

Understanding Science and Scientific Methods:

An Overview for Lawyers

SUMMARY – 10 October 2005

Class on 3 October 2005 Covered Topics 2.c.iii. and 2.d. (part) on the Syllabus

A. The “Ranch Hand” Study (Cohort Study) – key finding, the mortality rate of the group is the same as the matched comparison group.

B. Dioxin Levels in the General Population:

1. In 1969 the National Cancer Institute revealed that 2,4,5-T was the most potent man-made cause of birth defects (**Teratogen**) ever tested in mice. Later it was discovered that it was the **Dioxin** in 2,4,5-T that was the cause.
2. Other tests showed dioxin to be the most potent **Carcinogen** ever tested in laboratory animals.
3. The concentration of dioxin in body fat ranges from 0 to 20 parts per trillion (ppt).”
4. The level has fallen by at least a factor of 2 since the 1970s.
5. Dioxin has a half-life of 7-20 years (not precisely known).

C. Agent Orange in the Courtroom:

1. *U. S. Veterans vs. Dow Chemical*, 1984 "Settlement"? (*In Re "Agent Orange" Product Liability Litigation*, 597 F. Supp. 740 (E.D.N.Y. 1984), LEXIS 23337).

- a. Judge Weinstein held that the settlement was reasonable.
- b. The Chemical Companies admitted no liability
- c. Judge Weinstein held hearings in several cities and took testimony from Vietnam veterans and their families.
- d. Judge Weinstein very dubious that the Veterans had a case. Scientific causality very doubtful and they would have likely lost in court.

2. *Dow Chemical vs. Stephenson (2003)*

- a. **Can people who are unaware of their involvement in a class-action suit later argue that they were not properly represented?**
- b. **What standard should be used if those lawsuits are allowed?**