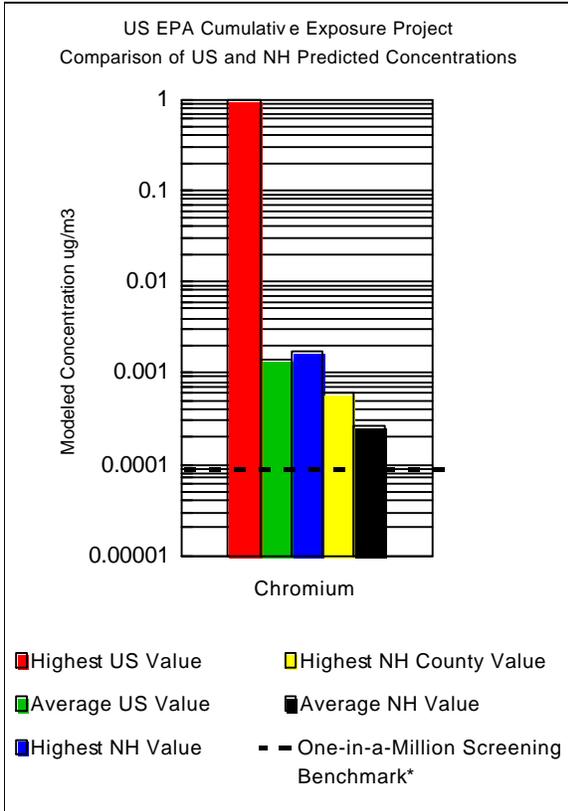


# Health Effects Information for Toxic Air Pollutants of Concern in New Hampshire (as identified in the US EPA Cumulative Exposure Project)

## CHROMIUM COMPOUNDS



CEP Concentration Data (ug/m <sup>3</sup> )	
CEP Screening Benchmark*	0.000083
CEP Background Concentration	n/a
Maximum US Concentration	1.0
Average US Concentration	0.0014
Maximum NH Concentration	0.0017
Maximum NH County Concentration	0.00060
Average NH Concentration	0.00026

NH CEP Concentration Comparison Summary	
Percent by w.t. of all toxics evaluated in the CEP	0.0020%
NH highest value as a % of US highest value	0.17%
NH average value as a % of US average value	18.8%
NH highest value as a % of US average value	121%
NH avg. as a % of CEP Screening Benchmark*	313%

Source Apportionment in NH**	
% contribution from Point Sources	42.9%
% contribution from Area Sources	39.3%
% contribution from Mobile Sources	17.8%

**Overview of Health Effects**

Hexavalent chromium (Cr VI) is known to be carcinogenic in humans by the inhalation route of exposure, causing lung cancer. The trivalent form, Cr III, has insufficient evidence of carcinogenicity. Noncancer effects from high or moderate levels of Cr VI causes damage to the nose and lungs. Reproductive problems and birth defects were observed in lab animals exposed to large amounts of Cr VI by ingestion. Some people may experience asthma attacks after breathing high levels.

Carcinogenicity Classification	
Cr VI: Known Human Carcinogen	(EPA Group A)
Cr III: Not classifiable as to Carcinogenicity	(EPA Group D)

\* In developing the CEP, EPA established screening benchmark concentrations for each modeled toxic air pollutant below which there is likely to be no public health concern. To estimate potential cancer concerns, the CEP used a screening benchmark of 1-in-a-million excess risk of cancer. A risk level of 1-in-a-million means that one person out of one million equally exposed people would potentially contract cancer if exposed continuously (24 hours per day) to the specified concentration over 70 years (an assumed lifetime). This one case would be in addition to the number of cancer cases that would normally occur in a normally exposed population of one million people.

\*\* Source apportionment reflects the estimated contribution from each of the three source categories. Point sources include major industrial emission sources such as power plants and manufacturing plants. Area sources are typically smaller sources such as gasoline stations, dry cleaners, auto body shops, and the use of consumer products in the home. Mobile sources include emissions from automobiles, trucks and buses.