related activity, such as fumaroles and hot springs. This final stage of an eruptive episode may remain active for a considerable length of time after the initial explosive phase has subsided. When new magma or magmatic emanations and their reaction products rise towards the surface, explosive activity will be resumed. This new sequence of explosive activity will often overlap the residual phase of the previous eruptive episode.

"Dissolved volatiles within the magma and possible contamination by the local groundwater account for this explosive-quiet pattern most frequently in two different ways. One, heating of the local groundwater by the ascending magma column would lead to steam explosions during the early part of an eruption. As the eruption continued, the groundwater would be pumped away and the eruptive violence would diminish. Two, a vertically stratified magma reservoir could be erupted sequentially. The highest concentrations of water vapor and other volatiles will occur at the top and along the walls of a large magma reservoir. Eruption of the top gas-rich portion would initiate the violent explosive phase, which would then diminish with time as the eruption continues and draws up magma from deeper and deeper in the conduit. Eruptions resulting from these two eruptive mechanisms are referred to as phreatic or phreatomagmatic and magmatic, respectively.

"Both phreatic (or steam) eruptions and magmatic eruptions can have violently explosive initial phases of activity, and as such could both potentially be identified as large eruptions, and assumed to be climatically significant according to the prevailing theories. It is likely that only magmatic eruptions will inject sufficient volumes of magmatic sulfur gases to have a significant impact upon the stratospheric aerosol load. Phreatic eruptions in their initial explosive phase will produce large volumes of tephra, but very few magmatic volatiles. The extremely violent eruptions of Mt. St. Helens, Washington on 18 May 1980 and of El Chichón, Mexico on 2 April 1982 illustrate the distinction between the impact of the eruption products from the phreatic and true magmatic eruptive mechanisms. The initial reaction of the scientific community with respect to the extremely violent eruption of

Are DuPont, ICI behind 'ozone depletion' scare?

Scientists and chemists interviewed by *EIR* have insisted that they believe that DuPont Chemicals and other chemical giants are behind the "ozone depletion" scare. Evidence for the accusations include indications that a chemical cartel is being created that will have exert total control over the chemicals that will replace CFCs after they are banned. At stake is control over a market for CFCs and related products which could easily total $120 billion per year in the next decade.

Today, 13 companies worldwide produce the bulk of an annual 1.14 million tons of CFCs. DuPont, which patents its CFC under the brand name Freon, is the world leader, making 25% of the total, with U.S. Allied Chemicals number two, Britain's Imperial Chemicals Industry (ICI) number three with 10%, tied to a French maker, Atochem (Elf Aquitaine). These four companies control about 60% of world supply. Significantly, these same four leading producers are now spearheading the campaign to ban CFC use!

A spokesman for ICI admitted in a recent discussion that ICI is almost finished with a big new plant in Runcorn, Great Britain, which will produce ICI's "ozone friendly" HFC-134a alternative, beginning in 1991. A second plant to make the new chemical is under construction in the United States by DuPont Chemicals.

On April 28, ICI chairman Henderson told his shareholders, "Our aim is to become the world's leading chemical company." There are some hints as to how ICI plans to do this. Henderson was a key adviser to Prime Minister Thatcher before she chaired the recent London conference on "Saving the Ozone Layer." ICI has come out publicly demanding "complete elimination" of CFC use.

Countries such as Brazil, Taiwan, South Korea, and certain OPEC countries are rapidly developing independent chemical industries which are becoming self-sufficient in producing CFCs and other basic chemicals. "For these large companies, elimination of a few percent in their market share can destroy their entire price structure. These Third World producers have become a serious threat to them on the margins, and that is critical," stressed one London industry analyst familiar with the internal corporate debate. "The ban on CFCs will be a big, big problem for especially Third World countries," he stressed. "The big chemical multinationals want binding legal sanctions internationally to enforce the ban on CFCs. They have invested huge sums in development of alternatives and they aren't about to let Third World producers take this market away from them."

Interestingly, the executive-director of Greenpeace in the United Kingdom, the 41-year-old Lord Melchett, is the heir to the Imperial Chemicals Industry fortune! His grandfather, the first Lord Melchett, Alfred Mond, founded the ICI conglomerate. So, ICI chairman Henderson takes orders from Lord Melchett.