

**STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

**MONITORING AND REPORTING PROGRAM NO. CI-4992  
FOR  
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY  
(CALABASAS LANDFILL)**

**(File No. 60-118)**

**General**

1. Monitoring responsibilities of the Sanitation Districts of Los Angeles County (Discharger) for the Calabasas Landfill (Landfill) are specified in California Water Code (CWC) section 13225(a), section 13267(b) and section 13387(b), and State Water Resources Control Board (SWRCB) Resolution No. 93-62. This self-monitoring program is issued pursuant to California Regional Water Quality Control Board, Los Angeles Region (Regional Board) Order No. R4-2009-0088. The principal purposes of a self-monitoring program by a waste discharger are:
  - a. To document compliance with discharge requirements and prohibitions established by the Regional Board;
  - b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge; and
  - c. To prepare water quality analyses.
2. The Discharger shall implement this monitoring and reporting program (M&RP), as described in section F (Requirements for Groundwater Monitoring) of Regional Board Order No. R4-2009-0088. The Discharger shall implement this M&RP during the first monitoring period immediately following adoption of this Order.
3. The Discharger shall submit any reports required by this Order electronically, in accordance with section 3890 et. seq. of the 23 CCR, division 3. In addition, complete paper copies of any Joint Technical Document (or addenda thereto), Closure/Post-Closure Plan, Final Design Report or Construction Quality Assurance Report, shall be submitted to this Regional Board office by the required electronic submittal date.
4. The Discharger shall comply with the requirements of 27 CCR section 20415 for any water quality monitoring program developed to satisfy 27 CCR section 20420, section 20425, or section 20430, as interpreted in this Order.
  - a. Groundwater monitoring shall meet the requirements of 27 CCR section 20415(b) and 40 CFR section 258.51 (a, c, and d), as interpreted in this Order;

- b. Surface water monitoring shall meet the requirements of 27 CCR section 20415(c) and NPDES requirements, as interpreted in this M&RP and the landfill's NPDES permit. In addition, whenever possible, the Discharger shall measure volumetric flow or, at a minimum, visually estimate the flow rate for all surface water monitoring points with flowing water (i.e. any flowing seeps or springs that develop during the development or operation of the Landfill);
- c. An unsaturated zone monitoring program is required by 27 CCR section 21769. However, as described in Finding No. 27 of Order No. R4-2009-0088, unsaturated zone monitoring attempted at the Landfill has proved ineffective. Through adoption of this Order the Regional Board approves that an unsaturated zone monitoring program is not required for continued operation of the Landfill.

### **Monitoring Program**

5. For the purposes of this monitoring program the terms “monitoring well”, “extraction well”, “observation well”, “piezometer”, and “sump” are synonymous.
6. Annual Appendix II Leachate Scan - Pursuant to 40 CFR section 258.55(b), the Discharger shall sample leachate in October from the LCRSs from the 80-Acre Liner, D-Cut Liner, and combined P-Cut/97-Cut/99-Cut/Southeastern Cut/North Ridge Cut Liners and shall analyze the samples for all constituents of 40 CFR Appendix II (Appendix II) that have not, to date, been detected in the Landfill's leachate, at-or-above the constituent's respective PQL concentration, and verified by re-sampling as well as any other constituent directed by the Regional Board's Executive Officer (Executive Officer). If the October leachate testing identifies any previously undetected Appendix II constituent(s), the Discharger shall obtain a single leachate retest sample the following April and analyze it for all such new constituents. Any constituents verified in the April retest shall become part of the COC list for corresponding downgradient monitoring wells. The Discharger shall include a prominent notification of these new COCs in the next scheduled monitoring report. The current COC list compiled from annual leachate monitoring from the 80-Acre Liner, D-Cut Liner, and combined P-Cut/97-Cut/99-Cut/Southeastern Cut/North Ridge Cut Liners LCRSs are indicated in Table 1 of this M&RP. During any year when one or more constituent is added to the Landfill's COC list, the Discharger shall proclaim the new COCs prominently in the annual monitoring report and shall include the revised COC list in an appendix to that report, which revised list shall take the place of COC list included herein. For any newly-added COC, the Discharger shall begin immediately collecting samples quarterly from each compliance and background well for 10 data points per well, for each new COC and shall include, in the next monitoring report following collection of this data, a proposed concentration limit for that new COC at each compliance well respectively (i.e., list the 10 data points

from the chosen background source, and name that source whether it is a given background well (interwell background) or is the compliance well in question (intrawell background)) together with a viable substantiation for using that background data source for that well/COC pair. If the new COC is a VOC, then it shall become a monitoring parameter (MPar) as of the next reporting period following the establishment of its concentration limit. If the new COC is not a VOC, then it shall go onto the Landfill's uninvolved COC (UCOC) list (i.e., those COCs that are not MPar) immediately following the establishment of its concentration limit.

7. The existing compliance groundwater monitoring system at the Landfill (see Figure 1, attached) includes three monitoring wells (R02A, R02B, M22D) for the Barrier 1 area, four monitoring wells (R06A, R06B, EMP10, EMP11) for the Barrier 2 area, one monitoring well (M18D) for the Barrier 3 area, one monitoring well (M19R) for the Barrier 4 area, eight monitoring wells (R07A, R07B, R08B, M20S, P64S, P67S, P68S, P69S) for the Barrier 5 area, and two monitoring wells (M15B, M16A) for the Barrier 6 area. Because the Discharger has established ranges of background groundwater quality at the Landfill and documented the heterogeneous nature of the groundwater quality at the Landfill, the Executive Officer finds that no concurrent background groundwater monitoring point are likely representative of any single downgradient monitoring well. Therefore, inter-well background water quality monitoring for this M&RP are not required unless directed by the Executive Officer. Monitoring elements include the validating of intra-well background data sets (Item No. 13(b), below); detection of man-made constituents in background wells (Item No. 17); and ongoing background well testing (Item No. 18).
8. Existing piezometers, monitoring wells and extraction wells at the Landfill are shown on Figures 2-4 (attached).

### Sampling and Analytical Methods

9. Groundwater monitoring shall be conducted on a semiannual basis as shown in the following schedule:

<u>Period</u>	<u>Sampling Period</u>
February - July	February
August - January	August

10. MPar List - At any given time, the MPar list for the Landfill shall include all constituents listed for the compliance monitoring wells in Table 2 of this M&RP. The attached list is the MPar list as of the effective date of Order No. R4-2009-0088. Any time a new constituent is added to the MPar list, as discussed below, the Discharger shall provide the Regional Board with an updated list of this table, shall identify this move (from the

UCOC list to the MPar list, for that portion of the Landfill) prominently in the next scheduled monitoring report, and shall exhibit a revised COC list (showing the revised MPar and UCOG lists for that portion of the Landfill) as an appendix in the next annual summary monitoring report, at which time the revised COC list shall replace the prior COC list (e.g., Table 3 of this M&RP). The MPar list and, therefore, the COC List (meaning the MPar list and UCOG list), varies for unlined versus lined portions of the Landfill. For the unlined areas (Subsurface Barriers 1, 2 and 5) of the Landfill the MPar consist of general organic and inorganic indicators of concern, all Appendix I VOCs, any anthropogenic Appendix II constituents detected in groundwater, and any COCs detected and verified in groundwater samples obtained as part of the five-year scans under Item No. 12(b) of this M&RP. For lined areas (Barriers 3, 4, and 6) the MPar consist of general organic and inorganic indicators of concern, and any anthropogenic Appendix II constituents previously detected in groundwater, every Appendix I VOC found in a leachate sample and verified by retest, and any COCs detected and verified in the five-year scans under Item No. 12(b) of this M&RP.

11. UCOG List – Likewise, as of the effective date of Order No. R4-2009-0088, the UCOGs and, therefore, the COCs (meaning the MPar list and UCOG list), vary for unlined versus lined portions of the Landfill. For the unlined areas described above, the UCOG list includes all Appendix II constituents that have never been identified as being in groundwater pursuant to the five-year scans under Item No. 12(a or b), plus any constituents added by the Executive Officer. For lined areas described above, the UCOG list includes only those Appendix II constituents that have been detected and verified (by retest) to be present in leachate at-or-above their respective PQL concentration under Item No. 6 of this M&RP, and that have not become an MPar, plus any constituents added by the Executive Officer.
12. This Order recognizes that there has been a release from the Barriers 1, 2, and 5 areas of the Landfill. Therefore, the Discharger shall continue to comply with a federal AMP and state CAP requirements for the known releases by incorporating the following monitoring and analysis requirements. As stated in Finding 46 of Order No. R4-2009-0088, the Order places the entire Landfill into a CAP while implementing corrective measures for the known releases meeting applicable state and federal requirements. This approach eliminates needless complexity associated with applying concurrent programs (i.e., running unaffected portions of the Landfill under a DMP and the portions affected by the release under either an EMP or a CAP, or both).
  - a. UCOG scans for the releases have previously been completed.
  - b. Five-Yearly UCOG Scan - Every five years, the Discharger shall analyze a sample from each compliance groundwater monitoring point within a known release [“affected well”] for the detectable presence (including trace

determinations) of all UCOCs applicable to that well. This constitutes the means by which the Discharger continues to meet the requirements of 40 CFR section 258.55(b-d). In addition, this approach is imposed, pursuant to Section 20080(a)(1) of Title 27, as a replacement for the less-stringent-and-effective five-yearly statistical testing of UCOCs normally applied under Title 27."

- i. During each such UCOC scanning event, the Discharger shall obtain and analyze a minimum of one sample from each affected well (sufficient to obtain a datum for each COC that is subject to the scan). Upon detecting a UCOC (COC that is not yet on the MPar List applicable to that well), the Discharger shall, within 30 days, take a single resample from the indicating affected well(s) and reanalyze it only for the newly-detected constituent(s).
- ii. Any UCOC detected in samples collected from a groundwater monitoring well, and verified by a retest, moves automatically from the UCOC List applicable to that well to its MPar List. The Discharger shall notify Regional Board staff of any such change immediately via phone followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall note prominently the constituent(s) added to the MPar list in the next scheduled monitoring report, along with a listing of which well(s) were involved in this detection and verification. This constitutes the means by which the Discharger shall meet the requirements of 40 CFR section 258.55(d)(2) and shall include an updated COC List (showing the revised MPar and UCOC Lists applicable to that group of wells) as an appendix to the annual monitoring report, which revised COC List shall supercede the previously applicable COC List for the wells to which it applies (named at the top of the list).

