APPENDIX B
IN SITU PERMEABILITY RESULTS

AQUIFER TESTING PROGRAM

1.0 INTRODUCTION

There are several acceptable methods for determining aquifer hydraulic properties. Determination of the hydraulic properties of an aquifer is commonly referred to as evaluating the "mechanics" of the aquifer. Developing an understanding of the aquifer mechanics is an important component of the site characterization. These data provide a means of quantifying aquifer properties, and therefore may be used subsequently for evaluation of the environmental fate and transport mechanisms for potential contaminants of concern. The three most common aquifer testing methods are:

- slug testing
- step-drawdown testing
- pumping tests

These methods are considered "in-situ" methods as each method involves determining the hydraulic characteristics of the aquifer by applying a "stress" to the aquifer and recording the response to that stress through time. Because the methods involve testing a relatively representative portion of the aquifer, they are generally considered more accurate than "ex-situ" (laboratory) soil permeability testing.

The hydraulic properties of interest include:

- Hydraulic conductivity - this property is a constant of proportionality that describes fluid flow through a porous media. Hydraulic conductivity ("K" by convention) is a function of the permeability of the media and of the physical properties of the fluid. In a groundwater setting, the physical properties of the water are considered relatively constant, and therefore hydraulic conductivity can be considered a function of the porous media. For this reason, the terms permeability and hydraulic conductivity are commonly used interchangably for groundwater settings. It is important to note that hydraulic conductivity varies over 13 orders of magnitude for earth materials. For this reason, order-of-magnitude approximations are generally considered appropriate for evaluation of aquifer mechanics.

  The Darcy flow velocity of groundwater is directly proportional to the hydraulic conductivity of the aquifer and of the hydraulic gradient. Quantification of the hydraulic conductivity is therefore significant in terms of evaluating solute transport mechanisms associated with advection.

- Transmissivity - this term ("T" by convention) is simply the product of the hydraulic conductivity and the aquifer thickness ("b" by convention). Transmissivity typically varies

significantly due to spatial variations in both the thickness and conductivity of the aquifer.

In this study, the curve-matching Cooper et al. method was used to calculate a transmissivity value. To obtain a hydraulic conductivity value, the following equation is used:

$$K = T/b$$

Where:

T = transmissivity
K = hydraulic conductivity
b = aquifer thickness.

- Storativity - this term represents the volume of water that an aquifer can release from storage per unit of aquifer storage area to a unit change in head ("S" by convention). Typically used for confined aquifer settings.

The three aquifer testing methods, slug testing, step-drawdown testing, and pumping tests have different applications and limitations. In general, step-drawdown tests and pumping tests are most feasible for relatively high transmissivity zones, such as sand and gravel aquifers. In these types of aquifers, the pumping test is the most accurate means of evaluating aquifer mechanics. With transmissive zones, groundwater can be removed at a rate that will stress the aquifer, and therefore water level changes will be noted in observation wells. Pumping tests are less effective for lower transmissivity zones because of difficulties in removing sufficient groundwater to stress the aquifer and measure a response in observation wells without dewatering the pumping well. These tests are typically infeasible or impractical for low yield aquifers. For low to moderately transmissive zones, a more viable aquifer test method is slug testing, described below.

2.0 SLUG TESTING

The slug withdrawal test requires the removal of a known volume from a well. A slug withdrawal test is commonly referred to as a "rising head" test. Water levels are monitored during recovery, and the rate at which a well recovers is a function of the hydraulic properties of the water-bearing stratum and of the well itself.

Because of the relatively small stress applied to the water-bearing zone, slug tests are best suited for low to moderately conductive aquifers. Slug tests are representative of the aquifer material in the area relatively close to the well. However, the tests provide a cost-effective means of determining "point" transmissivities over a large area such as the NAS Alameda facility.

3.0 SLUG TESTING METHODS

Rising head slug tests were conducted in 70 monitoring wells at the NAS Alameda facility to evaluate in-situ permeabilities of the first and second water-bearing zones. There are 40 "A" and 14 "E" wells in the unconfined first water-bearing zone and 10 "B" and six "C" wells in the confined second water-bearing zone. These wells partially penetrate each of the zones.

This slug test data were analyzed using the methods of Bouwer and Rice for unconfined aquifers and Cooper et al. for confined aquifers. The commercially available software program "AQTESOLV" was used for data reduction.

The rising head field data, result output, and graphs are included in this Appendix and hydraulic conductivity values are summarized in Table G-1. Field procedures to obtain slug test data from the monitoring wells on the NAS Alameda facility are discussed in Appendix C of this report.

4.0 UNCONFINED SLUG TEST METHODOLOGY

The Bouwer and Rice equation was used for the unconfined aquifer slug tests. Monitoring wells whose screen intervals straddle the water table require a well borehole radius adjustment to compensate for water storage in the filter pack (Bouwer, 1989; Kruseman & deRidder, 1990; Schafer, 1992). The Bouwer and Rice article and Bouwer's update article are attached for reference. The equation used to adjust for the borehole radius is:

$$r_{w\,adj} = [(1-n)r_c^2 + nr_w^2]^{1/2}$$

where:

n	=	porosity
r_c	=	radius of well casing
r_w	=	radius of well (including filter pack)
$r_{w\,adj}$	=	adjusted radius of well (including filter pack)

A porosity of 0.3 was used in this study and is within the range for sands and silts (Freeze & Cherry, 1979).

For evaluation of slug tests in unconfined aquifers, the following conditions and assumptions are applied (Bouwer & Rice, 1976; Kruseman & deRidder, 1990):

- The aquifer is unconfined and has an apparent infinite areal extent;
- The aquifer if homogeneous, isotropic, and of uniform thickness over the area influenced by the slug test;
- Prior to the test, the water table is (nearly) horizontal over the area that will be influenced by the test;
- The head in the well is lowered instantaneously at $t_o = 0$; the drawdown in the water table around the well is negligible; there is no flow above the water table;
- The inertia of the water column in the well and the linear and non-linear well losses are negligible;
- The well either partially or fully penetrates the saturated thickness of the aquifer;
- The well diameter is finite; hence storage in the well cannot be neglected;
- The flow to the well is in a steady state.

Data are plotted on a time versus drawdown graph. The x- and y- axis intersections from a late time, flat slope line are used to calculate the hydraulic conductivity (K) value in wells which the screen or open intervals are fully submerged (Figure G-1). However, in wells which the screen or open interval straddle the water-table, a double flat slope line effect is typically observed (Figure G-2). The first steep slope (early time) line shows the filter pack or developed zone drainage. The second flat slope (late time) line is representative of flow from the undisturbed saturated screened aquifer zone (Bouwer, 1989; Schafer, 1992). The second slope line is used to calculate the K value.

The knowns and constants listed in the result output, as shown on Figure G-3, correspond to the Bouwer and Rice equation. Field data were measured in feet and minutes. Results, listed under the type curve data, are in SI units of centimeters per second. The y_o on the result output refers to the drawdown value where the slope line intersects the y axis.

5.0 CONFINED SLUG TEST METHODOLOGY

Slug tests for monitoring wells screened within the confined zones were analyzed using the curve-matching methods of Cooper et al. The Cooper et al. article is attached for reference.

For evaluation of slug tests within the confined zone, the following conditions and assumptions are applied (Cooper et al., 1967; Kruseman and deRidder, 1990):

- The aquifer is confined and has an apparently infinite areal extent;
- The aquifer is homogeneous, isotropic, and of uniform thickness over the area influenced by the slug test;
- Prior to the test, the piezometric surface is (nearly) horizontal over the area that will be influenced by the test;
- The head in the well is changed instantaneously at time to = 0;
- The rate of flow to the well is in an unsteady state;
- The rate at which the water flows from the aquifer into the well is equal to the rate at which the volume of water stored in the well changes as the head in the well rises;
- The inertia of the water column in the well and the non-linear well losses are negligible;
- The well diameter is finite; hence storage in the well cannot be neglected;
- The well penetrates the entire aquifer.

Complications resulting from partial penetration are not considered significant due to the slug testing method exerting relatively small stresses on the confined aquifer and the hydrogeologic setting that predicts predominantly horizontal groundwater flow for the confined aquifer.

A change in head versus time data was plotted on a semi-log graph (Figure G-4). The result output lists the knowns and constants as shown on Figure G-5. The transmissivity (T) value obtained from the curve-matching was used to calculate the hydraulic conductivity (K) value (see equation in Introduction). Field data were measured in feet and minutes. However, results are presented in SI units of centimeters per second. The S value on the result output refers to storativity.

