



METHOD STATEMENT

MANHOLE & SEWAGE CLEANING SERVICES

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SCOPE:

This method statement covers the procedures to manhole, sewage cleaning services.

OBJECTIVE

This Method Statement is for guidance of the staff / Technicians who will be involved in carrying out the works

- This method statement is to ensure the work will be executed in an efficient and safe manner.

TOOLS & EQUIPMENTS REQUIRED:

Submersible pumps, vacuum machine, discharge hoses, electrical cables, pressure machine, low pressure machine, hand brushes, buckets, cleaning materials, Plastic covers.

SAFTEY:

- All safety measures and precautions shall be maintained.
- All requirements stipulated in Safety Precautions.
- Safety hazards and precautions shall be maintained during work.
- PPE such as Rubber gloves, safety shoe, gumboot and uniform.

- Cleaning Chemicals.

PRIOR ACTIVITIES:

- PTW – Permit to work to be obtained
- Briefing the activity to all technicians by supervisor through tool box talk.

RESPONSIBILITIES:

- Site Engineers shall ensure that all tools and equipment are made available sufficiently in advance to the commencement of the work.

PROCEDURE:

1. The supervisor to brief the team on safety and quality aspects.
2. Wear personal protective equipment. (safety harness and lifeline, impermeable rubber coat, pants, gloves and boots, helmet with face visor.
3. All the staff to be provided with overalls, rubber safety boots, safety helmet with face shield if necessary and gloves.
4. Locate power outlets and water taps.
5. Drain the water remaining in the tank using sumps pumps.
6. Position machines & equipment relative to power supply and water sources.
7. Determine manhole configuration, location, and access to jobsite to prepare for equipment, access strategy and other material requirements.
8. Barricade the area and put warning signs.
9. Ensure that power cords are well insulated and way above water.
10. Open the manhole cover and allow to vent for few minutes. Suck out stale air from the confined space using appropriate air blower equipment (Portable Exhaust)
11. Reverse the air flow direction to blow in fresh air.
12. Supervisor to check the competency of the cleaners before commencing the works.
13. Check oxygen levels with the multigas detector and note it down. If oxygen levels are not satisfactory, do not enter the confined space. Test and note down the oxygen levels every hour.
14. Install a tripod on the manhole, wherever applicable.
15. Remove the sludge and solids debris from and manhole and collect it in disposable bags for safe disposal.
16. Clean the internal surfaces of the tank (the sides & Floor) by using a stiff brush or high pressure jet.
17. Rinse the surface well with high pressure spray.
18. Use a walkie talkie to communicate with the supervisor is necessary.
19. Take before and after pictures and prepare the after service report.



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20. Discuss with the site engineer/supervisor regarding the completion of the cleaning and condition of the manhole/ sewage tank and take necessary approval/signatures.
21. Prepare an After-Service Report.

Pre-Operational Preparation

1. Take measurement to determine the total surface area to be treated.
2. Locate power outlets and water taps.
3. Determine access configuration, location, and access to jobsite to prepare for equipment, access strategy and other material requirements.
4. Prepare and check working condition of tools & equipment.
5. Prepare material supplies.

ON SITE OPERATION

- Wear personal protective equipment. (impermeable rubber coat, pants, gloves and boots, helmet with face visor.
- Position machines & equipment relative to power supply and water sources.
- Ensure that power cords are well insulated and way above water.
- Brush stubborn stains from the surface when necessary

CLOSING ACTIVITIES:

- PTW – Permit to work must be closed.





