3M Prairie du Chien Spill Update Report

Glycol spill

On May 14, 2020 a rental Chiller unit was moved, and lines extended to accommodate the move. The Plant Engineer HVAC Technician verified that there were no leaks at the time of the move and extensions added. On night of May 15, 2020, maintenance noticed a spill on roof which looked like glycol. Equipment on the roof was inspected and no leaks were found. The spill was reported on a Friday May 15, 2020 night as soon as it was found per the 3M Prairie du Chien spill reporting procedure to the EHS Department. EHS Department is trained to know the State and federal reporting thresholds on each material at the site. The quantity of spill was not known at the time of the notification and the technicians best guess was 1-2 gallons therefore no call to the Wisconsin Department of Natural Resources (WDNR) Spill Hotline. On May 16, 2020, HVAC tech found that there was no circulation in the lines to the chiller. He shut off pumps and filled with approx. 200 gal of water. He did not turn pumps back on till May 15, 2020. When turning on pump, he went to roof to look for leaks and found that a Victaulic coupling was leaking. 65/35 Mix of Hartland Propylene Glycol/water was spraying out of the coupling. The pump was shut down and repairs made. The site believe up to 200 gallons could have spilled on roof based on amount of water put back in system to get pumps operating again however the evidence of this amount was not found on the roof, in the associated ditch that roof drains feed to.

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On Monday May 18, the environmental engineer for the site was informed and called in the release to the WDNR spill hotline. The material was assumed to have made its way to the onsite Stormwater ditch which was checked and showed little evidence of this release on Monday. The Environmental Engineer Walked the entire length of the ditch looking for evidence of the glycol along the wat and did not find any other that the small amount at the inlet that was skimmed and placed into a 5-gallon pail which was then transferred into the sites 300 gallon tote used to house used antifreeze for recycling with Safety Kleen. A boom was placed across the inlet to the ditch and was monitored daily until Wednesday when the boom was collected and placed into a 5-gallon pail for disposal. Approximately, 3.5 gallons of glycol and water was skimmed from the ditch and another 10 pounds of water/glycol and boom were collected and disposed of under the site's glycol clean up waste stream.

Hydraulic Spills in 2020

May 29, 2020 A seal on a fitting for a stainless-steel line failed on the West TO causing less than 10 gallons of fluid to leak onto the concrete. The spill was contained on concrete and with socks and absorbents, cleaned up and properly disposed of at 3M Cottage Grove Incinerator under a TO hydraulic waste stream profile.

August 27, 2020 East outlet poppet valve cylinder had been rebuilt and ram gland seal didn't seat properly. After operating for 30 minutes a hydraulic fluid leak occurred at that location creating a -gallon spill. Plant Engineering Supervisor, PE Manager and EHS were all notified of the spill. Poppet valve is being reseated and spill is being cleaned up and disposed of properly. Approximately 700 pounds of

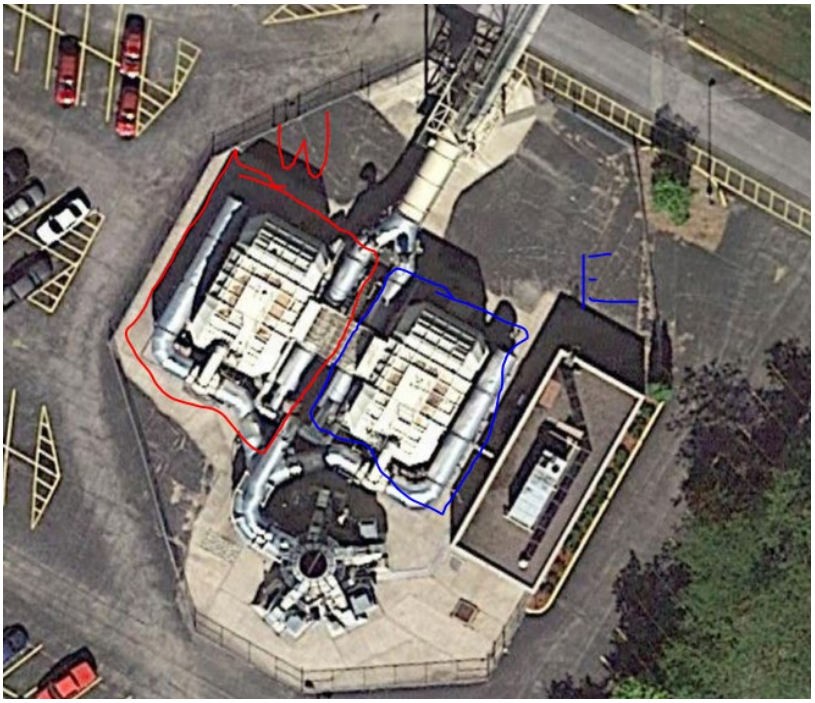
hydraulic oil and absorbent was drummed and disposed of through the sites TO Hydraulic oil Clean Up waste stream profile (WSP).

Background on the rebuild - A new bladder was ordered on July 6th. It was a 10-working day lead time for this bladder and the vendor back ordered it another 8 working days. The bladder was received on July 29th and installed on August 1st. A new accumulator from Parker was a 70 working day lead time, but we were able to find another replacement from a different vendor that had a 3-day lead time. A new accumulator was ordered on July 29th, this part was installed over the weekend of 8/7/20-8/9/20.

December 10, 2020 at 3:00 pm the site had a Flush Damper actuator seal on the West TO leaked causing approximately 15 gallons of hydraulic fluid/glycol to be release to the concrete below. See below pictures of before clean-up. All the hydraulic fluid that could be absorbed was captured in pads, oil dry and socks. Approximately 200 pounds of hydraulic oil and absorbent material was drummed and disposed of through the sites TO Hydraulic oil Clean Up waste stream profile (WSP). This material will be sent to the 3M Cottage Grove incinerator on the next shipment after the drum is capped/sealed.

The Reliability Engineer is working closely to determine the frequency of preventative maintenance on the hydraulic fluid system to prevent a re-occurrence of these gasket, seal and hose wear from the fluid over time. Most of the components that have failed were close to 5 years old from the glycol switch 4 years ago. We are trying to understand if a more compatible seal will extend the life or if they simply need to be replaced on a 3-4-year frequency. When we get the information back, we will determine the optimal frequency these components need to be replaced and develop PM's accordingly. Once the new accumulator arrives, we will create a PM to replace the entire accumulator every 3 years and rebuild the one that is taken out so we will continuously have a spare.

Below is a picture of the TO Area and which side is East and West



If you need further information or have additional questions reach out to Michelle Dupey 608-326-3022 or 715-977-2314

20200530WC12-1
3M

Legend

- Open Site
- Closed Site
- Continuing Obligations Apply
- Facility-wide Site

0.1 0 0.06 0.1 Miles

NAD_1983_HARN_Wisconsin_TM

1: 3,960

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made aregarding accuracy, applicability for a particular use, completemenss, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: http://dnr.wi.gov/org/legal/

Note: Not all sites are mapped.

Notes

HYDRAULIC OIL
PRAIRIE DU CHIEN
CRAWFORD CO.