13. Statistical Data Analysis Methodology

- a. For the purposes of this M&RP, Minimum Level (ML) and Reporting Limit (RL), as described in Attachment 1, are functionally equivalent to method detection limit (MDL) and practical quantitation limit (PQL) with regard to reporting and statistical evaluation requirements. For this purpose, MLs and RLs shall be derived by the laboratory for each analytical procedure, according to the SWRCB's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Policy or SIP) and the State of California's laboratory accreditation procedures. Sample results greater than or equal to the ML/RL shall be reported "as measured" by the laboratory. Sample results less than the ML/RL shall be

reported as less than the numeric values of the ML/RL. Nominal ML and RL values shall be reported with all data. Correspondingly, any reference to “detections at or above the trace level” shall be substituted with “detections at or above the Minimum Level”

- b. Intra-Well Comparisons are Standard - The Mpars for each compliance well that are subject to routine data analysis are indicated in the attached Table 2. Except as otherwise provided in Item Nos. 13(b)(i)(B & C) and 13(g)(ii) of this M&RP, intra-well comparison methods shall be used at all compliance wells for all MPar that are subject to data analysis under this Order and shall be used to test individual “background” (e.g., upgradient) wells regarding unexpected increases in man-made constituents (e.g., VOCs), as follows:
  - i. Pre-Detection Background Data Set - Initially, except as otherwise provided in Item Nos. 13(b)(i)(B & C) or 17, for each given MPar at a given downgradient monitoring well (well/MPar pair), the proposed background data set shall consist of all validated data from that compliance well and parameter, from the previous five-year period. Every two years, following the adoption of this Order, as part of the annual monitoring summary report (see 27 CCR section 20415(e)(14) and Item No. 42 of this M&RP), the Discharger shall add the newer data to the background data set for each well/MPar pair after validating (via a method approved by the Executive Officer) that the new data does not contain data indicating an increase over the existing background data. At that time, the Discharger shall also retire the oldest two years of background data for the well/MPar, thereby producing a data set covering the then-previous five years. The Discharger shall validate the proposed intra-well background data set as follows for each MPar at each well (initially) or, subsequently, at a new well or for a new MPar at an existing well. The Discharger shall report the validated or updated background data set, for each affected well/MPar pair, in the next scheduled monitoring report. Initial background data validation shall be as follows:
    - A. Accelerated Background Data Procurement - if there are less than ten post-1997 data points available, for a given MPar at any background or compliance well, the Discharger shall implement the accelerated data procurement effort described in Item No. 15 of this M&RP to achieve a minimum background sample size. A minimum background sample size of 10 data points per well shall be acquired prior to initiating the intra-well background data set validation procedure described below unless the Discharger makes a technical submittal that is approved by the Executive Officer for

a smaller minimum background sample size;

- B. Validate Upgradient Data for Man-Made MPar - for any MPar that is a non-metallic Appendix II constituent (i.e., that is man-made), the initial intra-well data validation under Item No. 13(b)(i)(C) shall utilize only data from those upgradient (or sidegradient) background wells whose data from the previous five years, for that constituent, exceeds the constituent's MDL in less than 10% of the well's data. Such man-made constituents should not be detectable at background wells except in error (around 1% of the time) or because the constituent comes either from the Landfill or from another source. Therefore, for any background well rejected pursuant to this item, for a given MPar, if the Discharger has not already explained the constituent's presence at that well to the satisfaction of the Executive Officer, the Discharger shall conduct an investigation under Item No. 17 of this M&RP. If there are one or more non-rejected background wells, the Discharger shall use their data to validate each well/MPar pair's proposed intra-well background data set, under Item No. 13(b)(i)(C); and
- C. Intra-Well Background Validation for New Well/MPar Pairs - for all compliance wells initially and, subsequently, for new wells or a new MPar at an existing well, to determine whether the existing data for that MPar at that well can be used as its intra-well comparison background data set:
  1. Commonly Quantified Constituents - for any MPar that, absent the existence of the Landfill, would usually be detected in groundwater at concentrations exceeding the constituent's PQL, the Discharger shall validate the proposed intra-well background data at each compliance well by comparing it to a pooled box-and-whiskers plot, for that MPar, from all "background" (upgradient or sidegradient background) wells completed in the same groundwater body. If any such constituent's median concentration (for a downgradient well) exceeds the pooled background plot's 75<sup>th</sup> percentile (upper boundary of the box, in a box-and-whisker plot), then that compliance well's existing data cannot be used as the intra-well comparison background data set for that well/MPar pair. Such a well/MPar pair shall be tested, beginning no later

than the next scheduled reporting period, using an inter-well comparison data analysis method (against the applicable background well(s)) that the Executive Officer agrees meets the requirements of 27 CCR section 20415(e)(9). Otherwise (i.e., for a well/MPar pair whose existing data's median is less than the pooled background plot's 75<sup>th</sup> percentile), that existing data shall be used as the initial background data set for intra-well comparisons for that well/MPar pair; or

2. Rarely Quantified Constituents - for an MPar that, absent the existence of the Landfill, would seldom be detected in groundwater (e.g., non-metallic Appendix II constituents), the Discharger shall identify the highest value from the pooled data set from all background wells that have passed validation under Item No. 13(b)(i)(B) or, in a case where all applicable upgradient well data is non-detect, the MDL. The Discharger shall use this value as a basis of comparison to validate the data points in the proposed intra-well background data set. The initial intra-well background data set for that downgradient well shall consist of all data points in the proposed intra-well background data set that are less than this value.
  - ii. Post-Detection Background Data Set - For any constituent that is in "tracking mode" (see Item No. 13(f)(ii) of this M&RP), at a given well, its background data set shall be the background data set that was in effect when the well/MPar pair exhibited a measurably significant increase.
- c. Performance Standards - For each well/MPar pair, the Discharger shall use a data analysis method approved, for that well/MPar pair, by the Executive Officer, that the Discharger has demonstrated meets all applicable requirements under 27 CCR 20415(e)(9). For the purposes of this paragraph, pursuant to authority under 27 CCR 20080(a)(1), the error rate restrictions of 27 CCR subparagraph 20415(e)(9)(B) does not apply to any statistical method that (including its retesting approach) meets or exceeds the USEPA's reference power curve.
- d. Retest is Part of the Method - In the event that an approved data analysis method provides a preliminary indication that a given MPar has exhibited a measurably significant increase at a given well, the Discharger shall conduct a verification procedure either in the form of a discrete retest, in accordance with 27 CCR section 20415(e)(8)(E), or, pursuant to 27 CCR 20080(a)(1), any of the better-

performing resting options (e.g., the pass-1-of-3 approach) in which the triggering concentration is lowered to counter the adverse effect that retesting would otherwise have on the data analysis method's false-negative rate (compared with a no-retest pass-1-of-1 approach). Nevertheless, any approved nonstatistical method used for data analysis shall use a pass-1-of-2 retesting approach. The retest is part of the data analysis method; therefore, a measurably significant increase exists only if the retesting does not countermand the preliminary indication, according to the retesting formula (e.g., under a pass-1-of-3 approach, the preliminary indication stands if neither of the retests countermands it). The Discharger has the discretion to accept that the preliminary indication confirms a measurably significant increase at a given monitoring well and forgo verification retesting procedures.

- e. Limited Retest Scope - For any given groundwater monitoring point, the Discharger shall perform the verification procedure only for those MPar that have shown a preliminary indication at that well during that reporting period. At any time, the Discharger may demonstrate, in accordance with 27 CCR section 20420(k)(7), that a source other than the Landfill caused an MPar to produce a measurably significant increase at a given well or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation, or by natural variation in the ground water.
- f. Water Quality Monitoring Approach - The monitoring approach used for each well/MPar pair shall be controlled by whether that MPar has exhibited a measurably significant increase at that well. Therefore, the Discharger shall monitor each well/MPar pair in one of two modes, as follows:
  - i. Detection Mode - For an MPar that has not produced a measurably significant increase at that well, the purpose of monitoring, for that well/MPar pair, is to watch for the MPar arrival at that well at a concentration strong enough to trigger a measurably significant indication using an appropriate statistical or non-statistical data analysis method; or
  - ii. Tracking Mode - For an MPar that has produced a measurably significant increase at a given well, the purpose of the monitoring, for that well/MPar pair, is to verify the suitability and effectiveness of the existing or proposed corrective measures by tracking changes in the MPar concentration at that location via an evolving concentration-versus-time plot.
- g. Detection Mode Data Analyses - The following applies to all detection mode data analyses (i.e., this provision does not apply to the scans under Item Nos. 12(b) or

6 of this M&RP, or to well/MPar pairs that are in tracking mode):

- i. MPars Readily Detectable in Background - At any given groundwater monitoring point, the Discharger shall apply an approved statistical analysis method for each detection mode MPar that exceeds its respective MDL in 10% or more of the applicable background data set. For each well/MPar pair (separately), an approved statistical analysis is a method, other than analysis of variance (ANOVA), that is either validated and analyzed by the SANITAS<sup>®</sup> water quality data analysis software (distributed by Intelligent Decisions Technology, Inc., 22052 W 66th Street, Suite 133, Shawnee, KS 66226, Tel: (913) 829-1470) or that the Executive Officer agrees meets the performance standards of 27 CCR section 20415(e)(9). If using SANITAS<sup>®</sup>, the Discharger shall use the “CA Standards” and “CA Retest” settings (under the “Options” pull-down menu). Otherwise:
  - A. For any such well/MPar pair that, as of the effective date of this Order, does not have an approved statistical analysis method, the Discharger shall propose and substantiate an appropriate statistical method within 90 days of the adoption of this Order;
  - B. After the adoption of this Order, for any new MPar that qualifies for statistical analysis by meeting the above 10% rule at a given well, once its Concentration Limit (under Item No. 6) has been established at each compliance well, the Discharger shall propose and substantiate an appropriate statistical method for that well/MPar pair as part of the background data validation under Item No. 13(b)(i)(C).
- ii. MPars not Readily Detectable in Background - For any monitoring point at which one or more detection mode MPars exceed their respective MDL in less than 10% of the applicable background data set, the Discharger shall analyze the data for these MPars via the California Non-statistical Data Analysis Method (CNSDAM) test described in Item No. 14 of this M&RP.

14. California Non-statistical Data Analysis Method

- a. Non-Statistical Method for Detection Mode for MPars Seldom Found in Background - For any given compliance (downgradient) well, regardless of the monitoring program (Detection Monitoring Program [DMP], Evaluation Monitoring Program [EMP], Assessment Monitoring Program [AMP], or

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Corrective Action Program [CAP]), the Discharger shall use this data analysis method, jointly, for all constituents on the “scope list” of Item No. 14(a)(i) of this M&RP (or, for each retest sample, the modified scope list of Item No. 14(b)(ii)).

