

## Dow Cites 2,4,5-T Impurity As Cause of Birth Defects

**EDITOR'S NOTE:** As the magazine went to press, the federal departments of agriculture, interior and health jointly announced the immediate suspension of certain uses of 2,4,5-T. The suspension affects the registration of liquid formulations of 2,4,5-T for use around the home and for registered uses on lakes, ponds and ditchbanks.

These actions do not eliminate registered uses of 2,4,5-T for control of weeds and brush on range and pasture, forests, rights-of-way, and other non-agricultural lands.

Users are cautioned that 2,4,5-T should not be used near homes or recreational areas.

The action was based on reports that nearly pure, 2,4,5-T caused birth defects when injected at high doses into pregnant mice, but not in rats. No data on humans are available.

In closely related action, Ohio Gov. James Rhodes halted use of 2,4,5-T, 2,4-D and silvex by the state highway department along

highways until further tests of the chemicals could be made.

Both 2,4-D and 2,4,5-T had been used for some 20 years.

Scientists of The Dow Chemical Company have presented detailed evidence showing that a contaminant rather than the compound 2,4,5-T was probably the cause of birth abnormalities reported in test animals in a recent study.

2,4,5-T has been under fire since October of last year when it was announced that a study conducted by Bionetics Laboratories, Inc., under contract to the National Cancer Institute, indicated higher than normal rates of birth defects in test animals treated with massive doses of 2,4,5-T. Examination of data from the Bionetics test suggested to scientists at Dow that rather than 2,4,5-T, the real culprit might have been a toxic contaminant that has from time to time been a problem in the manufacture of the material.

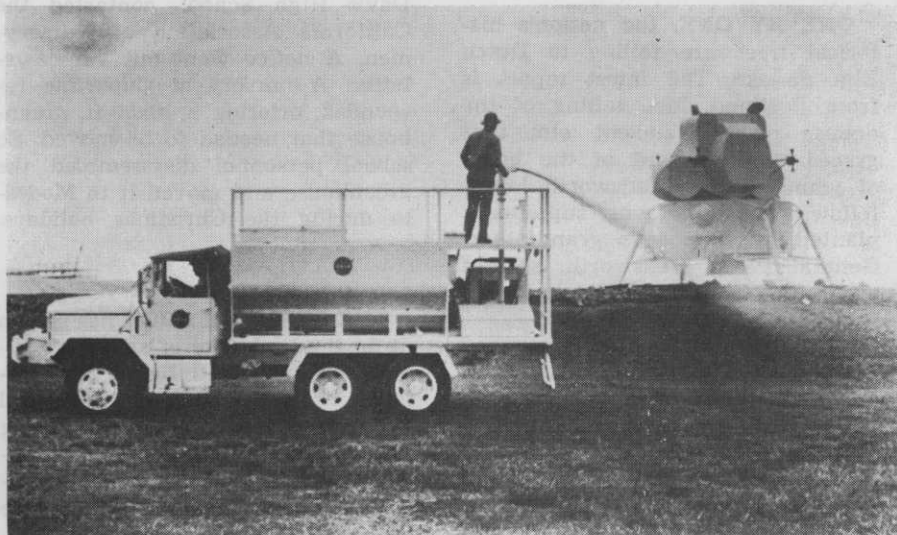
The Bionetics sample material was analyzed and found to contain about 27 parts per million of the contaminant, 2,3,7,8-tetrachlorodibenzo-p-dioxin. Production standards for the herbicide as produced by Dow require that 2,4,5-T contain less than

one part per million of the dioxin. Dow established this specification in 1965 to assure safety in the production of the material.

In papers presented recently at the meeting of the Society of Toxicology in Atlanta, V. K. Rowe and Dr. J. L. Emerson cited detailed studies just completed that indicate no fetal abnormalities are produced by the herbicide when the Dow standard for dioxin content is met. The animal studies involved the feeding of rats with 2,4,5-T containing less than one PPM of the dioxin contaminant at levels comparable to those used in the earlier studies.

Results indicated very clearly that the herbicide containing less than one part per million of the dioxin had no effect on either mothers or fetuses.

In addition, another group of test animals was given the dioxin alone at levels comparable to those in the impure sample used in the Bionetics work. Results in the test with the pure dioxin indicated a high level of maternal and fetal toxicity of the material. Abnormalities observed in these test were similar to those reported by Bionetics Laboratories.



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