

Sampling Program Re-Evaluation

At the completion of the sampling year, data from each of the previous sampling events are evaluated to assist with the design of next year's sampling program. This re-evaluation provides EPA with the ability to modify the sampling program. Each year this fine tuning of the sampling program ensures that data is obtained from monitoring wells that exhibit VOC contamination while not expending resources on those wells in which VOC concentrations have decreased or are below detection limits.

5.1 Criteria for Re-evaluation

Contaminant data from each sampling event conducted during the previous year (three events for 1996) are used to determine if the RI monitoring wells: (1) may be moved from the quarterly *to* the annual sampling program, (2) may be moved from the annual sampling program *to* the quarterly sampling program, (3) may be moved from the annual sampling program *to* the triannual sampling program, (4) may be moved from the triannual sampling program into the quarterly or annual sampling program, or (5) may remain in the same sampling program they are in currently. The following criteria are used to re-evaluate the sampling program:

- Quarterly to Annual. Wells currently in the quarterly sampling program containing contaminant concentrations below federal or state MCLs, but above detection limits, will continue to be sampled quarterly until the contaminant concentrations remain below MCLs for three consecutive quarters. At this point, the well will be recommended for placement in the annual sampling program. However, if these wells appear to be downgradient from contaminated wells or are deep wells beneath contaminated shallow wells, it is recommended that the wells remain in the quarterly sampling program to monitor contaminant migration.
- Annual to Quarterly. Wells currently in the annual sampling program that have contaminant concentrations that exceed federal or state MCLs are recommended for placement the quarterly sampling program.
- Annual to Triannual. Wells that are currently sampled annually, those in which contaminant concentrations continue to be below the detection limits for three consecutive sampling events, are recommended for assignment to the triannual sampling program. However, if these wells appear to be downgradient of contamination and may be useful in monitoring contaminant migration, it may be recommended that the wells be maintained in the annual sampling program.
- Triannual to Annual or Quarterly. Wells currently in the triannual sampling program, which have contaminant concentrations that are above detection limits but below MCLs, are recommended to be placed in the annual sampling program. Wells currently in the triannual sampling program that have contaminant concentrations that exceed federal or state MCLs are recommended to be placed in the quarterly sampling program.
- Remain the Same. Wells currently in the quarterly sampling programs that have contaminant concentrations staying above federal or state MCLs are recommended to remain in the quarterly sampling program. Wells in the annual sampling program that have contaminant concentrations staying above detection limits but below MCLs, are recommended to remain in the annual sampling program.

Based upon the above criteria, RI monitoring wells were assigned to the following sampling frequency at the beginning of 1996 (Table 5-1). Changes presented in the number of wells during quarterly and annual sampling events are the result of significant differences observed in analytical data compared to the previous sample event. The triannual sample event will be conducted during the fall of 1995.

TABLE 5-1
Assignment of RI Monitoring Wells 1996 Sampling Program

Sample	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
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Event	(Mar 96)	(canceled)	(July 96)	(Dec 96)
No. of Wells Scheduled for Sampling	52		52	65
No. of Inoperable wells				4
No. of Wells Sampled	52		52	61

*Monitoring wells inoperable due to mechanical or other problems (see Table 1-1).

5.2 Recommendations

Examination of VOC data obtained during 1996 focused on 14 of the 61 RI monitoring wells included in the sampling events for possible re-evaluation. Since the fourth quarter 1996 sample event was an annual event, criteria No. 4 (triannual to annual or quarterly) will not be addressed in this discussion. The recommended sampling frequency for the 1997 sampling schedule is discussed below.

Quarterly to Annual. All of the monitoring wells included in the quarterly sampling program continue to have detectable concentrations of TCE and/or PCE. However, five monitoring wells in the Verdugo area (VD-VPB-02, VD-VPB-03, VD-VPB-04, VD-VPB-05, and VD-VPB-06) exhibited no detectable concentrations of TCE, and PCE concentrations were below the MCL during quarterly sampling throughout the previous three sampling years. During this time, the reported concentrations of PCE have been “J” flagged (estimated). These five quarterly sampled monitoring wells were recommended for placement in the annual sampling program. In addition, VD-VPB-07 has exhibited no detectable concentrations of TCE or PCE during the previous three sampling years. This well is recommended to be placed in the triannual sampling event.

One additional quarterly monitoring well (NH-C02-220) exhibited changes in concentrations that should be noted, although no recommendation for changes are to be made at this time. This monitoring well has had no detectable concentrations of PCE for the previous three events, and the concentrations of TCE have been below the MCL for two quarters. Provided this trend continues, recommendations will be made following the completion of the next year.

Annual to Quarterly. No recommendations for changes in this sampling schedule.

Annual to Triannual. Two monitoring wells (CS-C03-325 and NH-VPB-12) are recommended to be moved from the annual sampling event to the triannual sampling event. NH-VPB-12 has exhibited no detectable concentrations of TCE or PCE for the previous three years, and data are available from facility monitoring wells in the vicinity of this RI well. CS-C03-325 has exhibited no detectable concentrations of TCE or PCE for the previous two years, with trace concentrations for both compounds during 1994. However, numerous data are available from facility monitoring wells in the vicinity of this RI well to provide information in this portion of the identified contaminant plume.

Two additional monitoring wells (NH-C01-450 and NH-VPB-11) have also exhibited decreasing trends in PCE contamination with no detectable levels of TCE. These wells have been below the MCL for the previous two years; however, available facility monitoring well data is not available in these identified contaminant plume areas.

Remain the Same. As discussed above, the majority of the quarterly monitoring wells will remain with the same sampling frequency. One additional annual monitoring well indicated significant changes; however, it did not warrant altering the sampling schedule. CS-VPB-09 has exhibited no detectable concentrations of TCE for the previous three years, but PCE concentrations have fluctuated from 2.0 µg/L to ND to 3.0 µg/L during the same period. This well will continue to be observed to determine if a change is warranted.

Based on these recommendations, the 1997 sampling frequency for the RI monitoring wells is presented in Table 5-2. Changes represent six monitoring wells moved from the quarterly sampling program to less frequent sampling (annual

and triannual frequency) and two monitoring wells moved from the annual sampling program to less frequent sampling (triannual frequency).

TABLE 5-2
Recommendations for Number of RI Wells 1997 Sampling Frequency

Sample Year	Quarterly Sampling	Annual Sampling	Triannual Sampling
1996	52	65	84 (a)
1997	46	68	84 (a)

(a) Next Triannual sampling event scheduled for fall 1998.