THE STATE of ALASKA
GOVERNOR SEAN PARNELL

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July 19, 2012

Mr Loren Garner
Flint Hills Refinery
1100 H&H Lane
North Pole, AK 99705

Re: EPA Sulfolane Toxicity Values

Dear Mr Garner:

The Alaska Department of Environmental Conservation (ADEC or Department) is in the process of reviewing the two documents produced by Flint Hills Resources for the Flint Hills North Pole Refinery: The Revised Draft Final Human Health Risk Assessment, May 2012 (HHRA) and the Draft Final Onsite Feasibility Study, May 2012 (FS). Both of these documents require use of toxicological criteria for sulfolane which is in turn used to develop remedial action objectives (RAOs) and cleanup levels for the site.

The Environmental Protection Agency (EPA) reviewed the toxicological data for sulfolane. EPA's review was completed in January 2012 and provisional peer-reviewed toxicity values (PPRTVs) for sulfolane were set. The Department's *Risk Assessment Procedures Manual- Draft* (November 2011) stipulates a hierarchy for toxicity criteria for use in risk assessments. The hierarchy is consistent with *Human Health Toxicity Values in Superfund Risk Assessments* (EPA 2003). The ADEC and EPA hierarchy identifies the use of the PPRTV when no Integrated Risk Information System (IRIS) value is available, as is the case for sulfolane. The State has found that the PPRTV was developed in an appropriate and robust manner consistent with EPA and general toxicological procedures.

Therefore, the Department has concluded that the EPA's PPRTV of 0.001 milligrams per kilograms body weight per day (mg/kg-d) for chronic oral exposure should be used to finalize the HHRA. Furthermore, the Department has determined that the ADEC accepted exposure parameters for the child chronically exposed to sulfolane in groundwater, as presented in the HHRA, should be used to determine the alternative cleanup level (ACL) at the site. This results in an ACL of 14 micrograms per liter (µg/L) for sulfolane. Thus, the FS for the Flint Hills site should use this 14 µg/L as an applicable or relevant and appropriate requirement and in development of remedial action objectives and evaluation of remedial options.

Should you have any questions please contact ADEC's Contaminated Sites Program Manager, Steve Bainbridge, at (907) 269-2021 or the ADEC Project Manager, Ann Farris at (907) 451-2104. Thank you for your ongoing diligence in addressing this complex, high priority site.

Sincerely,

Steve Bainbridge, P.E.
Contaminated Sites Program Manager

Cc: Sheryl Corrigan, Flint Hills Resources
Dan Opalski. EPA Director, Office of Environmental Cleanup
Ann Farris, Contaminated Sites Project Manager
Lawrence Hartig, DEC Commissioner
Lynn Kent, DEC Deputy Commissioner
Larry Dietrick, DEC SPAR Division Director