of manual scavengers and publication of provisional list of persons found to be working as manual scavengers under sub-section (4) of section 11;

(g) publication of final list of persons found to be working as manual scavengers under sub-section (6) of section 11;

(h) manner of application to be made to the Chief Executive Officer of the municipality, or to an officer authorised by him in this behalf, under sub-section (1) of section 12 or, as the case may be, sub-section (1) of section 15;

(i) provision of initial, one time, cash assistance under sub-clause (ii) of clause (a) of sub-section (1) of section 13;

(j) such other powers of Inspectors under clause (e) of sub-section (2) of section 20; and

(k) any other matter which is required to be, or may be, prescribed.

(3) Every rule made under this Act by the Central Government shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

(4) Every rule made under this Act by the State Government shall, as soon as may be after it is made, be laid before each House of State Legislature, where there are two Houses and where there is one House of State Legislature, before that House.

Power of
Central
Government
to make model
rules.

37. (1) Notwithstanding anything contained in section 36 of this Act:—

(a) the Central Government shall, by notification, publish model rules for the guidance and use of State Governments; and

(b) in case the State Government fails to notify the rules under section 36 of this Act within the period of three months specified therein, then the model rules as notified by the Central Government shall be deemed to have come into effect, *mutatis mutandis*, in such State, till such time as the State Government notifies its rules.

(2) The model rules made by the Central Government under this Act shall be laid, as soon as may be after they are made, before each House of Parliament while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses make any modification in the rule, the rule shall thereafter have effect only in such modified form; so, however, that any such modification shall be without prejudice to the validity of anything previously done under that rule.

Power to
remove
difficulties.

38. (1) If any difficulty arises in giving effect to the provisions of this Act, the Central Government may, by order published in the Official Gazette, make such provisions, not inconsistent with the provisions of this Act, as may appear to it to be necessary or expedient for the removal of the difficulty:

Provided that no such order shall be made in relation to a State after the expiration of three years from the commencement of this Act in that State.

(2) Every order made under this section shall, as soon as may be after it is made, be laid before each House of Parliament.

39. (1) The appropriate Government may, by a general or special order published in the Official Gazette, for reasons to be recorded, and subject to such conditions as it may impose, exempt any area, category of buildings or class of persons from any provisions of this Act or from any specified requirement contained in this Act or any rule, order, notification, bye-laws or scheme made thereunder or dispense with the observance of any such requirement in a class or classes of cases, for a period not exceeding six months at a time.

Power to
exempt.

(2) Every general or special order made under this section shall be laid, as soon as may be after it is made, before each House of Parliament or each House of State Legislature, where there are two Houses and where there is one House of State Legislature, before that House.

P.K. MALHOTRA,
Secy. to the Govt. of India.

Manual scavenging

From Wikipedia, the free encyclopedia

Manual scavenging is a caste-based occupation involving the removal of untreated human excreta from bucket toilets or pit latrines, that has been officially abolished by law in India as a dehumanizing practice. It involves moving the excreta, using brooms and tin plates, into baskets, which the workers carry to disposal locations sometimes several kilometers away.^[1] The workers, called scavengers, rarely have any personal protective equipment. The term is mainly used in the Indian context only.

The employment of manual scavengers to empty "dry toilets" (meaning here toilets that require daily manual cleaning) was prohibited in India in 1993 and the law was extended and clarified to include insanitary latrines, ditches and pits in 2013.^[2]

According to Socio Economic Caste Census 2011, 180,657 households are engaged in manual scavenging for a livelihood.^[3] The 2011 Census of India found 794,000 cases of manual scavenging across India.^[4] The state of Maharashtra, with 63,713, tops the list with the largest number of households working as manual scavengers, followed by the states of Madhya Pradesh, Uttar Pradesh, Tripura and Karnataka.^[5]

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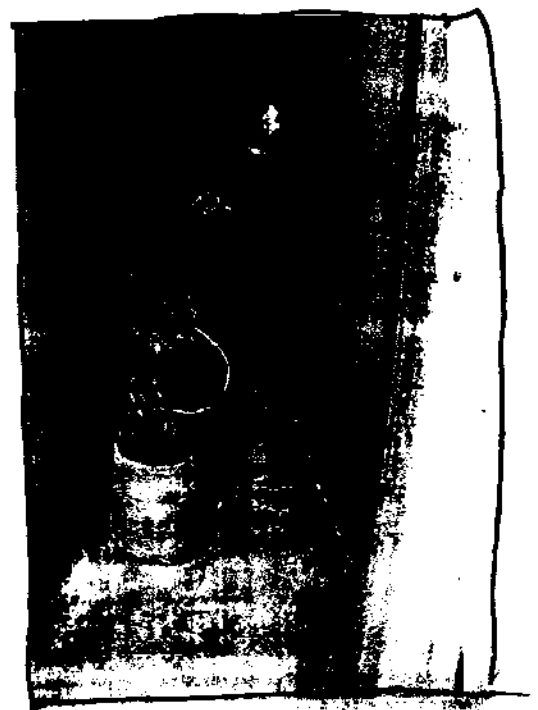
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Definition

Manual scavenging refers to the unsafe and manual removal of raw (fresh and untreated) human excreta from buckets or other containers that are used as toilets or from the pits of simple pit latrines. The safe and controlled emptying of pit latrines, on the other hand, is one component of fecal sludge management.

The official definition of a manual scavenger in Indian law from 1993 is as follows:^[6]

(25)



Example for unsafe manual pit emptying (which could be termed "manual scavenging") of a pit latrine in Korogocho slums in Kenya

"Manual scavenger" means a person engaged or employed, at the commencement of this Act or at any time thereafter, by an individual or a local authority or an agency or a contractor, for manually cleaning, carrying, disposing of, or otherwise handling in any manner, human excreta in an insanitary latrine or in an open drain or pit into which the human excreta from the insanitary latrines is disposed of, or railway track or in such other spaces or premises, as the Central Government or a State Government may notify, before the excreta fully decomposes in such manner as may be prescribed, and the expression "manual scavenging" shall be construed accordingly.



Another example for manual pit emptying (in Durban, South Africa) but with personal protective equipment and formalised occupation - therefore no longer regarded as "manual scavenging"

Not all forms of dry toilets involve "manual scavenging" to empty them, but only those that require unsafe handling of raw excreta. If on the other hand the excreta is already treated or pre-treated in the dry toilet itself, as is the case for composting toilets and urine-diverting dry toilets for example, then emptying these types of toilets is not classified as "manual scavenging". Container-based sanitation is another system that does not require manual scavenging to function even though it does involve the emptying of excreta from containers.

Also, emptying the pits of twin-pit pour-flush toilets is not classified as manual scavenging in India, as the excreta is already partly treated and degraded in those pits.

The International Labour Organization describes three forms of manual scavenging in India:

- Removal of human excrement from public streets and "dry latrines" (meaning simple pit latrines without a water seal, but not dry toilets in general)
- Cleaning septic tanks
- Cleaning gutters and sewers

Manual cleaning of railway lines of excreta dropped from toilets of trains is another form of manual scavenging in India.^[7]

Current prevalence

Manual scavenging still survives in parts of India without proper sewage systems or safe fecal sludge management practices. It is thought to be most prevalent in Gujarat, Madhya Pradesh, Uttar Pradesh, and Rajasthan.^[2] Some municipalities in India still run public toilets using simple pit latrines.

The biggest violator of this law in India is the Indian Railways where many train carriages have toilets dropping the excreta from trains on the tracks and who employ scavengers to clean the tracks manually.^[7]

Manual scavenging is traditionally a role determined by the outlawed caste system in India for members of the Dalit caste, usually from the Balmiki (or Valminki) or Hela subcaste.^[2]

In March 2014, the Supreme Court of India declared that there were 96 lakhs (9.6 million) dry latrines being manually emptied but the exact number of manual scavengers is disputed - official figures put it at less than 700,000.^[8]

Manual scavenging is done with basic tools like thin boards and either buckets or baskets lined with sacking and carried on the head. Due to the nature of the job, many of the workers have related health problems.^[2]

Initiatives for eradication

Legislation

In the late 1950s, freedom fighter G. S. Lakshman Iyer banned manual scavenging when he was the chairman of Gobichettipalayam Municipality, which became the first local body to ban it officially.^{[9][10]} Sanitation is a State subject as per entry 6 of the Constitution. Under this, in February 2013 Delhi announced that they are banning manual scavenging, making them the first state in India to do so. District magistrates are responsible for ensuring that there are no manual scavengers working in their district. Within 3 years time municipalities, railways and cantonments must make sufficient sanitary latrines available.^[11] The government of the state of Maharashtra has planned to abolish the menace of manual scavenging completely from the state soon. But by using Article 252 of the constitution which empowers Parliament to legislate for two or more States by consent and adoption of such legislation by any other State, the Government of India has enacted various laws.^[12] The continuance of such discriminatory practice is violation of ILO's Convention 111 (Discrimination in Employment and Occupation)^[13]

The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993

After six states passed resolutions requesting the Central Government to frame a law, The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993, drafted by the Ministry of Urban Development under the Narasimha Rao government,^[14] was passed by Parliament in 1993.

The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993 punishes the employment of scavengers or the construction of dry (non-flush) latrines with imprisonment for up to one year and/or a fine of Rs 2,000.^[6] No convictions were obtained under the law during the 20 years it was in force.^[15]

The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act 2013 or M.S. Act 2013

Government has passed the new legislation in September 2013 and issued Government notification for the same. In December, 2013 Government has also formulated Rules-2013 called as "The Prohibition of Employment as Manual Scavengers and their Rehabilitation Rules 2013" or "M.S. Rules 2013". The details about Act and Rules are available on the website of Ministry of Social Justice and Empowerment, GOI.

Further, the hearing on 27 March 2014 was held on Manual Scavenging of writ petition number 583 of 2003, and supreme Court has issued final orders and case is disposed of with various directions to the Government.

The broad objectives of the act are to eliminate unsanitary latrines, prohibit the employment of manual scavengers and the hazardous manual cleaning of sewer and septic tanks, and to maintain a survey of manual scavengers and their rehabilitation.^[16]

Activism

In India in 1970s, Dr. Bindeshwar Pathak introduced his "Sulabh" concept for building and managing public toilets in India, which has introduced hygienic and well-managed public toilet system. Activist Bezwada Wilson founded a group in 1994, Safai Karmachari Andolan, to campaign for the demolition of then newly illegal 'dry latrines' (pit latrines) and the abolition of manual scavenging. Despite the efforts of Wilson and other activists, the practice persists two decades later.^[17] In July 2008 "MissionSanitation" was a fashion show held by the United Nations as part of its International Year of Sanitation. On the runway were 36 previous workers, called scavengers, and top models to help bring awareness of the issue of manual scavenging.

History

There is evidence of the existence of toilets with a water seal in the civilisations of Harappa and Mohenjo-Daro. These cities had toilets which were connected to an underground drainage system lined with burnt clay bricks.^[18] In later stages, manual scavenging became a caste-based occupation, with the vast majority of workers involved being women.^[19]

The practice of manual scavenging in India dates back to ancient times. According to the contents of sacred scriptures and other literature, scavenging by some specific castes of India has existed since the beginning of civilization.^[20] One of the fifteen duties of slaves enumerated in *Naradiya Samhita* was of manual scavenging. This continues during the Buddhist and Mauraya period also.^[21] Jahangir built a public toilet at Alwar, 120 km away from Delhi, for 100 families in 1556 AD.^[22] Not much documentary evidence exists about its maintenance. Scholars have suggested that the Muslim women with purdah required enclosed toilets that needed to be scavenged.^[23] It is pointed out that the Chuhra (Chuhra) share some of the clan names with Rajputs, and propose that the *bhangis* are descendants of those captured in wars. There are many legends about the origin of *bhangis*, who have traditionally served as manual scavengers. One of them, associated with Lal Begi bhangis, describes the origin of bhangis from Mehtar.^[24]

Municipal records from 1870 show that the British organized municipalities in India which built roads, parks, public toilets etc.^[25] The British administrators organized systems for removing the fecal sludge and employed bhangis.^[26]

Other countries

Manual scavenging also took place in Europe but not specifically linked to a caste-based occupation and not called "manual scavenging": In European history the terms "nightsoil collectors" or "nightmen" and gong farmers were used. The contemporary term for safe nightsoil collection is fecal sludge management. Towns with sanitation systems based on pail closets (bucket toilets inouthouse) relied on frequent emptying, performed by workers driving "honeywagons", a precursor to the vacuum truck now used to pump out septage from septic tanks. The municipal emptying of pail toilets continued in Australia into the second half of the twentieth century; these were known as dunnies and the workers were dunnymen.^[27]

In Haiti, this type of occupation is called bayakou.

See also

- Caste system in India
- Illegal housing in India
- Swachh Bharat Abhiyan (Clean India Mission)
- Waste collector
- Water supply and sanitation in India

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Further reading

Book

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- "Manual scavenging: Court summons Principal Secretaries" (<http://www.hinduonnet.com/2004/09/14/stories/2004091404061200.htm>). *The Hindu*. 14 September 2004.
- "India's manual scavengers: How to abolish a dirty, low-status job." (<http://www.economist.com/node/11707614>) *The Economist*. 10 July 2008.
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3

OFFICE OF THE DIRECTOR (SAFETY & DISASTER MGT)
DELHI JAL BOARD: GOVT. OF NCT OF DELHI
ROOM NO 412: VARUNALAYA PH-I
KAROL BAGH: NEW DELHI-110005

No: F (1)/DJB/Dir(SDM)/2006/ 8696919

Dated: 29/5/06

CIRCULAR

Instructions for ensuring safety during operation and maintenance of sewerage have been issued from time to time from various office of Delhi Jal Board. In the past, approved NHRC guidelines and norms were circulated from the office of Member (Dr) vide their letter no DJB/Mem(Dr)/2002/2293 date 29.11.2002.

During safety awareness drive it was observed that the above circulated guidelines for safety are not being fully implemented. The copy of same guidelines duly spirally bound is recirculated to ensure sincere implementation in true spirit during operation and maintenance of sewerage system by the field staff while on duty.

End: As above

Executive Engineer

P Bhargava
(Praveen Bhargava)
Director(S&DM)

Copy to:

1. CEO(DJB) , for kind information.
2. Member(A)/Member(F)/Member(Dr)/Member(WS)
3. Director(A&P)
4. CE(C)/I/II/III/IV/V/VI/SDW
5. All SEs with request to issue direction to EE concerned to ensure that safety norms shall be followed under their supervision.

