

Tech Note - 55

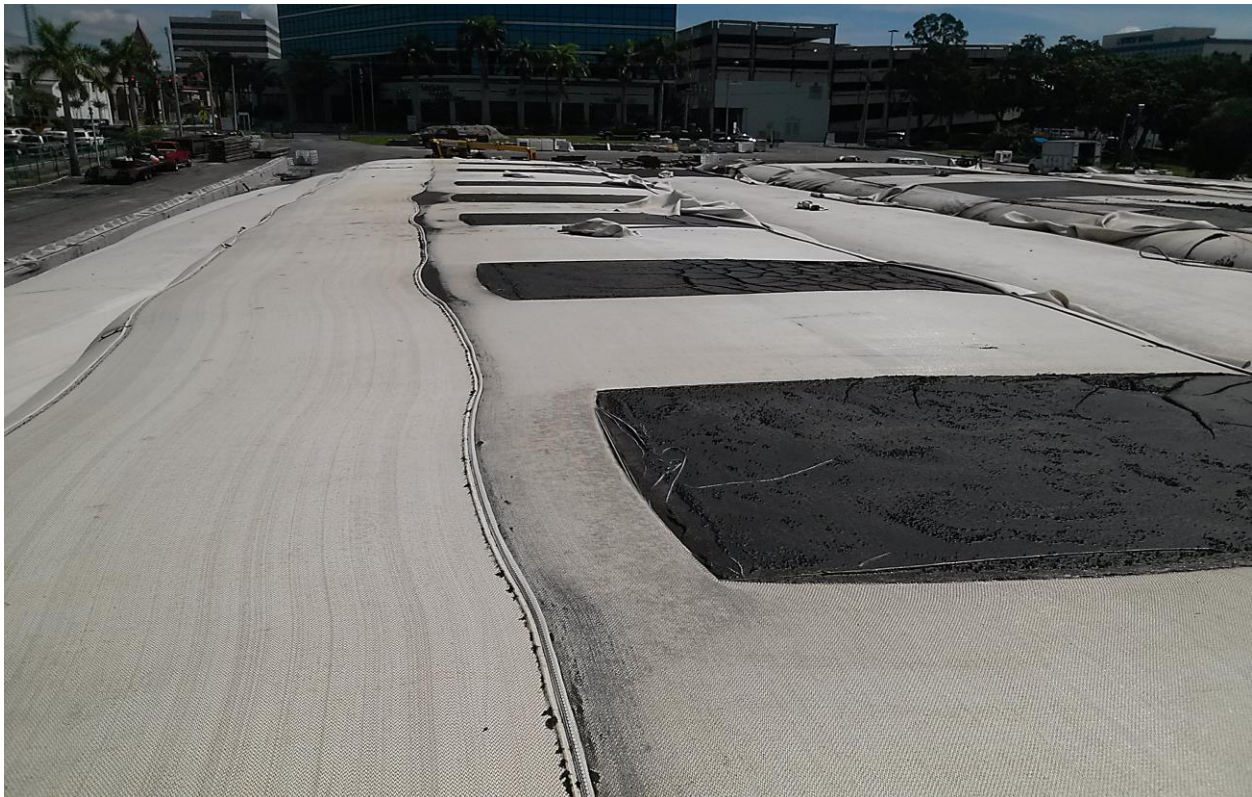
SAFE REMOVAL OF SLUDGE FROM DEWATERING TUBES

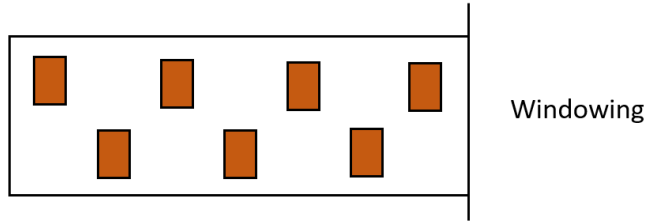
This Note is written for the safe and easy removal of sludge from TITANTube dewatering tubes. It also takes into account that our tubes utilize patented reinforcement bands along the seam line to increase the tube's overall strength and minimize rips. Additionally, the tubes feature reinforced port to preclude tube "zippering".

The steps to be observed in the safe and efficient removal of sludge from a dewatering tube, involve:

1- Verify that the tube has been dewatered to a safe consistency that allows it to hold its overall shape with only minor "slumping" by taking a sample from the port area and placing in a mold fashioned so as to have a height to width ratio of 1 to 3. This test can then be followed up by then testing the percent solids...thus establishing the site's standard for use from then on. This allows the facility to test the percent solids through the port and therefore verify that the tube is ready to be cut open without having to repeat the mold test again.

2- If the tube is slow in reaching the final percent solids desired, windows can be added providing that:
A) windows do not extend past the 12 o'clock position, B) windows are not directly opposite each other,
C) windows are not cut on the uphill side and windows are closed when rain is predicted so as to preclude reentry of moisture into the tube.

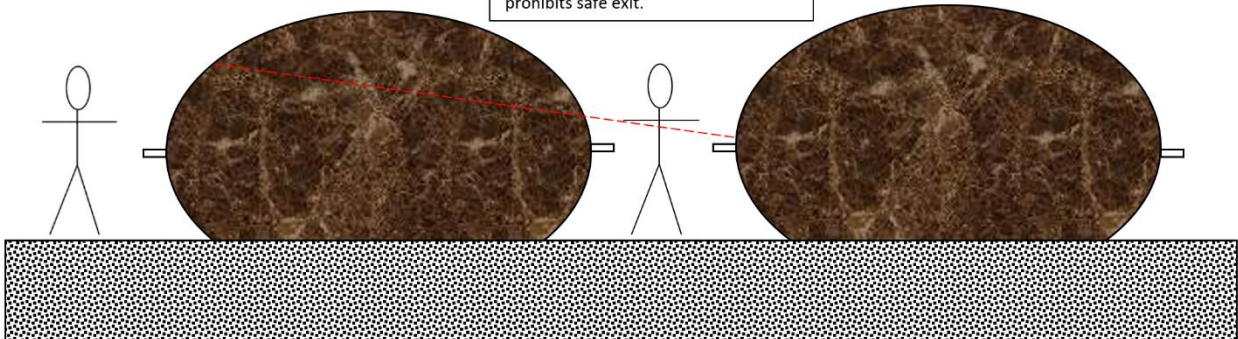




Lastly, at no time should an **individual cut open a tube** while in between parallel tubes. Additionally, a “spotter” should always be at the tube’s end so as to be positioned to watch another individual passing between tubes without intent to cut a tube open. Elements of both OSHA’s confined spaces and trenching to depths in excess of 5 feet can be incorporated to further safe up a site. All tube cutting should be done along the external side of a tube where an exit is easy.

3) Stand outside of adjacent tubes when cutting them open as this will provide for easy exit.

4) Never cut a tube open when in between 2 adjacent tubes as it prohibits safe exit.



For mechanical dewatering tube excavating, the **bucket may be employed** to cut the end off the tube in order to remove the dewatered material contained inside.