

DLB

February 28, 1994

ARU/ISOM SUPERVISORS

Deisohexanizer Releases

On two separate occasions, February 12 and February 18, we vented hydrocarbons from the Deisohexanizer (DIH) tower to the F20 blowdown drum. Both incidents resulted in the release of reportable quantities of hydrocarbon and presented a significant risk to the personnel and equipment. The results of the investigations of each event are summarized below and attached is a list of follow up action items.

On Friday, February 11, 1994, the Isomerization Unit was running normally, with the liquid recycle system in service. Operations began to have difficulty controlling the level in the DIH some time in the late evening hours. The level continued to rise until it topped out at a reading of about 91%. Several moves were made to try to bring the level down, including heating up the bottom of the tower and putting on the second bottoms pump. Operations continued to try to bring the level under control through the night Friday and most of the day Saturday, February 12, 1994. At approximately 8:30 p.m. on February 12, operations noticed a large amount of vapor coming from the F20 Blowdown drum. LEL readings near the area were 50%, hydrocarbon odor was strong. Fearing that the vapors would find a source of ignition, operations quickly shutdown the unit, put quench water and steam into the blowdown drum, fogged the area with nearby fire monitors, called for a stand-by fire fighting crew, asked Oil Movements to barricade the roadway and alerted Environmental that we had a release. Within fifteen minutes, the hydrocarbons had dissipated.

Further investigation showed that the pump screens on the J50 bottom pumps were solidly plugged, causing severe restriction of the flow. This caused the tower level to rise and the tower eventually filled with liquid. The suspected source of the hydrocarbon release to the blowdown was two of the three relief valves on the DIH overhead. The tower was pumped out and the unit was brought back on stream without incident.

On Thursday evening, February 17, 1994, the Isomerization Unit was asked by Utilities to take the liquid recycle system out of service due to a steam shortage. On Friday evening, February 18, we were given the okay to put the recycle system back in service. Operations started the procedure at approximately 10 p.m. On initially lining up the Preflash tower bottoms to the DIH, operations opened the vent to blowdown off of the F2 DIH reflux drum to control the initial pressure surge. Once the pressure stabilized, operations closed the vent and continue to heat up the DIH. Operations noticed a slight vapor release from the blowdown, but attributed it to venting the F2. As the tower approached

normal operating temperatures, the vapor release from the blowdown drum increased. At midnight, operations elected to take the recycle system out of service in order to stop the hydrocarbon release. The Ultracracker was notified of the release, the fire crew was called out on stand by and Environmental was notified.

Evidently, hydrocarbons were leaking across the seats of one or two of the DIH relief valves. The relief valves were tested in place and determined to be adjusted to the proper set pressure. The rupture disc below each relief valve was replaced. The recycle system was placed in service on Saturday, February 26, 1994 without incident.

The attached table list the actions identified to ensure the proper operation of the DIH and the associated equipment and to verify the adequacy of our operating procedures. You should also note that one of the action items calls for each shift supervisor to review with his crew the importance of including details of operations in the log book. The lack of information recorded in the log book concerning the two incidents hindered the investigation. Also attached is a copy of the revised procedure for placing the recycle system in service. Please review all of this material with your crews and notify me by PROFS when you have completed this.


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cc F. E. Gonzalez
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ACTION ITEMS RESULTING FROM THE DIH INCIDENTS

ACTION ITEM	PRIMARY RESPONSIBILITY	DATE COMPLETED
Have P5355 and P5336 calibrated	KAR	2/21/94
Test DIH RV's and reset as necessary	WCS	2/22/94
Replace rupture disc under DIH RV's	WCS	2/25/94
Check screens on J50's and set up schedule to do this once per week until no more pluggage is found	KAR	2/24/95
Review recycle system start up procedure and revise as necessary	DLB	2/25/94
Discuss issue of including more detail in the unit log book with each of the shifts	all supervisors	
Determine our obligation for rupture disc maintenance per the unit permit	MLK	
Check the operation of the blowdown system and associated equipment	MLK and WCS	
Check the adequacy of the blowdown system	MLK	