Dir(SDM)
6/6

P Bhargava
Director(S&DM)

(41)

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Dated : 29.11.2002

C. A. A. (SEW) Subj
OPENING BOARD
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COMPREHENSIVE GUIDLINES
AND SAFETY CODE FOR
OPERATION AND MAINTENANCE
OF SEWERAGE SYSTEMS

prepared by
Shri R.K.Bhandari
Engineer Member, DDA

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PREFACE

Serious expensive problems not only in terms of money and time but also in terms of Life can result from improper design and maintenance of sewerage systems. This was evident in the recent case, resulting in the death of two people working in sewers.

Today we are fast progressing towards a sewerage system disaster, the large influx of effluents from various industries, growing population of the metropolitan areas are all stressing the sewerage system to the full. The treatment plants are also working to capacity to clean up the toxic waste emanating from the various industries. These "COMPREHENSIVE GUIDELINES AND SAFETY CODE FOR OPERATION AND MAINTENANCE OF SEWERAGE SYSTEMS" are written in an attempt to mitigate any problem in the sewerage network for the future. These will lay down the foundations for a safer sewerage network.

Adequate slopes to maintain self cleaning velocities are essential for minimizing maintenance. Selection of a suitable pipe joint is vital to prevent penetration of roots and excessive infiltration. Cutting of tree roots from sewer lines can be an expensive and recurring cleaning process. Ground water entering joints carries with it soil from around the pipe, which ultimately causes structural failure. These are a few guides one can follow for a efficient and safer design of a sewerage system. In addition to this proper review of design and proper supervision of construction are key elements to be taken care of.

The other aspect crucial to the safety, a successful maintenance program is one which operates on a planned schedule and keeps effective records. Maps are used to show locations of manholes, flushing inlets, service connections, and other appurtenances. Keeping all records of maintenance helps in identifying troublesome lines and can be planned for in advance. While large sewers may not require flushing others should be placed on a regular schedule of maintenance. These few preventive maintenance steps can effectively reduce the number of emergencies related to sewer to a large extent.

These guidelines have come about due to an unfortunate incident (case No:1069/30/2000-01) dealing with the death of two Safai Karmachari's in sewer line. The National Human Rights Commission (NHRC) observed the need for instructions to safeguard the interest of Safai Karmachari's/ sewermen. After an interaction with the local bodies viz; DJB, MCD and DDA the commission, considered it a necessity to prepare a comprehensive document on guidelines, which need to be observed by every agency and which take care of all the significant aspects as well as interests including the welfare of the employees in respect of matters such as safety, health, etc. The N.H.R.C. gave the task to Shri R.K.Bhandari, Engineer member of DDA to offer his services in preparation of such a document. To initiate the exercise, the matter was discussed with the representatives of the local bodies viz. MCD, DJB, Delhi Cantonment Board & NDMC. The

matter was also discussed with the concerned representatives of Municipal Corporation of Greater Mumbai at Mumbai. Experts in Public Health engineering have also been consulted. Matter has been discussed with the representative of the LIC of India and agents of G.I.C.s for Insurance policy cover for workmen. Sewer workers, regular employees of the DJB, as well as private workers have been interviewed.

For preparation of the comprehensive papers following documents have been referred:

- i) "Manual on Sewerage & Sewage Treatment" of Public Health & Environmental Engineering Organisation, Min. of Urban Development, New Delhi.
- ii) Directions issued by Hon'ble High Court of Judicature at Mumbai in W.P No.125 of 1996.
- iii) BIS Code No.11972-1987
- iv) Standing Instructions issued by local bodies Viz. MCD DJB, Cantonment Board, NDMC & DDA

This draft document covers all important aspects on the operation and maintenance of the sewers and manholes only, vis a vis operations and safety for supervisory staff and workmen engaged.

I would like to place on record my appreciation to Shri S.K.Bajaj, Consultant (retired director (Works)) for his untiring efforts in getting the documents prepared and compiled. I would also acknowledge with thanks the experts opinion offered by Shri.N.Vasant, Consultant in Public Health Engg. & M/s Anchor Risk & Insurance Brokers Ltd. in the matter of group and personal accident insurance. Last but not the least, I would like to place on record deep appreciation of the services rendered by Shri Ram Kumar, Jr. Stenographer, Shri Rajender Rawat, Sr. Steno & Shri Amit Bhadur, JDC of EM's Secretariat.

R.K. Bhandari

R.K.Bhandari
Engineer Member DDA

GUIDELINES AND SAFETY CODE FOR OPERATION AND MAINTENANCE OF SEWERAGE SYSTEM.

1. Introduction.

1.1. Modern concepts for public health engineering demand, adequate means of collection, conveyance and hygienic disposal of wastes of all kind whether solid or liquid. Disposal of human waste has gone through many stages before the conventional water borne sewerage system came into existence. Water borne sewerage system has eliminated direct involvement of human labour in handling the human waste, but the labour force is definitely required for its maintenance and operations. This can be minimised to an extent but cannot be completely eliminated, even by involving more and more mechanical devices/employing advanced technologies.

1.2. The quality maintenance of sewerage system consists of the optimum use of labour, equipment and material to keep the system in good conditions so that it can accomplish efficiently its intended purpose of collection and transportation of waste water to the treatment plant.

2. Types of maintenance.

2.1. There are two types of maintenance of the sewerage system - Preventive & Emergency /Breakdown. It is necessary that preventative or routine maintenance are carried out to prevent any breakdown of the system and to avoid emergency operations to deal with clogged sewer lines, overflowing manhole, backing up of sewage into a house or structural failure of the system. Preventive maintenance is more economical and provides for reliability in operations of sewer facilities. Emergency repair, which would be very rare if proper preventive maintenance is carried out, will also have to be provided for. Periodical inspection and preventive maintenance is a necessity.

3. Necessity of Maintenance.

3.1. Sewer maintenance functions are too often neglected and given attention only as emergency arises. Considering the health hazards, that the public at large has to face, it will be appropriate to provide sufficient funds to take care of men, material, equipment and machinery required for efficient maintenance.

3.2. Maintenance helps to protect the capital investment and ensures an effective and economical expenditure in operating and maintaining the sewerage facilities. It also helps to build up and maintain cordial relations with the public, whose understanding and support are essential for the success of the facility.

4.

Problems in Sewerage system.

4.1

Improper Design and Material.

Serious and expensive sewer problems can result from improper design or poor construction. Adequate slopes to maintain self cleaning velocities are essential to minimise maintenance. Selection of a suitable pipe joint is vital to prevent penetration of roots and excessive infiltration. Cutting of tree roots from sewer lines can be expensive and recurring cleaning processes. Ground water entering joints carries with it soil from around the pipe, which ultimately causes structural failure.

4.2

Presence of non biodegradable material.

Sewer stoppages are caused chiefly by sand, greasy materials, plastics, sticks, stones, and tree roots etc.

4.3

Physical Actions.

Gradual breaking of jointing materials, poorly made branch connections, alternations in overburden pressure, impact loading due to traffic, vibrations, ground movements, scouring due to improper designing, damage due to maintenance equipment or during making connection contribute to physical actions.

4.4

Characteristics of sewage

Sewers convey the various types of waste water, domestic or industrial. Some of its constituents can be hazardous and can create various types of nuisances. Some are explosive in nature, and can create fire or explosion hazards. Some can obstruct the hydraulic capacity of the sewers and some create nuisances to the public, in treatment processes, or to receiving waters or in the sewer systems. The sewage characteristic shall be governed by the relevant BIS Code, Environment Protection Rules and the limits specified by the Local Body/Civic Authority/Sewerage Board under their Act/Bye-laws.

4.5

Chemical Actions.

Chemical actions are single most important reason for deterioration of sewer lines in general. Sewer material under humid atmosphere is susceptible to action due to presence of various undesirable elements in sewage. Most common element being Hydrogen Sulphide. Domestic sewage contains Sulphides and if industrial waste not properly treated are added to municipal waste water the sewage becomes more prone to Sulphide attack. Besides, industrial wastes from tanneries, dye houses, abattoirs etc. are high in Sulphide contents. Septic tank sludge and that from cess pools also have high Sulphide contents.

4.5.1

Factors which lead to Sulphide formations are:

- i. Low pH of sewage.
- ii. Long flow duration within sewers i.e. longer distances between collection and discharge points.
- iii. High BOD.
- iv. Poor ventilation.
- v. High temperature of sewage enhancing microbial action.
- vi. High-sewage velocity or turbulence due to poor design.

4.5.2 Lower pH, high velocities of sewage, turbulence, and greater depths are conducive to generation of Hydrogen Sulphide.

4.5.3 Attack on concrete or mortar takes place when Hydrogen Sulphide is converted into Sulphur dioxide on surfaces. Acid forming bacteria in presence of nutrients such as ammonia, phosphates etc. convert Hydrogen Sulphide into Sulphuric Acid in presence of moisture. Permeable and weaker concretes are easily attacked by this. Condensed moisture on the walls of the conduit leads to acidic conditions leading to channel scour.

4.6 Electro chemical Actions.

These lead to corrosion in metallic pipelines. This can be controlled by proper coating or even cathodic protection consisting of sacrificial anodes or even impressed current cathodic protection.

4.7 Biological, Actions.

Acid forming bacteria aid in Hydrogen Sulphide actions. In addition, growth of roots, algae also cause damage to pipelines.

4.8 Surcharged Conditions.

4.8.1 The surcharged conditions of the sewers occur owing to various reasons like the failure or the inadequate capacity of pumps, non availability/ delay in development of out fall facility /treatment plants etc.

4.8.2 Surcharge condition/overflow may also occur due to discharge of storm water into the sewer lines. In case such a situation is noticed, the maintenance agency shall report the matter to the concerned local authorities to take appropriate measures to get it delinked to the extent possible.

4.9 Rodents

4.9.1 Sewers form an ideal environment for the build up rat infestation. Norway rat (*Rattus norvegicus*) is the species particularly inhabiting sewers.

4.9.2 Rats gain access to the sewers through defective drains or through inspection chambers to infest the sewer system. The infestation then spreads through the network of sewers to distant parts of the city. Conversely the sewer rats negotiate through house drains and plumbing to enter the premises through toilet. Whenever the storm water and sewer systems are combined the sewer rats infest both the systems.

4.9.3 The burrowing activity of rat around sewer lines causes sinking of sewer lines particularly the house drains adversely affecting the flow.

4.10 Trespassing in manholes and sewer lines.

5. Provision in Design.

5.1 Maintenance really begins with the design and construction of the sewerage system. Hence due considerations shall be given to maintenance requirements at the time of designing sewerage systems.

- 5.2 Since sewer maintenance has to commence from manholes which are located in the street, the size of the manholes must be designed to permit safe access and sufficient working space.
- 5.3 Location of manholes depends on several factors, but consideration of safety alone require that they should be sited at all changes of sewer section and gradient, at junctions and the heads of all sewers. The spacing between manholes should not be large.
- 5.4 In deep manholes ladders bolted to built in legs are preferable to foot irons.
- 5.5 The sewers shall be laid at a sufficient grade to provide self cleansing velocity. The velocity of flow of the sewage should be great enough to prevent the deposition of solid matter and its subsequent putrefaction. Alternatively, the velocity should not be so high as to involve the risk of a workman being swept off, or cause erosion.
- 5.6 Particular care should be taken to ensure that the provisions made for ventilation will be adequate and efficient in practice.
- 5.7 Inverted siphons and eccentric manholes should be avoided as far as possible.
- 5.8 As far as possible, deep sewers should be avoided. With its optimal cost, sewerage systems should be designed with intermediate pumping stations, restricting depths to workable levels.
- 5.9 Manhole covers should be designed / provided with inbuilt locking arrangement as a check against theft and trespassing.

6. Organisation for maintenance.

- 6.1 The organisation responsible for the maintenance of the sewerage system will vary with the size and type of the sewerage system and the relative age of the system. The larger the Municipality, the larger and more complex will be its maintenance organisation. The size of the organisation will vary from a couple of employees to several hundred regular employees. The primary effort of the staff is to maintain sewers free flowing and unobstructed.
- 6.2 The sewer system with its components properly designed and installed is handed over to the person in charge of maintenance who assumes the responsibility to make it function satisfactorily for the benefit of the community. One should have sufficient experience in the design and construction of the system to enable him to perform his task efficiently with an understanding and appreciation of the problems that may arise during maintenance. One has to not only attend to technical issues but also to deal with human relations in order to be successful in his work. In-service training shall be imparted to the maintenance personnel to improve upon the methods adopted based on the latest trends. Failure to develop a better understanding of human relations and also lack of

development of the concept of service to the community generally results in the maintenance part becoming unpopular. The general public is also to be made aware of dos and don'ts to help in keeping the sewers free flowing and unobstructed.

6.3 The work of cleaning, de-silting and other maintenance of system shall be carried out departmentally or through concerned local body/ civic authority/ sewerage board by mutual arrangement and shall not be entrusted to the private contractors, unless there is an exigency for engaging contractors.

6.4 For meeting such exigencies experienced and well equipped agencies with trained manpower shall be pre-qualified. Such private agencies shall be engaged on annual/periodical contract basis at zonal /sectional level. Such agencies shall be required to strictly observe all the conditions of the safety code which shall form part of the contract.

6.5 As far as possible mechanical process for cleaning, de-silting and rehabilitation of sewer lines shall be used, minimising manual process for the same requiring the entry of workers in the sewerage system.

7 Sewer Maintenance and Cleaning.

7.1 Sewer inspection and maintenance should be planned. The whole sewerage system should be marked on a plan showing location, depth, diameter & type of line, direction of flow, location of manholes, flushing inlets, service connections and other appurtenances. The entire system of the city should be divided into different zones/circles/divisions/ subdivisions/sections/subsections assigning specific responsibility to respective heads. For each section/subsection, depending upon the size of sewer, its depth spacing of manholes, the conditions of sewer line (whether surcharged or not), whether cleaning is being done by manual labour or by mechanical sewer machines etc., frequency of problem, there should be dedicated sewer gang preferably consisting of a supervisor or mate with at least six skilled sewer men. In case, house gully traps are to be maintained, special gang of one or two persons who will clean these traps regularly in a phased or planned manner is necessary.

7.2 Records should be kept on maintenance performed, with particular emphasis on troublesome lines that are known to require more frequent inspection or cleaning. While large sewers with adequate slopes may never require flushing or cleaning, others must be placed on a regular schedule that may range from every month to once a year. The number of emergency sewer blockages can be materially reduced by such preventative maintenance.

