PS 1

A. PURPOSE: The need for industrial, utility, environmental, and regulatory groups to sit down and arrive at some concensus on the PCB problem is long overdue. It behooves all of us to work out a suitable compromise that gives reasonable environmental protection without substantial economic disruption to our economy. We trust that everyone will negotiate in good faith so we can develop regulations which apply equally and fairly to everyone *, do not disrupt our economy, and resolve the problem.

Litigation remains a method for a costly time consuming resolution of the problem which each of us prefers to avoid.

While we cannot be expected to represent everyone concerned with the PCB regulations we do have good representation of understanding and experience, on the subject. There is no reason to believe that a well thought-out concensus of this group would not be workable.

* Levels etc. are consistent with regulations for PCB railroad transformers.

The following represents the general concensus on specific points:

B. CONCENTRATION CUT-OFF FOR INCIDENTAL PCBs

1. Establish a maximum allowable yearly overage of 25 PPM (with a 50 ppm ceiling level) for incidental PCBs in products. The 25 PPM average would be based upon averaging of analytical results from samples taken on a minimum frequency of daily sampling. Annual reporting of compliance by the manufacturer could be required under a TSCA section 8 rule.

2. Establish a maximum allowable concentration in process water and air of 10 PPM .

3. Analytical results can be achieved by GC/ECTD for routine control with periodic audit by GC/MS.

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4. Control of maximum incidental PCB production can be achieved by EPA under Sections 5 or 8 of TSCA providing:

   a. EPA make mandatory reporting of new incidental PCBs (produced along with new chemical substances and/or through expansion of existing chemicals production capacity) a requirement through the submission of a premanufacturing notice (PMN) or section 8 report.

   b. EPA require section 8 annual reports of total incidental PCB production (could also be the vehicle for verifying compliance with a 25 PPM annual concentration average). Reporting requirements should be waived for any current manufacturer producing less than (rated capacity X 25 PPM) or any person producing less than 2500 lbs. per year of incidental PCBs in products.

   c. In some cases the manufacture of incidental PCBs involves only the production of the lower chlorinated congeners i.e. mono, di, and trichlorobiphenyls. It is a well established fact that these congeners, especially the monochlorobiphenyl, are considerably more biodegradable, have higher vapor pressures, are less bioaccumulative and are much less toxic than the higher chlorinated congeners. Consequently, the monochlorobiphenyls should be exempt from the rule. The di and trichlorobiphenyls cut off level should be increased to a value of 500 PPM..

C. PCB SPILL CLEAN UP

1. These regulations apply to spills from chemical processes as well as electrical equipment.

2. Any PCB-spill clean up (prior to the issue of new regulations) should be to a maximum level of 50 PPM. This eliminates the problem of setting lower limits on situations which have already been cleaned up to meet the legal limits of 50 PPM.

3. Any future (after the issue of new regulations) PCB spill should be cleaned up to a maximum level of 25 PPM in soil/or solid matter and 10 PPM in water. Sediment

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D. CONTINUED USE OF PCB's IN ELECTRICAL EQUIPMENT.

1. Phase out the exposure risk of PCB transformers and large PCB capacitors at a rate of 20% within each five year period or total phase out in 25 years by taking one of three corrective steps:

   a. Replacement of the unit with a non-PCB unit.

   b. Performing a retrofill on the unit, i.e. drawing the PCBs, flushing the residual PCBs and refilling with a non-PCB dielectric fluid.

   c. Installation of a permanent containment system that would prevent escape of PCBs into areas where human exposure is possible or into the environment.

2. When a transformer requires servicing that necessitates the draining of the PCB fluid (greater than 1 liter) then one of the corrective steps above must be taken prior to returning the unit to service. The undertaking of a corrective step fulfills the obligation under the phase-out schedule. If make up fluid (greater than 1 liter) is necessary for a PCB transformer then it must be a non-PCB fluid.

3. Retrofill of a PCB transformer is potentially a cost effective item providing EPA permits:

   a. Continued retrofill to a maximum of 6% PCB content. A simple drain and flush yields a 10 fold reduction in PCB content.

   b. Allow incineration of all PCB liquids in high efficiency boilers irrspective of concentration thereby increasing the availability of disposal facilities and decreasing the costs of disposal significantly. See separate topic "Incineration of PCBs in High Efficiency Boilers".

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c. Increase the current cut-off of 500 PPM for reclassifying a PCB transformer to a PCB contaminated transformer to a concentration level of 1000 PPM which is more consistent with current best state-of-the-art retrofill technology. Thus an owner opting to use the higher cost best retrofill technology could thereafter service, repair, and dispose of his unit under relaxed regulatory constraints.

d. Finally, the current cut-off of 50 PPM for reclassifying a transformer to a non-PCB unit should be kept to maintain a target for further improvements to retrofill technology. Except for the changes above the other disposal provisions of the current rule would apply.

