

Table 1.0 Results of sample SP 004 taken 06/09/04 Location Beyond Refinery Fence-

Levels measured beyond fence line in µg/m ³	Laws regulating contaminants	Law exceeded by	Health effects and Target organs
<p>BENZENE 110 µg/m³</p> <p>EU LEGAL LIMIT 5 µg/m³</p> <p>-Aromatic Odour</p>	<ul style="list-style-type: none"> • EU Directive 2000/69 states 5 µg/m³ as max. permissible. The directive also states, <i>"Benzene is a human genotoxic carcinogen and there is no identifiable threshold below which there is no risk to human health"</i>. • EPA recommended levels of 0.25 µg/m³ • Texas short term legal level of 12.0 µg/m³ (1 hour) • Texas long term legal level of 3.00 µg/m³ (24 hours) 	<p>X 22 times higher than the upper limit.</p> <p>X 440 times higher than rec. limit</p> <p>X 9.17 times higher than recommended</p> <p>X 36.67 times higher than recommended</p>	<p>-Causes leukaemia.</p> <p>-Irritation of eyes, skin, nose, respiratory system.</p> <p>-Dizziness; headaches; nausea</p> <p>-Staggered gait; anorexia; weakness, exhaustion</p> <p>-Dermatitis.</p> <p>-Bone marrow depression;</p> <p>-Potential occupational carcinogen.</p> <p>-Target organs: Eyes, skin, respiratory system, central nervous system; bone marrow</p>
<p>CARBON DISULFIDE 7.4 µg/m³</p> <p>USA LEGAL LIMIT 3 µg/m³</p> <p>-Ether like smell</p>	<ul style="list-style-type: none"> • EU Directive • Texas long term legal average level of 3.00 µg/m³ yearly 	<p>X 2.50 times higher than recommended Limit.</p>	<p>-Dizziness, headache, poor sleep, weakness, exhaustion,</p> <p>-Anxiety, anorexia, psychosis.</p> <p>-Ocular changes.</p> <p>-Coronary heart disease.</p> <p>-Gastritis</p> <p>-kidney, liver injury; eye, skin burns.</p> <p>-Dermatitis;</p> <p>-Reproductive effects.</p> <p>-Target organs: Central nervous system, peripheral nervous system; cardiovascular system, kidneys, liver, skin, respiratory system</p>
<p>TOLUENE 270 µg/m³</p> <p>USA LEGAL LIMIT 188 µg/m³</p> <p>-Sweet pungent benzene like odour</p>	<ul style="list-style-type: none"> • EU Directive • Texas long term legal average level of 188 µg/m³ yearly • ATSDR states that chronic minimal risk level for one year or more is 95.8 µg/m³ 	<p>X 1.44 times level recommended</p> <p>X 2.82 times the safety level for non-cancer health effects</p>	<p>-Irritation of eyes, nose, weakness, exhaustion</p> <p>-Confusion; euphoria</p> <p>-Dizziness, headache</p> <p>-Anxiety; muscle fatigue</p> <p>-Dermatitis; liver and kidney damage.</p> <p>_Target organs: Eyes, skin; respiratory system; central nervous system; kidneys</p>
<p>HYDROGEN SULFIDE 6.49 µg/m³</p> <p>USA LEGAL LIMIT 1.00 µg/m³</p> <p>-Rotten egg smell</p>	<ul style="list-style-type: none"> • EU Directive • EPA safe levels at 1.00 µg/m³ • Texas short term legal level of 1.00 µg/m³ (1 hour) 	<p>X 6.49 times the recommended limit</p> <p>X 6.49 times the recommended limit</p>	<p>-Potent chemical asphyxiate, combines with haemoglobin and cytochromes stopping oxygen access to cellular metabolism</p> <p>-As toxic as hydrogen cyanide.</p> <p>-Irritant of mucous membranes, eyes and respiratory tract at lower concentrations</p>
<p>1,3,5 - TRIMETHYLBENZENE 13 µg/m³</p> <p>USA LEGAL LIMIT 6.20µg/m³</p> <p>In both cases.</p> <p>1,2,4 - TRIMETHYLBENZENE 38 µg/m³</p> <p>-Distinct aromatic odour</p>	<ul style="list-style-type: none"> • EU Directive • EPA recommended safety level is 6.20 µg/m³ • EPA recommended safety level is 6.20 µg/m³ 	<p>X 2.10 times the recommended limit</p> <p>X 6.13 times the recommended limit</p>	<p>-Irritation of skin & Eyes</p> <p>-Exposure will cause dizziness, light-headedness and unconsciousness</p> <p>-repeated exposure will cause headaches, nervousness tiredness</p> <p>-Will cause changes in blood cells and blood clotting ability</p> <p>-Lung irritation, bronchitis with cough & Phlegm and or shortness of breath</p> <p style="text-align: right;">Table prepared by the BBB 2004 ©</p>