- i. Scope List – Within 90 days of the effective date of this Order, the Discharger shall create a current “scope list” showing each detection mode MPar, at that well, that exceeds its MDL in less than 10% of its background data.
  - ii. Two Triggers - From the scope list made under Item No. 14(a)(i), above, for an initial test (or, for a retest, the modified scope list under Item No. 14(b) below), the Discharger shall identify each MPar in the current sample from that well that exceeds either its respective MDL or PQL. The Discharger shall conclude that these exceeding MPars provide a preliminary indication (or, for a retest, provide a measurably significant indication) of a change in the nature or extent of the release, at that well, if either:
    - A. Five or more of the MPars on a monitoring well’s scope list exceed their respective MDL; or
    - B. At least one of the MPars on a monitoring well’s scope list equals or exceeds its respective PQL.
- b. Single Retest (pass-1-of-2 approach):
- i. In the event that the Discharger concludes (pursuant to Item No. 14(a)(ii) above) that there is a preliminary indication, then the Discharger shall immediately notify Regional Board staff by phone, followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall, within 30 days of such indication, collect one new (retest) sample from the indicating compliance well.
  - ii. For any given compliance well, the Discharger shall analyze the retest sample only for those constituents indicated in that well’s original test, under Item No. 14(a)(ii) of this M&RP, and these indicated constituents shall comprise the well’s “modified scope list.” As soon as the retest data are available, the Discharger shall apply the same test (under Item No. 14(a)(ii) above, but using this modified scope list) to separately analyze the two suites of retest data at that compliance well.





- ii. Shall include this background well as part of the release, for that MPar and, thereafter, shall address this well/MPar pair in tracking mode (i.e., as part of the release), in spite of the well's being a background well, beginning with the next scheduled monitoring report; and
  - iii. If there is not at least one other background well unaffected by this constituent, shall, within 90 days, install a new upgradient or sidegradient background well in a portion of the aquifer that will provide data representative of background conditions for the Landfill's compliance wells, and shall carry out an accelerated sampling schedule, for that constituent, under Item No. 15, to provide representative background data for validating the use of intra-well comparison testing under Item No. 13 above.
- 18. Ongoing Background Well Testing - Even though most data analysis will be via intra-well comparisons, the Discharger shall continue to monitor background wells, for each MPar and COC, each time that MPar or COC is monitored at downgradient wells. Each year in which there is new background well data for a constituent (i.e., semiannually for MPars and every five years for non-MPar COCs), the Discharger shall include the new data in the annual monitoring summary report (see 27 CCR section 20415(e)(14) and Item No. 42 of this M&RP) as a time-versus-concentration plot for that background well and constituent. Any time such a plot (for a given well and constituent) shows two successive data points in excess of the MDL for any non-metallic Appendix II constituent that has not already been investigated at that well, under Item No. 17, the Discharger shall notify the Regional Board immediately by phone followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall initiate an investigation under Item No. 17 within 30 days of noting this condition.
- 19. Monitoring Data Information - For each MPar addressed during a given reporting period, the Discharger shall include in the monitoring report a listing of the prevailing MDL and PQL for that MPar, together with an indication as to whether the MDL, PQL, or both have changed since the prior reporting period. The Discharger shall require the analytical laboratory to report all applicable censored data (trace level and non-detect determinations). In the event that an MDL and/or PQL for an Mpar changes, the Discharger shall highlight that change in the report's summary and the report shall include an explanation for the change that is approved by the owner/director of the analytical laboratory.
- 20. WQPS - Under this Order, pursuant to 27 CCR section 20415(e)(7), the Landfill is in violation of its WQPS any time a given detection mode well/MPar pair exhibits a measurably significant increase over the applicable background data set (and changes to

tracking mode), as determined by an appropriate statistical or non-statistical data analysis method. All well/MPar pairs in tracking mode remain in violation of the WQPS until completion of a successful proof period that ends the CAP (see 27 CCR section 20430(g) and 40 CFR section 258.58(e)). Pursuant to 27 CCR section 20390, the WQPS for groundwater at the Landfill consists of the following components:

- a. COCs (see 27 CCR section 20395) - At any given time, the COCs are those listed in Table 3 of this M&RP, including any updates made pursuant to Item No. 11 of this M&RP. Nevertheless, under this Order, statistical and non-statistical data analysis is limited to those COCs that are on the current MPar list by virtue of their being present in detectable levels either in groundwater or in that portion of the groundwater that is affected by the release;
  - b. Concentration Limits - At any given time, the concentration limit of a given well/MPar pair is its applicable background data set, as determined or updated pursuant to Item Nos. 13(b) or 17 of this M&RP (see 27 CCR section 20400(b)(2)). Nevertheless, during a CAP, the concentration limits may also include, for a given MPar, a numerical concentration limit greater than background adopted by the Regional Board pursuant to 27 CCR section 20400(b)(3)-(d) for application only to those monitoring points that are within the plume;
  - c. POC and Monitoring Wells - The POC consists of an imaginary vertical surface that is located, in map view, along the hydraulically downgradient limit of waste placement at the Landfill and that extends downward through the uppermost aquifer underlying the Landfill (i.e. the line indicated as "Limits of Refuse Placement and Groundwater Monitoring Point of Compliance Boundary" in Figure 8 of Order No. R4-2009-0088). At the Landfill there are no monitoring wells located exactly on the POC at this time, so that, for the purposes of this M&RP, POC monitoring points shall consist of the current compliance monitoring wells listed in Item No. 7.
  - d. Compliance Period - The compliance period for the Landfill is sixty nine years (see 27 CCR section 20410). Each time the standard is not met (i.e. releases discovered), the Landfill shall begin a compliance period on the date the Regional Board directs the Discharger to begin an EMP. If the CAP has not achieved compliance with the standard by the scheduled end of the compliance period, the compliance period is automatically extended until the Landfill has been in continuous compliance for at least three consecutive years.
21. Unless otherwise approved by the Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the DHS. All analyses shall be conducted in

accordance with the latest edition of "*Test Methods for Evaluating Physical/Chemical Methods*" (SW-846) promulgated by the USEPA (or equivalent standard methods as approved by the Executive Officer) and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or standard methods are used, the exact methodology must be submitted for review and must be approved by the Executive Officer prior to use. For any analyses performed for which no procedures are specified in the EPA guidelines or in this M&RP, the constituent or parameter analyzed, and the method or procedure used, must be specified in the corresponding monitoring report. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall approve all reports of such work submitted to the Regional Board. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements. In addition, the Discharger is responsible for seeing that the laboratory analysis of all samples meet the following restrictions:

- a. The methods and analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e. "trace" or "ND") in data from background monitoring points for that medium, the analytical methods having the lowest facility-specific MDL shall be selected from among those methods which would provide valid results in light of any matrix effects involved.
- b. Trace results falling between the MDL and the facility-specific practical quantitation limit (PQL), shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run and by an estimate of the constituent's concentration.
- c. MDLs and PQLs shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. If the lab suspects that, due to matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly, along with an estimate of the detection limit and quantitation limit actually achieved.
- d. All quality assurance / quality control (QA/QC) data shall be reported, along with the sample results to which it applies, including the method, equipment, and

analytical detection limits, the recovery rates, an explanation (corrective action) of any QA/QC measure that is outside the laboratory control limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery.

- e. Upon receiving written approval from the Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) during any given reporting period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any sample shall be reported and flagged for easy reference by Regional Board staff.
  - f. Within 90 days of the adoption of Order No. R4-2009-0088, the discharger shall submit a technical report for approval by the Executive Officer for an analytical methodology to report unknown chromatographic peaks, along with an estimate of the concentration of the unknown analyte.
  - g. In cases where contaminants are detected in QA/QC samples (i.e. field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged.
- 22. Proper chain of custody procedures shall be used.
  - 23. All compliance groundwater monitoring system wells shall be equipped with dedicated sampling pumps.
  - 24. All metals analyses shall be for total metals using unfiltered samples. Metals samples must be preserved in accordance with the specified laboratory methods, however care shall be taken that the dissolved metals samples are not exposed to acids until after filtering. The Discharger may elect to also obtain filtered metals representative of the dissolved phase. If so the Discharger must report the results of both the filtered and unfiltered.
  - 25. No filtering of samples taken for organics analyses shall be permitted. Samples for organic analyses shall be taken with a sampling method that minimizes volatilization and degradation of potential constituents.
  - 26. The Discharger may submit additional data to the Regional Board not required by this program in order to simplify reporting to other regulatory agencies.

27. If the Discharger performs analyses for any parameter more frequently than required by this M&RP using approved analytical methods, the results of those analyses shall be included in the monitoring program.
28. Fifteen-Day Sample Procurement Limitation:  
For any given monitored medium, the samples taken from all monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken within a span of fifteen days, and shall be taken in a manner that insures sample independence to the greatest extent feasible [27 CCR section 20415(e)(12)(B)]. For any sampling event during which samples are not collected within fifteen day, the Discharge shall report the sampling period in the corresponding semiannual report. Groundwater sampling shall also include an accurate determination of the groundwater surface elevation and field parameters (temperature, pH, electrical conductivity, turbidity) for that monitoring point [27 CCR section 20415(e)(13)]; groundwater elevations taken prior to purging the well and sampling for monitoring parameters shall be used to fulfill groundwater flow rate/direction analyses required under Item No. 40(b)(i) of this M&RP. Statistical or non-statistical analysis shall be carried out as soon as the data is available, in accordance with statistical and non-statistical analyses requirements described in this M&RP.
29. The groundwater monitoring program must be carried out during the active life of the Landfill, during the closure and postclosure maintenance period, and during any interim periods when no wastes are deposited at the Landfill.
30. Pursuant to section 20080(a)(1) of 27 CCR, the Discharger shall describe the effectiveness of the CAP in the annual groundwater monitoring reports due every May 15. Annual report will be effective because annual concentration-versus-time plots will better indicate changes with two new data points for each analysis, rather than just one, for a semi-annual reporting frequency.
31. Semiannual observations and measurements of the static groundwater levels shall be made on all compliance monitoring wells, and records of such observations shall be submitted with the semiannual monitoring reports. Compliance wells affected by pumping shall be measured prior to pumping insofar as is possible. All compliance monitoring wells shall be sounded annually to determine total depth.
32. Pumping data regarding fluid pumped from each monitoring well (other than for analytical samples) shall be reported to the Regional Board each month in the monthly waste disposal report and shall include:
  - a. Date and quantity of fluid pumped, and the method of disposal or reuse purpose, if reused.

