The Resolution in Vietnam

Since the early 1970s, scientists from throughout the world have been conducting studies on the toxicology, human risk and environmental fate of dioxin (TCDD). A significant portion of this research has focused on the perception of harm that may have occurred as a result of the use of Agent Orange in Vietnam. This extensive research has centered primarily on studies in animals and more recently on studies in human. Both have certainly contributed to defining the issues. However, public discussion and scientific research have proceeded largely on the assumption, rather than a determination, of widespread substantial exposure to tactical herbicides and the associated dioxin to Vietnamese civilians (Young 2004, 2008). The historical military records from the Vietnam-American War did not support the supposition of direct spraying of Allied tactical herbicides on Vietnamese civilians. Detailed policies and procedures minimized any circumstances in which spraying of Allied combat troops and non-combatant civilians with tactical herbicides in Vietnam would have resulted in human exposure. Reports by Vietnam War veterans and Vietnamese civilians of repeated sightings of RANCH HAND aircraft spraying Allied Bases and associated Vietnamese Communities are confused with the mission of Operation FLYSWATTER, the spraying of insecticide for the control of malaria-carrying mosquitoes (Young et al. 2004a; Cecil and Young 2008).

The establishment of “TCDD Hot Spots” in Southern Vietnam due to Agent Orange led the United States Department of Defense and Vietnam’s Ministry of National Defence to jointly sponsor two “Agent Orange and Dioxin Remediation Workshops”. By agreement between the two governments, the Workshops were focused on issues related to remediation activities and on the historical use of the former Tactical Herbicide Storage and Loading Sites in Southern Vietnam that might constitute a source of TCDD contamination to adjacent communities (Young and Andrews 2005, Young et al. 2008).

At the June 2007 Workshop, the United States committed to working with Vietnam in a joint program involving sampling, surveys, and analyses of potentially contaminated sites at the seven Air Fields identified for the Ministry
of National Defence. However, it is in the best interest of both Nations that a scientifically credible remediation program be based on a risk assessment process that involves reconciling the available data with the satellite image maps, and preparing a comprehensive plan to conduct additional site investigations needed to improve the technical understanding of the sources, extent, and the potential hazards of all contaminants. This plan would involve significant commitments to visit and assess each of the Air Fields, and then jointly prepare a comprehensive risk management program covering all installations. The implementation of such a plan would bring closure to the Agent Orange and Dioxin Remediation Program. To assist the Vietnamese Government, the US initiated a five-year $2 million project between the US Environmental Protection Agency (EPA) and the Vietnamese Academy of Science and Technology and Ministry of National Defence to build capacity for laboratory analysis of dioxin and related chemicals and site evaluation at the Da Nang Airport (Marciel 2008). Moreover, the Department of State and EPA have provided $400,000 for technical assistance for mitigation planning for the Da Nang Airport (Marciel 2008). Additional costs incurred for this would likely proceed with the current initiatives of mobilizing international donor funds and non-governmental support (Palmer 2004). However,

As to the broader issue of “victims of Agent Orange”:

I do not accept the term “victims of Agent Orange”. The United States humanitarian assistance to the disabled in Vietnam is not based on evaluation of causes of disability.

Statement of Ambassador Michael W. Marine, 9 August 2007, Hanoi, Vietnam

Absent evidence of widespread exposure to TCDD either from tactical herbicides or from soil or other sources in Vietnam, published reports suggesting that Agent Orange has caused widespread disease in veterans and their families and the Vietnamese people should be viewed with skepticism (Young et al. 2004a; Young et al. 2004b; Young et al. 2004c). Scientifically valid evaluations of causal relationships fail to establish a connection. Without evidence of widespread exposure to dioxin from tactical herbicides or contamination linked to the use of the tactical herbicides, there is little reason to expect causation will be established; see the recently published article in Science and Nature magazines (Stone 2007; Editorial 2008). Indeed, many effects attributed to the tactical herbicides and TCDD are readily explained by alternative factors. For example, neural tube defects (e.g., spina bifida and anencephaly) in Vietnamese children are frequently attributed to Agent Orange. However, other risk factors, primarily related to nutritional deficiencies of folic acid, are much more likely to be the underlying causative factors of such defects (Young et al. 2004b). A wider view of potential causative factors other than that of TCDD will re-focus scientific and medical resources toward the real causes of health problems in Vietnam. To these ends, the United States has expended in Vietnam more than $43 million in humanitarian assistance (Marciel 2008).
The Resolution for Vietnam Veterans

The extensive medical and scientific (including environmental fate) studies of Agent Orange and its associated dioxin over the last 35 years have provided ample evidence that most Vietnam veterans were not substantially exposed. They also show that even veterans with measurable serum 2,3,7,8-TCDD have not suffered ill effects as a result. The historical records from the Vietnam War have also supported the conclusion that spraying of troops with Agent Orange was minimal (Young 2004; Young et al. 2004a). Nevertheless, there remains a perception of harm to the Vietnam veteran. The emotional impact of this perception on the veteran and his family has been severe; see the recently published articles in Science and Nature magazines (Stone 2007; Editorial 2008). How can we counter this perception? The actions by the United States government via the Agent Orange Act of 1991 (Public Law 102-4) provides presumptive compensation in the absence of exposure and causation, an expression by the political system intended to acknowledge the sacrifices of the Vietnam veteran. Yet, it creates an unfair condition for veterans who develop diseases and illnesses not associated or suspected of being associated to Agent Orange or other tactical herbicides. Recently, the Institute of Medicine established a “Committee on Evaluation of the Presumptive Disability Decision-Making Process for Veterans” (IOM 2008). The report noted:

The more recent IOM Agent Orange reports have emphasized findings of observational studies on association and interpretation that might have been enhanced by placing the findings within a biological framework strengthened by greater attention to other lines of evidence. In the Agent Orange case studies, the category “limited/suggestive” for classifying evidence for association has been used for a broad range of evidence from indicating the mere possibility of an association to showing that an association is possibly causal...Both prostate cancer and type 2 diabetes illustrate situations in which the contribution of military exposure should be assessed against a background of disease risk that has other strong determinants: age in the case of prostate cancer and family history, and obesity in the case of type 2 diabetes (IOM 2008).

Vietnam and Agent Orange are now public policy issues. There are strong public policies favoring our veterans and rightly so. It has become apparent that science alone has not eliminated this perception of harm. The courts may resolve the massive litigation that has characterized this controversy, but the acrimony that has resulted from the Vietnam War and the use of tactical herbicides appears likely to be with us for many more years.

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