6.0 DISCUSSION

Hydraulic conductivities determined from the aquifer testing program ranged from 5.5E-02 cm/s to 2.5E-05 cm/s. The range of hydraulic conductivity values is consistent with the conceptual hydrogeologic model for the site that indicates heterogenous soils within the first and second water-bearing zones. The K values determined from the aquifer testing program were consistent with published conductivity values for similar soils (Freeze & Cherry, 1979). However, several limitations of all slug testing methods are noted. These limitations include:

- Slug tests only provide aquifer characteristics over a relatively small area of investigation.

Uncertainty between data points (wells) may be significant in heterogeneous hydrogeologic setting.

- Aquifer storage coefficients for unconfined aquifers cannot be determined using slug tests. Storativity values determined for confined aquifers are only approximate values and should not be used for estimating long-term steady state conditions (Cooper et al, 1967).

- Slug tests are incapable of providing data required to evaluate the pumping characteristics of the well, and therefore cannot determine specific capacity or well efficiency. Well efficiency may be compromised by construction details, well development, and borehole skin effects.

A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers With Completely or Partially Penetrating Wells

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A procedure is presented for calculating the hydraulic conductivity of an aquifer near a well from the rate of rise of the water level in the well after a certain volume of water is suddenly removed. The calculation is based on the Thiem equation of steady state flow to a well. The effective radius R_e over which the head difference between the equilibrium water table in the aquifer and the water level in the well is dissipated was evaluated with a resistance network analog for a wide range of system geometries. An empirical equation relating R_e to the geometry of the well and aquifer was derived. The technique is applicable to completely or partially penetrating wells in unconfined aquifers. It can also be used for confined aquifers that receive water from the upper confining layer. The method's results are compatible with those obtained by other techniques for overlapping geometries.

With the slug test the hydraulic conductivity or transmissibility of an aquifer is determined from the rate of rise of the water level in a well after a certain volume or 'slug' of water is suddenly removed from the well. The slug test is simpler and quicker than the Theis pumping test because observation wells and pumping the well are not needed. With the slug test the portion of the aquifer 'sampled' for hydraulic conductivity is smaller than that for the pumping test even though with the latter, most of the head loss also occurs within a relatively small distance of the pumped well and the resulting transmissibility primarily reflects the aquifer conditions near the pumped well.

Essentially instantaneous lowering of the water level in a well can be achieved by quickly removing water with a bailer or by partially or completely submerging an object in the water, letting the water level reach equilibrium, and then quickly removing the object. If the aquifer is very permeable, the water level in the well may rise very rapidly. Such rapid rises can be measured with sensitive pressure transducers and fast-response strip chart recorders or x-y plotters. Also it may be possible to isolate portions of the perforated or screened section of the well with special packers for the slug test. This not only reduces the inflow and hence the rate of rise of the water level in the well, but it also makes it possible to determine the vertical distribution of the hydraulic conductivity. Special packer techniques may have to be developed to obtain a good seal, especially for rough casings or perforations. Effective sealing may be achieved with relatively long sections of inflatable stoppers or tubing. The use of long sections of these materials would also reduce leakage flow from the rest of the well to the isolated section between packers. This flow can occur through gravel envelopes or other permeable zones surrounding the casing. Sections of inflatable tubing may have to be long enough to block off the entire part of the well not used for the slug test. High inflation pressures should be used to minimize volume changes in the tubing due to changing water pressures in the isolated section when the head is lowered.

So far, solutions for the slug test have been developed only for completely penetrating wells in confined aquifers. *Cooper et al.* [1967] derived an equation for the rise or fall of the water level in a well after sudden lowering or raising, respectively. Their equation was based on nonsteady flow to a pumped, completely penetrating well, and the solution was expressed as a series of 'type curves' against which observed rates of water level rises were matched. Values for the transmissibility and storage coefficient were then evaluated from the curve parameter and horizontal-scale position of the type curve showing the best fit with the experimental data. *Skibitzke* [1958] developed an equation for calculating transmissibility from the recovery of the water level in a well that was repeatedly bailed. The technique is limited to wells in confined aquifers with sufficiently shallow water levels to permit short time intervals between bailing cycles [*Lohman*, 1972].

To use the slug test for partially penetrating or partially perforated wells in confined or unconfined aquifers, some solutions developed for the auger hole and piezometer techniques to measure soil hydraulic conductivity [*Bouwer and Jackson*, 1974] may be employed. However, the geometry of most groundwater wells is outside the range in geometry covered by the existing equations or tables for the auger hole or piezometer methods. For this reason, theory and equations are presented in this paper for slug tests on partially or completely penetrating wells in unconfined aquifers for a wide range of geometry conditions. The wells may be partially or completely perforated, screened, or otherwise open along their periphery. While the solutions are developed for unconfined aquifers, they may also be used for slug tests on wells in confined aquifers if water enters the aquifer from the upper confining layer through compression or leakage.

THEORY

Geometry and symbols of a well in an unconfined aquifer are shown in Figure 1. For the slug test the water level in the well is suddenly lowered, and the rate of rise of the water level is measured. The flow into the well at a particular value of y can be calculated by modifying the Thiem equation to

$$Q = 2\pi KL \frac{y}{\ln (R_e/r_w)} \qquad (1)$$

where Q is the flow into the well (length³/time), K is the hydraulic conductivity of the aquifer (length/time), L is the height of the portion of well through which water enters (height of screen or perforated zone or of uncased portion of well), y is the vertical distance between water level in well and equilibrium water table in aquifer, R_e is the effective radius over which y is dissipated, and r_w is the horizontal distance

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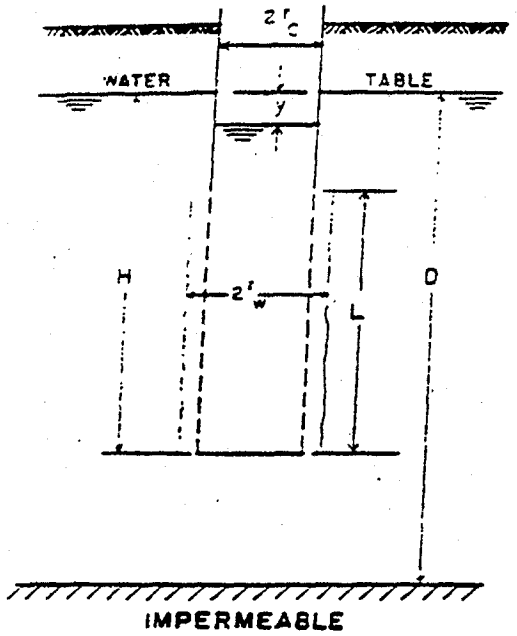

Fig. 1. Geometry and symbols of a partially penetrating, partially perforated well in unconfined aquifer with gravel pack or developed zone around perforated section.

from well center to original aquifer (well radius or radius of casing plus thickness of gravel envelope or developed zone).

The terms L, y, R_e, and r_w are all expressed in units of length. The effective radius R_e is the equivalent radial distance over which the head loss y is dissipated in the flow system. The value of R_e depends on the geometry of the flow system, and it was determined for different values of H, L, D, and r_w (Figure 1) with a resistance network analog, as will be discussed in the next section. Equation (1) is based on the assumptions that (1) drawdown of the water table around the well is negligible, (2) flow above the water table (in the capillary fringe) can be ignored, (3) head losses as water enters the well (well losses) are negligible, and (4) the aquifer is homogeneous and isotropic. These are the usual assumptions in the development of equations for pumped hole techniques [*Bouwer and Jackson*, 1974, and references therein].

The value of r_w in (1) represents the radial distance between the undisturbed aquifer and the well center. Thus r_w should include gravel envelopes or "developed" zones if they are much more permeable than the aquifer itself (Figure 1).

The rate of rise, dy/dt, of the water level in the well after suddenly removing a slug of water can be related to the inflow Q by the equation

$$dy/dt = -Q/\pi r_c^2 \tag{2}$$

where πr_c^2 is the cross-sectional area of the well where the water level is rising. The minus sign in (2) is introduced because y decreases as t increases.

The term r_c is the inside radius of the casing if the water level is above the perforated or otherwise open portion of the well. If the water level is rising in the perforated section of the well, allowance should be made for the porosity outside the well casing if the hydraulic conductivity of the gravel envelope or developed zone is much higher than that of the aquifer. In that case the (open) porosity in the permeable zone must be included in the cross-sectional area of the well. For example, if the radius of the perforated casing is 20 cm and the casing is surrounded by a 10-cm permeable gravel envelope with a porosity of 30%, r_c should be taken as $[20^2 - 0.30(30^2 - 20^2)]^{1/2} = 23.5$ cm to obtain the cross-sectional area of the well that relates Q to dy/dt. The value of r_w for this well section is 30 cm.

