

## SegreTECH Procedure

### Empty Sand

Sweet / Sour: **SWEET**

Isolation: **NO**

De-Pressure: **NO**

Scales: **YES**

#### Objective:

Empty sand from the isolated containment sphere while continuing to flow the well.

#### Safety Hazards:

Pressurized Equipment; Potential Exposure to Hydrocarbons

### CONTAINMENT SPHERE EMPTYING PROCEDURE – SCALE EQUIPPED UNITS

NOTE: If the sand separator has been equipped with scales, it will also be equipped with a local digital display showing both the weight of the containment sphere and the mV reading from the scales.

#### Procedure Steps

1. **INDICATION** - Using the weight indicator on the PD8, determine if the Containment Sphere is full of sand and ready to be emptied. Typically, the unit is emptied when the weight reaches 300 kg (660 lbs) or more but this will vary between customers. ***Consult your company's policies and procedures to determine maximum weight.***

#### PD8 Display

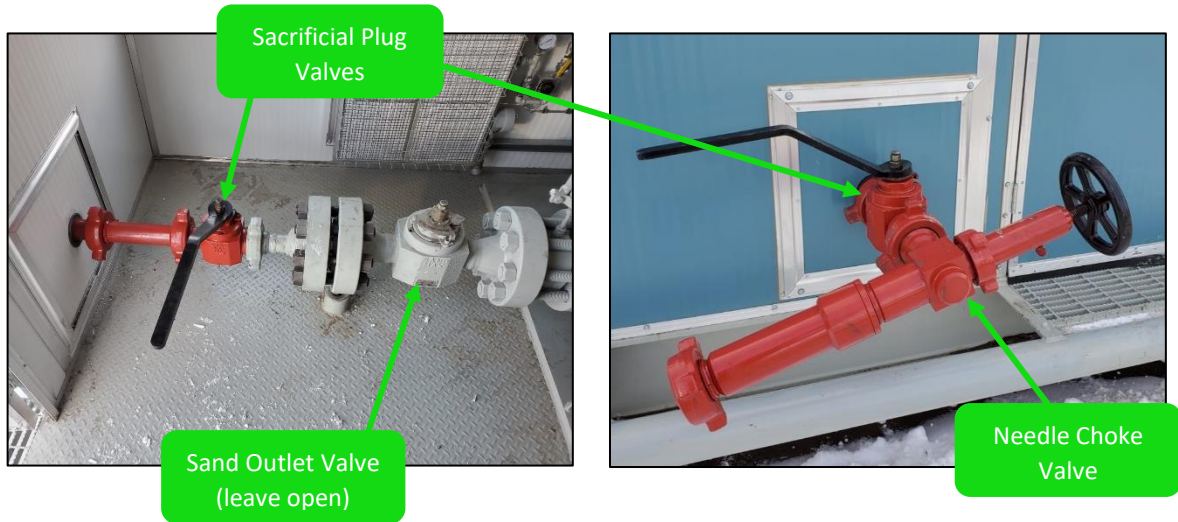


The top line represents sand weight (lb or kg).

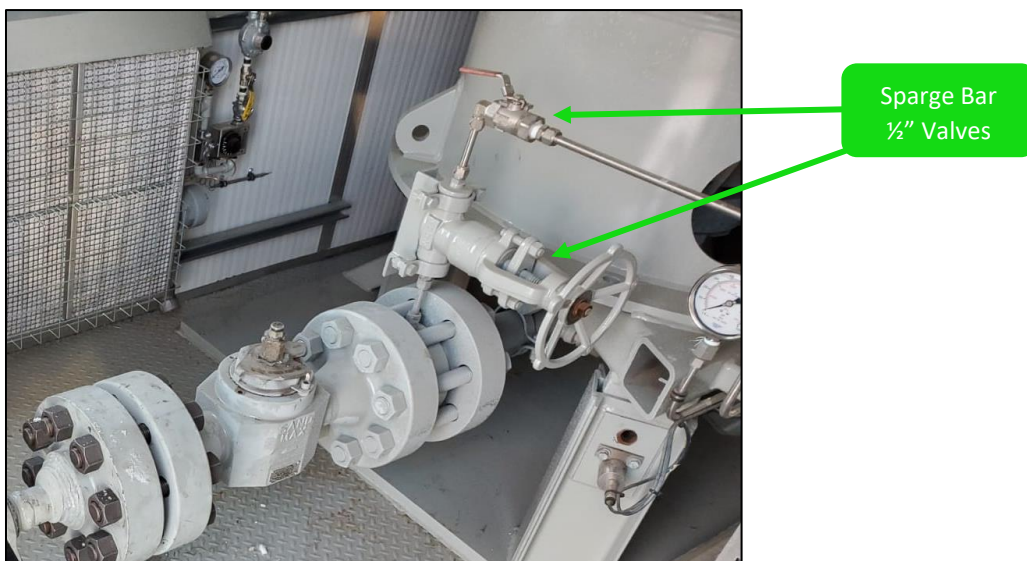
The bottom line shows the total mV from the load sensing pins.