- b. If no fluid was pumped during the month from any monitoring well, a statement to that effect shall be submitted.

**Waste Disposal Reporting Requirements**

- 33. The results of the waste-load-checking program shall be submitted in semiannual monitoring reports. The Discharger shall report all hazardous or unacceptable (to this site) wastes inadvertently received at this site and their disposition. The following details shall be included:
  - a. The source (if known), including the hauler, of the unacceptable wastes and dated received and/or discovered.
  - b. Identification of waste (if known) and the amount of waste.
  - c. The name and address of the hauler who removed the waste from this site.
  - d. The ultimate point of disposal for the waste.
  - e. Actions by the Discharger to prevent recurrence of the attempted depositing of unacceptable wastes by this source or individual (if applicable).
  - f. If no unacceptable wastes were received (or discovered) during the month, the report shall so state.
- 34. The results of dewatered sewage sludge testing shall be submitted in the semiannual monitoring reports. In addition to reporting the quantity of dewatered sewage sludge deposited each month, quarterly samples of incoming sludge shall be obtained and analyzed as follows:
  - a. A time-composite sludge sample shall be collected during a 24-hour period. The composite sample shall consist of 12 sub-samples taken at two-hour intervals. The sub-samples shall be mixed as completely as possible into a single sample. The total percent solids of the sample shall be reported.
  - b. An extraction solution of the sludge shall be prepared for analyses using the WET method as contained in 22 CCR, division 4.5, chapter 11, appendix II. All testing shall be done on 48-hour extracts. The extracts shall be analyzed for the soluble threshold limit concentration (STLC) for the following metals: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. The digested

sludge shall also be analyzed quarterly for following parameters: polychlorinated biphenyls (PCBs), trichloroethylene (TCE), perchloroethylene (PCE), carbon tetrachloride, DDT DDE, DDD, Endrin, Lindane, Methoxychlor, Toxaphene, 2,4-D and 2,4,5-TP (Silvex).

- c. These results shall be reported in the corresponding semiannual report.
  - d. If the Discharger performs sludge analyses more frequently than required by this program, the results of those analyses shall be included in the corresponding semiannual report.
35. Wastewater reuse reporting shall accompany semiannual monitoring reports and include the following:
- a. A statement that, during the reporting period, all wastewater was used only as specified, and for the uses specified in Order No. R4-2009-0088.
  - b. Approximate acreage and locations receiving reused water for irrigation.
  - c. Analytical results for wastewater shall be submitted with the corresponding semiannual monitoring report. If a wastewater source was not sampled or measured during the reporting period, the reason for the omission shall be given. If no wastewater was reused from a source, a statement to that effect shall be provided in lieu of analyses.
  - d. Records of operational problems, mechanical breakdowns, and diversions to emergency storage or disposal associated with any violations, or potential violations of Order No. R4-2009-0088.
  - e. Any corrective actions taken.
  - f. If all or a portion of the wastewater was not reused because of a failure to meet the limits specified in Order No. R4-2009-0088, the report shall so state and identify the disposition of the effluent.
36. Waste disposal reporting of the following information shall be filed with this Regional Board each month, or alternatively shall be compiled on a monthly basis and shall be submitted with the semiannual monitoring reports:
- a. A tabular list of the estimated average monthly quantities (in cubic yards and tons) and types of materials deposited each month.

- b. An estimate of the remaining capacity (in cubic yards and tons), and the remaining life of the site in years and months.
  - c. A certification that all wastes were deposited in compliance with the Regional Board's requirements, and that no wastes were deposited outside of the boundaries of the landfill as specified in Order No. R4-2009-0088.
37. Waste disposal information for the following items shall be compiled on a monthly basis and shall accompany semiannual monitoring reports:
- a. A description of the location and estimate of the seepage rate or flow of all known seeps and springs at the site.
  - b. The estimated amount of water used at the landfill for landscape irrigation, compaction, dust control, etc., during the month. (If a source other than potable water is used, the source and amount of water from each source shall also be reported).
  - c. Quantities of liquid pumped from the leachate monitoring sumps and/or extraction wells, including dates or removal, and the ultimate point of disposal, if other than an onsite leachate treatment plant. If no liquid was detected or pumped during the reporting period, a statement to that effect shall be submitted.
  - d. A map of the site that indicates the area(s) where disposal is taking place or will begin. The map shall be submitted with the annual report. If a new area is landfilled, it shall be identified in the corresponding semiannual report.

**Records to be Maintained**

38. Written reports shall be maintained by the Discharger or its laboratory and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board. Such records shall show the following for each sample:
- a. Identity of sample and of the monitoring point from which it was taken, along with the identity of the individual who obtained the sample;
  - b. Date and time of sampling;
  - c. Date and time that analyses were started and completed, and the name of the personnel performing each analysis;

- d. Complete procedures used, including method of preserving the sample, and the identity and volumes of reagents used;
- e. Calculations of results; and
- f. Results of analyses, and the MDL and PQL for each analysis.

**Reports to be Filed with the Board**

39. Electronic semiannual and annual monitoring reports shall be submitted pursuant the following schedule. Every five years, the Discharger shall also submit a report concerning the direct analysis of all COCs (COC report), alternating between the monitoring periods. The COC report may be included in a corresponding semiannual report.

<u>Period</u>	<u>Sampling Period</u>	<u>Reporting Date</u>
February – July	February	July 31st
August - January	August	January 31st
January – December		May 15 (Annual Report)

The Discharger can combine the annual report with the May 15 semiannual report but all required information must be included in the combined report. In the event monitoring is not performed as above because of unforeseen circumstances, substitute monitoring shall be performed as soon as possible after these times, and the reason for the delay shall be given.

40. The semiannual monitoring reports shall be comprised of at least the following:

- a. Letter of Transmittal:  
A letter detailing the essential points of the monitoring program shall accompany each report. Such a letter shall include a discussion of any requirement violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has previously submitted a detailed time schedule for correcting said requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice-president or above, or by his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and

correct;

- b. Each report shall include a compliance evaluation summary. The summary shall contain at least:
  - i. For each monitored groundwater body, a description and graphical presentation of the velocity and direction of the groundwater flow under/around the Landfill, based upon water level elevations taken during the collection of the water quality data submitted in the report. In the case where this cannot be determined with meaningful results, a statement to the nature of the groundwater flow and general flow characteristics will suffice.
  - ii. Pre-Sampling Purge for Samples Obtained from Wells:  
For each monitoring point addressed by the report, a description of the method and time of water level measurement, of the type of pump used for purging and the placement of the pump in the well, and of the method of purging (the pumping rate, the equipment and methods used to monitor field pH, temperature, electrical conductivity and turbidity during purging, the calibration of the field equipment, results of the pH, temperature, electrical conductivity, and turbidity testing, and the method of disposing of the purge water).
  - iii. Sampling:  
For each monitoring point addressed by the report, a description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the date and time of sampling, the name of the person taking the samples, and any other observations).
  - iv. A separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the Discharger into full compliance with waste discharge requirements. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements.
  - v. A separate appendix containing any revised COC List (showing its then-current MPar and UCOC Lists reflecting any constituent added or constituent moved from the UCOC List to the MPar list), together with, for each such listing, the wells to which that list applies. In any such listing, the new or moved COC(s) shall be in bolded print (or otherwise emphasized).

- vi. A separate appendix containing, for each well/COC pair, the its then-current Concentration Limit (background data points) listed (left-to-right) from the earliest datum to the most recent one.
  - vii. A separate appendix containing, for the first submittal thereof, a complete succinct description of the data analysis method, including all parameter settings, for each well/MPar pair. If the method is the NSDAM, simply state "NSDAM" following the well/MPar pair's name, without further description. For subsequent annual monitoring reports, this appendix need address only those well/MPar pairs for which the data analysis method has changed since the initial (comprehensive) listing, together with the date when that (most recent) change became effective.
  - viii. A separate appendix listing, organized by well, listing all MPar's that are in Tracking Mode (out of compliance) at each well and showing (in parentheses following the constituent name) the date when that well/MPar pair changed from Detection Mode to Tracking Mode.
- c. Unless otherwise approved by the Executive Officer, monitoring reports shall be submitted in PDF or JPEG format (tabular laboratory analytical data may be submitted in MS Excel or Access format). The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with Order No. R4-2009-0088. The cover letter, the main report text, and any tables and/or figures that are directly quoted in the main report, shall be submitted. The submittal shall be signed by a responsible officer(s) of the Discharger. All original laboratory reports, quality assurance and quality control (QA/QC) data, and filed records that are used to prepare the reports must be kept in the Landfill's operating record, as required in 27 CCR section 20415(e)(16). These data must be available for Regional Board staff review, if required.
  - d. A map or aerial photograph showing the locations of observation stations and monitoring points;
  - e. Laboratory results for groundwater, surface water, LCRS, reuse water, and dewatered sludge shall be summarized in the report. For each report, include laboratory statements of results of all analyses demonstrating compliance with Item No. 21 of this M&RP;
  - f. An evaluation of the effectiveness of the run-off/run-on control facilities;
  - g. A summary and certification of completion of all standard observations listed

below for the Landfill and the perimeter of the Landfill.

- i. Along the perimeter of the Landfill:
  - A. Evidence of liquid leaving or entering the Landfill, estimated size of affected area, and flow rate;
  - B. Evidence of odors: presence or absence, characterization, source, and distance of travel from source; and
  - C. Evidence of erosion and/or of exposed refuse.
- ii. For the Landfill:
  - A. Evidence of ponded water at any point on the waste management facility;
  - B. Evidence of odors: presence or absence, characterization, source, and distance of travel from source;
  - C. Evidence of erosion and/or of exposed refuse; and

41. Contingency Reporting

- a. The Discharger shall report by telephone to Regional Board staff any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Regional Board within seven days of the verbal report, containing at least the following information:
  - i. A map showing the location(s) of seepage;
  - ii. An estimate of the flow rate;
  - iii. A description of the nature of the discharge (e.g., all pertinent observations and analyses); and
  - iv. Corrective measures underway or proposed.

42. The Discharger shall submit an annual summary report to the Regional Board covering the previous monitoring year. The annual report shall be submitted no later than May 15 of each year. This report shall contain:

- a. A graphical presentation of analytical data [27 CCR section 20415(e)(14)]:  
For each monitoring point, submit in graphical format the laboratory analytical data for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents over time for a given monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. On the basis of any aberrations noted in the plotted data, the Executive Officer may direct the Discharger to carry out a preliminary investigation [27 CCR section 20080(d)(2)], the results of which will determine whether or not a release is indicated;
- b. A comprehensive discussion of the compliance record, and the result of any corrective actions taken, or planned, which may be needed to bring the Discharger into full compliance with the WDRs;
- c. A written summary of the groundwater analyses, indicating any changes made since the previous annual report;
- d. A discussion of any routinely-revised intra-well background monitoring data; and
- e. An evaluation of the effectiveness of the run on/run-off control facilities, pursuant to 27 CCR section 20340 (b-d).

