October 13, 2009

Attn: Michael Baes
Pesticide and Environmental Toxicology Branch
Office of Environmental Health Hazard Assessment
California Environmental Protection Agency
1515 Clay St., 16th floor
Oakland, CA 94612

Re: Draft Public Health Goal for Hexavalent Chromium in Drinking Water

To Whom It May Concern:

The City of Watsonville appreciates the opportunity to comment on the draft public health goal (PHG) for hexavalent chromium in drinking water. The City has a water service population of over 65,000, with over 15,000 service connections for domestic, commercial and industrial use. About 85% of our water supply is from ground water sources, and all of our sources comply with the current MCL for chromium. The City’s highest priority is protecting the health and safety of our customers. However, we are concerned that the studies used to develop the proposed Public Health Goal for hexavalent chromium were inappropriate, and that further studies are needed before a PHG can be established.

The City of Watsonville firmly believes in and has consistently advocated for sound science to be utilized in the development of public health goals (PHG). Risk assessments should be carefully crafted in recognition of scientifically validated studies that will appropriately protect public health in California.

OEHHA’s draft PHG of 60 parts per trillion (ppt) was based largely on the findings of a recent National Toxicology Program (NTP) study that concluded there is sufficient data to classify hexavalent chromium as a carcinogen through the oral route of exposure. The researchers reached this conclusion through selected evidence that hexavalent chromium, when ingested in very high doses, causes cancer of the oral cavity and small intestine in rats and mice.

While we recognize the efforts made by NTP and OEHHA, the known toxicity of hexavalent chromium via inhalation, and the lengthy process that has led to this draft PHG, the City of Watsonville is concerned that the results of the NTP study and other referenced studies do not sufficiently demonstrate the human carcinogenicity of hexavalent chromium in drinking water and as a result do not provide justification for the proposed PHG level of 60 ppt (parts per trillion).
As indicated in the draft PHG document, several studies previously estimated that saliva and stomach fluids have the capacity to reduce hexavalent chromium to trivalent chromium in amounts much larger than the "maximum plausible levels of hexavalent chromium in water that would likely be ingested by humans..." The document further asserts that "...exhaustion of the capacity of saliva and gastric fluids to reduce hexavalent chromium appears unlikely."¹ The City understands other studies exist and are referenced in the document providing evidence that complete reduction may not always occur, but believes the administered doses in the NTP study are so large they easily overwhelmed the reductive capacity of both the oral cavity and the stomach in the rodents. This is especially significant as the NTP study did not find excess cancers at the lowered studied doses in both rats and mice. Equally as important, the stomach composition of humans and rodents is very different, with humans having a much more sophisticated and higher level of gastric juices than rodents.

In addition, we have concerns with the interpretation and use of data from two key studies submitted as evidence that hexavalent chromium in drinking water is a human carcinogen. The Borneff et al study is seriously flawed and should not be considered in the development of the PHG. In the work completed by Zhang and Li, not all factors were considered when the authors reached their conclusions including the extremely high levels of hexavalent chromium and the presence of a particular bacterial infection potentially affecting the results.

The City of Watsonville has supported OEHHA’s efforts thus far to determine the potential human health risks of hexavalent chromium when ingested. In this case we strongly support additional scientific studies to validate or refute the carcinogenicity of hexavalent chromium before establishing a final PHG that will be used by the California Department of Public Health to set its maximum contaminant level (MCL).

Our highest priority continues to be protecting public health while ensuring a reliable water supply for consumers and we look forward to working with staff on this very important issue.

Thank you for your consideration.

Sincerely,

David Koch
Director of Public Works and Utilities

¹ "Draft Public Health Goal for Hexavalent Chromium in Drinking Water," Office of Environmental Health Hazard Assessment, August 2009