7.3 The work of each sewer maintenance gang would consist of the following :

7.3.1. Check manhole conditions for deposition of silt, flow, new connections done, damaged walls or steps, manhole covers, clogged vertical pipes in drop manholes etc. While the cleaning of the manhole, pipes etc., will be undertaken by the gang, repairs etc. may be reported to be handled by a

separate construction gang of mason and helpers. It is preferable that the repair gang comes out on the work when the sewer cleaning or maintenance gang is working, so that brick bats, debris mortar etc. which fall in the manhole are removed then and there. This will cause a major blockage if the same is allowed to flow into the sewer line, which usually occurs when repairs are done separately. In such cases, couple of sewer men should be deputed to clean the manhole of the debris immediately after repair work is completed.

- 7.3.2 Check the sewer line between two successive manholes for silting and flow conditions and remove the deposited silt and
- 7.3.3 Check for any harmful and extraneous matter entering into the sewer line so that further investigation of the cause and location can be determined.
- 7.3.4 Check air release valves in rising or force mains, sluice gates or stoppage in the sewer lines, overflow arrangements etc.
- 7.4 A record of daily work done by the gang, and also a record of work done on the sewer lines should be maintained so that chronic trouble spots may be investigated and remedial action taken.
- 7.5 All operating records of the sewerage system shall be properly compiled on day to day basis and daily, monthly and yearly reports prepared. History cards for individual sewer line and the equipment installed on the sewerage system should also be recorded. Record should also contain the details of maintenance, operations carried out, its cost, time and resources involved and also defects noticed during maintenance operation. This will facilitate not only the prompt corrective action to be taken for the purpose of future planning.

8. Sewer cleaning equipment and procedures.

- 8.1 Sewer cleaning work require usual implements like pick axes, manhole guards, tripod stands, danger flags, lantern, batteries, safety lamps, lead acetate paper, silt drums, ropes, iron hooks, hand carts, plunger rods, observation rods, shovels etc.
- 8.2 In addition, sewer cleaning work calls for the following special equipments and devices like a portable pump set running on either diesel or petrol engine, manila rope and cloth balls, sectional sewer rods, a sewer cleaning bucket machine, a dredge, a roding machine with flexible sewer rods and cleaning tool attachments such as flush bags, sewer balls, wooden ball and sewer scooters, sewer jetting machine, gully emptier and pneumatic plugs.
 - 8.2.1. **Portable Pump Set.**
In cases where sewers are blocked completely and sewage has accumulated in manholes, the collected sewage has to be pumped out to tackle the sewer blockage. Such pumps should be of non clogging type preferably on four wheel trailers for the large sizes and should be provided with a self priming unit to save time and effort. Small pneumatic pumps can be used where high

lifts are required and the volume of liquid to be pumped is not large, such as when pumping out flooded basements and de watering deep trench excavation. In case of very deep manholes, non clog submersible pumps may be used.

8.2.2. Manila Rope and Cloth Ball.

The most common way of cleaning small up to 300 mm diameter is by the use of a manila rope and cloth ball. Flexible bamboo strips tied together are inserted into the sewer line by a person on top. If necessary, another man inside the manhole helps in pushing the rod through the sewer line. When the front end of the bamboo strip reaches the next manhole, a thick manila rope is tied to the rear end of the bamboo splits. The bamboo splits are then pulled by another man in the downstream manhole and pushed through the sewer line and the accumulated grit is carried to the next manhole where it is removed out by means of buckets. The operation is repeated between the next manholes until the stretch of sewer line is cleaned.

8.2.3. Sectional Sewer Rods.

These rods are used for cleaning small sewers. The sewer rods may be of bamboo or teakwood or light metal usually about one metre long at the end of which is a coupling which remains intact in the sewer but can be easily disjointed in the manhole. Sections of the rods are pushed down the sewer. The front or the advancing end of the sewer rod is generally fitted with a brush, a rubber ring for cleaning or a cutting edge to cut and dislodge the obstructions. These rods are also useful to locate the obstruction from either manhole, in case that particular portion of the sewer has to be exposed for attending to the problem.

8.2.4. Sewer Cleaning Bucket Machine.

The bucket machine consists of two powered winches with cables in between. In cleaning a section of sewer, the winches are centred over two adjacent manholes. To get the cable from one winch to the other, it is necessary to thread the cable through the sewer line by means of sewer rods or flexible split bamboo rods. The cable from the drum of each winch is fastened to the barrel on each end of an expansion sewer bucket fitted with closing device, so that the bucket can be pulled in either direction by the machine on the appropriate end. The bucket is pulled into the loosened material in the sewer until the operator feels that it is loaded with debris. The winch is then thrown out of gear and the opposing winch is put into action. When the reverse pull starts, the bucket automatically closes and the dirt is deposited in a truck or a trailer. This operation is repeated until the line is clear. Various bucket sizes are available for sewers 150 mm to 900 mm in size. The machine is also used along with other scrapping instruments for loosening sludge banks of detritus or cutting roots and dislodging obstructions. (Fig. 8.1)

8.2.5. Dredger (Clam shell),

It consists of a grab bucket on a wire which is lowered into the manhole in open condition with the help of a crane and pulley. On reaching the bottom of the manhole the segments are closed picking up the accumulated silt. The bucket is then raised above ground level where the bucket opens and the silt is automatically dropped into a truck or a trailer. The closing of the

bucket can be effected by wire ropes or by a pneumatically operated cylinder. The disadvantage in this system is that it can not clean the corner of the catch pit of manholes. Sometimes the deposits at the corners may become so hard that the same may be required to be chiselled out.

8.2.6. Rodding Machine with Flexible Sewer Rods.

This consists of a machine which rotates a rod to which is attached the cleaning tool such as auger, corkscrew or hedgehog and sand cups (fig. 8.2). The flexible rod consists of a series of steel rods with screw couplings. The flexible rod is guided through the manhole by a bent pipe. The machine rotates the rod with the tool attached to one end, the other being fixed to the machine. The rotating rod is thrust into the bent pipe manually with clamps with long handles holding the rod near the couplings. As the rod is thrust inside, the machine also is drawn towards the manhole. The rod is pulled in and out in quick succession when the tool is engaging the obstructions, so as to dislodge or loosen it. When the obstruction is cleared, the rod is pulled out by means of clamps keeping the rod rotating to facilitate quick and easy removal. The various tools attached to the rods are shown in Fig 8.3.

8.2.7. Scraper

This method is used for sewers of diameter larger than 750 mm. The scraper is an assembly of wooden planks of slightly smaller size than the sewer to be cleaned. Where the scraper cannot be lowered through the opening of a manhole, the scraper has to be assembled inside the manhole. The scraper chains, attached to a control chain in the manhole into which it is lowered, is then connected to a winch in the next downstream manhole by means of chains. The winch is then revolved to push the debris ahead of the scraper. The heading up of the flow behind the scraper and the water dropping from the top of the scraper will also assist in pushing it in the forward direction. This ensures that the bottom and the sides of the sewer are cleaned thoroughly. The scraped debris is removed manually.

Circular scrapers are used on small sewers below 350 mm diameter for cleaning the body of the line. They are commonly known as discs and these discs are either of collapsible type made out of metal or a wooden pair separated about 200 mm apart by steel rods. (Fig. 5)

8.2.8. Hydraulically Propelled Devices.

The hydraulically propelled devices take advantage of the force of impounded water to effectively clear sewers. Efficiency depends on the hydraulic principle that an increase in velocity in a moving stream is accompanied by a greatly increased ability to move entrapped material. The transporting capacity of water varies as the sixth power of its velocity.

8.2.8.1. Flush Bags.

A most effective tool for cleaning portions of sewers where rods cannot be used is the sewer flusher or flush bag. The flusher is a canvas bag or rubber bag equipped with a fire hose coupler at one end and a reducer at the other end. The flusher is connected to the fire hose and placed in the downstream end from the point where a choke is located. The bag is allowed to fill up until it expands and seals the sewer. The upstream pressure built up due to this damming effect breaks loose the obstructions. Caution must be exercised

In using these types of devices as there is a likely hood of sewage flowing back into the house connections or breaking of the pipes or joints due to high pressure that may develop.

8.2.8.2 Sewer Balls.

These are simple elastic pneumatic type rubber balls which can be blown up to varying degrees of inflation. These are manufactured in sizes from 150 mm to 750 mm when fully inflated. When used in cleaning a sewer, the ball is first inflated and then wrapped in a canvas cloth, the edges of which are sewed together. A trial line, little longer than the distance between the manholes, is attached securely to the covering. The size of the ball and the covering shall be such as to fit fairly snugly into the sewer. Immediately the ball is thrust into the sewer sewage commences to back up in the manhole and continues to rise until such time as its pressure is great enough to force the ball, moving it downstream through the pipe. Acting as a compressible floating plug, it affords enough obstruction, so that a continuous high velocity jet spurts under and to some extent around the ball, thereby sluicing all the moveable material ahead, to the next manhole. If the ball encounters an obstruction which is immovable, the ball merely indents to the necessary degree and moves forward. The only fixed obstruction which will stop the forward progress of the ball is a root mass or some similar obstruction tightly wedged into the pipe. Bricks, stones, bottles, loose metal parts, broken pieces of pipes, sand, gravel and settled sludge are easily moved ahead. If the ball stops momentarily, a pull on the trial line is usually sufficient to set it in motion again. If the pipe is very dirty, the trial line can be tied to a step in the upper manhole and the ball's progress can be retarded to the required degree as the lower manhole is reached, thus giving time for complete removal of accumulated silt and debris which has piled up ahead of the ball. (Fig 8.4) A wooden ball, also called a sewer pile, can also be used for this purpose, particularly for cleaning large out fall sewers. It is dropped into the sewer and owing to its buoyant action rolls along the invert of the sewer. The obstruction caused by it to the flow produces a vigorous scouring action along the invert and the sides which has the effect of removing the growths and the deposits from the sewers. The method is economical and hence can be used at frequent intervals.

8.2.8.3 Sewer Scooter.

This arrangement is an improved version of the scraper and consists of two jacks, a controlling rope and the scooter with a tight fitting shield. In contrast to the scraper, the scooter completely stops any flow of sewage. The scooter, attached to the control rope, is lowered into the manhole and then into the downstream sewer line. The down stream manhole jack is lowered into place from the road and upper manhole jack across the top of the manhole.

When the scooter is introduced into the line, it stops the flow of sewage thus building up a head behind the shield. The resulting pressure causes the scooter to move through the sewer until it accumulates enough debris to stop its movement. The head is then allowed to build approximately one meter before the control rope is pulled, causing the shield to fold back, thus allowing the accumulated sewage to gush into the sewer downstream, flushing the debris ahead to the next manhole from where it is removed. The

control rope is released, clearing the shield against the sewage and causing the scooter to advance again until the debris stops its movement. This process is repeated till the scooter reaches the downstream manhole where it may be removed or allowed to continue through the next section.

8.2.9 Velocity Cleaners (Jetting Machines).

The high velocity sewer cleaner makes use of high velocity water jets to remove and dislodge obstructions, soluble grease, grit and other materials from sanitary, storm and combined sewerage systems. It combines the functions of a roding machine and gully emptier machine. Basically it includes a high pressure hydraulic pump capable of delivering water at variable pressure up to about 80 kg/cm² through flexible hose to a sewer cleaning nozzle. The nozzle has one forward facing hole and a number of rear ward facing holes. The high pressure water coming out of the holes with a high velocity breaks up and dislodges the obstructions and flushes the materials down the sewer. Moreover by varying the pressure suitably, the nozzle itself acts as jack hammer and breaks up stubborn obstructions. (A separate suction pump or air flow devices may also be used to suck the dislodged material). The entire equipment is usually mounted on a heavy truck chassis with either a separate prime mover or a power take off for the suction device. The high pressure hose reel is also hydraulically driven. The truck also carries fresh water tanks for the hydraulic jet and a tank for the removed sludge and the various controls grouped together for easy operation during sewer cleaning. The manufacturer's operating and servicing manuals should be carefully followed for best results in the use of the machine.

8.2.10. Suction Units, (Gully Emptier)

Suction units create vacuum required for siphoning of mud, slurry, grit and other materials from sanitary, storm and combined sewerage systems. The vacuum created is such as to siphon the materials from the manholes, catch pits etc. having depth ranging from 1 m to 8 m in normal cases with an option to suck additional 4 m with the help of special accessories for the purpose. The unit can be vehicle or trolley mounted.

Silt and heavy particles settled at the bottom can be agitated and loosened by pressurised air with the help of the pump and then sucked up. Once the silt tank is full, the effluent is discharged in the nearby storm water drain or manhole, and the operation is repeated till the manhole is cleared off the silt. The silt deposited in the tank is then emptied at the predetermined dumping spot.

This machine is very much useful in de-silting surcharged manholes and in routine course the manholes can be de-silted without the workers getting down into the manhole.

8.2.11. Pneumatic Plugs.

The plugs are used for:

1. Isolating the gravity sewers for low pressure testing of sewers.
2. Stopping the flow of sewerage in the sewer line to carry out structural repairs.
3. Stopping the flow to carry out routine maintenance on the downstream side of plugged sewer line.