E. INCINERATION OF PCBs in HIGH EFFICIENCY BOILERS

BACKGROUND:

Historial background on the current rule pertaining to the incineration of PCBs reference can be found in the regulatory support document for the PCB ban rule. A brief summary of this background follows.

The high temperature stability of PCBs combined with the theoretical possibility of forming chlorinated dibenzofurans and dibenzodioxins during low temperature combustion from PCBs prompted EPA to establish incineration criteria in the PCB regulations. At the time that these criteria were established there was little data available on the combustion properties of PCBs except that EPA had acquired practical experience and data during burning of agent orange defoliant in the ocean incinerator ship Vulcanus. Since agent orange and its suspected dioxin contaminant are chemically similar to PCBs EPA patterned the Annex 1 incinerator criteria on the design and performance specifications for the Vulcanus incinerators. Essentially the criteria establish minimum allowable values for three key parameters: temperature of combustion, residence time of the PCBs at the combustion temperature, and the concentration of excess oxygen available for combustion. Annex I sets these values as 1200 degrees centigrade, 2-second dwell time, and 3% excess oxygen in the stack gas respectively.

The suitability of these specifications were verified through test burns on two land-based incinerators; one owned by Rollins in Deer Park, Texas and the other by Ensco in El Dorado, Arkansas. More recently, the Vulcanus also passed a successful test burn when the ship was acquired by Chemical Waste Management. Other incinerators owned by Monsanto and General Waste had also burned PCBs in the past but minimal data was available to EPA from these units.

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However, at the time the regulations were promulgated, the data from the above test burns was unavailable and EPA was concerned whether enough (or if any) incineration capacity would become commercially available. As a consequence, the prospect of using utility power generating boilers (actually high efficiency boilers in general) as incinerators was studied by EPA and a subcontractor, TRW. The results from these studies showed that high efficiency boilers (defined as 50 million btu per hour or greater) met the desired combustion criteria and would likely achieve the same destruction efficiencies as Annex I incinerators. But since there was a lack of operational data on PCB burns in boilers, EPA limited the use of high efficiency boilers for incineration to PCB mineral oil liquids containing less than 500 PPM PCB. Furthermore, dilution to 500 PPM to permit burning higher concentration PCBs was prohibited. The rationale was that with these limitations the quantity of PCBs burned in boilers would be inherently limited, thereby putting a limit on risk if the units did not operate as expected.

PROPOSAL TO CHANGE RULE:

Since the rule went into effect, EPA in a joint effort with General Motors Corp. conducted a detailed experimental evaluation of the incineration of PCBs in a high efficiency boiler owned by GMC. A number of electric utilities are also successfully burning PCB-contaminated mineral oils in their power generating stations. This collective experience demonstrates that PCBs can be burned in high efficiency boilers with a destruction efficiency equivalent to that of an Annex I incinerator without the formation of any detectable quantities of dibenzofuran or dibenzodioxin. The Canadian government performed a experimental burn in a cement kiln with highly successful results.

From a technical consideration the efficiency of destruction in a boiler is totally independent of the origin of the PCB because the ratio of boiler fuel to PCB burned would be a constant irrespective whether the PCB originated as an askarel or a low level contaminated mineral oil. Therefore, there is no longer a valid technical or risk assessment basis for limiting the concentration of PCBs that can be burned in utility or other high efficiency boilers.

Thus it is proposed that the PCB rule be amended as follows:

1. Upon notification to the regional administrator the owner of a high efficiency boiler may incinerate any PCB-containing transformer fluid or flush solvent that was generated by the owner. The requirements for notification, instrumentation and monitoring, and records keeping would remain as presently promulgated under section 761.10 of the PCB ban regulation.

2. The incineration of liquids containing greater than 500 PPM PCBs in a high efficiency boiler for a commercial fee would be subject to the approval requirements as stated in Annex I, except that such a facility could accept small quantities of PCBs (defined as five gallons or less) as a public service without approval of the regional administrator.

3. The definition of high efficiency boiler be extended to include cement kilns subject to the same regulatory requirements.

There is no longer any technical limitation to the incineration of PCBs in utility boilers, high efficiency boilers, or cement kilns. The major obstacle to using these facilities is public acceptance and overcoming administrative protocols to obtain regional administrator approval. The significance of the proposed changes is that upon notification to the regional administration (no approval necessary, no test burn necessary, and no public hearings --- unless determined otherwise by regional administrator) owners of high efficiency boilers and cement kilns could incinerate PCB-containing transformer fluids of any concentration if it was owned or generated by the owner.

Furthermore, such facilities could accept transformer fluids under 500 PPM owned and generated by others for a commercial fee upon notification to the regional administrator. The economic significance of these proposed changes is that the costs of disposing of PCB dielectric fluids would be substantially reduced and useful energy would be extracted from the fluids. Annex I facilities at present do not derive useful energy from the burning of PCB fluids. The environmental significance is that voluntary phase-out of PCBs would be accelerated with the decreased cost and increased availability of disposal facilities. Also, the risks of transport accidents (the most frequent cause of PCB spillage) would be reduced as a results of shorter transport distances.

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