Combining (1) and (2) yields

$$\frac{1}{y}\,dy = -\frac{2KL}{r_c^2 \ln (R_e/r_w)}\,dt \tag{3}$$

which can be integrated to

$$\ln y = -\frac{2KLt}{r_c^2 \ln (R_e/r_w)} + \text{constant} \tag{4}$$

Applying this equation between limits y_0 at $t = 0$ and y_t at t and solving for K yield

$$K = \frac{r_c^2 \ln (R_e/r_w)}{2L}\,\frac{1}{t}\,\ln \frac{y_0}{y_t} \tag{5}$$

This equation enables K to be calculated from the rise of the water level in the well after suddenly removing a slug of water from the well. Since K, r_c, r_w, R_e, and L in (5) are constants, $(1/t)\ln y_0/y_t$ must also be constant. Thus field data should yield a straight line when they are plotted as $\ln y_t$ versus t. The term $(1/t)\ln y_0/y_t$ in (5) is then obtained from the best-fitting straight line in a plot of $\ln y$ versus t (see the example). The value of $\ln R_e/r_w$ is dependent on H, D, L, and r_w and can be evaluated from the analog results presented in the next section. The transmissibility T of the aquifer is calculated by multiplying (5) by the thickness D of the aquifer or

$$T = \frac{Dr_c^2 \ln (R_e/r_w)}{2L}\,\frac{1}{t}\,\ln \frac{y_0}{y_t} \tag{6}$$

This equation is based on the assumption that the aquifer is uniform with depth.

Equations (5) and (6) are dimensionally correct. Thus K and T are expressed in the same units as the length and time parameters in the equations.

EVALUATION OF R_e

Values of R_e, expressed as $\ln R_e/r_w$, were determined with an electrical resistance network analog for different values of r_w, L, H, and D (Figure 1), using the same assumptions as those for (1). An axisymmetric sector of 1 rad was simulated by a network of electrical resistors. The vertical distance between the nodes was constant, but the radial distance between nodes increased with increasing distance from the center line (Figure 2). This yielded a network with the highest node density near the well, where the head loss was greatest, and a decreasing node density toward the outer reaches of the system. For a more detailed discussion of graded networks for representing axisymmetric flow systems, see *Liebmann* [1950] and *Bouwer* [1960].

The radial extent of the medium represented on the analog was more than 60,000 times the largest r_w value used in the analyses. Thus the radial extent of the analog system was essentially infinite, as evidenced by the fact that a reduction in radial extent by several nodes did not have a measurable effect on the observed value of R_e.

The value of R_e for an infinitely deep aquifer ($D = \infty$) was determined by simulating an impermeable and then an infinitely permeable layer at a certain value of D. If this value of D is taken to be sufficiently large, the flow in the system when the layer at D is taken as being impermeable is only slightly

piezometer method at the lower values of L/r_w. With the piezometer method a cavity is augered out in the soil below a piezometer tube. The water level in the tube is abruptly lowered, and K of the soil around the cavity is calculated from the rate of rise of the water level in the tube [*Bouwer and Jackson*, 1974]. The equation for K is

$$K = \frac{\pi r_w^2}{A_Y} \frac{1}{t} \ln \frac{y_0}{y_t} \tag{12}$$

where A_Y is a geometry factor with dimension of length. Values of A_Y were evaluated with an electrolytic tank analog by *Youngs* [1968], whose results were expressed in tabular form as A_Y/r_w for different values of L/r_w (ranging between 0 and 8), $(H - L)/r_w$, and $(D - H)/r_w$.

Taking a hypothetical case where $L/r_w = 8$, $H/r_w = 12$, and $D/r_w = 16$, K calculated with (5) is 18% below K calculated with (12). This is more than the 10% error normally expected with (8) and (9) for the L/H value of 0.67 in this case. The larger discrepancy may be due to the difference in methodology, or to the fact that the L/r_w value is close to the lower limit of the range covered on the resistance network analog.

An approximate equation for calculating K with the piezometer method was presented by *Hvorslev* [1951]. The equation, which is based on the assumptions of an ellipsoidal cavity or well screen and infinite vertical extent (upward and downward) of the flow system, contains a term $[1 + (L/2r_w)^2]^{1/2}$. For most well-slug-test geometries, $L/2r_w$ will be sufficiently large to permit replacement of this term by $L/2r_w$. In that case, however, Hvorslev's equation for Q yields $R_e = L$, which is not true. In reality, R_e is considerably less than L. For example, if $L = 40$ m, $r_w = 0.4$ m, $H = 80$ m, and $D = \infty$, (8) shows that $R_e = 11.9$ m, which is much less than the value of 40 m indicated by Hvorslev's equation. However, since the calculation of K is based on $\ln (R_e/r_w)$ as shown by (5), the error in K is less than the error in R_e (i.e., 36 and 236%, respectively, in this case).

If, for the above example, the top of the well screen or cavity had been taken at the same level as the water table ($H = 40$ m), R_e would have been 8.6 m and Hvorslev's equation would have yielded a K value that is 50% higher than K given by (5). The larger error is probably due to Hvorslev's assumption of infinite vertical (upward) extent of the flow system, which is not met when the cavity is immediately below the water table. Using Hvorslev's equation for cavities immediately below a confining layer would increase the error to 73%, but this, of course, is due to the fact that a water table is not a solid boundary. Hvorslev's equation for the confining layer case can be shown to yield $R_e = 2L$.

Auger hole method. The analog analyses for (8) and (9) and Figure 3 were performed for $L < H$, because short circuiting between the water table and the well prevented simulation of the case where $L = H$. If the analog results are extrapolated to $L = H$, however, the geometry of the system in Figure 1 becomes similar to that of the auger hole technique, for which a number of equations and graphs have been developed to calculate K from the rise of the water level in the well [*Bouwer and Jackson*, 1974]. *Boast and Kirkham* [1971], for example, developed the equation

$$K = C_{BK} \frac{\Delta y}{\Delta t} \tag{13}$$

where C_{BK} was determined mathematically and expressed in tabular form for various values of L/r_w, $(D - H)/r_w$, and y_0/H. Since the rate of rise of the water level in the hole after the removal of a slug of water decreases with decreasing y, $\Delta y/\Delta t$ is not a constant and the value of K obtained with this procedure depends on the magnitude of Δy used in the field measurements. The general rule is that Δy should be relatively small.

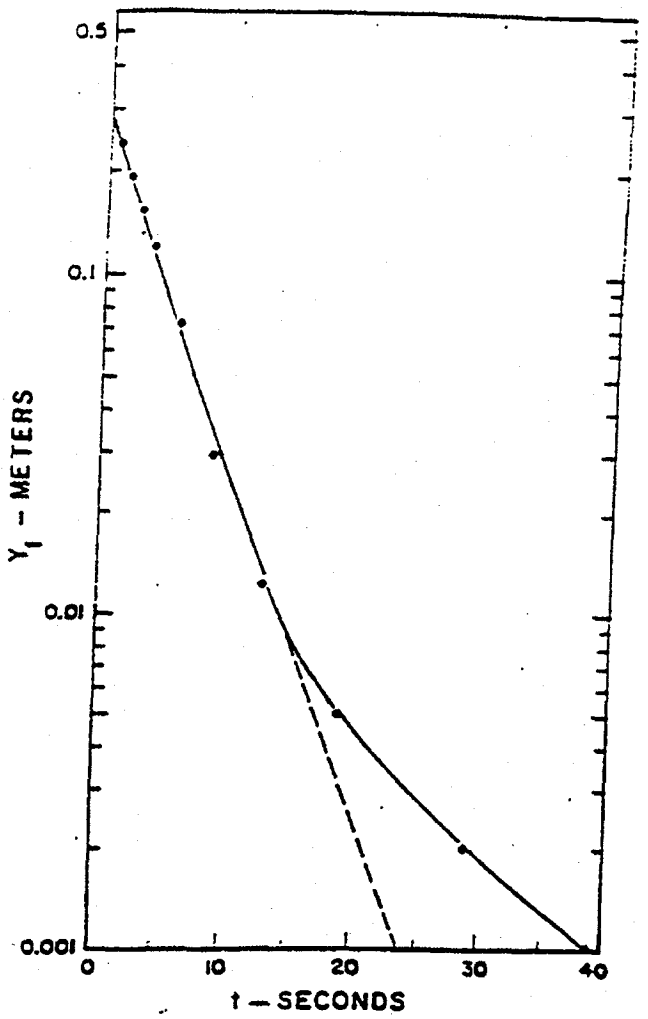

Fig. 4. Plot of y versus t for slug test on east well.

Taking a hypothetical case where $y_0 = 2.5$ m, $y_t = 2.4$ m, $\Delta t = 10$ s, $L = H = 5$ m, $D = 6$ m, and $r_w = 0.1$ m, (5) yields a K value that is 36% lower than K calculated with (13). However, if y_t is taken as 0.5 m, which should give $\Delta t = 394$ s according to the theory that $(1/t) \ln y_0/y_t$ is constant, the K value yielded by (5) is 26% higher than K obtained with (13). If y_t is taken as 0.9 m, (5) and (13) give identical results.