43. Reporting

- a. Each monitoring report shall contain the following statement:  

"I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations."
- b. A duly authorized representative of the Discharger may sign the documents if:
  - i. The authorization is made in writing by the person described above;
  - ii. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and

**County Sanitation District of Los Angeles County  
Calabasas Landfill  
Monitoring and Reporting Program No. CI-4992**

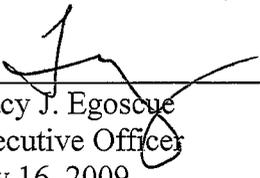
**Order No. R4-2009-0088**

iii. The written authorization is submitted to the Executive Officer.

c. Submit monitoring reports to:

California Regional Water Quality Control Board  
Los Angeles Region  
320 W. 4<sup>th</sup> Street, Suite 200  
Los Angeles, California 90013  
ATTN: Information Technology Unit

Ordered by \_\_\_\_\_

  
Tracy J. Egoscue  
Executive Officer  
July 16, 2009

**TABLE 1 – CONSTITUENTS DETECTED AND CONFIRMED DURING ANNUAL LEACHATE MONITORING (April 22, 2009)**

Constituent	COC Lists <sup>1</sup>		
	LCRS <sup>2</sup>	DLCS <sup>2</sup>	PSLC <sup>2</sup>
<b><i>General Parameters</i></b>			
Ammonia Nitrogen	✓	✓	✓
Boron	✓	✓	✓
Electrical Conductivity	✓	✓	✓
pH	✓	✓	✓
Total Alkalinity	✓	✓	✓
Total Dissolved Solids	✓	✓	✓
Total Hardness	✓	✓	✓
<b><i>Anions</i></b>			
Bicarbonate Alkalinity	✓	✓	✓
Chloride	✓	✓	✓
Fluoride	✓	✓	✓
Nitrate Nitrogen	✓	✓	---
Sulfate	✓	✓	✓
<b><i>Cations</i></b>			
Calcium Hardness	✓	✓	✓
Iron	✓ T&S <sup>3</sup>	✓ T&S	✓ T&S
Magnesium Hardness	✓	✓	✓
Manganese	✓ T&S	✓ T&S	✓ T&S
Potassium	✓	✓	✓
Sodium	✓	✓	✓
<b><i>Organics</i></b>			
Soluble Biochemical Oxygen Demand	✓ T&S	✓ T&S	✓ T&S
Soluble Chemical Oxygen Demand	✓ T&S	✓ T&S	✓ T&S
Total Organic Carbon	✓	✓	✓
Total Organic Halogen (Tox)	✓	✓	✓

1. ✓ = On confirmed COC List; "---" = Not on COC List.
2. LCRS = 80-acre liquid collection and removal system;  
 PSLC = liquids in P-, 97-, 99-, Southeastern-, and North Ridge (Phase 1 and 2a) Cut Liner and LCRS collection systems;  
 DLCS = liquids in the D-Cut collection systems
3. T = Total portion of constituent (Unfiltered);  
 S = Soluble portion of constituent (Filtered).

**TABLE 1 (Cont.) – CONSTITUENTS DETECTED AND CONFIRMED  
 DURING ANNUAL LEACHATE MONITORING (April 22, 2009)**

Constituent	COC Lists <sup>1</sup>		
	LCRS <sup>2</sup>	DLCS <sup>2</sup>	PSLC <sup>2</sup>
<i>Metals</i>			
Antimony	✓ T&S	✓ T&S	---
Arsenic	✓ T&S	✓ T&S	✓ T&S
Barium	✓ T&S	✓ T&S	✓ T&S
Cadmium	---	✓ S	✓ T
Total Chromium	✓ T&S	✓ T	✓ T&S
Cobalt	✓ T&S	---	---
Copper	✓ T&S	✓ T&S	✓ S
Mercury	---	✓ T&S	---
Nickel	✓ T&S	✓ T&S	✓ T&S
Selenium	✓ T&S	✓ T&S	✓ T&S
Thallium	✓ T&S	---	---
Vanadium	✓ T	✓ T&S	✓ T&S
Zinc	✓ T&S	✓ T&S	✓ T&S
<i>Volatile Organic Compounds</i>			
1,1-Dichloroethane	✓	✓	✓
1,2-Dichloroethane	✓	---	---
1,2-Dichloropropane	✓	---	---
Benzene	✓	---	✓
Chlorobenzene	✓	---	---
cis-1,2-Dichloroethylene	✓	---	✓
Freon 12 (CCL2F2)	---	---	✓
m+p-Xylene	✓	---	---
Methylene Chloride	---	✓	✓
o-Dichlorobenzene	✓	---	---
o-Xylene	✓	---	---
p-Dichlorobenzene	✓	---	✓
Tetrachloroethylene	✓	✓	✓
Toluene	✓	---	✓
Trichloroethylene	✓	---	---
Vinyl Chloride	✓	---	---

1. ✓ = On confirmed COC List; "---" = Not on COC List.
2. LCRS = 80-acre liquid collection and removal system;  
 PSLC = liquids in P-, 97-, 99-, Southeastern-,  
 and North Ridge (Phase 1 and 2a) Cut Liner and LCRS collection systems;  
 DLCS = liquids in the D-Cut collection systems
3. T = Total portion of constituent (Unfiltered);  
 S = Soluble portion of constituent (Filtered).

**TABLE 2 – MPars FOR MONTORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well R02A**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	ND
General	TDS	TBD	VOC	o-Dichlorobenzene	ND
General	Chloride	TBD	VOC	p-Dichlorobenzene	TM
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	TM
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	TM
General	Boron	✓	VOC	1,1-Dichloroethylene	TM
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	TM
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	TM
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	ND
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	ND
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	ND
General	TOC	TBD	VOC	Methyl Ethyl Ketone	ND
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	TM
VOC	Acetone	TM	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	TM	VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	TM
VOC	Bromodichloromethane	ND	VOC	Toluene	ND
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	TM
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	TM
VOC	Chlorobenzene	TM	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	ND	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	TM
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well R02B**

Group	Constituent	
General	pH	✓
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✓
General	TOX	TBD
General	Calcium Hardness	✓
General	Magnesium Hardness	✓
General	Sodium	✓
General	Potassium	✓
General	Total Alkalinity	✓
General	Bicarbonate Alkalinity	✓
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	ND
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	TM
VOC	1,1,1,-Trichloroethane	TM
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well M22D**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	TM
General	TDS	TBD	VOC	o-Dichlorobenzene	ND
General	Chloride	TBD	VOC	p-Dichlorobenzene	TM
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	TM
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	TM
General	Boron	✓	VOC	1,1-Dichloroethylene	ND
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	TM
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	ND
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	ND
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	ND
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	ND
General	TOC	TBD	VOC	Methyl Ethyl Ketone	ND
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	TM
VOC	Acetone	ND	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	ND	VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	ND
VOC	Bromodichloromethane	ND	VOC	Toluene	ND
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	ND
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	TM
VOC	Chlorobenzene	ND	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	ND	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	TM
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)  
 MPars for Monitoring Well R06A

Group	Constituent	
General	pH	✓
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✓
General	TOX	TBD
General	Calcium Hardness	✓
General	Magnesium Hardness	✓
General	Sodium	✓
General	Potassium	✓
General	Total Alkalinity	✓
General	Bicarbonate Alkalinity	✓
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	TM
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	TM
VOC	Chlorobenzene	ND
VOC	Chloroethane	TM
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	TM
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	TM
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	TM
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	TM
VOC	1,1,1,-Trichloroethane	TM
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well R06B**

Group	Constituent	
General	pH	✓
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✓
General	TOX	TBD
General	Calcium Hardness	✓
General	Magnesium Hardness	✓
General	Sodium	✓
General	Potassium	✓
General	Total Alkalinity	✓
General	Bicarbonate Alkalinity	✓
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	TM
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	TM
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	TM
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	TM
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	TM
VOC	1,1,1,-Trichloroethane	TM
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well EMP-10**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	ND
General	TDS	TBD	VOC	o-Dichlorobenzene	ND
General	Chloride	TBD	VOC	p-Dichlorobenzene	ND
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	ND
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	TM
General	Boron	✓	VOC	1,1-Dichloroethylene	ND
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	ND
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	ND
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	ND
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	ND
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	ND
General	TOC	TBD	VOC	Methyl Ethyl Ketone	ND
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	TM
VOC	Acetone	TM	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	ND	VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	ND
VOC	Bromodichloromethane	ND	VOC	Toluene	ND
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	ND
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	ND
VOC	Chlorobenzene	ND	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	ND	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	ND
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

- ✓ = MPar not subject to routine statistical analysis.
- ND = The concentration limit for man-made constituents is the laboratory detection limit.
- = Constituent not required to be monitored based on LCRS monitoring results.
- TM = Tracking mode; MPar concentration versus time plot required.
- TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well EMP-11**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	ND
General	TDS	TBD	VOC	o-Dichlorobenzene	ND
General	Chloride	TBD	VOC	p-Dichlorobenzene	ND
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	ND
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	TM
General	Boron	✓	VOC	1,1-Dichloroethylene	ND
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	ND
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	ND
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	ND
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	✓ a
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	ND
General	TOC	TBD	VOC	Methyl Ethyl Ketone	TM
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	TM
VOC	Acetone	ND	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	✓ a	VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	ND
VOC	Bromodichloromethane	ND	VOC	Toluene	✓ a
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	ND
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	ND
VOC	Chlorobenzene	ND	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	ND	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	ND
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	✓ a

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

a = This constituent is naturally occurring in this well.

TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)  
 MPars for Monitoring Well M18D

Group	Constituent	
General	pH	6.84
General	TDS	706.3
General	Chloride	44.1
General	Sulfate	175
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	9.87
General	Boron	✓
General	TOX	TBD
General	Calcium Hardness	✓
General	Magnesium Hardness	✓
General	Sodium	✓
General	Potassium	✓
General	Total Alkalinity	✓
General	Bicarbonate Alkalinity	✓
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	-
Metal	Mercury	-
Metal	Lead	-
VOC	Acetone	-
VOC	Acrylonitrile	-
VOC	Benzene	ND
VOC	Bromochloromethane	-
VOC	Bromodichloromethane	-
VOC	Bromoform	-
VOC	Carbon disulfide	-
VOC	Carbon tetrachloride	-
VOC	Chlorobenzene	ND
VOC	Chloroethane	-
VOC	Chloroform	-
VOC	Dibromochloromethane	-
VOC	1,2-Dibromo-3-Chloropropane	-

Group	Constituent	
VOC	1,2-Dibromoethane	-
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	-
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	-
VOC	trans-1,3-Dichloropropene	-
VOC	Ethyl benzene	ND
VOC	2-Hexanone	-
VOC	Methyl bromide	-
VOC	Methyl chloride	-
VOC	Methyl Ethyl Ketone	-
VOC	Methyl iodide	-
VOC	4-Methyl-2-pentanone	-
VOC	Methylene bromide	-
VOC	Methylene chloride	-
VOC	Styrene	-
VOC	1,1,1,2-Tetrachloroethane	-
VOC	1,1,2,2-Tetrachloroethane	-
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	-
VOC	1,1,2,-Trichloroethane	-
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	-
VOC	Vinyl acetate	-
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	-

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)  
 MPars for Monitoring Well M19R

Group	Constituent	
General	pH	5.86
General	TDS	3,286
General	Chloride	98.7
General	Sulfate	2,029
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	0.451
General	Boron	✓
General	TOX	TBD
General	Calcium Hardness	✓
General	Magnesium Hardness	✓
General	Sodium	✓
General	Potassium	✓
General	Total Alkalinity	✓
General	Bicarbonate Alkalinity	✓
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	-
Metal	Mercury	-
Metal	Lead	-
VOC	Acetone	-
VOC	Acrylonitrile	-
VOC	Benzene	ND
VOC	Bromochloromethane	-
VOC	Bromodichloromethane	-
VOC	Bromoform	-
VOC	Carbon disulfide	-
VOC	Carbon tetrachloride	-
VOC	Chlorobenzene	ND
VOC	Chloroethane	-
VOC	Chloroform	-
VOC	Dibromochloromethane	-
VOC	1,2-Dibromo-3-Chloropropane	-

Group	Constituent	
VOC	1,2-Dibromoethane	-
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	-
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	-
VOC	trans-1,3-Dichloropropene	-
VOC	Ethyl benzene	ND
VOC	2-Hexanone	-
VOC	Methyl bromide	-
VOC	Methyl chloride	-
VOC	Methyl Ethyl Ketone	-
VOC	Methyl iodide	-
VOC	4-Methyl-2-pentanone	-
VOC	Methylene bromide	-
VOC	Methylene chloride	-
VOC	Styrene	-
VOC	1,1,1,2-Tetrachloroethane	-
VOC	1,1,2,2-Tetrachloroethane	-
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	-
VOC	1,1,2,-Trichloroethane	-
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	-
VOC	Vinyl acetate	-
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	-

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well R07A**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	ND
General	TDS	TBD	VOC	o-Dichlorobenzene	TM
General	Chloride	TBD	VOC	p-Dichlorobenzene	TM
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	TM
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	TM
General	Boron	✓	VOC	1,1-Dichloroethylene	TM
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	TM
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	TM
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	TM
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	ND
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	ND
General	TOC	TBD	VOC	Methyl Ethyl Ketone	ND
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	TM
VOC	Acetone	ND	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	TM	VOC	1,1,2,2-Tetrachloroethane	TM
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	TM
VOC	Bromodichloromethane	ND	VOC	Toluene	TM
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	ND
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	TM
VOC	Chlorobenzene	TM	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	TM	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	TM
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well R07B**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	ND
General	TDS	TBD	VOC	o-Dichlorobenzene	ND
General	Chloride	TBD	VOC	p-Dichlorobenzene	ND
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	TM
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	TM
General	Boron	✓	VOC	1,1-Dichloroethylene	ND
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	TM
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	TM
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	ND
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	ND
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	ND
General	TOC	TBD	VOC	Methyl Ethyl Ketone	ND
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	TM
VOC	Acetone	TM	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	ND	VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	TM
VOC	Bromodichloromethane	ND	VOC	Toluene	ND
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	ND
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	TM
VOC	Chlorobenzene	ND	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	ND	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	TM
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well R08B**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	ND
General	TDS	TBD	VOC	o-Dichlorobenzene	ND
General	Chloride	TBD	VOC	p-Dichlorobenzene	TM
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	TM
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	TM
General	Boron	✓	VOC	1,1-Dichloroethylene	ND
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	TM
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	ND
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	ND
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	ND
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	TM
General	TOC	TBD	VOC	Methyl Ethyl Ketone	ND
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	TM
VOC	Acetone	TM	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	ND	VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	TM
VOC	Bromodichloromethane	ND	VOC	Toluene	ND
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	ND
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	TM
VOC	Chlorobenzene	ND	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	ND	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	TM
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well M20S**

Group	Constituent	
General	pH	✓
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✓
General	TOX	TBD
General	Calcium Hardness	✓
General	Magnesium Hardness	✓
General	Sodium	✓
General	Potassium	✓
General	Total Alkalinity	✓
General	Bicarbonate Alkalinity	✓
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	ND
VOC	Acrylonitrile	ND
VOC	Benzene	TM
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	TM
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	TM
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	TM
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

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ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well P64S**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	ND
General	TDS	TBD	VOC	o-Dichlorobenzene	TM
General	Chloride	TBD	VOC	p-Dichlorobenzene	TM
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	TM
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	TM
General	Boron	✓	VOC	1,1-Dichloroethylene	ND
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	TM
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	TM
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	TM
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	ND
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	ND
General	TOC	TBD	VOC	Methyl Ethyl Ketone	ND
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	ND
VOC	Acetone	ND	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	ND	VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	TM
VOC	Bromodichloromethane	ND	VOC	Toluene	ND
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	ND
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	TM
VOC	Chlorobenzene	TM	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	TM	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	TM
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

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- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well P67S**

Group	Constituent	
General	pH	✓
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✓
General	TOX	TBD
General	Calcium Hardness	✓
General	Magnesium Hardness	✓
General	Sodium	✓
General	Potassium	✓
General	Total Alkalinity	✓
General	Bicarbonate Alkalinity	✓
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	ND
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well P68S**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	ND
General	TDS	TBD	VOC	o-Dichlorobenzene	ND
General	Chloride	TBD	VOC	p-Dichlorobenzene	ND
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	ND
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	TM
General	Boron	✓	VOC	1,1-Dichloroethylene	ND
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	ND
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	ND
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	ND
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	ND
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	ND
General	TOC	TBD	VOC	Methyl Ethyl Ketone	ND
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	ND
VOC	Acetone	TM	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	TM	VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	ND
VOC	Bromodichloromethane	ND	VOC	Toluene	ND
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	ND
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	ND
VOC	Chlorobenzene	ND	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	ND	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	ND
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

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ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)**  
**MPars for Monitoring Well P69S**

Group	Constituent		Group	Constituent	
General	pH	✓	VOC	1,2-Dibromoethane	ND
General	TDS	TBD	VOC	o-Dichlorobenzene	ND
General	Chloride	TBD	VOC	p-Dichlorobenzene	ND
General	Sulfate	TBD	VOC	trans-1,4-Dichloro-2-butene	ND
General	Ammonia, Nitrogen	TBD	VOC	1,1-Dichloroethane	ND
General	Nitrate Nitrogen	TBD	VOC	1,2-Dichloroethane	ND
General	Boron	✓	VOC	1,1-Dichloroethylene	ND
General	TOX	TBD	VOC	cis-1,2-Dichloroethylene	ND
General	Calcium Hardness	✓	VOC	trans-1,2-Dichloroethylene	ND
General	Magnesium Hardness	✓	VOC	1,2-Dichloropropane	ND
General	Sodium	✓	VOC	cis-1,3-Dichloropropene	ND
General	Potassium	✓	VOC	trans-1,3-Dichloropropene	ND
General	Total Alkalinity	✓	VOC	Ethyl benzene	ND
General	Bicarbonate Alkalinity	✓	VOC	2-Hexanone	ND
General	BOD	TBD	VOC	Methyl bromide	ND
General	COD	TBD	VOC	Methyl chloride	ND
General	TOC	TBD	VOC	Methyl Ethyl Ketone	ND
General	nitrite	TBD	VOC	Methyl iodide	ND
Metal	Chromium	TBD	VOC	4-Methyl-2-pentanone	ND
Metal	Mercury	TBD	VOC	Methylene bromide	ND
Metal	Lead	TBD	VOC	Methylene chloride	ND
VOC	Acetone	ND	VOC	Styrene	ND
VOC	Acrylonitrile	ND	VOC	1,1,1,2-Tetrachloroethane	ND
VOC	Benzene	ND	VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Bromochloromethane	ND	VOC	Tetrachloroethylene	ND
VOC	Bromodichloromethane	ND	VOC	Toluene	ND
VOC	Bromoform	ND	VOC	1,1,1,-Trichloroethane	ND
VOC	Carbon disulfide	ND	VOC	1,1,2,-Trichloroethane	ND
VOC	Carbon tetrachloride	ND	VOC	Trichloroethylene	ND
VOC	Chlorobenzene	ND	VOC	Trichlorofluoromethane (CFC11)	ND
VOC	Chloroethane	ND	VOC	1,2,3-Trichloropropane	ND
VOC	Chloroform	ND	VOC	Vinyl acetate	ND
VOC	Dibromochloromethane	ND	VOC	Vinyl Chloride	ND
VOC	1,2-Dibromo-3-Chloropropane	ND	VOC	Xylenes, m- & o+p	ND

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONITORING PROGRAM WELLS (April 22, 2009)  
 MPars for Monitoring Well M15B

Group	Constituent	
General	pH	6.87
General	TDS	4,338
General	Chloride	573.3
General	Sulfate	1,893
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	0.171
General	Boron	✓
General	TOX	TBD
General	Calcium Hardness	✓
General	Magnesium Hardness	✓
General	Sodium	✓
General	Potassium	✓
General	Total Alkalinity	✓
General	Bicarbonate Alkalinity	✓
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	-
Metal	Mercury	-
Metal	Lead	-
VOC	Acetone	-
VOC	Acrylonitrile	-
VOC	Benzene	ND
VOC	Bromochloromethane	-
VOC	Bromodichloromethane	-
VOC	Bromoform	-
VOC	Carbon disulfide	-
VOC	Carbon tetrachloride	-
VOC	Chlorobenzene	ND
VOC	Chloroethane	-
VOC	Chloroform	-
VOC	Dibromochloromethane	-
VOC	1,2-Dibromo-3-Chloropropane	-

