enviros®

June 25, 1997

Mr. Scott Seery
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, #250
Alameda, California 94502

Re: Implementation of Non-Purge Sampling Methodology

Dear Mr. Seery:

We intend to apply non-purge sampling methodology at the site listed below beginning in the third quarter of 1997. The application of non-purge sampling methodology at this site is consistent with the San Francisco Bay Regional Water Quality Control Board's January 31, 1997 letter regarding *"Utilization of Non-Purge Approach for Sampling of Monitoring Wells Impacted by Petroleum Hydrocarbons, BTEX, and MTBE"*.

Former Shell Service Station
15275 Washington, San Leandro, California
WIC #204-6852-1008

Specifically, this site satisfies each of the following conditions outlined in the SFRWQCB letter.

- Ground water at this site has only been impacted by Petroleum Hydrocarbons, BTEX, and MTBE.
- The monitoring wells at this site have been installed in unconfined aquifers.
- The monitoring wells at this site have been properly permitted, constructed, and developed.
- The monitoring wells are not in use for ground water or soil vapor extraction.
- The monitoring wells from which ground water samples are collected do not have free product.
- The monitoring wells have already been routinely purged in previous sampling events and therefore do not require an initial duplicate non-purged and purged sample. We recognize that new monitoring wells installed at this site will require an initial duplicate non-purged and purged sample.

Enviros, Inc. 270 Perkins Street P.O. Box 259 Sonoma, California 95476-0259 Tel 707 / 935-4850 Fax 707 / 935-6649

If you have any questions regarding the contents of this letter, please call.

Sincerely,

Enviros, Inc.

John Werfal
Sr. Environmental Scientist

Diane M. Lundquist, P.E.
Senior Engineer
C46725

cc: Mr. Alex Perez, Shell Oil Products Company
SFRWQCB

Attachment

SFRWQCB's January 31, 1997 Non-Purge Letter

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)1 Webster Street
te 500
kland, CA 94612
0) 286-1255
X (510) 286-1380

Pete Wilson
Governor

To: Interested Parties

January 31, 1997
File: 1123.64

SUBJECT: **Utilization of Non-Purge Approach for Sampling of Monitoring Wells Impacted by Petroleum Hydrocarbons, BTEX, and MTBE**

REFERENCE: "The California Groundwater Purging Study for Petroleum Hydrocarbons", Report for Western States Petroleum Association by SECOR International Incorporated, Dated October 28, 1996

Finding and Recommendation

The WSPA study concludes that selection of a non-purge sampling methodology will not affect the overall variability of analytic data, and will provide a comparable, and in many cases, conservative estimate of petroleum hydrocarbons in groundwater. Based upon our review of the study, we conclude that for monitoring wells at fuel UST sites purging is not required providing the conditions we have outlined below are met. Our rationale is provided below.

Rationale

Since the release of the Western States Petroleum Association (WSPA) study on the effects of purging or not purging gasoline impacted monitoring wells prior to sampling there have been questions posed as to the validity and applicability of the study. Board staff acknowledge the concerns of some towards the possible bias in the study because of variations in data quality due to differing purging and sampling techniques utilized in the study, the lack of specific well design information or water quality parameter information, and the questions of statistical bias introduced into the study by the inclusion of non-detect data. However, we believe that these concerns are mitigated by the overall environmental and economic benefits discussed below.

Section 13267 (b) of the Water Code states that for technical or monitoring program reports the board may specify that ... "The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports". From an environmental perspective, there is an advantage in reducing the environmental burden by virtue of reducing the volumes of purge water for treatment

and disposal, which in turn reduces secondary impacts to air and water quality from waste handling, transport, and treatment of the purge water. In addition, there is a positive cost savings and, consequently, a potential savings to the State's limited Clean Up Fund resources. We therefore believe that this approach is consistent with Section 13267.

We recognize at least one disadvantage from not purging is that, if true, higher analytic readings from non-purged samples may result in unnecessarily prolonging remediation and monitoring. In the worst case, some minor changes in water quality may be missed on a timely basis, such as those due to changes resulting from utilizing effective remediation techniques or, conversely, missing the detection of a new release from on or off site. Also, if further refinement of the WSPA study provides new information in conflict to the present study, we are prepared to modify our requirements accordingly.

Conditions on Using the Non-Purging Approach

In consideration of the above, we will now require the following for any Responsible Party or consultant proposing to utilize the non-purging approach:

1. The non-purging approach shall be used only for monitoring wells where groundwater has been impacted by Petroleum Hydrocarbons, BTEX, and MTBE.

2. Non-purge sampling shall be utilized for unconfined aquifers only.

3. The monitoring well shall be properly permitted, constructed (in this case, screened across the water table), and developed.

4. The well is not presently in use for groundwater or soil vapor extraction.

5. The well does not have free product.

6. For new wells or wells brought into monitoring for the first time, the first round of groundwater sampling performed at a site shall be with both non-purged and purged samples. The purging and sampling method used shall be documented. This shall include the rate of purge and sampling details. For these wells we require measurements of dissolved oxygen, specific conductance, pH, and temperature whether purged or not purged. Also, if biodegradation is being tracked at the well, our requirements do not preclude the measurement of other parameters.

7. Existing wells which have already been routinely purged in previous sampling events immediate to being switched to a non-purging mode do not require an initial duplicate non-purged and purged sample.

8. Monitoring data frequency shall be as required by the appropriate regulatory oversight agency.

9. Should a Responsible Party request site closure where the non-purged approach has been used, the final confirmation sampling event shall include both non-purged and purged samples from each well or as agreed upon with the appropriate regulatory oversight agency.

Prior to implementing the non-purge approach, the appropriate regulatory oversight agency shall be contacted, with an information copy to this office. Please call John Kaiser (510 - 286 - 0803) or me (510 - 286 - 0304) if you have any questions regarding this letter.

Loretta K. Barsamian
Executive Officer

Stephen I. Morse, P.E.
Chief,
Toxics Cleanup Division

cc: SWRCB - CWP (Alan Patton and Dave Deaner)
Regional Boards 1,3-9 UST Program Managers
RWQCB Region 2 UST Staff
USEPA, Region 9 (Matt Small)
Region 2 Local Agency UST Managers

Note: A synopsis of the WSPA Report including information on how to obtain the complete report may be found on the Internet at http://www.secor.com/purge.html