Slug test on wells in confined aquifers. The confined aquifer for which the slug test by *Cooper et al.* [1967] was developed is an aquifer with an internal water source, for example, recharge through aquitards or compression of confining layers or other material. This situation is similar to that of the unconfined aquifer presented in this paper because the water table is considered horizontal, like the upper boundary of a confined aquifer, and the water table is a plane source. Thus K or T calculated with (5) or (6) should be of the same order as K calculated with the procedure of *Cooper et al.* [1967], which involves plotting the rise of the water level in the well and finding the best fit on a family of type curves. *Cooper et al.* [1967] presented an example of the calculation of T for a well

with $r_c = r_w = 0.076$ m and $L = 98$ m. The resulting value of T was 45.8 m^2/day. Values of D and H for this well were not given. However, since the well was 122 m deep and completely penetrating (at least theoretically), D and H must have been between 98 and 122 m. Assuming that both D and H were 100 m, (6) yields $T = 62.8$ m^2/day, which is compatible with T obtained by Cooper et al.

CONCLUSIONS

The hydraulic conductivity of an aquifer near a well can be calculated from the rise of the water level in the well after a slug of water is suddenly removed. The calculation is based on the Thiem equation, using an effective radius R_e for the distance over which the head difference between the equilibrium water table in the aquifer and the water level in the well is dissipated. Values of R_e were evaluated by electrical resistance network analog. An empirical equation was then developed to relate R_e to the geometry of the system. This equation is accurate to within 10–25%, depending on how much of the well below the water table is perforated or otherwise open. The technique is applicable to partially or completely penetrating wells in unconfined aquifers. It can also be used to estimate the hydraulic conductivity of confined aquifers that receive water from the upper confining layer through recharge or compression.

The vertical distance between the rising water level in the well and the equilibrium water table in the aquifer must yield a straight line when it is plotted on a logarithmic scale against time. This can be used to check the validity of field measurements and to obtain the best-fitting line for calculating the hydraulic conductivity. Permeable aquifers produce rapidly rising water levels that can be measured with fast-response pressure transducers and strip chart recorders or x-y plotters. The portion of the aquifer sampled for hydraulic conductivity with the slug test is approximately a cylinder with radius R_e and a height somewhat larger than the perforated or otherwise open section of the well.

Hydraulic conductivity values obtained with the proposed slug test are compatible with those yielded by the auger hole and piezometer techniques where the geometries of the systems overlap, and by a slug test for completely penetrating wells in confined aquifers.

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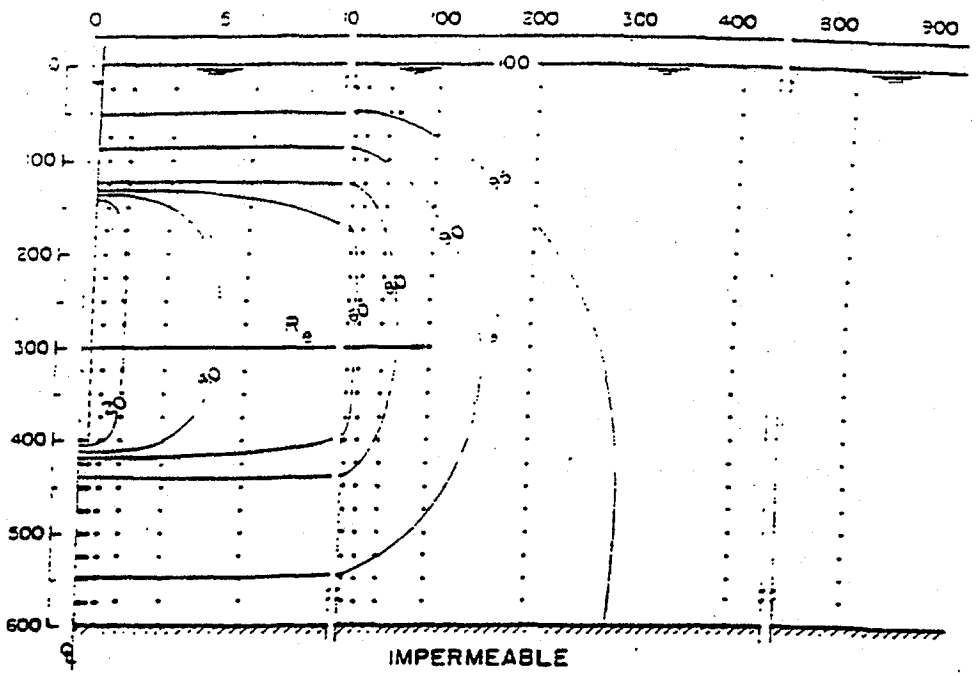

Fig. 2. Node arrangement (dots) for resistance network analog and potential distribution (indicated as percentages on equipotentials) for system with $L/r_w = 625$, $H/r_w = 1000$, and $D/r_w = 1500$. The numbers on the left and at the top of the figure are arbitrary length units (note breaks in horizontal scale).

less than the flow when the layer is taken as being infinitely permeable. The average of the two flows can then be taken as a good estimate of the flow that would occur if the aquifer were represented on the analog as being uniform to infinite depth [*Bouwer*, 1967]. This average flow was used to calculate R_e for $D = \infty$.

The analog analyses were performed by simulating a system with certain values of r_w, H, and D. The electrical current entering the 'well' was then measured for different values of L, ranging from near H to near 0. This was repeated for other values of r_w, H, and D. The condition where $L = H$ could not be simulated on the analog because it would mean a short between the water table as the source and the well as the sink. The electrical current flow in the analog was converted to volume per day, and $\ln R_e/r_w$ was evaluated with (1) for each combination of r_w, H, L, and D used in the analog.

For a given geometry described by r_w, H, and D, the current flow Q_i into the simulated well varied essentially linearly with L and could be described by the equation

$$Q_i = mL + n \tag{7}$$

Because of the linearity between Q_i and L the results of the analyses could be extrapolated to the condition $L = H$. The values of m in (7) appeared to vary inversely with $\ln H/r_w$. The values of n varied approximately linearly with $\ln [(D - H)/r_w]$, the slope A and intercept B in these relations being a function of L/r_w. This enabled the derivation of the following empirical equation relating $\ln R_e/r_w$ to the geometry of the system:

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln (H/r_w)} + \frac{A + B \ln [(D - H)/r_w]}{L/r_w}\right]^{-1} \tag{8}$$

In this equation, A and B are dimensionless coefficients that are functions of L/r_w, as shown in Figure 3. If $D >> H$, an increase in D has no measurable effect on $\ln R_e/r_w$. The analog results indicated that the effective upper limit of $\ln [(D - H)/r_w]$ is 6. Thus if D is considered infinity or $(D - H)/r_w$ is so large that $\ln [(D - H)/r_w]$ is greater than 6, a value of 6 should still be used for the term $\ln [(D - H)/r_w]$ in (8).

If $D = H$, the term $\ln [(D - H)/r_w]$ in (8) cannot be used. The analog results indicated that for this condition, which is the case of a fully penetrating well, (8) should be modified to

$$\ln R_e/r_w = \left(\frac{1.1}{\ln (H/r_w)} + \frac{C}{L/r_w}\right)^{-1} \tag{9}$$

where C is a dimensionless parameter that is a function of L/r_w as shown in Figure 3.

Equations (8) and (9) yield values of $\ln R_e/r_w$ that are within 10% of the actual value as evaluated by analog if $L > 0.4H$ and within 25% if $L << H$ (for example, $L = 0.1H$).

The analog analyses were performed for wells that were closed at the bottom. Occasionally, however, wells with open bottoms were also simulated. The flow through the bottom appeared to be negligible for all values of r_w and L used in the analyses. If L is not much greater than r_w (for example, $L/r_w << 4$), the system geometry approaches that of a piezometer cavity [*Bouwer and Jackson*, 1974], in which case the bottom flow can be significant. Equations (8) and (9) can also be used to evaluate $\ln R_e/r_w$ if a portion of the perforated or otherwise open part of the well is isolated with packers for the slug test.

Equipotentials for the flow system around a partially penetrating, partially perforated well in an unconfined aquifer after lowering the water level in the well are shown in Figure 2. The numbers along the symmetry axis and the water table represent arbitrary length units. The numbers on the equipotentials indicate the potential as a percentage of the total head difference between the water table (100%) and the open portion of the well (0%) shown as a dashed line.