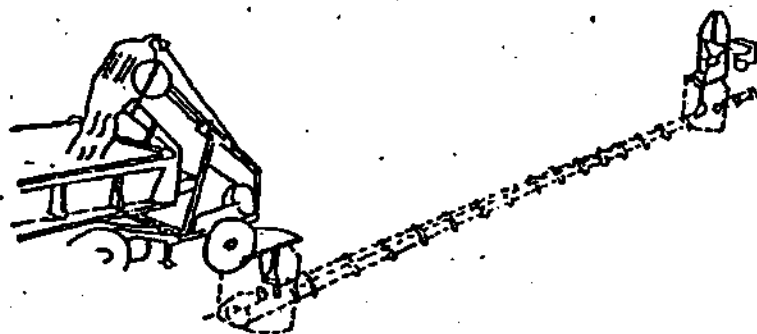


Fig 8.1 : Sewer Cleaning bucket machine

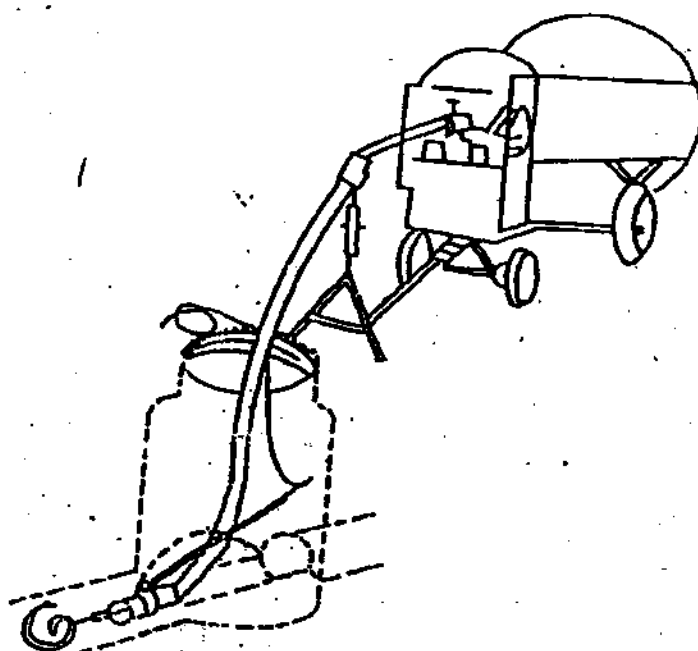


Fig 8.2 : Rodding machine with flexible sewer rods for sewer cleaning

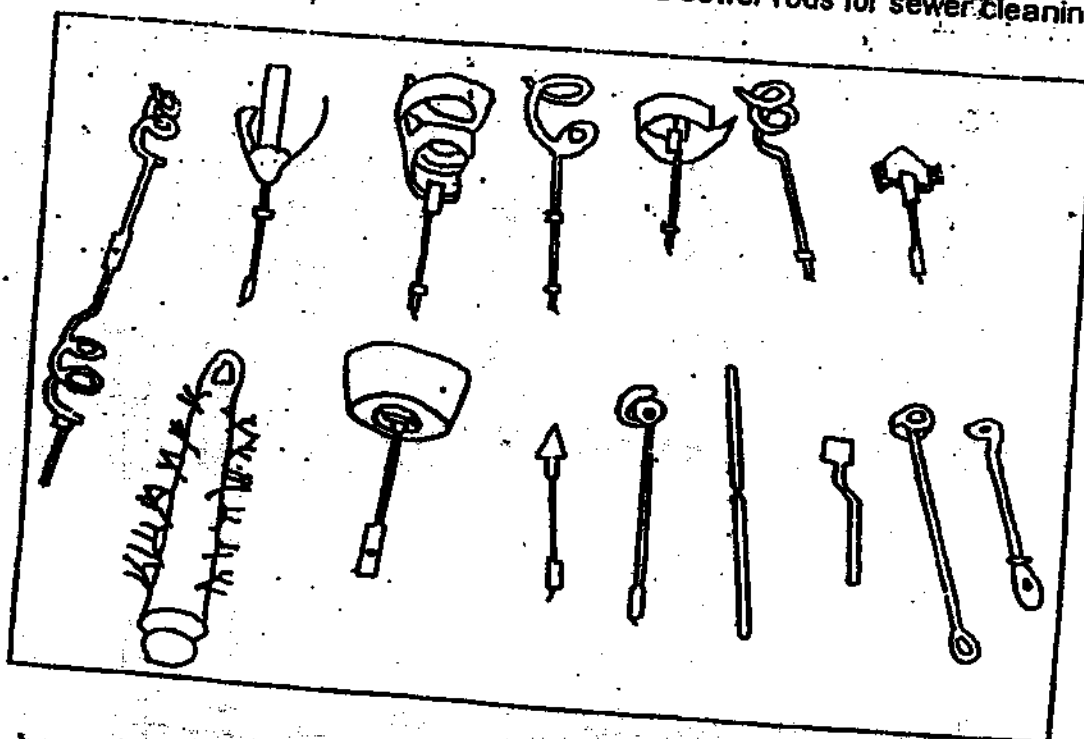


Fig 8.3 : Tools for sewer cleaning

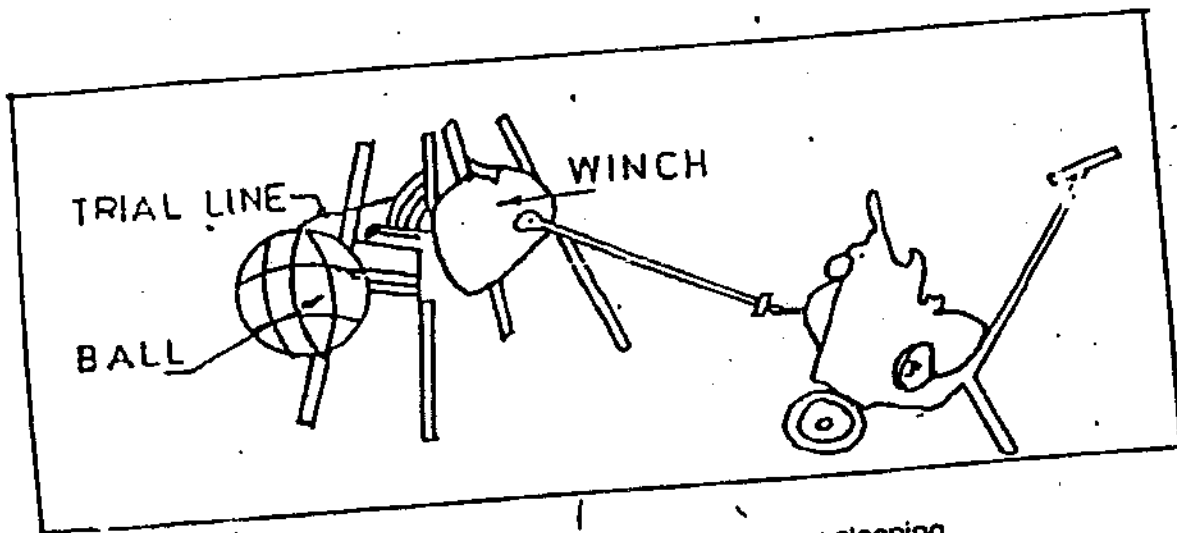
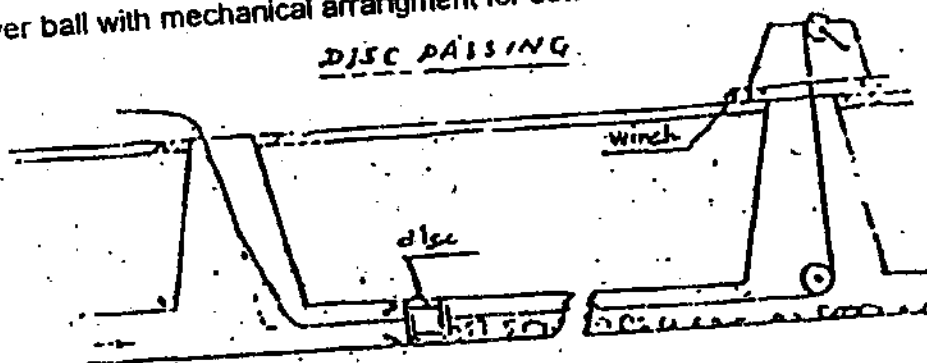


Fig 8.4 : Sewer ball with mechanical arrangement for sewer cleaning



Scrape & dragging

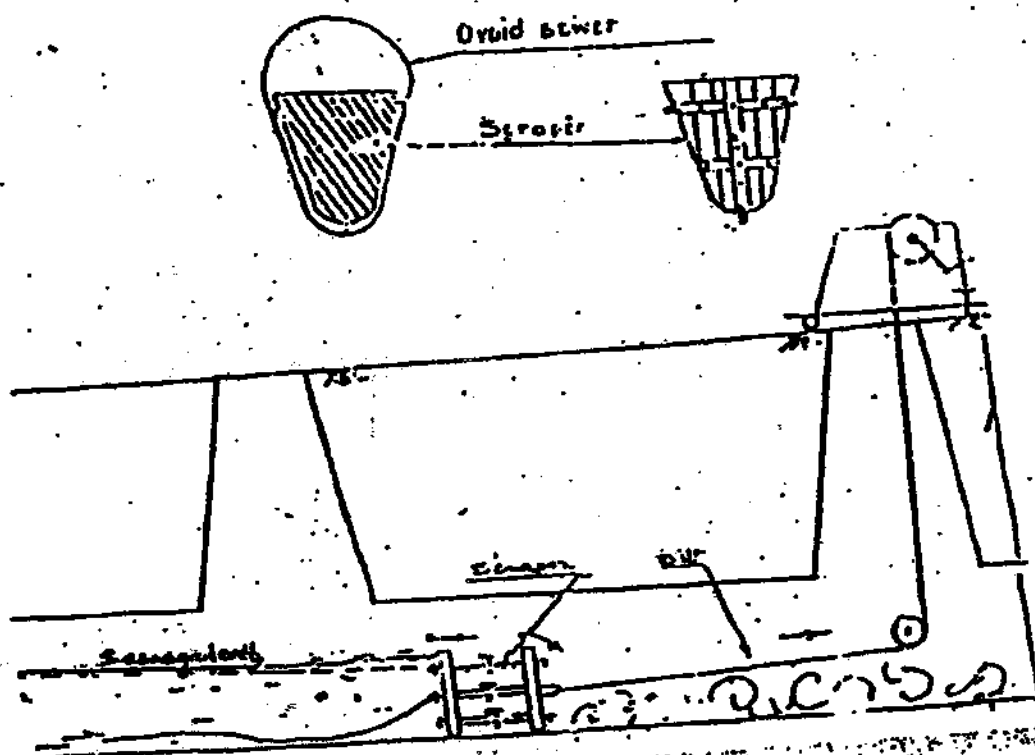


Fig 8.5

The plugs are made of metal plates which can withstand the action of waste water. The plates are bounded with suitable quality strong elastic material. The plugs should withstand the minimum hydrostatic back pressure likely to be encountered. The plugs can be inflated and deflated within the sewer line itself by suitable controls from the road level. Suitable hook and chain are provided to chain the plug in the manhole. Tethering life line and inflation hose are supplied with each plug. All plugs above 450 mm diameter should have a bye-pass fitting suitable for fixing a fire hose and suction hose.

9. SAFETY GUIDE FOR MEN WORKING IN SEWERS

9.1 PREFACE

9.1.1. Throughout the country there are many hundreds of men who, in the course of their duties work in manholes or sewers, pumping stations or at sewage disposal works. This is work of considerable importance which can be done only by experienced men. How well such sewers and works are designed and executed, their successful operation and freedom from breakdown depend upon the skill of the men who maintain them.

9.1.2. **SAFETY IS FIRST.** This is also to be observed in maintenance of sewer lines. Safety awareness, i.e. acquiring necessary skill & knowledge to avoid the hazards around us, among workers & supervisors is a basic requirement.

9.1.3. The risks likely to be met in this day to day work are no more than those present in general industry. Everybody should know exactly what to do when an accident occurs but prevention is better than cure. One must learn how to avoid accidents. If one is in doubt about any aspect of accident prevention procedure then one must ask the man in charge of his gang or group.

9.1.4. In no circumstances should one enter a manhole, sewer, sump or any underground chamber until the necessary safety precautions have been taken, else one may place himself in danger and may hinder the rescue of others.

EVEN IF THERE IS AN EMERGENCY & LIVES ARE AT STAKE, DO NOT NEGLECT SAFETY PROCEDURES.

9.1.5 STATUTORY PROVISIONS FOR SAFETY

9.1.5.1 There are laid down guidelines for safety measures to be adopted by each department in regard to workmen deputed for de-silting/cleaning of sewers under Section 36 of the Factories Act, 1948.

9.1.5.2 There is also a BIS code of practice for safety precautions to be taken when entering a sewerage system (BIS code no. 11972-1987).

These are to be followed in all sewerage maintenance works.

9.2.

POTENTIAL HAZARDS & PRECAUTIONS

Personnel engaged in operation and maintenance of sewerage systems including sewage pumping stations are exposed to different types of occupational hazards. The health and safety of personnel can be safeguarded to a great extent by taking the likely hazards into consideration at the time of designing the sewers, sewer appurtenances and pumping stations. Hazards which are still possible despite due consideration being given at the design stages, can be reduced by use of safety equipment and precautions appropriate for each hazardous condition. Finally to guard against human error and carelessness, proper job instructions and adequate effective supervision by competent personnel are most essential. Education of all personnel in the hazards present and preventive and safety measures is a must.

9.2.1. The causes of accidents in sewer maintenance could be broadly classified in following categories:

- A). Road accidents at ground or road level.
- B). Accidents within sewer lines.
- C). Accidents due to machines & equipments used in sewer maintenance & cleaning.
- D). Accidents due to other reasons.

9.2.1.1. Accidents on ground or road levels.

9.2.1.1.1. The accidents on the ground or road level could further be classified as under:

a) Accidents due to speeding vehicles.

1. Sewers are normally laid below the carriage way of the road. The staff working on the sewer maintenance and cleaning at road level is therefore, exposed to the accidents due to speeding vehicles.

b) Accidents to the Vehicles

For sewer cleaning it becomes necessary to open number of manholes on the *upstream and downstream* sides of the spot of working to provide ventilation. If proper safety gratings, barricades and signals are not provided on these open manholes, vehicles in general and two wheelers in particular, are likely to run over these manholes and meet with accidents. Similar situations may arise in case of theft of manhole covers.

c) Accidents to pedestrians

If the open manholes are not provided with safety grating and signals the pedestrians are likely to fall into the manholes.

9.2.1.1.2. PRECAUTIONS

As a precaution following traffic control measures should be adopted

- i) Place easily readable and clear warning signals well ahead of work area.
- ii) Provide Red Lanterns or electric light signals at night.
- iii) Fence off adequate space around the manhole for placing equipment and deposition of silt removed.
- iv) Place barricades or signs to channelise the traffic, if possible.
- v) Vehicles can be parked between the traffic and the work area as a time gap arrangement.
- vi) Use a flagman at the two ends for controlling flow of traffic from each direction and to avoid a traffic jam, if the road is narrow and only one lane of traffic is possible.
- vii) Better to inform traffic police in advance to control/direct traffic on heavy traffic/congested roads.
- viii) On completion of the work, all manholes shall be checked and it should be ascertained that the same are properly closed.

