To: **Cagen, Stuart Z SCC**
</O=SHELL/OU=MSXSCC/CN=RECIPIENTS/CN=SC724012>
From: **Van den Brakel, Peter P SIC-CTFN/3**
</O=SHELL/OU=OPC/CN=RECIPIENTS/CN=KAPBR6>
Cc:
Bcc:
Received Date: **2002-10-23 08:39:27 GMT**
Subject: **RE: HSE Cost Study ToR**

Stuart,

Thanks for the information below. I will pass this to Jan van Dijk, if he requires further I will come back.

with kind regards,
Peter

-----Original Message-----
From: Cagen, Stuart Z SCC
Sent: 22 October 2002 17:55
To: Van den Brakel, Peter P SIC-CTFN/3
Cc: Conklin, Jeffrey J SCC-CHSE; Rueda, Alicia AI SCC
Subject: RE: HSE Cost Study ToR

Peter:

The US Toxicology R&D program is a bit varied in that each PBU has its own particular set of issues and laboratory selection is dependent on these needs. Here is a brief description off the top of my head; understand, however, that I am mainly involved with HODer, Lower Olefins, and Aromatics programs and I am not aware of all of the details of the Solvents or EO/EG programs.

The key drivers for most of the toxicology work are High Production Volume (HPV) voluntary testing and a voluntary children's health initiative. I mention these as voluntary because they are, but there were certainly quasi-regulatory pressures to volunteer. These programs are administered via the America Chemistry Council (ACC) CHEMSTAR Panels. These Panels provide a means by which Shell can work with its competitors for mutual benefit and cost sharing for common voluntary work. We are testing a series of Lower Olefins Streams for the HPV program and laboratories that the ACC CHEMSTAR Panel uses include: DOW CHEMICAL tox lab, WIL Laboratories, DuPont Toxicology Laboratory, Huntington UK and Huntington US laboratories. A Higher Olefins Panel for the HODer PBU is using Springborn Labs for their HPV program. There are similar programs via CHEMSTAR for HPV work for Solvents, while Aromatics programs are shared with Lower Olefins.

Regarding Children's Health, the main costs right now are for efforts to compile existing hazard and exposure data and no testing is expected in 2003, and certainly no laboratories have been selected yet. The Children's Health Voluntary testing program, however, will have expenditures in 2003 for the compilations mentioned and involve: HODer for 2 alkane materials, Solvents for MEK, Aromatics for benzene, toluene and xylene, and Acetone.

Additional volunteer testing has also been budgeted outside of HPV and Children's health. The Lower Olefins PBU is working with the University of North Carolina, University of Vermont, GSF Lab in Germany, University of Alabama and some consultants for risk estimation for butadiene, isoprene, propylene or ethylene. A major program (and major expense) for Aromatics is a multi-institutional multi-study program for benzene epidemiology for cancer hazard