The value of R_e for the case in Figure 2 is 96.7 length units. As shown in the figure, this corresponds approximately to the

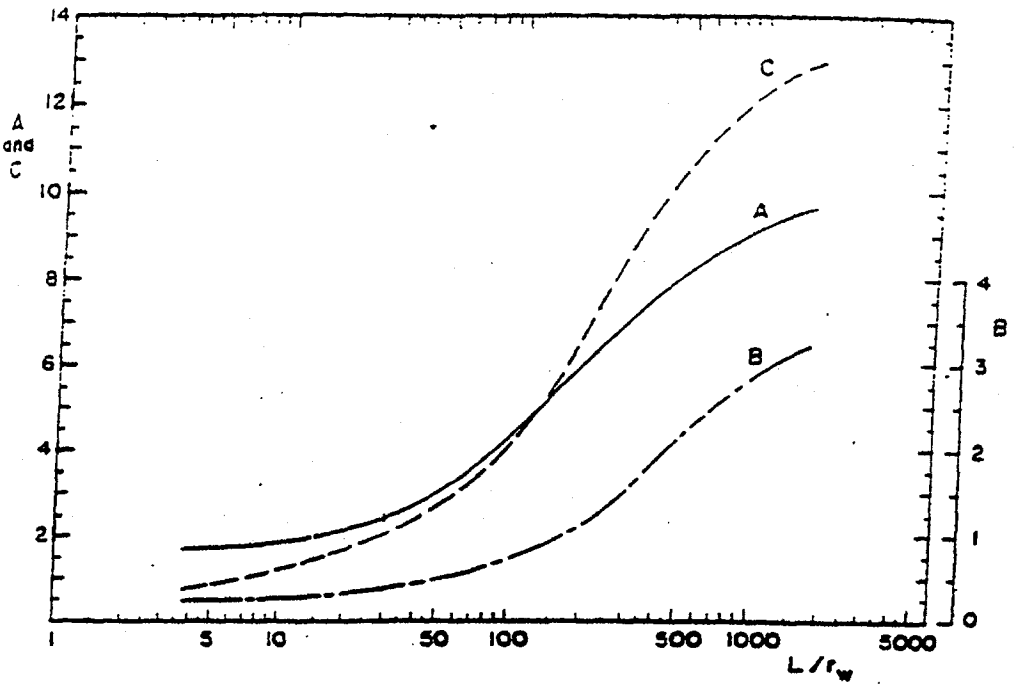

Fig. 3. Curves relating coefficients A, B, and C to L/r_w.

85% equipotential when R_e is laterally extended from the center of the open portion of the well. Thus most of the head loss in the flow system occurs in a cylinder with radius R_e, which is indicative of the horizontal extent of the portion of the aquifer sampled for K or T. The vertical extent is somewhat greater than L, as indicated by, for example, the 80% equipotential in Figure 2.

To estimate the rate of rise of the water level in a well after it is suddenly lowered, (5) can be written as

$$t = \frac{r_c^2}{2KL} \ln \frac{R_e}{r_w} \ln \frac{y_0}{y_t} \qquad (10)$$

By taking $y_t = 0.9y_0$, (10) reduces to

$$t_{90\%} = 0.0527 \frac{r_c^2}{KL} \ln \frac{R_e}{r_w} \qquad (11)$$

where $t_{90\%}$ is the time that it takes for the water level to rise 90% of the distance to the equilibrium level. By assuming a permeable aquifer with $K = 30$ m/day, a well with $r_c = 0.2$ m and $L = 10$ m, and $\ln (R_e/r_w) = 3$, (11) yields $t_{90\%} = 1.82$ s. Thus if y_0 is taken as 30 cm, it takes 1.8 s for the water level to rise 27 cm, another 1.8 s for the next 2.7 cm (90% of the remaining 3 cm), and another 1.8 s for the next 0.27 cm, or a total of 5.4 s for a rise of 29.97 cm. Measurement of this fast rise requires a sensitive and accurate transducer and a fast-response recorder. The rate of rise can be reduced by allowing groundwater to enter through only a portion of the open section of the well, as can be accomplished with packers.

For a moderately permeable aquifer with, for example, $K = 1$ m/day, a well with $r_c = 0.1$ m and $L = 20$ m, and $\ln (R_e/r_w) = 5$, (11) yields $t = 11.4$ s. In this case, it would take the water level 22.8 s to rise from 30 cm to 0.3 cm below static level.

EXAMPLE

A slug test was performed on a cased well in the alluvial deposits of the Salt River bed west of Phoenix, Arizona. The well, known as the east well, is located about 20 m east of six rapid infiltration basins for groundwater recharge with sewage effluent [*Bouwer*, 1970]. The static water table was at a depth of 3 m, $D = 80$ m, $H = 5.5$ m, $L = 4.56$ m, $r_c = 0.076$ m, and r_w was taken as 0.12 m to allow for development of the aquifer around the perforated portion of the casing. A Statham PM131TC pressure transducer was suspended about 1 m below the static water level in the well (when trade names and company names are included, they are for the convenience of the reader and do not imply preferential endorsement of a particular product or company over others by the U.S. Department of Agriculture). A solid cylinder with a volume equivalent to a 0.32-m change in water level in the well was also placed below the water level. When the water level had returned to equilibrium, the cylinder was quickly removed. The transducer output, recorded on a Sargent millivolt recorder, yielded the y-t relationship shown in Figure 4 with y plotted on a logarithmic scale. The straight-line portion is the valid part of the readings. The actual y_0 value of 0.29 m indicated by the straight line is close to the theoretical value of 0.32 m calculated from the displacement of the submerged cylinder.

Extending the straight line in Figure 4 shows that for the arbitrarily selected t value of 20 s, $y = 0.0025$ m. Thus $(1/t) \ln y_0/y_t = 0.238\ s^{-1}$. The value of $L/r_w = 38$, for which Figure 3 yields $A = 2.6$ and $B = 0.42$. Substituting these values into (8) and using the maximum value of 6 for $\ln [(D - H)/r_w]$ (since $\ln [(D - H)/r_w]$ for the well exceeds 6) yield $\ln (R_e/r_w) = 2.37$. Equation (5) then gives $K = 0.00036$ m/s $= 31$ m/day. This value agrees with K values of 10 and 53 m/day obtained previously with the tube method on two nearby observation wells [*Bouwer*, 1970]. These K values were essentially point measurements on the aquifer immediately around the well bottoms, which were at depths of 9.1 and 6.1 m, respectively.

COMPARISONS

Piezometer method. The geometry to which (8) and (9) and the coefficients in Figure 3 apply overlaps the geometry of the

The Bouwer and Rice Slug Test — An Update[a]

by Herman Bouwer[b]

ABSTRACT

The Bouwer and Rice slug test was developed to measure aquifer hydraulic conductivity around boreholes (production, monitoring, or test wells). The wells can be partially penetrating and partially screened, perforated, or otherwise open. The slug test can be based on quickly withdrawing a volume of water from the well and measuring the subsequent rate of rise of the water level in the well, or by adding a slug of water and measuring the subsequent rate of fall of the water level in the well. While originally developed for unconfined aquifers, the method can also be used for confined or stratified aquifers if the top of the screen or perforated section is some distance below the upper confining layer. Anomalies ("double straight line effect") sometimes observed in the measured rate of rise of the water level in the well are attributed to drainage of a gravel pack or developed zone around the well following lowering of the water level. The effect of this drainage can be eliminated by ignoring the early data points and using the second straight line portion in the data plot for calculation of hydraulic conductivity. The method is applicable to any diameter and depth of the borehole, provided that the dimensions of the system are covered by the ranges for which the geometry factor R_e has been worked out. The smaller the diameter of the hole, however, the more vulnerable the results will be to aquifer heterogeneities and to inaccuracies in estimating effective well diameters. Computer programs for rapid processing of the field data have been developed.

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INTRODUCTION

The slug test developed by Bouwer and Rice (1976) permits the measurement of saturated hydraulic conductivity (K) of aquifer materials with a single well. The method consists of quickly lowering or raising the water level in a well or borehole from equilibrium and measuring its subsequent rate of rise or fall, respectively. The method was designed to measure K of the aquifer around the screen or otherwise open portion of the well for fully or partially penetrating wells in unconfined aquifers. Because of its simplicity, the Bouwer and Rice slug test has become a frequently used tool in ground-water investigations. This paper addresses some of the experiences obtained with the method, including the validity of falling level tests, use of the method in confined aquifers, effect of draining gravel packs on the rise of the water level, effect of hole diameter, and computer processing of field data.