9.2.1.2. Accidents in the sewer lines:

For cleaning of the sewers, either manually or mechanically, it becomes necessary for the workers to go down in the manhole and sometimes into the body of the sewer. The risk to which the workers are exposed while working in the sewer are as under:

- a) Suffocation (Asphyxiation) as a result of oxygen deficiency or poisoning due to gases or vapours.
- b) Physical injury
- c) Infection
- d) Drowning
- e) Harmful Industrial effluents
- f) Others

9.2.1.2.1. Gases in Sewerage System-Suffocation or gas Poisoning

a) Sewer gas is a mixture of gases in sewers and manholes containing abnormally high percentage of Carbon Dioxide, varying amounts of Methane, Hydrogen, Hydrogen Sulphide and low percentages of Oxygen caused by septic action through the accumulation of organic matter inside the sewer. The actual hazard is due to the presence of high levels of Methane, forming an explosive mixture or the Oxygen deficiency or Hydrogen Sulphide in excess of permissible levels. Some times trade wastes may also contribute to other gases like Chlorine, Ammonia, Sulphur Dioxide etc.

b) The characteristics of common gases encountered in sewers, sewage pumping stations and sewage treatment plants, their physiological effects and safe exposure limits are detailed in Appendix 9.1.

c) Anoxic gas or vapour is any gas or vapour that is directly or indirectly injurious or destructive to the health or life of human beings. It can be a simple asphyxiant, chemical asphyxiant, irritant, volatile solvent or a combustible gas.

d) Simple asphyxiants are the physiologically inert gases like Nitrogen, Carbon dioxide, Methane and Hydrogen which when breathed in high concentrations act mechanically by excluding oxygen. (Oxygen deficiency).

e) Chemical asphyxiants are substances like Carbon monoxide which by combining with the haemoglobin of the blood or with some constituents of the tissues either prevent Oxygen from reaching the tissues or prevent the tissues from using it.

f) Irritants are substances like Chlorine which injure the air passage and lungs and induce inflammation in the surface of the respiratory tract.

g) Volatile solvents and drug like substances exert little or no effect on the lungs but affect the nervous system inducing anaesthesia. Inorganic and organic metallic poisonous substances in a volatile form prove toxic after their absorption into the body.

h) Combustible vapours will burn as long as they are in contact with flame, spark or a heated material having a temperature equal to or greater than the ignition temperature of the gas or vapours, provided, there is enough Oxygen present for combustion. The reaction of the gas or vapour with the Oxygen of the air, resulting in progressive combustion, or propagation of flame, occurs only when the concentration of the gas or vapours is within certain limits expressed as percentage of gas or vapours in air by volume. These limits are called explosive limits. Outside these limits, local combustion may occur at the source of ignition but there will be no propagation of flame and hence the combustion ceases on removal of the source of ignition. Within the limits, along with the propagation of the flame through the mixture, there will be development of pressure leading to violent explosion.

B. PRECAUTIONS

i) Ventilate the sewer line by opening two or three manholes on both the sides where work is to be carried out. This is more important when adequate blowers for ventilating sewers are not available. The manholes should be opened at least one hour before start of operations. The opened manholes should be properly fenced to prevent any person, especially children, accidentally falling into the sewer. Dummy covers with BRC welded fabric can be used.

ii) Where it is not possible to use the blowers, operate the fan for at least 30 minutes before start of work. During cleaning operations to ventilate the lowest working levels. Portable air blowers, for ventilating manhole, are recommended for all tank, pit or manhole works where there is a possibility of presence of noxious gas, vapours or Oxygen deficiency. The motor of these air blowers shall be of weatherproof and flameproof type, compression ignitions, diesel type (without spark plug). These shall be placed not less than 2 m away from the opening and on the leeward side protected from wind so that they will not serve as a source of ignition for any inflammable gas which may be present. Forced type ventilation should be provided by blower located at ground level with suitable flexible ducting to displace out air from the manhole.

iii) Use safety harness and life line before entering the sewer line. Two helpers at the top should be provided for each person. The person standing at the top must send signals at every few minutes interval to the person in the manhole to ensure safety. Two way wireless communication system is recommended for better communication.

iv) Test for hazardous gases before entry of a person into the sewer line and also in between if the operations are for a longer time. In case of scum formation the water and sediments in the manhole should be agitated with the help of rod or any other suitable instrument for trapped gases when manhole is checked for noxious gases and oxygen deficiencies.

v) For extended jobs the gas tests shall be repeated every three minutes while men are in the sewer.

vi) Presence of H_2S can be detected by use of the lead acetate paper available in the market. The lead acetate paper can also be prepared by dipping a filter paper in a solution of 5% lead acetate. For detecting H_2S the lead acetate paper is moistened and lowered in the manhole. Change of colour to brown or grey indicates presence of H_2S .

vii) To ensure the presence of minimum required level of Oxygen in the sewer line, a safety lamp is inserted into the manhole. The lamp will burn smoothly if sufficient Oxygen is available in the sewer line.

viii) If the gas or Oxygen deficiency is present and it is not practicable to ventilate adequately before workers enter, a hose mask shall be worn and extreme care shall be taken to avoid all sources of ignition. Workers shall be taught how to use the hose equipment. In these cases, they shall always use permissible safety lights (not ordinary flash lights) rubber boots or non-sparking shoes and non-sparking tools.

9.2.1.2.2. Physical Injury

A: The work men are likely to receive physical injury.

- a) Due to fall of heavy materials like pieces of broken manhole covers, tools like hammer, phowda, pickaxe and accidental dropping of the silt bucket while hoisting. The workers working on the road surface are required to be more careful while lowering these items into the manhole or hoisting silt buckets from the manhole.
- b) Due to workman himself falling down/slipping from ladders.
- c) Due to knocking down by a speeding vehicle at road level.

B: PRECAUTIONS.

i) Test manhole rungs or steps for structural safety before using. Workmen descending a manhole shaft to inspect or clean sewers shall try each ladder step or rung carefully before putting the full weight on it to guard against insecure fastening due to corrosion of the rung at the manhole.

ii) Ensure that, where portable ladders are used they are properly seated or fixed.

iii) Ensure that no material or tools are located near the edge, which can fall into the manhole and injure the workman.

iv) Lower all tools to the workman in a bucket.

v) Allow no smoking or open flame and guard against sparks.

vi) Use lighting equipment which must be explosion and fire proof, or use mirror for reflection of light.

vii) Provide helmets to the workers working in the manhole.

9.2.1.2.3. Infection

A: Body infection to the workers may be caused by cuts or wounds coming in contact with sewage. Cleanliness is, therefore, most important. The workers should be asked to oil (Coconut or sweet oil) their body before entering into the manholes and take bath immediately after completing the work. Providing rubber hand gloves and boots is a good practice.

B: PRECAUTIONS

i) Emergency First Aid treatment kits shall be provided to take care of all minor injuries like cuts and burns.

ii) A physician's services should be available for emergencies.

iii) The workers should be educated about the hazards of waterborne diseases, such as typhoid and cholera through sewage and tetanus through cuts and wounds. Cuts and grazes should be covered with waterproof plasters. Effective immunization of workers against diseases such as typhoid, cholera, tetanus, etc. should be done by vaccination.

iv) The importance of personal hygiene should be emphasized and the workers should be instructed to keep finger nails short and well trimmed wash hands with soap and hot water before taking food or smoking and to keep fingers out of nose, mouth and eyes, because the hands carry most infections.

v) Use of rubber gloves should be insisted so that sewage or sludge does not come in direct contact with the hands. Before starting work, skin likely to be exposed to sewage should be covered with barrier cream or worker should be provided with wadded suit.

vi) The workers should be provided with a complete change of work clothes to be worn during working hours. Gum boots should also be provided for the workers.

vii) When the work is completed, thoroughly wash all contaminated parts of the body.

viii) In laboratory work only pipettes with rubber teats should be used to prevent contamination of the mouth. Laboratory glassware should not be used for drinking purposes. In no event food should be prepared in the laboratory.

ix) Adequate facility of clean water and soap shall be provided for the workers for cleaning their body after completion of the job.

x) The gangs/JE/site-in-charge must have telephone numbers for call of an ambulance, fire service, police and near by hospital for any emergency.

9.2.1.2.4. Drowning:

a) In case of very big sewers, sudden rise in the level of the sewage can cause death due to drowning. Similarly in case of blocked sewers sudden removal of blockages can flood the manholes and can endanger the life of the workers.

b) PRECAUTIONS

i) Sewage levels shall be checked in the manholes and the same should not be more than 1.5 feet.

ii) Rise of water level or sudden breeze in the sewer, onset of rain or even dark clouds in the distance may be taken as warning to possible flooding, particularly in combined sewers.

iii) When men are working in man entry sewer lines, 3rd manhole on u/s side should be plugged and upstream sewage should be pumped over to the 3rd manhole on the downstream side of the working section to ensure safety against flood flows drowning or sliding into the sewers. Similarly, as a check against sudden removal of blockage causing flood, the pumping should be resorted to maintain the level of flow within workable limit as mentioned above.

9.2.1.2.5 Harmful Industrial effluents

a) Hot discharges: the hot discharges from industries like textile mills can cause injuries to the workers working inside the manhole. It becomes, therefore, necessary to restrict the temperature of the discharge to 40 deg. C or below by suitable regulations. If not implemented then the factory manager should be contacted in advance and requested not to discharge high temperature waste while the work is in progress.

b) Chemical discharges: Discharge from the chemical factories may contain acids and other harmful chemicals which may cause injuries to the skin. Similar precautions as in (a) above would be necessary.

c) The use of radioactive material in hospitals, research laboratories and industry can give rise to presence of radioactive waste matter which should not be discharged to sewers except in controlled conditions and with

adequate precaution. Normally the amount of radioactive waste in conjunction with the volume of diluting sewage is too small to provide any hazard. But in case of fire or accidental spillage, this amount can be large enough to be dangerous. Such instances should be reported to Local Bodies, Pollution Control Board immediately and dealt with jointly by the police, fire services and local authority/P.C.B.

d) Some establishments like petrol pumps discharge oil in large quantities. In surcharged condition the oil floats on the sewage in manhole and makes it difficult for the workers to enter into the manhole. Therefore, suitable action should be taken against these establishments to prevent hazards due to such discharges.

e) The Central/State Pollution Control Board shall strictly regulate and ensure that no industrial and/or manufacturing unit shall discharge untreated and hazardous effluents in the municipal/public sewers and shall observe all the conditions and norms imposed upon them under the provision of law in this behalf

f) The agency in charge for maintenance of sewers shall be entitled to test the effluent discharged in the municipal/public sewers by all industrial and manufacturing units from time to time to ascertain whether the said effluent are properly treated and are not poisonous or hazardous. In case it is found that the effluent discharged by any industrial or manufacturing units is untreated, hazardous, or poisonous, the agency-in-charge shall report the same to the Central/State Pollution Control Board for necessary action. This is without prejudice to the right of the agency-in-charge to take necessary action under the provision of the relevant Act.

9.2.1.2.6. Other reasons:

a) When the sewer is in stagnant condition for long time scum of considerable thickness is formed above the sewage. This gives false indication of firm ground.

b) Such scum has to be mixed well with sewage before entering into the manhole.

9.2.1.3. Accidents due to machines & equipments use: 3.1 sewer Maintenance & cleaning:

a) Various types of machines are used for cleaning and de-silting of sewers. Many of these machines are power operated and, therefore, comprise of gears, chains, belts etc. These moving parts can cause accident to the operator if he is not careful and the moving parts are not provided with proper safety guards.

b) In case of power bucket machines, two machines at a time are used for cleaning, and labourers are required to go into the manholes for removing the silt deposited under the pulley periodically. If the machines are wrongly operated, the worker removing the silt inside the manhole is likely to get

Injury because of the wire rope. In case of high pressure jetting machine, the pressure of the water is as high as 200 psi. If a leakage develops in any component or hose pipe a worker can get serious injuries due to the water emitting at high pressure. Necessary instructions be issued to machine drivers to ensure that the safety precautions have been complied with by the sewer man before operating the machines. The power Rodding machine consists of Chromo Flex rods which are rotated in bent position. If a rod breaks accidentally it is likely to hit a worker or a person standing near by, resulting in injury.

5.2.1.4 Accidents due to some other reasons:

Occupational Hazards:

- a) Due to heavy traffic and surcharged conditions of the sewer, in larger cities particularly in congested areas, the maintenance and de-siling of the sewer are necessarily carried out at night. Because of the nature of the work and continuous night duty, eye sight and alertness of the workers is likely to get affected. As far as possible rotation of shifts should be given to the workers at regular interval.
- b) Accidents may occur due to falling of heavy materials, from upper floors, in a common house gully. A headgear helmet should be provided when a worker is asked to go in such gullies.
- c) Accidents may also occur due to electric shock while excavating trenches for carrying out repairs to the sewer. These can be avoided if workers are careful with underground cables while excavating.

9.3.0. SAFETY EQUIPMENT

9.3.0.1. The various safety equipments that are normally required in sewer maintenance work are gas masks, Oxygen breathing apparatus, portable lighting equipment, no sparking tools, portable air blowers, safety belts, inhalators, diver's suit, bump helmets, gloves, lead acetate paper, barrier cream, head lamps, first aid kits, gas detector lamps etc.

9.3.0.2. The use of the particular safety equipment is governed by the detection of various gases and Oxygen deficiency.

9.3.0.3. A knowledge of the type of gases in the atmosphere and of the working location becomes essential for the selection of the right type of safety equipment. Equipment and simple tests for detection of various gases and Oxygen deficiency are furnished in App.9.2.

9.3.1 Gas Masks

9.3.1.1. General purpose gas masks are used for respiratory protection from low and moderately high concentrations of all types of toxic gases and vapours present in the atmosphere in which there is sufficient Oxygen to support life. Masks afford necessary respiratory protection under many circumstances

but it is most important to know the limitations of the various types available and to be familiar with their use. Even when masks are used properly, other precautions such as never using open flame or creating sparks in the presence of inflammable gases must be taken. The general purpose gas masks affords protection against organic vapours, acid gases, carbon monoxide up to 2 percent concentration, ~~toxic~~ dusts, fumes and smoke.

- 9.3.1.2. The gas mask consists of a face piece ~~attached~~ containing purifying chemicals, a liner for showing duration of ~~service~~ and a harness for support. Protection against specific contaminants ~~is achieved~~ by the selection of appropriate canisters.
- 9.3.1.3. Persons using gas masks, should practice ~~regularly~~ ~~equally~~ with them in order to become proficient in putting them on quickly ~~and~~ breathing through them.
- 9.3.1.4. Gas masks cannot be used in Oxygen ~~deficient~~ atmospheres, in non ventilated locations or areas where large concentrations of poisonous gases exist.