RISK ASSESSMENT

Hazard	Potential Hazard	Initial Assessment			Control Measures (List the controls to manage each of the hazards)	Re-Assessment		
		L (1-5)	S (1-5)	Risk Rate		L	S	Residual Risk
Confined space	Serious physical damage to employees	4	4	16	Follow permit to work, verify acceptable entry condition. Portable exhaust for forced ventilation of confined space. Use multi-gas detectors to measure oxygen, CO, LEL & H2S levels. Provision of retrieval/rescue equipment. Conduct safety briefing to identify the risk involved with each site. Using radio for continuous communication.	2	4	8
Electrical lights	Electrical shock & fire	4	4	16	Battery operated LED lights and head torches. Use of flame proof, waterproof & shatter proof electrical equipment. Preventive maintenance of all electrical equipments.	2	4	8
Pressure Washer	Bodily injury	4	4	16	Keep the area clear of non-essential, eye and hand protection to be worn always. TBT on the safe use of the machines. Maintain good housekeeping.	1	4	4
Oxygen deficiency	Suffocation & dizziness	4	4	16	Continuous forced ventilation throughout the cleaning process. Oxygen meters to check levels on timely basis. Tank cleaning attendant observing the tank entrants. First aid & SCBA kit	1	4	4
Manual Handling	Physical Injury - Head, feet & body.	3	4	12	Clear tank entrance. Use ropes & hooks to secure objects & equipment. Hard hat and safety shoes to minimize the impact. (All PPE's)	1	4	4
Working at heights	Physical damage	4	4	12	Use full PPE's. Use of long handled tools wherever appropriate. Full body harness and lifeline. Safety briefing to be conducted before starting the job. Take utmost precaution & controlled operations.	1	4	4



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ENVIRONMENTAL SERVICES

Chemical hazard	Burns and skin irritation	3	4	12	All PPE's such as Face mask, gloves and eye protection. Dilute the chemical concentration with water before starting the cleaning works. Carry eye wash if required.	1	4	4
Slips/Falls.	Head & body injury	3	4	12	Provision of anti-slip boots. Thorough understanding of tank layout, provision of adequate lighting and proper training. Warning signs and isolate area.	1	4	4
Limited access & egress	Head & body injury	3	4	12	Provision of retrieval/rescue equipment. Conduct safety briefing to identify the risk involved. Use radio for continuous communication.	1	4	4
Hard/sharp objects.	Head & body injury	3	4	12	Barricade and isolate all with warning signs. Use all PPE's. Identify the areas and use padding or wrapping to sharp edges.	1	4	4
Waste disposal	Pollution	3	4	12	Use of environmental friendly bio degradable disinfectant to clean. Prevent contamination of sewage line, collect waste and debris for safe disposal. All empty chemical cans to be taken off site for safe disposal as per local regulations.	1	4	4

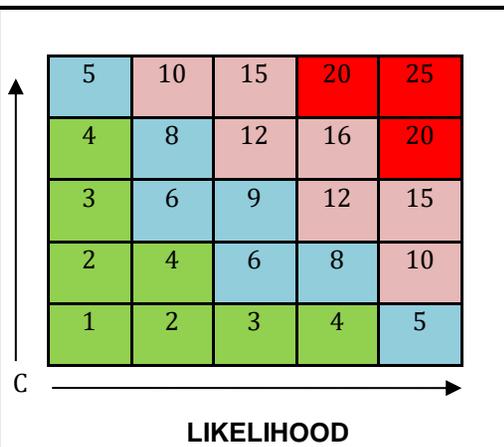


LIKELIHOOD

- 1. Very Unlikely** - There's 1 in a million chance of the hazardous event happening.
- 2. Unlikely** - There's 1 in 100,000 chance of the hazardous event happening.
- 3. Fairly Likely** - There's 1 in 10,000 chance of the hazardous event happening.
- 4. Likely** - There's 1 in 1000 chance of the hazardous event happening.
- 5. Very Likely** - There's 1 in 100 chance of the hazardous event happening.

CONSEQUENCE

- 1.. Insignificant - No injury
2. Minor - Minor injuries needing First Aid
3. Moderate - Up to 3 days absent
4. Major - More than 3 days absent
5. Catastrophic - Death



17 - 25	UNACCEPTABLE Stop activity and make immediate improvements
10 - 16	TOLERABLE Look to improve within specified timescale
5 - 09	ADEQUATE Improve at next review
1 - 4	ACCEPTABLE No further action. Ensure controls are maintained

	Name	Designation	Signature	Date	Remarks
Prepared By;		Safety Supervisor		06-08-2019	
Reviewed By:		HSE		06-08-2019	