METHODOLOGY

Geometry and symbols of a slug-tested well are shown in Figure 1. The rate of flow of ground water into the well when the water level in the well is a distance y lower than the static ground-water table around the well is calculated with the Thiem equation as

$$Q = 2\pi K L_e \frac{y}{\ln(R_e/r_w)} \qquad (1)$$

where Q = volume rate of flow into well; K = hydraulic conductivity of aquifer around well; L_e = length of screened, perforated, or otherwise open section of well; y = vertical difference between water level inside well and static water table outside

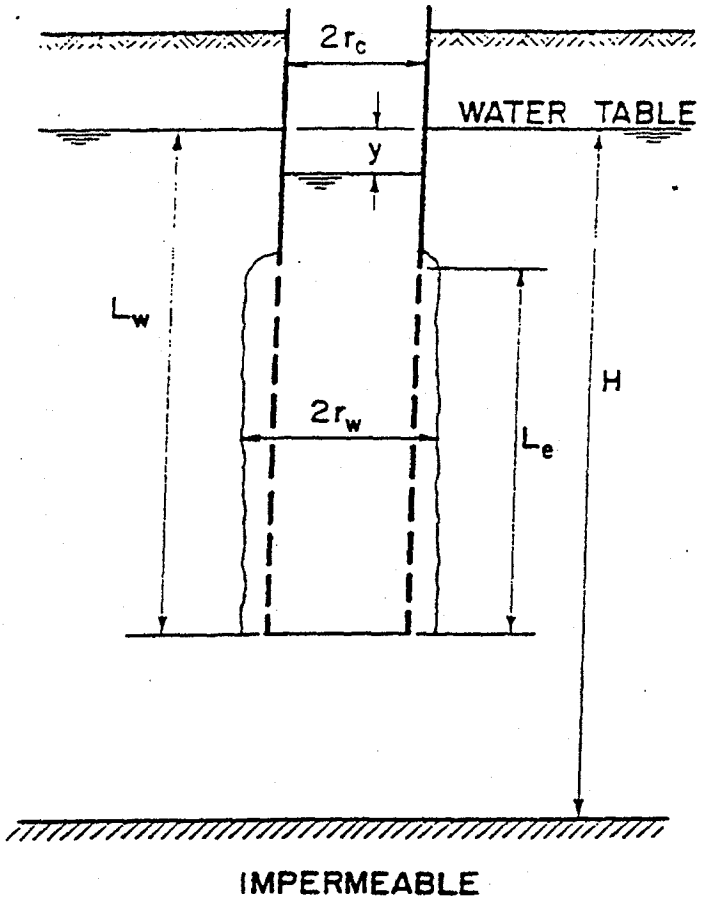

Fig. 1. Geometry and symbols for slug test on partially penetrating, partially screened well in unconfined aquifer with gravel pack and/or developed zone around screen.

well: R_e = effective radial distance over which y is dissipated; and r_w = radial distance of undisturbed portion of aquifer from centerline.

Values of R_e were determined with an electrical resistance network analog for different values of r_w, L_e, L_w, and H (see Figure 1 for meaning of geometry symbols). The value of r_w is the radius of the screened or open section of the well plus the thickness of a sand or gravel pack and/or of the developed zone around the well. Thus, r_w is the radial distance from the center of the well to normal K of the aquifer. Because the thickness of the developed zone is almost never known, the tendency is to ignore it and take only gravel or sand packs into account.

The rate of rise dy/dt of the water level in the well after the water level has been quickly lowered some distance is

$$\frac{dy}{dt} = -\frac{Q}{\pi r_c^2} \qquad (2)$$

where r_c is the radius of the casing or other section of the well where the rise of the water level is measured. If the water level rises in the screened or open section of the well with a gravel pack around it, the thickness and porosity of the gravel envelope should be taken into account when calculating the equivalent value of r_c for the rising water level. This calculation is based on the total free-water surface area in the well and sand or gravel pack, calculated as $\pi r_c^2 + \pi(r_w^2 - r_c^2)n$, where n is the porosity, and $r_w - r_c$ is the thickness of the envelope. The equivalent radius of a circle giving this total area is then calculated as $[(1-n)r_c^2 + nr_w^2]^{1/2}$. For example, if the radius of the screen or perforated casing is 20 cm and there is 8 cm gravel pack with a porosity of 30 percent, r_c should be taken as 25.9 cm, while r_w is 28 cm.

Solving equation (2) for Q, equating the resulting expression to equation (1), integrating, and solving for K yields

$$K = \frac{r_c^2 \ln(R_e/r_w)}{2L_e} \frac{1}{t} \ln \frac{y_0}{y_t} \qquad (3)$$

where y_0 = y at time zero; and y_t = y at time t.

The results of the analog analyses to evaluate R_e for various system geometries were expressed in terms of the dimensionless ratio $\ln(R_e/r_w)$. The data could be fitted into two equations, one for the case where $L_w < H$, and one where $L_w = H$. The resulting equations were, respectively,

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{A + B\ln[(H-L_w)/r_w]}{L_e/r_w}\right]^{-1} \qquad (4)$$

and

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{C}{L_e/r_w}\right]^{-1} \qquad (5)$$

where A, B, and C are dimensionless numbers plotted in Figure 2 as a function of L_e/r_w.

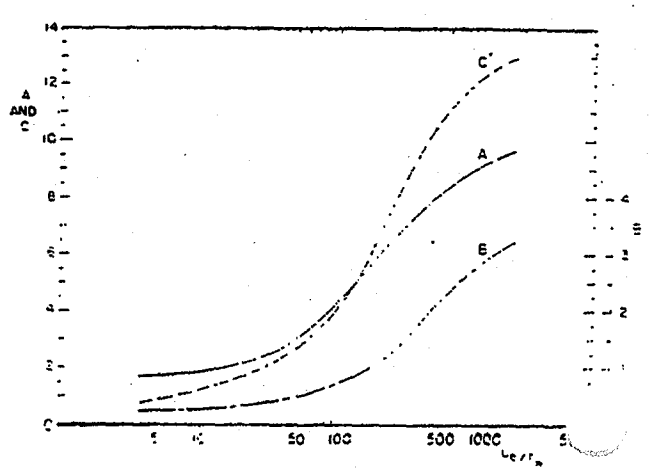

Fig. 2. Dimensionless parameters A, B, and C as a function of L_e/r_w for calculation of $\ln(R_e/r_w)$.

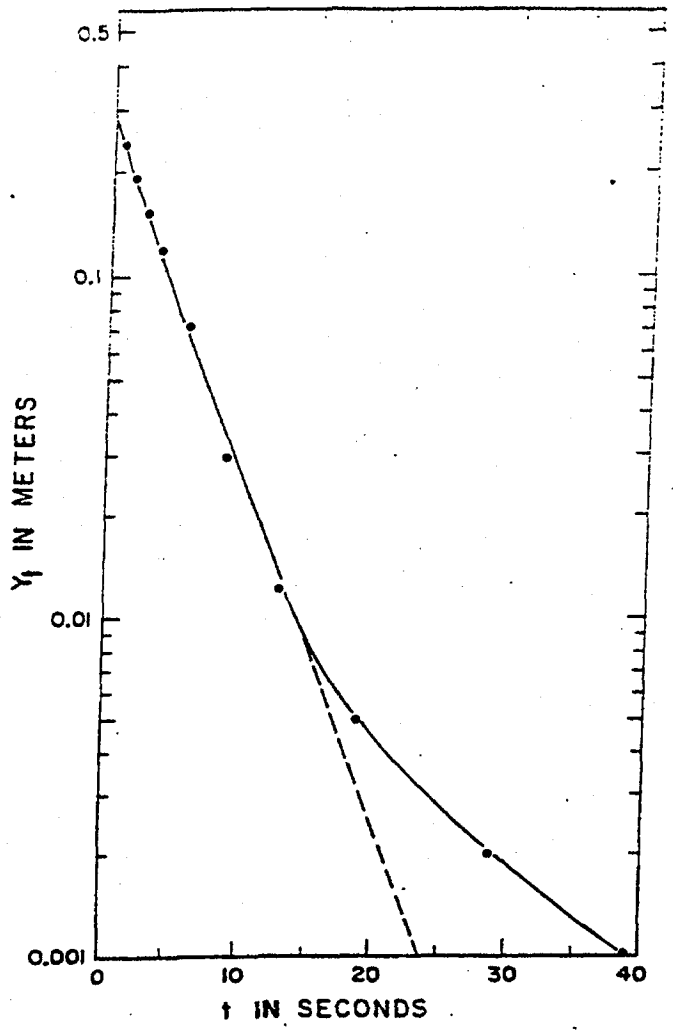

Fig. 3. Graph of log y_t versus t for slug test on well in Salt River Bed, 27th Avenue, Phoenix, Arizona.

Because y and t are the only variables in equation (3), a plot of ln y_t versus t must show a straight line. Thus, instead of calculating K on the basis of two measurements of y and t (y_0 at t = 0 and y_t at t), a number of y and t measurements can be taken and $[\ln(y_0/y_t)]/t$ determined as the slope of the best-fitting line through the y versus t points on semilogarithmic paper (Figure 3). The straight line through the data points can also be used to select two values of y, namely, y_0 and y_t, along with the time interval t between them for substitution into equation (3). Because drawdown of the ground-water table around the well becomes increasingly significant as the test progresses, the points as in Figure 3 begin to deviate from the straight line for large t and small y. Thus, only the straight line portion of the data points should be used to evaluate $[\ln(y_0/y_t)]/t$ for calculation of K with equation (3).