9.3.2. Breathing Apparatus

This is designed for respiratory protection for atmosphere that contains very high concentrations of toxic gases and vapours or that are deficient in Oxygen. It fully protects a worker against ~~all~~ ~~gases~~, vapours, dusts, fumes, smokes and oxygen deficiencies and can be ~~used~~ in petroleum vapours and is the most dependable device ~~for work~~ in atmospheres normally encountered in sewerage works.

9.3.2.1. Air Hose Respirator

- 9.3.2.1.1. This is used where a source of fresh air ~~is available~~ within a distance of 50 m from the working location. It is essential ~~that~~ the supply of air is obtained from an uncontaminated source.
- 9.3.2.1.2. It consists of a mask which is a tight ~~fitting~~ ~~face~~ piece attached to a large diameter flexible hose, breathing tubes ~~and~~ ~~connections~~. Fresh air is blown to the mask through either a power operated ~~or~~ hand operated blower. An inhalation check valve in the breathing ~~line~~ ~~assembly~~ and exhalation valve in the face piece permit air flow only in one ~~direction~~, from the source to the mask; when the blower is in operation. ~~Exhaled~~ ~~air~~ is released into the surrounding atmosphere through the exhalation valve. The valve arrangement permits the wearer to ~~breathe~~ directly through the hose in the event of blower failure. The ~~max.~~ ~~min.~~ length of hose will ~~be~~ ~~at~~ least 50 M. The hose, using a large diameter permits breathing without ~~excessive~~ resistance in the event of blower failure. A special pressure release valve on the blower permits regulation of air delivery and a fresh air bypass valve functions automatically in the event of blower failure permitting the ~~wearer~~ to breathe directly through the hose. When a hand operated blower is ~~used~~ the operator will be available to attend to any emergent situation also. The apparatus does not depend on chemical and may be used over extended periods at low costs.

- 9.3.2.1.3. Purified air is used where a source of fresh air is not available within 50 m to permit the use of an air hose respirator or in situations where an air hose would encumber the worker.

9.3.3. Portable Lighting Equipment

The equipment normally used are portable electric hand lamps of permissible types, electric cap lamps and explosion proof flash light.

9.3.4. Non sparking Tools

These are made of an alloy (containing at least 80 percent of copper) that will not spark when struck against other objects and metals and yet retains the necessary strength and resistance to wear.

9.3.5. Portable Air Blowers

Forced ventilation of manholes, pits and tanks can be provided by portable air blowers. Special precautions should be taken to ensure that the blowers do not serve as a source of ignition for inflammable gases. Such precautions shall include placing of the blower upwind from the manhole or at right angles to the wind direction and at least 2 m away from the opening. The use of such equipment requires a consideration of the depth of the manhole, size of enclosure and the number of openings to uncontaminated atmosphere. Trailer mounted blower having a capacity of 210 M³/min can ventilate easily many meters of medium sized sewers.

9.3.6. Safety Belt

This consists of a body belt with a buckle and shoulder harness. The life line is of high grade spliced manila rope, nylon rope or a steel cable anchored with rings on each side of the belt and provided with safety straps for anchoring or securing to a stable support. The life line should be about 15 m in length and the overall assembly should be capable of withstanding a tensile load of 2000 kgs. The safety belt and life line should be tested by lifting the wearer clear of ground before each day's use.

9.3.7. Inhalators

Approved inhalators employing a mixture of Oxygen and Carbon Dioxide are used for resuscitating victims of gas collapse, drowning or electric shock. Artificial respiration should be started at once on the patient and an inhalator face piece attached to the victims mouth as soon as the equipment can be made ready. The Carbon Dioxide used in small percentages stimulates deep breathing so that more Oxygen may be inhaled. Pure Oxygen should be used only when irritant gases such as Hydrogen sulphide or Chlorine have caused the victim's collapse.

9.3.8. Diver's Suit

A good quality diver suit should be provided to the diver whose services are

very necessary while plugging the sewer line or removal of some hard blockage due to stone etc. at the mouth of the pipe in the manholes. Depending upon the site condition, suit should have provision to connect an air line with compressor or Oxygen cylinder.

9.4 SELECTION OF SEWER WORKERS, TRAINING & PREREQUISITE

9.4.1. Only workers who are above 18 years of age, physically fit for their task, aware of the possible hazards and alert for action should an emergency arise, shall be employed.

9.4.2. The selection of prospective employees for the sewerage and sewage disposal functions should take into account the duties they will be expected to perform those duties may be divided into two categories

- a) Duties not requiring entry into confined spaces, and
- b) Duties requiring entry into confined spaces.

9.4.3. GUIDANCE FOR SELECTION OF SEWER MEN

9.4.3.1. REQUIREMENTS FOR DUTIES NOT REQUIRING ENTRY INTO CONFINED SPACE.

No specific requirements except a routine medical examination shall be made. Those with the following disabilities shall not be selected as any of the disease involves risks to the health and safety of both the prospective employee and/or other employees;

- a) History of fits, blackouts, fainting attacks
- b) Chronic skin disease; and
- c) Meniers disease or diseases involving loss of balance.

9.4.3.2. REQUIREMENTS FOR DUTIES REQUIRING ENTRY INTO CONFINED SPACE.

Persons considered for employment in confined spaces shall be physically fit and capable of understanding training given. Those with the undemoted disabilities shall not be recruited for this type of work and those who contract these should cease to be employed in this capacity.

- a) A history of fits, blackouts or fainting;
- b) A history of heart disease or disorder;
- c) High blood pressure;
- d) Asthma, bronchitis or a shortness of breath on exertion;
- e) Deafness
- f) Meniers disease or disease involving giddiness or loss of balance;
- g) Claustrophobia or nervous or mental disorder;
- h) Back pain or joint trouble that would limit mobility in confined spaces;
- i) Deformity or disease of the lower limbs limiting movement;
- k) Chronic skin disease;
- m) Serious defects in eyesight; and
- n) Lack of sense of smell.

- 9.4.3.3. The workmen entrusted with the work task of sewers cleaning and de-silting should have basic functional literacy.
- 9.4.3.4. Employees should be medically re-examined at reasonable intervals, taking into account the person's age and duties.
- 9.4.4. The local agency shall impart training to the supervisory staff regarding implementation of this scheme and of safety measures including rescue methods and the use of safety equipment. Such training programme shall be repeated periodically. This training should be imparted through Central Labour Institute/Fire Brigade Department, Department of Sewerage Operation and National Environmental Engineering Research Institute (NEERI) and/or other relevant institutions.
- 9.4.5. Training and demonstration regarding implementation of the safety measures including rescue method and the use of safety equipment shall be imparted to each worker and a certificate shall be issued to that effect. Such training programme shall be imparted to every new entrant. The training in safety and welfare shall be imparted through the Central Labour Institute and local/state Fire Brigade department, Department of Sewerage Operation, and other relevant institutions. Every officer of the local agency or Contractors, should ensure that the training is imparted to all the workers. The Labour Officer of the local agency shall coordinate and monitor the training programme. The training programme to be conducted by the institutions shall be especially designed for this purpose and should be imparted to the workers in local/regional/Hindi language, preferably with visual aids. The Contractors supervisors and their labour staff shall also undergo these training and the contractors shall submit to the local agency a true copy of the certificates before taking over any assignments showing that their supervisor and labour staff have undergone the specified level of training in safety and welfare. This condition shall be incorporated by Chief Engineer (Sewerage Operation) in the tender for cleaning and de-silting the sewer lines and manholes.
- 9.4.6. An annual schedule for medical checkup of workers engaged in such work will be drawn and implemented. This check up should include a full clinical examination, proper blood tests, routine radiological tests, pulmonary functions test, a psychiatric evaluation and other specialized tests wherever necessary. Special emphasis must be given to study the respiratory system, the eyes and the skin problems.
- 9.4.7. Copy of the safety measures in either regional or Hindi language shall be given to each worker and also read out to them by Supervisors of the local agency or/and the Contractor's Supervisors.
- 9.5 GENERAL
- 9.5.1. During the summer or hot period, persons should be allowed to go inside the manhole during morning hours or when the temperature is low.
- 9.5.2. No person should work inside the manhole for more than 15 minutes at a stretch. He should be withdrawn afterwards and the next person be sent.

- 9.5.3. Smoking, naked lights or fires should not be permitted within 3 m. of any manhole. In no circumstances should the safety lamp be inside the sewer or manhole.
- 9.5.4. Men working in manholes or sewers must have with them their detector lamp, test papers and air must be tested at frequent intervals. If at any time unsafe conditions are indicated or if there is an unusual smell or peculiar smell, all men must leave the Manhole at once.
- 9.5.5. When the sewers are large enough to be entered, guard bars or chains must be kept in position across the sewer downstream of the place of the work.
- 9.5.6. No one should walk along a sewer inside. A lifeline must be used when working in sewers with a fast flowing current and special care must be taken when cleaning blockage.
- 9.5.7. Copy of the safety measures in Hindi/local language be provided to such workers.
- 9.5.8.1 Proper arrangements should be made for arranging treatment including arrangements to ensure speedy admission and treatment at any hospital in nearby vicinity of site. The information of each accident should be given to the concerned authorities and the labour welfare officer immediately on telephone as well in writing.
- 9.5.8.2 In the event of a man collapsing suddenly, when it is thought that this is due to "gas", the top man must be warned at once. Unless the casualty can be removed quickly, the men with him must immediately return to the surface. No further rescue attempt should be made without breathing apparatus, and help must be summoned at once by telephoning for the fire and ambulance services.
- 9.5.9. A responsible officer of the supervisory cadre of the department such as Junior Engineer, sanitary facility inspector, sewer ASI etc. should be physically present at the site and he or she should ensure and document compliance of these guidelines and entry worthiness in the manhole. He/she should remain physically present throughout the operation and the onus of compliance with the guidelines should lie on him/her. A log books should be maintained by him/her giving the date and time, the names of workers, place and other relevant particulars of stay in the manhole etc. The said official should hold a certificate of training from a Competent Body such as St. John's Ambulance Brigade, Loss Prevention Association of India, Fire Brigade etc. of training in First Aid and Emergency Measures. If the said Supervising Officer is not satisfied about the various requirements as per this scheme then he/she should immediately stop the work.
- 9.5.10 The list of various safety tools, overall and safety equipment to be used while entering the manhole and during the cleaning/de-silting operation should be periodically reviewed / checked. Each section of Main Sewer

Division shall be equipped with these tools, overall and safety equipment.

- 9.5.11. Each worker working in the Main Sewer Division engaged in cleaning and de-silting operation of the sewer lines, manholes, etc. shall be medically examined once a year and shall not be engaged if he is suffering from any of the diseases such as respiratory, skin, eye problems, infections, cardio vascular, spinal, psychiatric nature etc. He should not be engaged for cleaning and de-silting work inside the manhole or sewer lines till he is cured. Whether a person is suffering from any of the above mentioned diseases, shall be certified by any Municipal/Govt. Hospital/Doctor/authorized medical practitioner. Similarly, the contractors engaged in cleaning and de-silting operations, shall get their workers, employees medically examined and shall not employ any worker who is found to be suffering from any of the above mentioned ailments. The contractor shall submit with the contractee agency, a certificate from a registered medical practitioner showing that the workers to be engaged for the said contract of cleaning and de-silting operation, are not suffering from any of the above mentioned ailments.
- 9.5.12. The workers should be provided with vaccination against certain diseases which sewerage workers normally suffer due to the nature of their work.
- ✓ 9.5.13. First Aid Box properly stocked including washing bottles to wash away skin and eyes, should be kept.
- 9.5.14. If any worker on medical examination is found to be suffering from any disease attributable to this work and when certified by a Municipal Medical practitioner, Govt. Hospital shall be granted special disability leave as per the provisions of the relevant regulations.
- 9.5.15. The Contractors engaged by local body for sewer cleaning and de-silting work, should take out workmen insurance policy at the contractor's cost (individual or group) for Rupees one lakh for each worker engaged by him for the work of sewer line and/or de-silting in order to cover death of the worker, permanent disability or hospitalization of the worker caused by the said work. Similar insurance cover will also be arranged by the local body/ authority responsible for operation and maintenance of sewer lines for its regular roll/casual roll employees engaged in such jobs.
- 9.5.16. A vehicle with the safety equipment such as breathing apparatus, diver's suit, air blower, escape set, etc., should be available to meet any emergency. The same vehicle shall have other facility such as first aid kit provision for eyewash, etc. This vehicle should be used as a ambulance van in case of an emergency or accident.
- 9.5.17. Local body/Authority will incorporate in the tender all the conditions incorporated in this scheme including safety procedure, use of safety equipment, tools, shackles and personal gear as also the insurance for each worker and ensure that the contractors fulfill them in toto. A provision of penalty shall be incorporated in the tender for non compliance of the conditions related to health, safety and welfare of the workers and other conditions of this scheme. The contractors shall not be allowed to start the

work of cleaning and de-silting of the sewer line until the requisite insurance policy is taken out and verified by the Sme-In-charge. Departmental Site-in-charge will be responsible for ensuring full compliance of these conditions. Senior Officers of department shall also verify during their periodical inspection round that the proper record is maintained and the various conditions related to safety and welfare of the workers are fully complied with.

9.5.18. List of the contractor's employees including their residential addresses, age, etc. is required to be supplied by the Contractor in separate register. ✓

9.5.19. If the contractor has engaged 20 or more labourers, it is required to be registered under the Contract Labour Act and Interstate Migrate Labour Act where ever applicable. ✓

9.5.20. Contractors should abide by all the rules and regulations in respect of labour laws prescribed by the Govt. Authorities and submit the returns etc. ✓

9.5.21. The Workmen compensation should be paid to the contractor's employees as per the provisions of Workmen's Compensation Act. ✓

9.5.22 After working in sewers or manholes

The ganger, foreman, ASI or Junior Engineer site incharge must check carefully that all men have left the sewer or manhole.

All equipment should be cleaned, dried, checked and adjusted ready for further immediate use.

Characteristics of common gases causing hazards

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APPENDIX 9.2

Equipment and simple tests for detection of gases and oxygen deficiency.

Combustible gas indicators are used for testing the atmosphere for hazardous concentration of inflammable gases and vapours and for making quantitative estimates of the percentage of combustible gas present. The indicator consists of a battery operated unit, which oxidizes or burns a sample of atmosphere to be tested over a heated catalytic filament which is a part of a balanced electrical circuit. Combustibles in the samples are burned on the hot wire, thus raising its temperature and incur its resistance in proportion to the concentration of the combustibles in the sample. The imbalance in the electrical circuit causes the deflection of the pointer of the meter which indicates on a scale, the concentration of combustible gases or vapours in the sample. This scale is calibrated in percentages of the lower explosive limit. The scale is generally calibrated for a single specific inflammable gas, but may also be calibrated for known mixtures of gases and vapours. The types of combustible gas indicator may be selected to suit the gas or vapour usually encountered.