Group	Constituent	
VOC	1,2-Dibromoethane	-
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	-
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	-
VOC	trans-1,3-Dichloropropene	-
VOC	Ethyl benzene	ND
VOC	2-Hexanone	-
VOC	Methyl bromide	-
VOC	Methyl chloride	-
VOC	Methyl Ethyl Ketone	-
VOC	Methyl iodide	-
VOC	4-Methyl-2-pentanone	-
VOC	Methylene bromide	-
VOC	Methylene chloride	-
VOC	Styrene	-
VOC	1,1,1,2-Tetrachloroethane	-
VOC	1,1,2,2-Tetrachloroethane	-
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	-
VOC	1,1,2,-Trichloroethane	-
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	-
VOC	Vinyl acetate	-
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	-

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 22, 2009)  
 MPars for Monitoring Well M16A

Group	Constituent	
General	pH	6.78
General	TDS	4,898
General	Chloride	403.9
General	Sulfate	2,532
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	4.06
General	Boron	✓
General	TOX	TBD
General	Calcium Hardness	✓
General	Magnesium Hardness	✓
General	Sodium	✓
General	Potassium	✓
General	Total Alkalinity	✓
General	Bicarbonate Alkalinity	✓
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	-
Metal	Mercury	-
Metal	Lead	-
VOC	Acetone	-
VOC	Acrylonitrile	-
VOC	Benzene	ND
VOC	Bromochloromethane	-
VOC	Bromodichloromethane	-
VOC	Bromoform	-
VOC	Carbon disulfide	-
VOC	Carbon tetrachloride	-
VOC	Chlorobenzene	ND
VOC	Chloroethane	-
VOC	Chloroform	-
VOC	Dibromochloromethane	-
VOC	1,2-Dibromo-3-Chloropropane	-

Group	Constituent	
VOC	1,2-Dibromoethane	-
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	-
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	-
VOC	trans-1,3-Dichloropropene	-
VOC	Ethyl benzene	ND
VOC	2-Hexanone	-
VOC	Methyl bromide	-
VOC	Methyl chloride	-
VOC	Methyl Ethyl Ketone	-
VOC	Methyl iodide	-
VOC	4-Methyl-2-pentanone	-
VOC	Methylene bromide	-
VOC	Methylene chloride	-
VOC	Styrene	-
VOC	1,1,1,2-Tetrachloroethane	-
VOC	1,1,2,2-Tetrachloroethane	-
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	-
VOC	1,1,2,-Trichloroethane	-
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	-
VOC	Vinyl acetate	-
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	-

The units for concentration limits indicated are mg/L.

✓ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

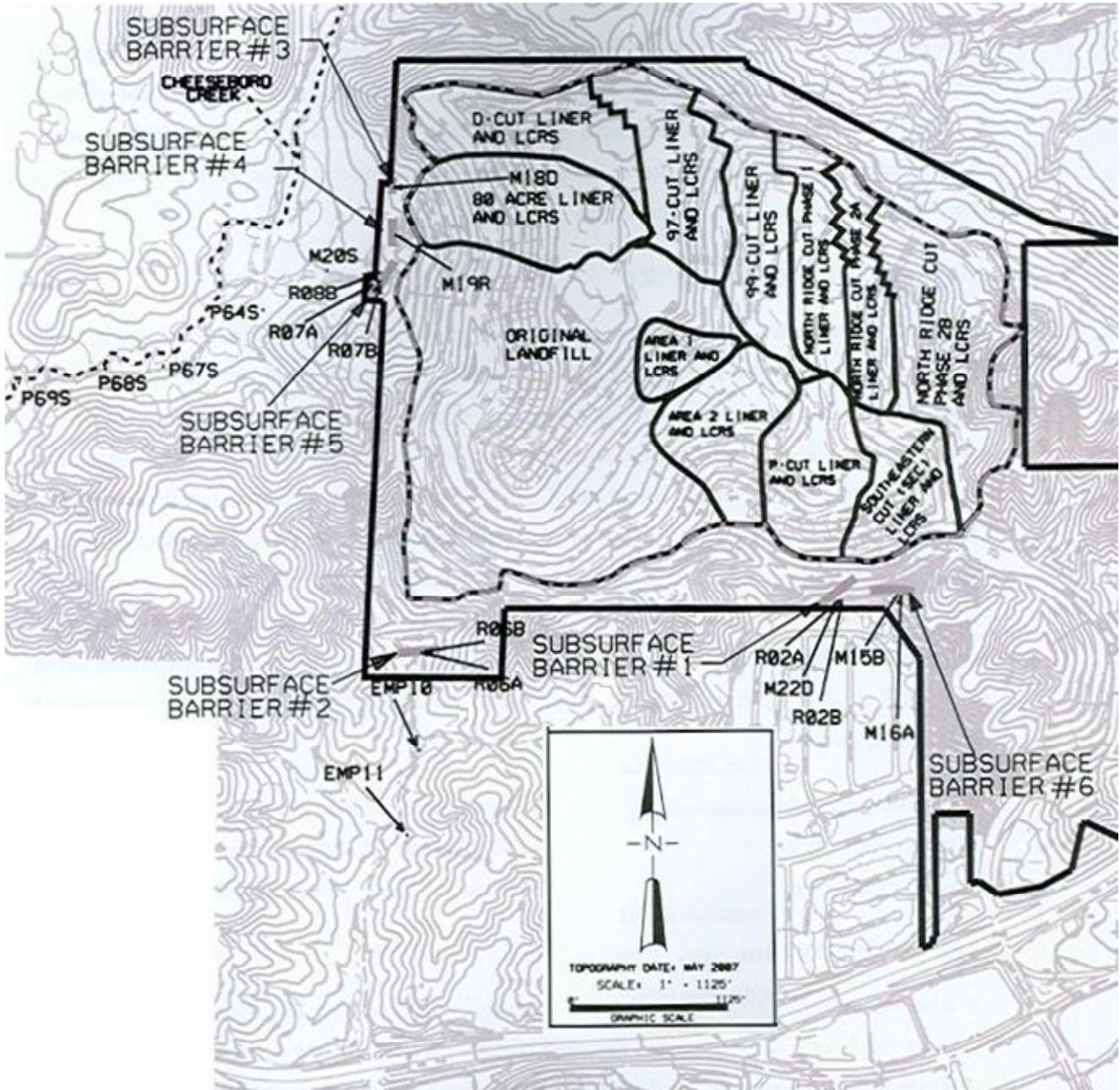
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