The slug test can be used on production wells, test wells, observation wells, and monitoring wells. Objectives for the measurements include characterization of aquifer hydraulic conductivity for modeling, ground-water recharge studies, and ground-water pollution studies. The method is particularly useful in ground-water contamination studies because the slug test can be carried out on the same wells used for ground-water quality monitoring. Also, combining the resulting values of hydraulic conductivity with the porosity of the aquifer and slopes of the ground-water table or piezometric surface permits the prediction of pore-water velocities and, hence, the rate of movement of pollution plumes and transport of contaminants. The slug test can also be useful in determining vertical distribution of hydraulic conductivities in an aquifer system and other spatial variability of hydraulic conductivity in studies of macrodispersion and movement of contaminants.

Over the years, a number of questions and comments about the slug test have been received. These questions and comments are addressed in the following sections.

DOUBLE STRAIGHT LINE EFFECT

Users of the slug test have observed that when plotting log y_t versus t as in Figure 3, they sometimes get a double straight line as shown schematically in Figure 4. The first part (AB) is straight and steep, whereas the next part (BC) is straight and less steep. Then, at point C, the points begin their expected deviation from the straight line as

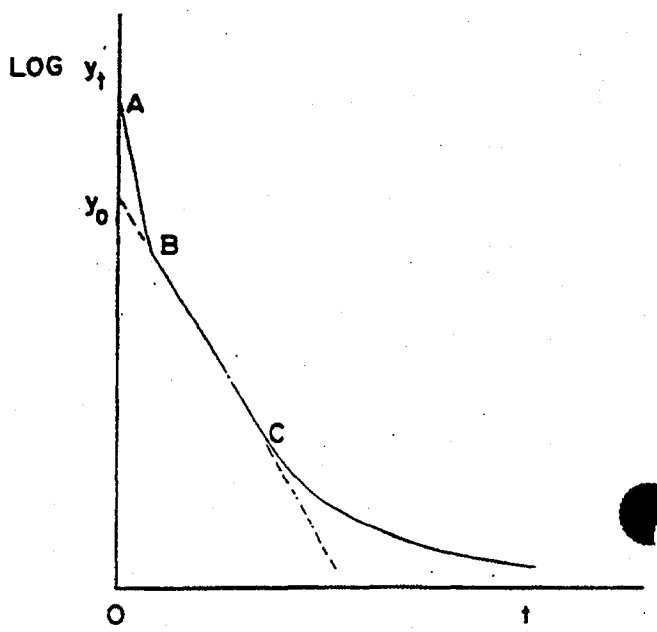

Fig. 4. Schematic of double straight line effect.

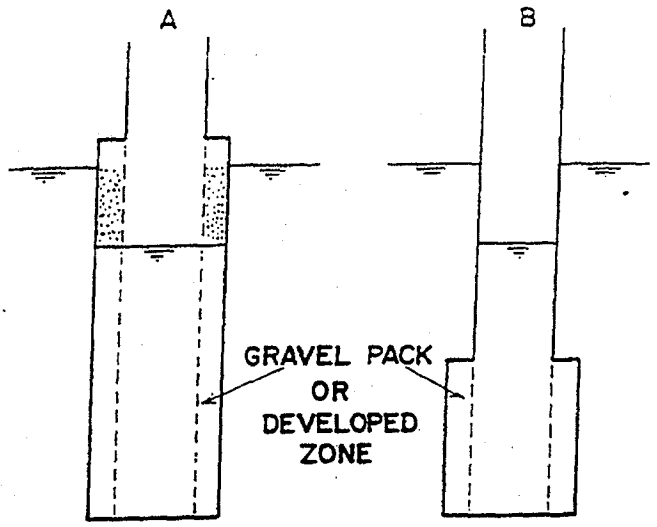

Fig. 5. Slug test for borehole with ground-water level below (A), and above (B) top of screen or perforated section.

the drawdown around the hole becomes significant relative to y_t. The first straight line portion in Figure 4 is probably due to a highly permeable zone around the well (gravel pack or developed zone), which quickly sends water into the well immediately after the water level in the well has been lowered (Figure 5A). Then, when the water level in the permeable zone around the well has drained to the water level in the well itself, the flow into the well slows down and the points begin to form a second, less steep, straight line (BC in Figure 4). This second straight line is more indicative of the flow from the undisturbed aquifer into the well. Hence, segment BC should be used in calculating K of the aquifer with equation (3). In the original 1976 article, gravel envelopes or developed zones were assumed to drain at the same rate as the water level in the borehole when it is lowered for the slug test, i.e., essentially instantaneously. However, some gravel packs or developed zones apparently are not permeable enough to give such instantaneous drainage.

If the ground-water table is above the screened or open section of the borehole, and the water level in the hole is not lowered so far that it drops below the top of the open section (Figure 5B), the gravel envelope or developed zone around the open section cannot drain. The inflow into the hole then is immediately controlled by the aquifer, and the double straight line effect should not occur. If it still occurs, it could indicate leakage around the casing or grouting above the gravel pack.

Where the double straight line is due to a gravel pack around the well, the effective well radius r_w should be taken as the radial distance from the center of the well to the outer surface the gravel pack. Where the double straight line due to a naturally developed zone around the well, r_w is harder to evaluate and an "intelligent" estimate must be made. It may also be possible to estimate r_w from the value of y at point B in Figure 4. Considering the volume of water in the well between y_A and y_B in Figure 4 to be due to the drainage of the gravel pack or developed zone, and knowing or estimating the drainable porosity of the gravel pack or developed zone, the radial extent of this zone can be calculated for evaluation of r_w. Capillary fringe effects do not have to be considered, since the capillary fringe was also present in the pack or in the developed zone before the water level was lowered. Because the rising water level in the hole during the slug test will also fill up the drained pore space of the gravel pack or developed zone, the value of r_c in the equation for calculation of K should be adjusted to take this effect into account, as discussed earlier in this article.

Conceivably, a well could have a gravel pack surrounded by a less permeable developed zone before the original aquifer material is reached. This could lead to a triple straight line effect, with a intermediate straight line portion at point B, or a curved transition zone at B if the hydraulic conductivity of the developed zone gradually decreases until K of the original aquifer material is reached. By the same token, portion AB in Figure 4 could also be curved if the hydraulic conductivity of the gravel pack or developed zone immediately around the well decreases with radial distance from the well.

FALLING WATER LEVEL TEST

The slug test was developed for a rising water level in the borehole, as obtained by quick removal of a certain volume or slug of water. This can be achieved by bailing, (quick) pumping, or by immersing a section of pipe filled with sand or other ballast and closed with caps on both ends, or other submersible object, in the borehole, letting the water level in the borehole return to equilibrium, and quickly removing the submerged object. The question is often raised: can the method also be used when a volume of water is quickly added to the hole and the subsequent rate of fall of the water level in the hole is measured for calculation of K? The answer is yes, provided that the equilibrium water level is above the screened or open section of the borehole (Figures 1 and 5B). In this

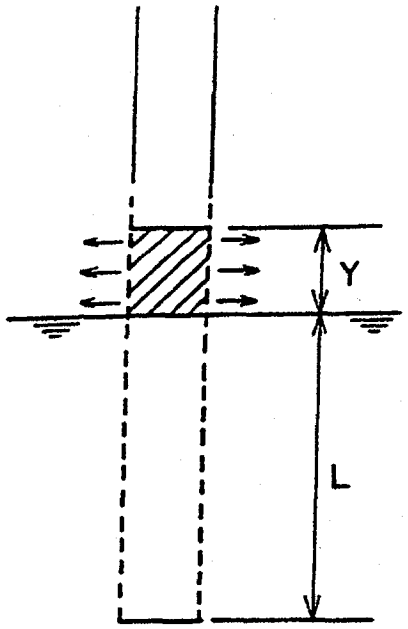

Fig. 6. Schematic of addition of water (hatched section) to borehole with equilibrium water level below top of screen or perforated section, with outflow of water into vadose zone (horizontal arrows).

case, the outflow from the well due to the falling water level occurs only through the screened or open section of the well, and the flow system in the aquifer is a true reverse of the flow system for the rising water level after a slug of water has been removed (ignoring, of course, eventual rises and drawdowns of the ground-water table immediately around the borehole if the aquifer is unconfined). Thus, equations (3), (4), and (5) are also applicable to the addition of a slug of water and measuring the subsequent rate of fall of the water level in the borehole for calculation of K of the aquifer around the hole.