Carbon monoxide indicator may be used to detect, the percentage of the gas present. There are both hand operated and battery operated units which determine electrically the percentage of carbon monoxide present. They are very sensitive to low concentrations of gas and reliably indicate low but dangerous concentrations of carbon monoxide.

The sample of the atmosphere drawn into the indicator is oxidized to carbon dioxide by catalytic action. The heat liberated by oxidation is proportional to the amount of carbon monoxide present and is measured by a differential thermocouple in series with the indicating meter which is calibrated to read directly the percentage of carbon monoxide in the atmosphere.

Colorimetric detectors are used to detect specific gases like carbon monoxide, hydrogen sulphide etc. In a specific gas detector, when a sample of the atmosphere is drawn into the instrument, that specific gas reacts chemically with the special substance in the detector producing a change in colour. The colour with its intensity produced is compared with a chart to estimate the percentage of the specific gas present.

In the carbon monoxide detector the chemical used is iodine pentoxide or palladium chloride. In hydrogen sulphite detector the chemical used is lead acetate.

Oxygen deficiency indicator is an adaptation of the flame safety lamp used by miners, for testing the atmosphere suspected of being deficient in oxygen. Normally the indicator is used from an external source to test the suspected atmosphere. The sample of air is drawn in, using an aspirator bulb and the flame inside the lamp is observed. When the atmosphere is normal the flame of the lamp will have normal appearance. With decreased oxygen content in the atmosphere and the absence of another combustible gas, the flame will be dimmer. When the oxygen content in the atmosphere is as low as 16% or lower, the flame will be extinguished.

At altitudes more than 1500 m above sea level, the flame may continue to burn even if the percentage of oxygen in the atmosphere is less than 16%. Hence this possibility must be considered at high altitudes.

Simple tests: In the absence of the indicators and detectors mentioned above, the following simple tests must be conducted after providing sufficient time for natural ventilation.

In asphyxiating conditions, a safety lamp must be used. The lamp should burn continuously for at least 5 minutes in the atmosphere under test. It is essential to check if the lamp is undamaged before being used.

For hydrogen sulphide, a filter paper moistened with 5% solution of lead acetate is exposed for five minutes to the atmosphere under test. As hydrogen sulphide is heavier than air, the atmosphere at the bottom of the manhole should be tested. The presence of hydrogen sulphide gas is indicated by paper turning Grey or brown. The greater the percentage of the gas, the darker will be the colour.

Detectors and indicators for various gases and oxygen deficiency normally encountered in sewage works are as follows:

Gas or Vapour	Detector
Hydrogen sulphide:	Lead Acetate impregnated paper (Qualitative) Hydrogen sulphide ampoules, Hydrogen sulphide detector (qualitative).
Methane	Combustible gas Indicator, Oxygen deficiency indicator, Methane alarm.
Carbon dioxide.	Oxygen deficiency indicator.
Nitrogen.	Oxygen deficiency indicator.
Oxygen.	Oxygen deficiency indicator.
Carbon monoxide.	Carbon monoxide indicator, Carbon monoxide tube (quantitative)
Hydrogen	Combustible gas Indicator, Oxygen deficiency indicator,
Gas	Combustible gas Indicator, Oxygen deficiency indicator. (for concentration over 0.3%)
Sludge	Combustible gas Indicator, Oxygen deficiency indicator Methane alarm.
Chlorine	Aqueous ammonia, Odour.

Supreme Court of India

Safai Karamchari Andolan And Ors vs Union Of India And Ors on 27 March, 2014

Author: P.Sathasivam

Bench: P Sathasivam, Ranjan Gogoi, N.V. Ramana

REPORTABLE

IN THE SUPREME COURT OF INDIA

CIVIL ORIGINAL JURISDICTION

1 WRIT PETITION (CIVIL) NO. 583 OF 2003

Safai Karamchari Andolan & Ors.

.... Petitioner (s)

Versus

Union of India & Ors.

.... Respondent(s)

2

3 WITH

4

5

6 CONSTITUTION PETITION (C) NO. 132 OF 2012

7 IN

8 WRIT PETITION (CIVIL) NO. 583 OF 2003

J U D G M E N T

P.Sathasivam, CJI.

1) The above writ petition has been filed by the petitioners as a Public Interest Litigation under Article 32 of the Constitution of India praying for issuance of a writ of mandamus to the respondent-Union of India, State Governments and Union Territories to strictly enforce the

implementation of the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993 (in short the Act), inter alia, seeking for enforcement of fundamental rights guaranteed under Articles 14, 17, 21 and 47 of the Constitution of India.

2) Brief facts:

- (i) The inhuman practice of manually removing night soil which involves removal of human excrements from dry toilets with bare hands, brooms or metal scrappers; carrying excrements and baskets to dumping sites for disposal is a practice that is still prevalent in many parts of the country. While the surveys conducted by some of the petitioner- organizations estimate that there are over 12 lakh manual scavengers undertaking the degrading human practice in the country, the official statistics issued by the Ministry of Social Justice and Empowerment for the year 2002-2003 puts the figure of identified manual scavengers at 6,76,009. Of these, over 95% are Dalits (persons belonging to the scheduled castes), who are compelled to undertake this denigrating task under the garb of traditional occupation. The manual scavengers are considered as untouchables by other mainstream castes and are thrown into a vortex of severe social and economic exploitation.
- (ii) The sub-Committee of the Task Force constituted by the Planning Commission in 1989 estimated that there were 72.05 lakhs dry latrines in the country. These dry latrines have not only continued to exist till date in several States but have increased to 96 lakhs and are still being cleaned manually by scavengers belonging to the Scheduled Castes.
- (iii) National Scheduled Castes and Scheduled Tribes Finance and Development Corporation was set up in February, 1989 as a Government company to provide financial assistance to all the Scheduled Castes and Scheduled Tribes including Safai Karamcharis for their economic development.
- (iv) The Government of India formulated a Scheme known as Low Cost Sanitation for Liberation of Scavengers which is a centrally sponsored Scheme being implemented in 1989-90 for elimination of manual scavenging by converting existing dry latrines into low cost water pour flush latrines and also for construction of new sanitary latrines.
- (v) With a view to eliminate manual scavenging, a Scheme known as National Scheme of Liberation and Rehabilitation of Scavengers and their Dependents was launched in March 1992 for identification, liberation and rehabilitation of scavengers and their dependents by providing alternative employment after giving the requisite training.
- (vi) Based on earlier experience and keeping in view the recommendations of the National Seminar on Rural Sanitation held in September 1992, a new strategy was adopted by the Government of India in March 1993. The emphasis was now on providing sanitary latrines including the construction of individual sanitary latrines for selected houses below the poverty line with subsidy of 80% of the unit cost of Rs.2,500/-.
- (vii) In the year 1993, the Parliament enacted the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993 and it received the assent of the President on

5th June, 1993. The long title of the Act describes it as an Act to provide for the prohibition of employment of manual scavengers as well as construction or continuance of dry latrines and for the regulation of construction and maintenance of water-seal latrines and for matters connected therewith or incidental thereto.

(viii) The Act, which was enacted in June 1993, remained inoperative for about 3½ years. It was finally brought into force in the year 1997. In the first instance, the Act applied to the States of Andhra Pradesh, Goa, Karnataka, Maharashtra, Tripura and West Bengal and to all the Union Territories. It was expected that the remaining States would adopt the Act subsequently by passing appropriate resolution under Article 252 of the Constitution. However, as noted by the National Commission for Safai Karamcharis—a statutory body, set up under the National Commission for Safai Karamcharis Act, 1993, in its 3rd and 4th Reports (combined) submitted to the Parliament, noted that the 1993 Act was not being implemented effectively and further noted that the estimated number of dry latrines in the country is 96 lakhs and the estimated number of manual scavengers identified is 5,77,228. It further noted that manual scavengers were being employed in the military engineering works, the army, public sector undertakings, Indian Railways etc.

(ix) In 2003, a report was submitted by the Comptroller and Auditor General (CAG) which evaluated the National Scheme for Liberation and Rehabilitation of Scavengers and their Dependents. The conclusion of the report was that this Scheme has failed to achieve its objectives even after 10 years of implementation involving investment of more than Rs. 600 crores. It further pointed out that although funds were available for implementation of the Scheme, much of it were unspent or underutilized. The Committees set up for monitoring the Scheme were non-functional. It further noted that there was lack of correspondence between liberation and rehabilitation and that there was no evidence to suggest if those liberated were in fact rehabilitated. It concluded that the most serious lapse in the conceptualization and operationalization of the Scheme was its failure to employ the law that prohibited the occupation—the law was rarely used.

(x) In December, 2003 the Safai Karamchari Andolan along with six other civil society organizations as well as seven individuals belonging to the community of manual scavengers filed the present writ petition under Article 32 of the Constitution on the ground that the continuation of the practice of manual scavenging as well as of dry latrines is illegal and unconstitutional since it violates the fundamental rights guaranteed under Articles 14, 17, 21 and 23 of the Constitution of India and the 1993 Act.

3) We have heard the arguments advanced by learned counsel for the parties and perused the records.

Relief sought for:

4) The petitioners have approached this Court by way of writ petition in 2003, inter alia, seeking:

(i) to ensure complete eradication of Dry Latrines;

(ii) to declare continuance of the practice of manual scavenging and the operation of Dry Latrines violative of Articles 14, 17, 21 and 23 of the Constitution and the 1993 Act;

(iii) to direct the respondents to adopt and implement the Act and to formulate detailed plans, on time bound basis, for complete eradication of practice of manual scavenging and rehabilitation of persons engaged in such practice;

(iv) to direct Union of India and State Governments to issue necessary directives to various Municipal Corporations, Municipalities and Nagar Panchayats (all local bodies) to strictly implement the provisions of the Act and initiate prosecution against the violators; and

(v) to file periodical Compliance Reports pursuant to various directions issued by this Court.

Discussion:

5) The practice of untouchability in general and of manual scavenging in particular was deprecated in no uncertain terms by Dr. B.R. Ambedkar, Chairman of the Drafting Committee of the Constitution of India. Accordingly, in Chapter III of the Constitution, Article 17 abolished untouchability which states as follows:

Abolition of Untouchability: Untouchability is abolished and its practice in any form is forbidden. The enforcement of any disability arising out of Untouchability shall be an offence punishable in accordance with law.

6) Article 17 of the Constitution was initially implemented through the enactment of the Protection of Civil Rights Act, 1955 (formerly known as the Untouchability (Offences) Act, 1955). Section 7A of the said Act provides that whoever compels any person on the ground of untouchability to do any scavenging shall be deemed to have enforced a disability arising out of untouchability which is punishable with imprisonment. While these constitutional and statutory provisions were path breaking in themselves, they were found to be inadequate in addressing the continuation of the obnoxious practice of manual scavenging across the country, a practice squarely rooted in the concept of the caste-system and untouchability.

7) Apart from the provisions of the Constitution, there are various international conventions and covenants to which India is a party, which prescribe the inhuman practice of manual scavenging. These are the Universal Declaration of Human Rights (UDHR), Convention on Elimination of Racial Discrimination (CERD) and the Convention for Elimination of all Forms of Discrimination Against Women (CEDAW). The relevant provisions of the UDHR, CERD and CEDAW are hereunder:

Article 1 of UDHR All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in spirit of brotherhood.

Article 2(1) of UDHR Everyone is entitled to all the rights and freedom set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.

Article 23(3) of UDHR Everyone who works has a right to just and favourable remuneration enduring for himself and his family an existence worthy of human dignity and supplemented, if necessary, by other means of social protection. Article 5(a) of CEDAW States Parties shall take all appropriate measures

a) to modify the social and cultural patterns of conduct of men and women, with a view to achieving the elimination of prejudices and customary and all other practices which are based on the idea of the inferiority or the superiority of either of the sexes or on stereotyped roles for men and women.

Article 2 of CERD Article 2(1)(c) States parties condemn racial discrimination and undertake to pursue by all appropriate means and without delay a policy of eliminating racial discrimination in all its forms and promoting understanding among all races, and to this end:

(c) each State party shall take effective measures to review governmental, national and local policies, and to amend, rescind or nullify any laws and regulations which have the effect of creating or perpetuating racial discrimination wherever it exists;

(d) each State party shall prohibit and bring to an end, by all appropriate means, including legislation as required by circumstances, racial discrimination by any persons, group or organization. The above provisions of the International Covenants, which have been ratified by India, are binding to the extent that they are not inconsistent with the provisions of the domestic law.

8) From 2003 till date, this writ petition was treated as a continuing mandamus. Several orders have been passed by this Court having far reaching implications. The petitioners have brought to focus the non- adoption of the Act by various States which led to ratification of the Act by State Assemblies (including the Delhi Assembly which ratified the Act as late as in 2010). The Union Government, State Governments as well as the petitioners have filed affidavits from time to time as per the directions of this Court and also as to the compliance of those orders.

9) This Court has, on several occasions, directed the Union and State Governments to take steps towards the monitoring and implementation of the Act. Various orders have gradually pushed the State Governments to ratify the law and appoint Executive Authorities under the Act. Under the directions of this Court, the States are obligated by law to collect data and monitor the implementation of the Act.

10) Due to mounting pressure of this Court, in March, 2013, the Central Government announced a Survey of Manual Scavengers. The survey, however, was confined only to 3546 statutory towns and did not extend to rural areas. Even with this limited mandate, as per the information with Petitioner No. 1, the survey has shown remarkably little progress. State records in the Progress Report of Survey of Manual Scavengers and their Dependents dated 27.02.2014 show that they have only been able to identify a miniscule proportion of the number of people actually engaged in manual scavenging. For instance, the petitioners, with their limited resources, have managed to identify 1098 persons in manual scavenging in the State of Bihar. The Progress Report dated 27.02.2014 claims to have identified only

136. In the State of Rajasthan, the petitioners have identified 816 manual scavengers whereas the Progress Report of the State dated 27.02.2014 has identified only 46.

