CRYSTALLINE
ENVIRONMENTAL SERVICES

METHOD STATEMENT

FILTER MEDIA REPLACEMENT

SCOPE:

This method statement covers the procedures for the replacement of the sand filter media from the filtration system.

OBJECTIVE

This Method Statement is for guidance of the staff / Technicians who will be involved in carrying out the replacement of the filter media.

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

TOOLS & EQUIPMENTS REQUIRED:

Vacuum, Air Compressor, High Pressure Jetting Machine, Low Pressure Spray, Cleaning Brushes, Vipers, Brush, buckets, spanners, cleaning materials, Plastic covers.

SAFETY:

- All safety measures and precautions shall be maintained.
- PPE such as gloves, safety shoe, mask, goggles and uniform.

MATERIALS

Sand Media bags, Safety goggles, hand gloves, safety shoes, mask.

PRIOR ACTIVITIES:

- PTW – Permit to work to be obtained

- Briefing the activity to all technicians by supervisor through toolbox talk.

RESPONSIBILITIES:

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

PROCEDURE:

During filtration, there is constant friction between the filter media, and due to this the size of the filter media is reduced which cause suspended particles to pass through the filtration system thereby reducing the efficiency of filtration as well as the water quality.

STEP 1: REMOVAL OF THE FILTER MEDIA

The filter to be serviced must be isolated from the supply and discharge lines. Open the top and bottom covers of the filters and remove the entire sand media. Collect the sand media in bags to be safely disposed.

STEP 2: CLEAN THE VESSEL

Clean the inside and the outside of the filtration vessel with a pressure jet. Rinse thoroughly and close the bottom of the vessel.

STEP 3: CHARGING OF NEW SAND MEDIA

1. Refill the filter vessel with clean water and then start charging the different sizes of sand media. The larger size will be charged first descending to lower sizes and the smallest will be charged last.
2. Close the filter and give the filter a thorough backwash. You should start this process by over filling the water and then backwashing for as much as 3 to 5 minutes, followed by a 60 second rinse cycle before setting to filter.

PRE-OPERATIONAL PREPRATION

- Locate power outlets to plug the machines and water taps
- Determine, location, and access to jobsite to prepare for equipment, access strategy and other material requirements.
- Prepare and check working condition of equipment, Prepare material supplies.
- Wear personal protective equipment, safety gloves, shoes and gloves.
- Ensure that the area is covered with plastic sheets.

CLOSING ACTIVITIES:

- PTW – Permit to work must be closed.

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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
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. Good housekeeping practices to be maintained at all times.	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
Chemical hazard	Burns and skin irritation	4	4	16	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. Conduct safety briefing before task. Keep MSDS of chemical on site for reference.	1	4	4
Hard/sharp objects.	Head & body injury	4	4	16	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
Slips Trips & Falls	Head & body injury	4	4	16	Site supervisor to check all areas prior to commencement of work. Implementation of safe working practices and general housekeeping Provision of anti-slip boots. Warning signs and isolate area. All aspects to be covered in Toolbox talk.	1	4	4
Waste disposal	Pollution	4	4	16	Use of environmentally 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

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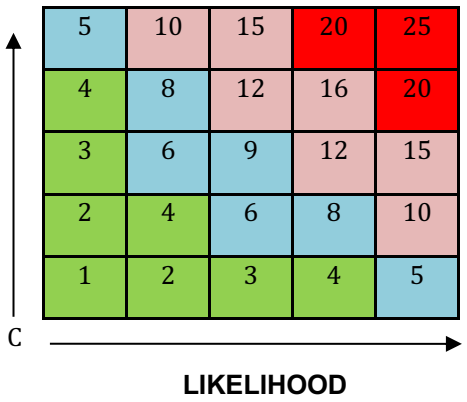
LIKELIHOOD

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;	Patrick	Safety Supervisor		10-03-2020	
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