SOURCE: Interpretive Guidance Document for Sustainable Futures Summary Assessment Human Health Hazard - Cancer Updated June 2006

Interpretation of OncoLogic Results:

| SF Concern | OncoLogic Results | Definition - OncoLogic Result |
|----------------------------|-------------------|--|
| Low | Low | Unlikely to be a carcinogen |
| Further Research Needed | Marginal | Likely to have equivocal carcinogenic activity |
| Moderate | Low-Moderate | Likely to be weakly carcinogenic |
| | Moderate | Likely to be moderately active carcinogen |
| High | Moderate-High | Highly likely to be a moderately active carcinogen |
| | High | Highly likely to be a potent carcinogen |

Interpretation of Experimental Data:

| SF Concern | Definition - Experimental Data | |
|------------|--|--|
| Low | Negative experimental data | |
| Moderate | Positive cancer bioassay in experimental animals or chemical class known to produce carcinogenic effects | |
| High | Positive experimental data in humans (e.g. epidemiology study) | |

NOTE: Measured data from a properly conducted study on the SF chemical or a relevant analog always takes precedence over predicted data.

Human Health Hazard - Non-Cancer

Criteria for Assigning Non-Cancer Hazard Concern Levels:

| SF Concern | Definition - Experimental Data |
|------------|--|
| Low | No basis for concern identified or systemic toxicity with NOAEL ≥ 1000 mg/kg/day; only minor clinical signs of toxicity; liver and/or kidney weight increase or clinical chemistry changes with LOAEL ≥ 500 mg/kg/day |
| Moderate | Suggestive animal studies for chemical or analog(s) or chemical class known to produce toxicity or organ pathology (gross and/or microscopic) with LOAEL < 500 mg/kg/day; clinical chemistry changes and organ weight changes at < 500 mg/kg/day; NOAEL < 1000 mg/kg/day |
| High | Evidence of adverse effects in humans or conclusive evidence of severe effects in animal studies. Death, organ pathology (microscopic) at LOAEL \leq 100 mg/kg/day; multiple organ toxicity; NOAEL \leq 10 mg/kg/day. |

NOTE: Most often, regulatory decisions will be made based on the following human health effects: reproductive; immune; developmental; neurotoxicity; and systemic. If analog data are used, absorption considerations should be made for the chemical of interest.

NOTE: Guidance on the evaluation of non-cancer human health concerns of polymers can be found in: P2 Framework Manual, Oct 2003 version, edited Jan 2004, pg. 169-170 at http://www.epa.gov/oppt/p2framework/docs/p2manua.htm