11) The aforesaid data collected by the petitioners makes it abundantly clear that the practice of manual scavenging continues unabated. Dry latrines continue to exist notwithstanding the fact that the 1993 Act was in force for nearly two decades. States have acted in denial of the 1993 Act and the constitutional mandate to abolish untouchability. 12) For over a decade, this Court issued various directions and sought for compliance from all the States and Union Territories. Due to effective intervention and directions of this Court, the Government of India brought an Act called The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 for abolition of this evil and for the welfare of manual scavengers. The Act got the assent of the President on 18.09.2013. The enactment of the aforesaid Act, in no way, neither dilutes the constitutional mandate of Article 17 nor does it condone the inaction on the part of Union and State Governments under the 1993 Act. What the 2013 Act does in addition is to expressly acknowledge Article 17 and Article 21 rights of the persons engaged in sewage cleaning and cleaning tanks as well persons cleaning human excreta on railway tracks.

13) Learned Additional Solicitor General has brought to our notice various salient features of the Act which are as under:-

(i) The above-said Act has been enacted to provide for the prohibition of employment as manual scavengers, rehabilitation of manual scavengers and their families, and for matters connected therewith or incidental thereto.

(ii) Chapter I of the Act inter alia provides for the definitions of hazardous cleaning, insanitary latrine and manual scavenger as contained in Sections 2(1)(d), (e) and (g) thereof respectively.

(iii) Chapter II of the Act contains provisions for Identification of Insanitary latrines. Section 4(1) of the Act reads as under: 4 - Local authorities to survey insanitary latrines and provide sanitary community latrines (1) Every local authority shall,--

(a) carry out a survey of insanitary latrines existing within its jurisdiction, and publish a list of such insanitary latrines, in such manner as may be prescribed, within a period of two months from the date of commencement of this Act;

(b) give a notice to the occupier, within fifteen days from the date of publication of the list under clause (a), to either demolish the insanitary latrine or convert it into a sanitary latrine, within a period of six months from the date of commencement of this Act: Provided that the local authority may for sufficient reasons to be recorded in writing extend the said period not exceeding three months;

(c) construct, within a period not exceeding nine months from the date of commencement of this Act, such number of sanitary community latrines as it considers necessary, in the areas where insanitary latrines have been found.

(iv) Chapter III of the Act contains provisions for prohibition of insanitary latrines and employment and engagement as manual scavenger. Sections 5, 6 and 7 of the Act read as under:

5 - Prohibition of insanitary latrines and employment and engagement of manual scavenger (1) Notwithstanding anything inconsistent therewith contained in the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993(46 of 1993), no person, local authority or any agency shall, after the date of commencement of this Act,--

(a) construct an insanitary latrine; or

(b) engage or employ, either directly or indirectly, a manual scavenger, and every person so engaged or employed shall stand discharged immediately from any obligation, express or implied, to do manual scavenging.

(2) Every insanitary latrine existing on the date of commencement of this Act, shall either be demolished or be converted into a sanitary latrine, by the occupier at his own cost, before the expiry of the period so specified in clause (b) of sub-section (1) of section 4: Provided that where there are several occupiers in relation to an insanitary latrine, the liability to demolish or convert it shall lie with,--

(a) the owner of the premises, in case one of the occupiers happens to be the owner; and

(b) all the occupiers, jointly and severally, in all other cases: Provided that the State Government may give assistance for conversion of insanitary latrines into sanitary latrines to occupiers from such categories of persons and on such scale, as it may, by notification, specify:

Provided further that non-receipt of State assistance shall not be a valid ground to maintain or use an insanitary latrine, beyond the said period of nine months.

(3) If any occupier fails to demolish an insanitary latrine or convert it into a sanitary latrine within the period specified in sub-section (2), the local authority having

jurisdiction over the area in which such insanitary latrine is situated, shall, after giving notice of not less than twenty one days to the occupier, either convert such latrine into a sanitary latrine, or demolish such insanitary latrine, and shall be entitled to recover the cost of such conversion or, as the case may be, of demolition, from such occupier in such manner as may be prescribed.

6 - Contract, agreement, etc., to be void (1) Any contract, agreement or other instrument entered into or executed before the date of commencement of this Act, engaging or employing a person for the purpose of manual scavenging shall, on the date of commencement of this Act, be terminated and such contract, agreement or other instrument shall be void and inoperative and no compensation shall be payable therefor.

(2) Notwithstanding anything contained in sub-section (1), no person employed or engaged as a manual scavenger on a full-time basis shall be retrenched by his employer, but shall be retained, subject to his willingness, in employment on at least the same emoluments, and shall be assigned work other than manual scavenging.

7 - Prohibition of persons from engagement or employment for hazardous cleaning of sewers and septic tanks No person, local authority or any agency shall, from such date as the State Government may notify, which shall not be later than one year from the date of commencement of this Act, engage or employ, either directly or indirectly, any person for hazardous cleaning of a sewer or a septic tank.

(v) Sections 8 and 9 of the Act provide for penal provisions which read as under:-

8 - Penalty for contravention of section 5 or section 6 Whoever contravenes the provisions of section 5 or section 6 shall for the first contravention be punishable with imprisonment for a term which may extend to one year or with fine which may extend to fifty thousand rupees or with both, and for any subsequent contravention with imprisonment which may extend to two years or with fine which may extend to one lakh rupees, or with both.

9 - Penalty for contravention of section 7 Whoever contravenes the provisions of section 7 shall for the first contravention be punishable with imprisonment for a term which may extend to two years or with fine which may extend to two lakh rupees or with both, and for any subsequent contravention with imprisonment which may extend to five years or with fine which may extend to five lakh rupees, or with both.

(vi) Chapter IV of the Act contains provisions with respect to identification of manual scavengers in Urban and Rural Areas and also provides for their rehabilitation. Section 13 of the Act reads as under;

13 - Rehabilitation of persons identified as manual scavengers by a Municipality (1)
Any person included in the final list of manual scavengers published in pursuance of sub-section (6) of section 11 or added thereto in pursuance of sub-section (3) of section 12, shall be rehabilitated in the following manner, namely:--

(a) he shall be given, within one month,--

(i) a photo identity card, containing, inter alia, details of all members of his family dependent on him, and

(ii) such initial, one time, cash assistance, as may be prescribed;

(b) his children shall be entitled to scholarship as per the relevant scheme of the Central Government or the State Government or the local authorities, as the case may be;

(c) he shall be allotted a residential plot and financial assistance for house construction, or a ready-built house, with financial assistance, subject to eligibility and willingness of the manual scavenger, and the provisions of the relevant scheme of the Central Government or the State Government or the concerned local authority;

(d) he, or at least one adult member of his family, shall be given, subject to eligibility and willingness, training in a livelihood skill, and shall be paid a monthly stipend of not less than three thousand rupees, during the period of such training;

(e) he, or at least one adult member of his family, shall be given, subject to eligibility and willingness, subsidy and concessional loan for taking up an alternative occupation on a sustainable basis, in such manner as may be stipulated in the relevant scheme of the Central Government or the State Government or the concerned local authority;

(f) he shall be provided such other legal and programmatic assistance, as the Central Government or State Government may notify in this behalf.

(2) The District Magistrate of the district concerned shall be responsible for rehabilitation of each manual scavenger in accordance with the provisions of sub-section (1) and the State Government or the District Magistrate concerned may, in addition, assign responsibilities in his behalf to officers subordinate to the District Magistrate and to officers of the concerned Municipality.

(vii) Chapter V of the Act provides for the implementing mechanism. Sections 17 to 20 read as under:

17 - Responsibility of local authorities to ensure elimination of insanitary latrines
Notwithstanding anything contained in any other law for the time being in force, it

shall be the responsibility of every local authority to ensure, through awareness campaign or in such other manner that after the expiry of a period of nine months, from the date of commencement of this Act,--

- (i) no insanitary latrine is constructed, maintained or used within its jurisdiction; and
- (ii) in case of contravention of clause (i), action is taken against the occupier under sub-section (3) of section 5.

18 - Authorities who may be specified for implementing provisions of this Act The appropriate Government may confer such powers and impose such duties on local authority and District Magistrate as may be necessary to ensure that the provisions of this Act are properly carried out, and a local authority and the District Magistrate may, specify the subordinate officers, who shall exercise all or any of the powers, and perform all or any of the duties, so conferred or imposed, and the local limits within which such powers or duties shall be carried out by the officer or officers so specified.

19 - Duty of District Magistrate and authorised officers The District Magistrate and the authority authorised under section 18 or any other subordinate officers specified by them under that section shall ensure that, after the expiry of such period as specified for the purpose of this Act,--

- (a) no person is engaged or employed as manual scavenger within their jurisdiction;
- (b) no one constructs, maintains, uses or makes available for use, an insanitary latrine;
- (c) manual scavengers identified under this Act are rehabilitated in accordance with section 13, or as the case may be, section 16;
- (d) persons contravening the provisions of section 5 or section 6 or section 7 are investigated and prosecuted under the provisions of this Act; and
- (e) all provisions of this Act applicable within his jurisdiction are duly complied with.

20 - Appointment of inspectors and their powers (1) The appropriate Government may, by notification, appoint such persons as it thinks fit to be inspectors for the purposes of this Act, and define the local limits within which they shall exercise their powers under this Act

(viii) Chapter VII of the Act provides for the establishment of Vigilance and Monitoring Committees in the following terms:

24 - Vigilance Committees (1) Every State Government shall, by notification, constitute a Vigilance Committee for each district and each Sub-Division. (2) Each

Vigilance Committee constituted for a district shall consist of the following members, namely:--

(a) the District Magistrate--Chairperson, ex officio; 25 - Functions of Vigilance Committee The functions of Vigilance Committee shall be--

(a) to advise the District Magistrate or, as the case may be, the Sub- Divisional Magistrate, on the action which needs to be taken, to ensure that the provisions of this Act or of any rule made thereunder are properly implemented;

(b) to oversee the economic and social rehabilitation of manual scavengers;

(c) to co-ordinate the functions of all concerned agencies with a view to channelise adequate credit for the rehabilitation of manual scavengers;

(d) to monitor the registration of offences under this Act and their investigation and prosecution.

26 - State Monitoring Committee (1) Every State Government shall, by notification, constitute a State Monitoring Committee, consisting of the following members, namely:--

(a) the Chief Minister of State or a Minister nominated by him-- Chairperson, ex officio; 27 - Functions of the State Monitoring Committee The functions of the State Monitoring Committee shall be--

(a) to monitor and advise the State Government and local authorities for effective implementation of this Act;

(b) to co-ordinate the functions of all concerned agencies;

(c) to look into any other matter incidental thereto or connected therewith for implementation of this Act.

***** ** 29 - Central Monitoring Committee (1) The Central Government shall, by notification, constitute a Central Monitoring Committee in accordance with the provisions of this section.**

(2) The Central Monitoring Committee shall consist of the following members, namely:--

(a) The Union Minister for Social Justice and Empowerment-- Chairperson, ex officio; 30 - Functions of the Central Monitoring Committee The functions of the Central Monitoring Committee shall be,--

(a) to monitor and advise the Central Government and State Government for effective implementation of this Act and related laws and programmes; 31 - Functions of National Commission for Safai Karamcharis (1) The National Commission for Safai Karamcharis shall perform the following functions, namely:--

(a) to monitor the implementation of this Act;

(b) to enquire into complaints regarding contravention of the provisions of this Act, and to convey its findings to the concerned authorities with recommendations requiring further action; and

(c) to advise the Central and the State Governments for effective implementation of the provisions of this Act.

(d) to take suo motu notice of matter relating to non-implementation of this Act.

(ix) Chapter VIII of the Act contains miscellaneous provisions. Section 33 of the Act provides for duty of local authorities and other agencies to use modern technology for cleaning of sewers, etc. Section 36 of the Act provides that the appropriate Government shall, by notification, make rules for carrying out the provisions of the Act within a period not exceeding three months. Section 37 of the Act provides that the Central Government shall, by notification, publish model rules for the guidance and use of the State Governments.

14) We have already noted various provisions of the 2013 Act and also in the light of various orders of this Court, we issue the following directions:-

(i) The persons included in the final list of manual scavengers under Sections 11 and 12 of the 2013 Act, shall be rehabilitated as per the provisions of Part IV of the 2013 Act, in the following manner, namely:-

(a) such initial, one time, cash assistance, as may be prescribed;

(b) their children shall be entitled to scholarship as per the relevant scheme of the Central Government or the State Government or the local authorities, as the case may be;

(c) they shall be allotted a residential plot and financial assistance for house construction, or a ready-built house with financial assistance, subject to eligibility and willingness of the manual scavenger as per the provisions of the relevant scheme;

(d) at least one member of their family, shall be given, subject to eligibility and willingness, training in livelihood skill and shall be paid a monthly stipend during such period;

- (e) at least one adult member of their family shall be given, subject to eligibility and willingness, subsidy and concessional loan for taking up an alternative occupation on sustainable basis, as per the provisions of the relevant scheme;
- (f) shall be provided such other legal and programmatic assistance, as the Central Government or State Government may notify in this behalf.
- (ii) If the practice of manual scavenging has to be brought to a close and also to prevent future generations from the inhuman practice of manual scavenging, rehabilitation of manual scavengers will need to include:-
 - (a) Sewer deaths entering sewer lines without safety gears should be made a crime even in emergency situations. For each such death, compensation of Rs. 10 lakhs should be given to the family of the deceased.
 - (b) Railways should take time bound strategy to end manual scavenging on the tracks.
 - (c) Persons released from manual scavenging should not have to cross hurdles to receive what is their legitimate due under the law.
 - (d) Provide support for dignified livelihood to safai karamchāri women in accordance with their choice of livelihood schemes.
- (iii) Identify the families of all persons who have died in sewerage work (manholes, septic tanks) since 1993 and award compensation of Rs.10 lakhs for each such death to the family members depending on them.
- (iv) Rehabilitation must be based on the principles of justice and transformation.
- 15) In the light of various provisions of the Act referred to above and the Rules in addition to various directions issued by this Court, we hereby direct all the State Governments and the Union Territories to fully implement the same and take appropriate action for non-implementation as well as violation of the provisions contained in the 2013 Act. Inasmuch as the Act 2013 occupies the entire field, we are of the view that no further monitoring is required by this Court. However, we once again reiterate that the duty is cast on all the States and the Union Territories to fully implement and to take action against the violators. Henceforth, persons aggrieved are permitted to approach the authorities concerned at the first instance and thereafter the High Court having jurisdiction.
- 16) With the above direction, the writ petition is disposed of. No order is required in the contempt petition.

.CJI.

(P. SATHASIVAM) J.

(RANJAN GOGOI) J.

(N.V. RAMANA) NEW DELHI:

MARCH 27, 2014.