**\*\* NOTE: SegreTECH recommends installing two (2) sacrificial plug valves and one (1) needle choke valve downstream of the SegreTECH unit. This allows the SegreTECH Sand Outlet Valve to be shut off if downstream valves need to be repaired or replaced. Using this practice, the SegreTECH Sand Outlet Valve should normally be in the “open” position.**

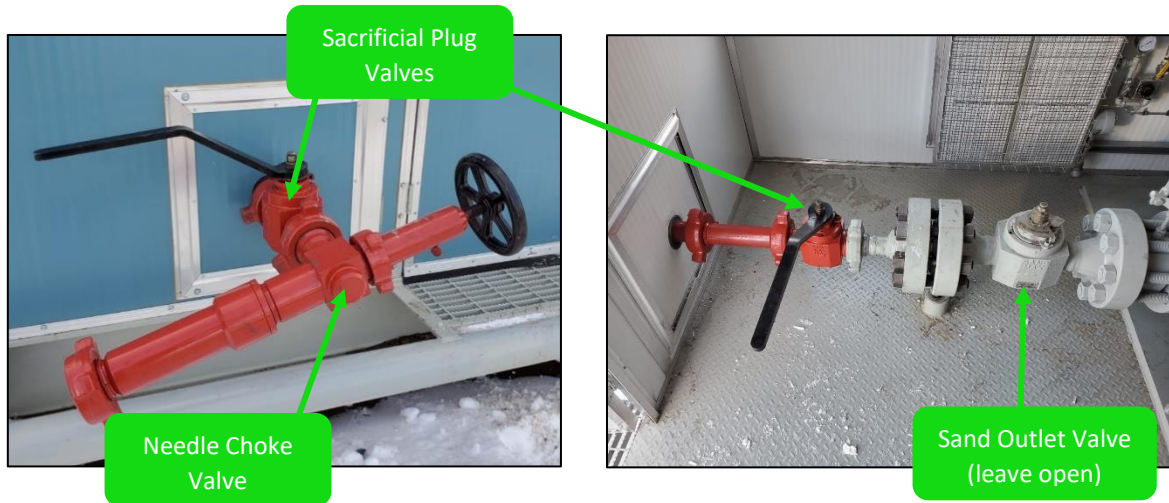
2. **EMPTYING SAND** - Slowly open the sacrificial plug valves to the fully open position. Then, slowly open the outside needle choke valve, allowing sand to flow from the Containment Sphere to the tub, tank or truck.



**\*\* NOTE: If the sand will not flow, close the needle choke valve and open the ½” ball valve and ½” globe valve located directly upstream of the Sand Outlet Valve. This will activate the sparge bar (sand agitation line) and loosen any packed sand. Wait 20-30 seconds, then close the globe valve then ball valve and re-open the needle choke valve.**



3. **EMPTYING SAND (continued)** - Listen for sand flow as the sand is being emptied from the unit. *NOTE: There is an audible difference through the needle choke valve between sand flow and liquid flow, both in sound volume and type.*
4. **FINISH EMPTYING SAND** - When the sand flow changes to liquid flow, close the needle choke valve, then close the sacrificial plug valve on the outside of the building and inside of the building. The SegreTECH Sand Outlet Valve should remain open.



5. **FREEZE PROTECTION** - With the inside plug valve closed, open the outside plug valve and needle choke valve to bleed the pressure and drain the external piping, then close both valves again.

**NOTE: In extremely cold weather, the outside plug valve and needle choke valve may be left open to prevent freeze up. The valves should be closed again prior to emptying sand. (Consult your company's policies and procedures prior to leaving and valves open.)**

6. **RETURN TO OPERATION** - When the Containment Sphere pressure gets within 350 kPa (50 psi) of the Inlet Sphere, slowly and continuously open the Containment Outlet Valve to commence flow thru the entire system. For best accuracy, refer to the pressure gauges shown on either side of the choke valve.
7. **PRESSURE VERIFICATION** - Once the system has stabilized flow, double check to ensure that there is a minimum of 70 - 140 kPa (10 - 20 psi) pressure differential between the 2 vessels.

**NOTE: The Inlet Sphere gauge should show the higher pressure and the Containment Sphere gauge should show the lower pressure.**