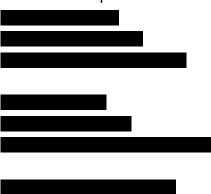
February 11, 2016

Andrew A. Kopania



Sue Genera, Executive Assistant Lahontan Regional Water Quality Control Board 2501 Lake Tahoe Blvd. South Lake Tahoe, CA 96150

Subject: Comments on Draft CAO for Lake Tahoe Laundry Works

1024 Lake Tahoe Boulevard

Sent via email to: RB6enfproceed@waterboards.ca.gov and

<u>Lisa.dernbach@waterboards.ca.gov</u>

Dear Ms. Genera:

The following comments are offered on the subject Draft CAO:

- 1. Paragraph 19 refers to "two properties referenced in Paragraph 3". From the context, it appears that those properties are referenced in Paragraph 4.
- 2. The relatively steep hydraulic gradient described in paragraph 2 (0.01 to 0.06 ft/ft) suggests that an air sparge system would not be capable of developing an adequate capture zone to contain the VOC contamination emanating from the site. While the system may effectively treat a small area around each individual sparge well, the steep gradient and high groundwater flow velocities suggest that there may be substantial untreated mass between individual air sparge wells that is able to continually move downgradient.
- 3. The large rebound of almost 100-fold (5.9 $\mu g/L$ to 550 $\mu g/L$) that occurred in 2013 when the air sparge system was down for approximately six months demonstrates that there is still substantial PCE mass present on the site that is not being treated or removed by the existing system.

- 4. Order Item #3 The monitoring reports would be of more value in evaluating the regional impacts from the site if they were also required to include data from affected STPUD, Lukins Brothers, and Tahoe Keys supply wells, to the extent that the Order requires sampling of all affected downgradient wells or the data can be obtained from the affected well owners.
- 5. Order Item #4 It would be beneficial, and help clarify intent, if this section of the Order specifically required full vertical characterization of VOC impacts both on and off site.
- 6. Order Item #4.3.6 The phrase "if possible" is vague and should be deleted. This section should require development of a conceptual hydrogeologic model (not a numerical model just a conceptualization) that identifies potential preferential flow paths due to the ancient fluvial depositional environment and describes the different aquifer zones from which the various affected supply wells produce water. Apparently the geologist for STPUD has developed such a conceptualization related to some of the Lukins Brothers and Tahoe Keys wells. While several paragraphs in the Draft Order acknowledge the potential for lateral dispersion to increase the plume width, little or no discussion or requirements are included related to potential changes in the vertical extent of the plume. Development of a site conceptual model (SCM) and a description of the different vertical zones from which supply wells produce groundwater within the required Technical Report would be extremely valuable in developing an appropriate understanding of the extent of impacts and relevant and applicable remedies.

Thank you for the opportunity to provide these comments on the Draft CAO.

Sincerely,

Andrew A. Kopania

A. Kopania

From:

To: RB6enfproceed@waterboards; Dernbach, Lisa@Waterboards

Subject: Additional Comment on Draft CAO for Lake Tahoe Laundry Works

Date: Tuesday, February 09, 2016 7:35:27 PM

I have one additional comment on the Draft CAO that I forgot to include in my letter earlier today:

Given the distribution of PCE in the Y Area, it may also be appropriate to have the Discharger conduct an evaluation of the storm sewer and sanitary sewer systems in the area. Due to the time that has passed since PCE was last used at the site, sampling and testing for VOCs from within the sewers is probably not worthwhile. However, developing an understanding of the sewer layout and flow directions/patterns might provide additional information about the potential distribution of PCE in the groundwater. In many municipalities throughout California, the sewer systems have been demonstrated or suspected of playing a contributing role in the fate and transport of PCE from dry cleaning facilities. The discussion in the Draft CAO did not mention sewers, so it is assumed that this issue has not been fully assessed.

Thank you for your consideration of this additional comment.

From: Andrew Kopania

To: "RB6enfproceed@waterboards.ca.gov" <RB6enfproceed@waterboards.ca.gov>;

"lisa.dernbach@waterboards.ca.gov" < lisa.dernbach@waterboards.ca.gov>

Cc: Andrew Kopania <a href="mailto: sbcglobal.net Sent: Tuesday, February 9, 2016 2:55 PM

Subject: Comments on Draft CAO for Lake Tahoe Laundry Works

Attached please find comments on the Draft CAO of Lake Tahoe Laundry Works. Please also add my name to the contact list for this site so that I will be notified of any meetings or actions.

Thank you,

Andrew A. Kopania