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Summary Comments on An Assessment of Dioxin Emissions in Hong Kong

In the dioxin assessment for Hong Kong, --:

- Dioxin releases to air are estimated, but the report offers no estimates for dioxin releases to land and water, which have been found in other regions to be far greater than air releases.
- Major sources of dioxin releases to air are not identified and/or releases from identified sources are significantly underestimated. This is evidenced by two contrasting findings:
 - On a per capita basis, dioxins are released into the air in Hong Kong at a very low rate in comparison to other regions; but
 - Dioxin levels in the air in Hong Kong are as high or higher than the levels measured in other areas that have many more dioxin sources and far greater dioxin releases to air.
- Dioxin exposure through air inhalation is deemed to be insignificant due presumably to the far greater dioxin exposure through the diet in Hong Kong. This is based on the assumption that both the types of food eaten and the levels of dioxin contamination in the food are similar to those of Western Europe and North America. On the contrary, the large number of dioxin sources and much higher per capita dioxin releases in regions is strong suggestive evidence that dioxin levels in foods are also higher.

Dioxin levels in the blood of people in central China are about one-third of the levels common among people of Western Europe and North America. This suggests that, in China, the types of food eaten are different and the levels of dioxin in the food are considerably lower than in Europe and North America.

At dietary intake levels commensurate with the dioxin blood levels of the people in central China, breathing air that has dioxin concentrations like those measured in the air of Hong Kong will increase total dioxin exposure by as much as 14 percent. It seems likely that the dietary intake of dioxins in Hong Kong is intermediate between that of central China and that of Western Europe and North America. If this is the case, dioxin levels in the air in Hong Kong are sufficiently high that inhalation is a significant fraction of the total dioxin exposure of the citizens of Hong Kong.

As noted in the dioxin assessment, "the historical legacy of PCDD/F [dioxin] emissions due to the operation of thermal waste treatment processes has to a large extent been avoided" in Hong Kong. Given this circumstance and the indeterminate, incomplete and troubling findings of the dioxin assessment, it is prudent public policy to gather more information before going forward with the decision made almost a decade ago to rely on incineration as a major tool for managing Hong Kong's wastes and thereby to institutionalize these known dioxin sources.