**TABLE 3 – CONSTITUENTS OF CONCERN FOR  
 MONITORING PROGRAM WELLS (April 22, 2009)**

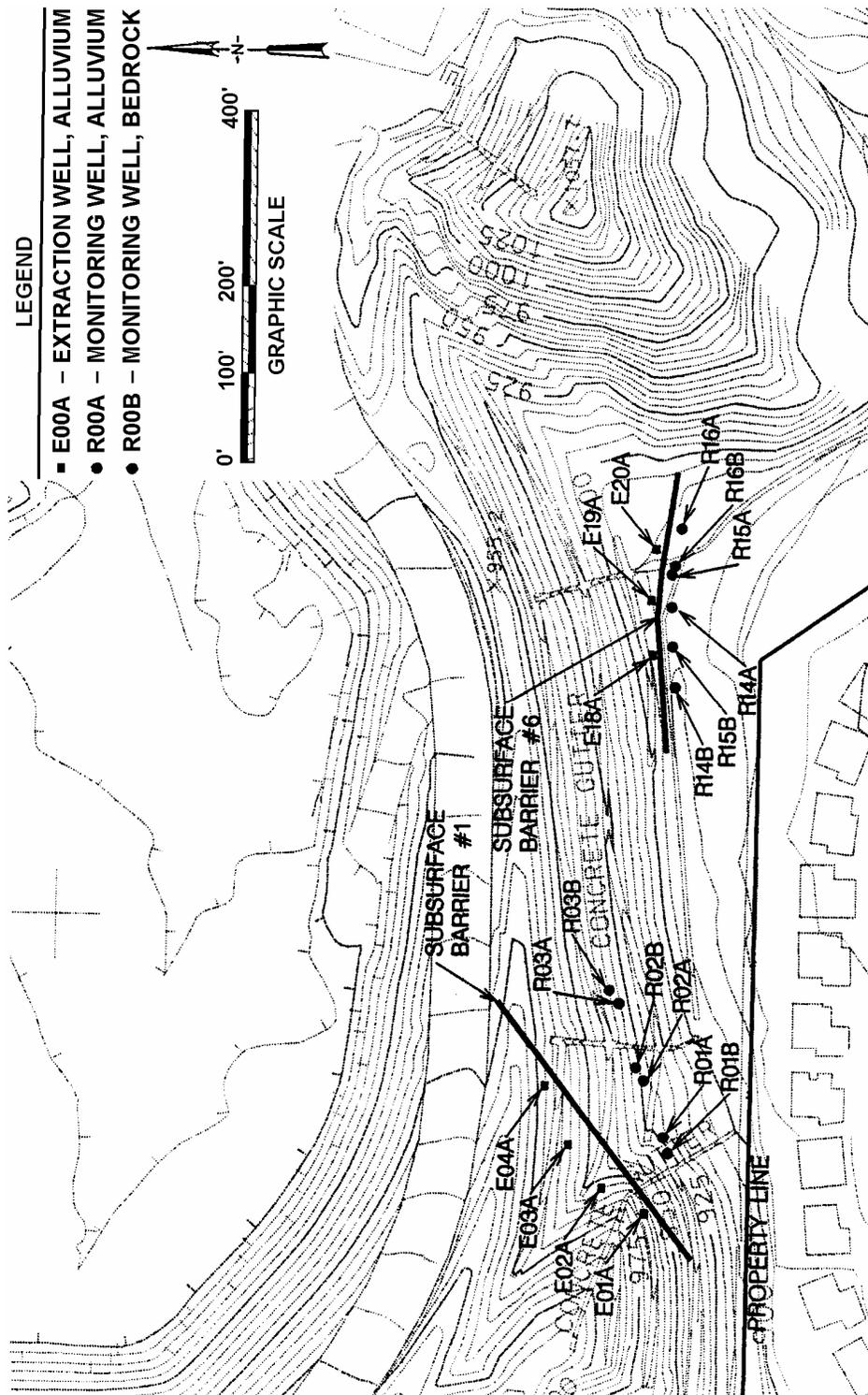
Group	Constituent	Group	Constituent	Group	Constituent
Volatile Organic Compounds (VOCs)	Acetone	BNA Compounds (Con't)	Bis(2-chloro-1-methylethyl) ether	BNA Compounds (Con't)	Phenol
	Acrylonitrile		Bis(2-ethylhexyl) phthalate		p-Phenylenediamine
	Benzene		4-Bromophenyl phenyl ether		Pronamide
	Bromochloromethane		Butyl benzyl phthalate		Pyrene
	Bromodichloromethane		p-Chloroaniline		Safrole
	Bromoform		Chlorobenzilate		1,2,4,5-Tetrachlorobenzene
	Carbon disulfide		p-Chloro-m-cresol		2,3,4,6-Tetrachlorophenol
	Carbon tetrachloride		2-Chloronaphthalene		o-Toluidine
	Chlorobenzene		2-Chlorophenol		1,2,4-Trichlorobenzene
	Chloroethane		4-Chlorophenyl phenyl ether		2,4,5-Trichlorophenol
	Chloroform		Chrysene		2,4,6-Trichlorophenol
	Dibromochloromethane		M+p Cresol		0,0,0-Triethyl Phosphorothioate
	1,2-Dibromo-3-Chloropropane		o-Cresol	sym-Trinitrobenzene	
	1,2-Dibromoethane		Diallate	Pesticides	Aldrin
	o-Dichlorobenzene		Dibenz(a,h)anthracene		alpha-BHC
	p-Dichlorobenzene		Dibenzofuran		beta-BHC
	trans-1,4-Dichloro-2-butene		Di-n-butyl phthalate		delta-BHC
	1,1-Dichloroethane		3,3'-Dichlorobenzidine		gamma-BHC (Lindane)
	1,2-Dichloroethane		2,4-Dichlorophenol		Chlordane
	1,1-Dichloroethylene		2,6-Dichlorophenol		4,4'-DDD
	cis-1,2-Dichloroethylene		Diethyl phthalate		4,4'-DDE
	trans-1,2-Dichloroethylene		p-(Dimethylamino)azobenzene		4,4'-DDT
	1,2-Dichloropropane		7,12-Dimethylbenz(a)anthracene		Dieldrin
	cis-1,3-Dichloropropene		3,3'-Dimethylbenzidine		Endosulfan I
	trans-1,3-Dichloropropene		2,4-Dimethylphenol		Endosulfan II
	Ethyl benzene		Dimethyl phthalate		Endosulfan sulfate
	2-Hexanone		m-Dinitrobenzene		Endrin
	Methyl bromide		4,6-Dinitro-o-cresol		Endrin aldehyde
	Methyl chloride		2,4-Dinitrophenol		Heptachlor
	Methyl Ethyl Ketone		2,4-Dinitrotoluene		Heptachlor epoxide
	Methyl iodide		2,6-Dinitrotoluene		Aroclor 1016
	4-Methyl-2-pentanone		Di-n-octyl phthalate		Aroclor 1221
	Methylene bromide		Diphenylamine		Aroclor 1232
	Methylene chloride		Ethyl methanesulfonate		Aroclor 1242
	Styrene		Famphur		Aroclor 1248
	1,1,1,2-Tetrachloroethane		Fluoranthene		Aroclor 1254
	1,1,2,2-Tetrachloroethane		Fluorene		Aroclor 1260
	Tetrachloroethylene		Hexachlorobenzene	Methoxylor	
	Toluene		Hexachlorobutadiene	Toxaphene	
	1,1,1,-Trichloroethane		Hexachlorocyclopentadiene	2,4-D	
	1,1,2,-Trichloroethane		Hexachloroethane	Dinoseb	
	Trichloroethylene		Hexachloropropene	Silvex	
	Trichlorofluoromethane (CFC 11)		Indeno(1,2,3-c,d)pyrene	2,4,5-Trichlorophenoxyacetic acid	
	1,2,3-Trichloropropane		Isodrin	Thionazin	
	Vinyl acetate		Isophorone	Dimethoate	
Vinyl Chloride	Isosafrole	Disulfoton			
Xylenes, m- & o+p	Kepon	Methyl parathion			
BNA Compounds	Acetonitrile	Methapyrilene	Parathion		
	Acrolein	3-Methylcholanthrene	Phorate		
	Allyl chloride	Methyl methanesulfonate	Iron		
	Chloroprene	2-Methylnaphthalene	Antimony		
	m-Dichlorobenzene	Naphthalene	Arsenic		
	Dichlorodifluoromethane (CFC 12)	1,4-Naphthoquinone	Barium		
	1,3-Dichloropropane	1-Naphthylamine	Beryllium		
	2,2-Dichloropropane	2-Naphthylamine	Cadmium		
	1,1-Dichloropropene	o-Nitroaniline	Chromium (total and hexavalent)		
	Ethyl methacrylate	m-Nitroaniline	Cobalt		
	Isobutyl alcohol	p-Nitroaniline	Copper		
	Methacrylonitrile	Nitrobenzene	Lead		
	Methyl methacrylate	2-Nitrophenol	Mercury		
	Propionitrile	4-Nitrophenol	Nickel		
	Acenaphthene	N-Nitrosodi-n-butylamine	Selenium		
	Acenaphthylene	N-Nitrosodiethylamine	Silver		
	Acetophenone	N-Nitrosodimethylamine	Thallium		
	2-Acetylaminofluorene	N-Nitrosodiphenylamine	Tin		
	4-Aminobiphenyl	N-Nitrosodipropylamine	Vanadium		
	Anthracene	N-Nitrosomethylethylamine	Zinc		
	Benzo(a)anthracene	N-Nitrosopiperidine	gross alpha/beta particle activity, tritium, isotopic uranium, radium-226, radium-228, cesium-137 strontium-90, potassium-40		
	Benzo(b)fluoranthene	N-Nitrosopyrrolidine	Emergent Chemicals	Perchlorate	
	Benzo(k)fluoranthene	5-Nitro-o-toluidine		N-Nitrosodimethylamine (NDMA)	
	Benzo(ghi)perylene	Pentachlorobenzene		1,4-Dioxane	
	Benzo(a)pyrene	Pentachloronitrobenzene	1,2,3-Trichloropropane		
	Benzyl alcohol	Pentachlorophenol			
	Bis(2-chloroethoxy) methane	Phenacetin			
	Bis(2-chloroethyl) ether	Phenanthrene			

The shaded constituents are those that have been detected and verified in the annual leachate testing.

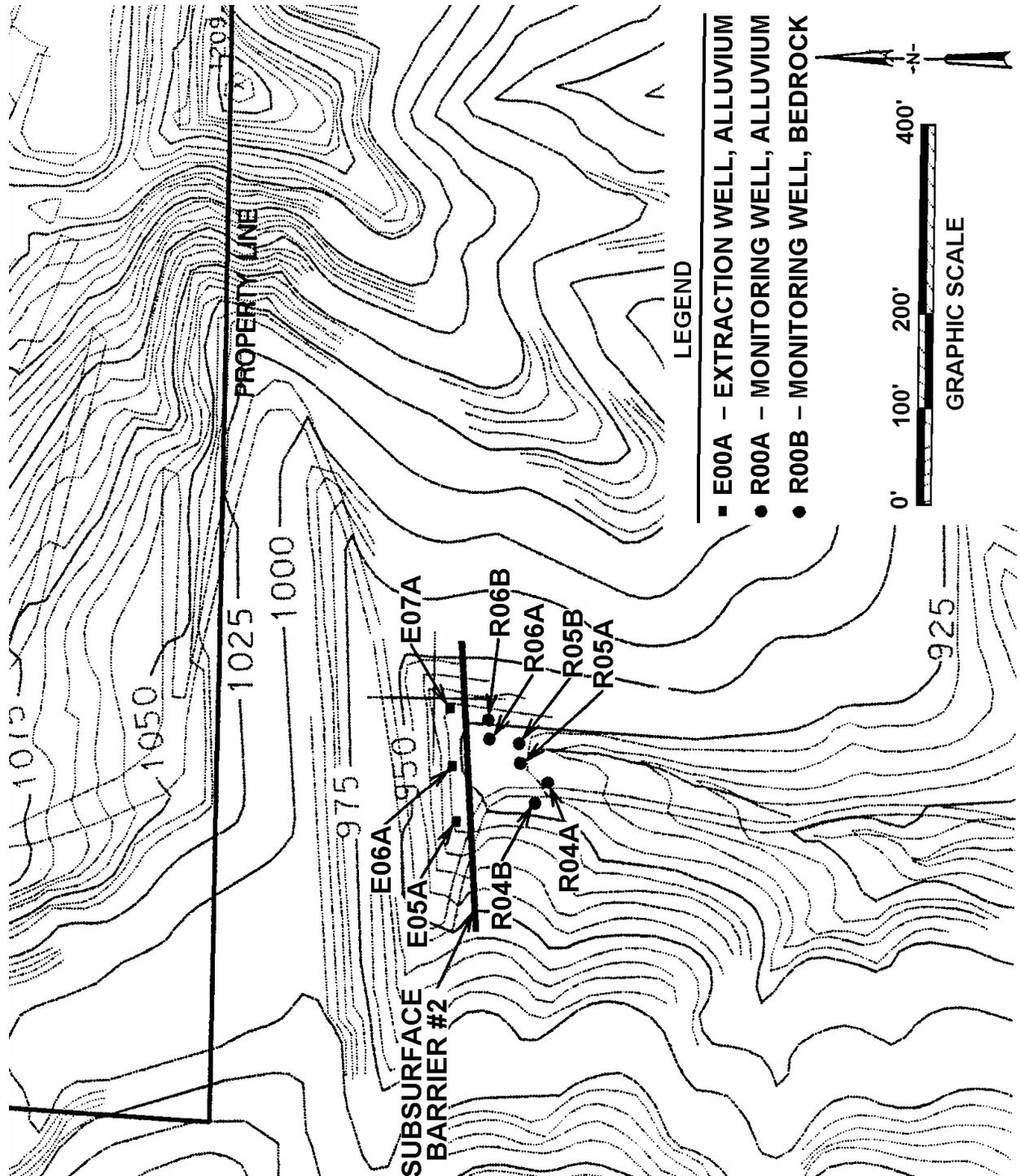
FIGURE 1:  
EXISTING COMPLIANCE MONITORING WELLS



**FIGURE 2:  
BARRIERS 1 AND 6 AREA EXISTING MONITORING WELLS, PIEZOMETERS, AND  
EXTRACTION WELLS**



**FIGURE 3:  
BARRIER 2 AREA EXISTING MONITORING WELLS, PIEZOMETERS, AND  
EXTRACTION WELLS**



**FIGURE 4:  
BARRIER 3, 4, 5 AREA EXISTING MONITORING WELLS, PIEZOMETERS, AND  
EXTRACTION WELLS**

