



Hal Morgenstern's Community Cancer Study Submitted to DTSC's STREAM Platform (SCF000004)

A question/statement that is frequently raised in public meetings is the "peer reviewed" 2007 University of Michigan Study by Dr. Hal Morgenstern in which he claimed a 60% increase in certain cancers within 2 miles of SSFL.

The facts are,

1. The study was never published in any professional journal and was therefore not "peer reviewed" in the usual sense of the phrase. Given academicians' usual desire to publish their work in professional journals, this speaks volumes about Morgenstern's confidence in his own work. (See Morgenstern's July 2022 CV <https://sph.umich.edu/faculty-profiles/pdf/halm.pdf>).
2. The study was sponsored by the ATSDR and funded through a sole-source contract with the Eastern Research Group (ERG), neither of whom published any written or verbal comment on the report, either positive or negative.
3. Two peer reviews that were conducted, by Dr. Alan Warren and Dr. William Blot (both hired consultants by Boeing) were extremely negative of the study (see online citations below).
4. Morgenstern (as do many epidemiologists) cherry picked his data. Of the ~200 cancer rate comparisons he made, almost as many rate ratios were below 1.0 as where above 1.0. More rate ratios were "significantly" below 1.0 as "significantly" above 1.0. Morgenstern discussed only rates that he judged as high and ignored rates that were equally on the low side.
5. The elevated rate ratios were due almost entirely by the hispanic population. Non-hispanic white and other non-hispanic (presumably black and Asian) rate ratios were mostly below 1.0. The socio-economic demographic surrounding SSFL is mostly non-hispanic white. Dr. Morgenstern was unable to explain this ethnic disparity.
6. An alleged 60% increase in cancer rates would not meet even the lowest legal burden of proof (preponderance of evidence in civil courts) that would require a 100% increase in cancer rate.
7. Morgenstern made a common mistake in using the Poisson approximation to estimate the standard deviation for the LA and Ventura County's cancer rates. This resulted in an



unrealistic narrow distribution for the baseline county cancer rates. An observation shared by Dr. Warren.

Rebuttals to Dr. Morgenstern's study may be found in Section 10.6 at ...
https://philrutherford.com/SSFL/Offsite_Impact_of_SSFL.pdf#page=138

Discussion of the conclusions of numerous community cancer studies may be found in Section 10.0 at ...
https://philrutherford.com/SSFL/Offsite_Impact_of_SSFL.pdf#page=127

Perhaps this material will assist DTSC staff in responding to the usual challenges to DTSC's trust and credibility, when they rightly state that *"DTSC has not found any evidence that contamination from research and testing operations at SSFL has posed or would pose a threat to human health or the environment outside the SSFL site boundaries."*