

BUSINESS CONFIDENTIAL

Prepared at the Request of Counsel in Consideration of the Compliance Agreement between Silfab Solar Inc. and S.C. Department of Environmental Services

Root Cause Assessment of KOH & Scrubber Water Discharge That Occurred on March 3, 2026

Event: A spill of approximately 300 gallons of scrubber water containing potassium hydroxide (KOH) at a concentration of 0.5% occurred due to a discharge from the scrubber system (the “Scrubber”).

Location: Scrubber System, Silfab Solar, Fort Mill, SC

Event Date: Early Morning approximately 6:00AM of March 3, 2026

Ambient Temperature: ~50°F

Chemical Involved: Potassium Hydroxide (KOH)

I. Summary

On March 3, 2026, during routine operator rounds, the Silfab Solar Scrubber was found to be leaking scrubber water (shown below). Silfab estimates that of the approximately 1,500 gallons contained within the Scrubber, approximately 300 gallons of scrubber water (leak rate estimated at 2 gallons per minute (gpm) for 2.5 hours) flowed across the back lot, approximately 110 feet to the nearest storm collection receiver.



It was determined, during the event response, that the leaked scrubber water (the “Material”) had made it to the stormwater retention pond located on the facility grounds, never leaving the confines of the property. The Material consisted of water containing approximately 0.5% concentration by weight, of KOH resulting in approximately 262 lbs of released KOH material which is substantially below the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) reportable quantity (RQ) of 1,000 lbs. KOH is kept at a concentration level of 45% and used in a diluted mixture with water to neutralize acid vapor

in the Scrubber System in order to maintain a balanced PH. The Scrubber had been running prior to March 3rd with the KOH and water neutralizing agent, to collect Hydrofluoric Acid (HF) vapor from the tank upon delivery of 49% HF to the facility's holding tank.

The on-site professional emergency response team responded to mitigate the leak; external emergency responders were contacted consistent with our emergency response protocols, and were on site to assist in the clean-up, which included the removal of the liquid contents of the SW retention pond at the request of York County officials.

II. Additional Background

The Scrubber System is a packed bed scrubber where specialized-shaped packing media is packed into the main body of the Scrubber and utilized to increase surface area of the air filtration process. Internal exhaust vapor from acidic materials used in storage and processing is collected from the source of origin and pulled through the packed media of the Scrubber System forcing the acid vapor to make contact with the neutralizing agent, consisting of water and KOH. The KOH feed to the scrubber water is at a 45% concentration prior to its introduction into the water at which point it is diluted to maintain a neutral PH. The Scrubber is equipped with a basin and pumping system that delivers the neutralizing solution through spray heads located at the top of the Scrubber which allows the solution to spray down through the filter media making contact with the exhaust vapor, thereby neutralizing the exhaust before being emitted atmospherically. During operation, fresh water is added to the Scrubber through an automated makeup solenoid valve to maintain the proper water level in the Scrubber. The solenoid valve is designed to open and close based on the level detectors located in the Scrubber Basin. There is an additional interlock that will shut the Scrubber down if the water level falls below the low-low level. The valve opens to add fresh water at the low level setpoint and closes at the high-level set point. The solenoid valve malfunctioned, which was likely a direct result of the abnormally cold freezing conditions

that had occurred in the previous nights and atypical for this area, prior to the March 3rd incident. Due to the solenoid valve malfunction and not operating correctly, the operator opened the manual valve to add water into the Scrubber, based on the fluid level readings indicated on the control system operating screen. During the manual filling process, the high-high limit was inadvertently exceeded which in turn caused the level of the Scrubber to reach the overflow height, resulting in the scrubber water overflowing into the acid scrubber sump tank, shown below.



The scrubber sump tank drain line is also tied into the drain lines from the scrubber fan volutes. The overflow of the scrubber sump tank caused the tank to exceed the level at which the fan volute drain lines tie in (shown below). The drain line design and construction did not include a check valve at the time of the occurrence to prevent the scrubber sump water from back filling the fan drain lines as this condition would not typically be present with a properly functioning solenoid valve and no manual intervention. The elevated level resulted in the solution backfilling the fan volute drain lines and leaking out of a breach in the drain line. The drain lines

were also most likely impaired by the freezing conditions previously mentioned. The breach was discovered after the leak started to occur.

The pictures below show the breach and the leak location, as well as temporary containment elements (yellow lines).



III. Root Cause

Although the weather impacted breached drain line was a significant factor in the release of the scrubber water, the leak would not have occurred if the Scrubber had not reached the point of overflowing into the scrubber sump which caused the scrubber water to back up in the drain lines and ultimately leak from the breach. Therefore, the root cause was the overfilling of the Scrubber due to the faulty solenoid valve rendering automatic functionality temporarily inoperable.

IV. Corrective Actions

Silfab Solar has completed the following corrective actions as a direct result of the investigation regarding this occurrence.

1. Installed a check valve in the Fan Volute Drain Line (shown below)



2. Repaired piping to fix the breached drain line (shown below)



3. Replaced the broken solenoid valve (shown below)



4. Scrubber operations training reinforcement led by the original equipment manufacturer and senior site qualified personnel.
5. Verification of level sensors, control limits and all Scrubber System interlocks.
6. Future actions include additional scrubber insulation on exposed piping to eliminate potential freeze concerns, both as it relates to Scrubber as well as elsewhere.

Please feel free to contact me if you have any questions or concerns with this information.

Best regards,

Greg Basden

Director of Operations

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