

Monsanto

FROM (NAME & LOCATION) J. J. Roder

DATE July 25, 1972

SUBJECT Call Report

REFERENCE

TO CUMMING PATON

COMPANY CONTACTED:

Shell Oil Company
New Orleans, La. (?)

PERSONNEL CONTACTED:

Mr. Ping Crawford
Mr. Ken Arnold
Mr. Carl Magnus
Mr. Robert Wilson
Mr. Rick Smith

DATE OF CALL:

July 17, 1972

Summary

Ping Crawford has been assigned the responsibility to review a possible conversion of a Therminol FR system in the offshore industry. This action was taken as a result of a fire with a Therminol FR system that had been badly contaminated with a fuel oil product from a platform. The contamination was caused by a tube failure which allowed the gas/oil mixture to contaminate Therminol FR-1. In spite of their apparent attempt to learn as much as possible about the conversion of a Therminol FR system I got the impression that they do not in the least intend to convert their systems to a non-PCB material. Apparently they are receiving sufficient quantities of PCB from Coastal Chemical that they will in fact refill with a PCB material. ..

Their major concern at the present time appears to be:

1. The quality of PCB available from Coastal Chemical.
2. The quantity of PCB available from Coastal Chemical.
3. The effect of PCBs from the standpoint of human ingestion.

Mr. Magnus in particular appears to be concerned about the quality of PCB based on samples of material received from Coastal Chemical. They also feel that they cannot depend upon a steady supply of PCBs from Coastal Chemical and have seriously considered approaching Monsanto's management on a possibility that they could buy PCB by signing a hold harmless agreement. I told them that Monsanto management would be courteous and listen to their story; however, I felt certain that they would respond to the negative. Mr. Magnus also mentioned that at the present time Coastal has been purchasing biphenyl from one company and having it shipped to another location for chlorination. Because of this arrangement they do not wish to depend

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upon Coastal Chemical for the heat transfer fluid.

Their concern regarding human ingestion of PCB material is based on the application in their offshore platform where PCB material is used to de salinate water for drinking purposes. They have had occurrences where due to heat exchanger failures PCBs have contaminated the drinking water system. Because of this they have drafted and apparently had in typing a letter directed to Dr. Paton requesting additional information on PCB problems with human ingestion.

The strong position regarding PCBs held by Shell is based on the feeling that a gas turbine used to provide hot air for heat recovery systems is more hazardous because of the excess air in the turbines than would be a direct fired heater and as such they feel it is impossible to protect this system from fire hazard. I did not agree with their assumption; however, they feel that the platforms located in 300 feet of water are very dangerous from the standpoint of human life should they have a failure and resulting fire.

A copy of the recently issued task force report on PCBs was shown at our meeting and it was requested that a copy of this report be forwarded to Mr. Robert Wilson for further study. It was also requested by Mr. Magnus to supply information regarding metal embrittlement caused by the hydrogen in Therminol 66 should serious overheating occur.

At the present time Shell Oil has four systems that are operating with PCB material. They are not absolutely sure but it appears that all of these systems were originally filled with Therminol FR-1 and have all since been topped up with PCB material as supplied by Coastal Chemical. They also have at least three new systems in the design stages and one of which will be filled within the next two months requiring an estimated 2000 gallons of fluid. Recommendations have been instigated by Carl Magnus to redesign these systems to accept a glycol material as the heat media at temperatures in the area of 400°F. This redesign would completely eliminate any potential for Therminol 66 in the offshore industry at Shell. The decision regarding this redesign is that since a flammable fluid would have to be used they would just as soon use glycol which is already on the platform for other purposes and they would be able to eliminate not only additional equipment but an additional fluid and its related toxicity problems.

Action Required

Roder provide a copy of the recent Task Force report to Mr. Wilson and also return a call to Mr. Magnus regarding possibility of metal embrittlement caused by hydrogen in Therminol 66 decomposition products if this is possible. Continued contact with Shell regarding new systems to be filled this year.