If the equilibrium water level in the borehole is below the top of the screen or open section (Figure 6), and water is added (hatched section in Figure 6), the subsequent flow of water into the aquifer due to the falling water level not only takes place through the screen or perforations below the original water table, but also through the vadose zone above the original water table (arrows in Figure 6). This increases the rate of fall of the water level in the borehole beyond that caused by inflow into the aquifer and leads to an overestimation of K. The greater the ratio of y/L (Figure 6) in this case, the more the slug test will overestimate K if the measurement is based on adding water to the hole and measuring the subsequent rate of fall of the water level.

APPLICATION OF SLUG TEST TO CONFINED AQUIFERS

Theoretically, the slug test (Bouwer and Ric 1976) applies to aquifers where the upper bound ary is a plane source (rising water-level test) or sink (falling water-level test), as in an unconfined aquifer. However, because most of the head difference y between the static water table and the water level in the well is dissipated in the vicinity of the well around the screen or perforated section, the method should also be applicable to situations where the upper boundary of the aquifer is an impermeable or semipermeable plane, i.e., an impermeable or semipermeable upper confining layer. Thus the slug test should also give reasonable values for K in confined, semiconfined, or stratified aquifers. Theoretically, the larger the distance between the top of the screened or open section of the well and the upper confining layer (like $L_w - L_e$ in Figure 1), the more accurate the resulting values of K will be. In actuality, however, source boundaries of ground water flowing into the well in response to lowering the water level are hard to define because of elastic deformation of aquifer material and confining and interbedded fine-textured layers, and because of leakage through semiconfining layers.

EFFECT OF WELL DIAMETER

Theoretically, the Bouwer and Rice slug test applies to any diameter of the borehole. Practically, the hole dimensions should be selected so that the geometry parameters are covered by Figure 2. The larger r_w and L_e (Figure 1), the larger the portion of the aquifer on which K is determined. For layered aquifers, smaller values of L_e may sometimes be preferable because they give more resolution and more information about the vertical distribution of K when the slug test is carried out at different depths. Very small hole diameters (for example 2 in. or 5 cm) should still give accurate values for K, but the values apply to only a small region around the well and, hence, are more sensitive to spatial variability. Also, inaccuracies in the estimates of the thickness of gravel envelopes and developed zones have a greater effect on the calculated values of K where r_c is small than where r_c is large.

PROCESSING OF y VERSUS t MEASUREMENTS

To calculate $1/t \ln(y_0/y_t)$ for the appropriate straight line portion of curves as in Figure 3 or 4, two values of y on the straight line and their

corresponding values of t are read from the graph. The natural logarithm of the ratio y_0/y_t is then taken and divided by the difference between the two values of t. For example, Figure 3 shows that at y is 0.28 m and 0.001 m, t is 0 and 24 seconds, respectively. This yields

$1/t \ln(y_0/y_t) = 1/24 \ln(0.28/0.001) = 0.23$ m/sec.

If $1/t \ln(y_0/y_t)$ is calculated from the slope of the curve, the number of log cycles on the vertical scale between the two points is divided by the time increment and multiplied by 2.3 to convert to natural logarithm. For example, Figure 3 shows that the straight line from $y_0 = 0.28$ m to $y_t = 0.001$ m covers 2.4 log cycles. The time increment between the two points is again 24 seconds, yielding $1/t \ln(y_0/y_t) = 2.3 \times 2.4/24 = 0.23$ m/sec, which is the same as calculated earlier. Because of different coordinate scales in plots of log y versus t, the value of $1/t \ln(y_0/y_t)$ cannot be taken as the actual slope of the straight line portion!

ESTIMATING RATE OF RISE OR FALL OF WATER LEVEL IN WELL

If the water level in a slug-tested well rises or falls at a relatively slow rate, simple water-level measuring devices and a stop watch may be all that is needed to do the test. Fast-moving water levels, however, require the use of a pressure transducer and a fast-acting x-y plotter. To get some idea about the rate of water-level movement that can be expected in a slug-tested well and what equipment to use, equation (3) can be solved for t and $\ln(y_0/y_t)$ can be taken as ln 10 to calculate the time $t_{90\%}$ required for the water level in the well to rise or fall 90% of the initial lowering or raising, respectively, of the water level in the well. This yields the equation

$$t_{90\%} = 1.15 \frac{r_c^2}{KL_e} \ln \frac{R_e}{r_w} \qquad (6)$$

where K must be taken as the estimated or expected value of K of the aquifer. Equation (6) yields values of t that are 22 times greater than the t values calculated by the $t_{90\%}$ equation in the original article (Bouwer and Rice, 1976), where $\ln(y_0/y_t)$ was erroneously taken as ln 0.9, thus yielding the time required for only 10% of the water-level rise or fall to occur.

COMPUTER PROGRAMS

Where the Bouwer and Rice slug test is routinely used, time for calculating K with equation (3) is saved by developing a computer program in which values of L_e/r_w are stored for direct calculation of $\ln(R_e/r_w)$ and K from the field data. Such programs have been developed by several users (see, for example, Pandit and Miner, 1986; and Kemblowski and Klein, 1988). Also, a number of users have designed forms for easy and systematic recording of field data.

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Pandit, N. S. and R. F. Miner. 1986. Interpretation of test data. Ground Water, v. 24, pp. 743-749.

Herman Bouwer received B.S. and M.S. degrees in 1949 and 1952 in Drainage, Reclamation, and Irrigation from the National Agricultural University at Wageningen, The Netherlands, and a Ph.D. degree in 1955 in Soil and Water Management from Cornell University, New York. He was associated with the Agricultural Engineering Department of Auburn University, Alabama, from 1955 to 1959, before joining the U.S. Water Conservation Laboratory in Phoenix, Arizona, where he became Director in 1972. In 1970, he also was appointed Adjunct Professor at Arizona State University in Tempe where he taught Ground-Water Hydrology in the Geology and Civil Engineering Departments. He is also an Adjunct Professor at the University of Arizona in Tucson.

Response of a Finite-Diameter Well to an Instantaneous Charge of Water[1]

HILTON H. COOPER, JR., JOHN D. BREDEHOEFT, AND ISTAVROS S. PAPADOPULOS

Water Resources Division, U. S. Geological Survey, Washington, D. C.

Abstract. A solution is presented for the change in water level in a well of finite diameter after a known volume of water is suddenly injected or withdrawn. A set of type curves computed from this solution permits a determination of the transmissibility of the aquifer. (Key words: Aquifer tests; groundwater; hydraulics; permeability)

INTRODUCTION

Ferris and Knowles [1954] introduced a method for determining the transmissibility of an aquifer from observations of the water level in a well after a known volume of water is suddenly injected into the well. (See also *Ferris et al.* [1962]). They reasoned that for practical purposes the well may be approximated by an instantaneous line source in the infinite region, for which the residual head differences due to the injection are described by

$$h = (V/4\pi Tt)e^{-r^2S/4Tt} \qquad (1)$$

where

h = change in head at distance r and time t due to the injection;
r = distance from the line source or center of well;
t = time since instantaneous injection;
V = volume of water injected;
T = transmissibility of aquifer;
S = coefficient of storage of aquifer.

They reasoned further that the head H in the injected well would be described closely by (1) when r is set equal to the effective radius r_e [*Jacob*, 1947, p. 1049] of the screen or open hole. Then, since r_e is small, the exponential approaches unity quickly, so that the equation approaches $H = V/4\pi Tt$, which can be written

$$T = V(1/t)/4\pi H \qquad (2)$$

To the extent that the equation is valid for a well of finite diameter, a determination of the transmissibility can be obtained from the slope of a plot of head H versus the reciprocal of time $(1/t)$.

Since the volume of water injected into the well is $\pi r_e^2 H_0$, where r_e is the radius of the casing in the interval over which the water level fluctuates and H_0 is the initial head increase in the well, equation 1 can be written

$$h/H_0 = (r_e^2/4Tt)e^{-r^2S/4Tt} \qquad (3)$$

and equation 2 can be written

$$H/H_0 = r_e^2/4Tt \qquad (4)$$

Recently *Bredehoeft et al.* [1966] demonstrated by means of an electrical analog model of a well-aquifer system that equation 3 gives a satisfactory approximation of the head in an injected well only after the time t is large enough for the ratio H/H_0 to be very small (see Figure 1). The observed discrepancy appears to arise from the assumption that the injected well can be approximated by a line source.

We present here an exact solution for the head in and around a well of finite diameter after the well is instantaneously charged with a known volume of water.

ANALYSIS

Consider a nonflowing well cased to the top of a homogeneous isotropic artesian aquifer of uniform thickness, and screened (or open) throughout the thickness of the aquifer (Figure 2). Suppose that the well is instantaneously charged with a volume V of water. (We will consider

[1] Publication authorized by the Director, U. S. Geological Survey.

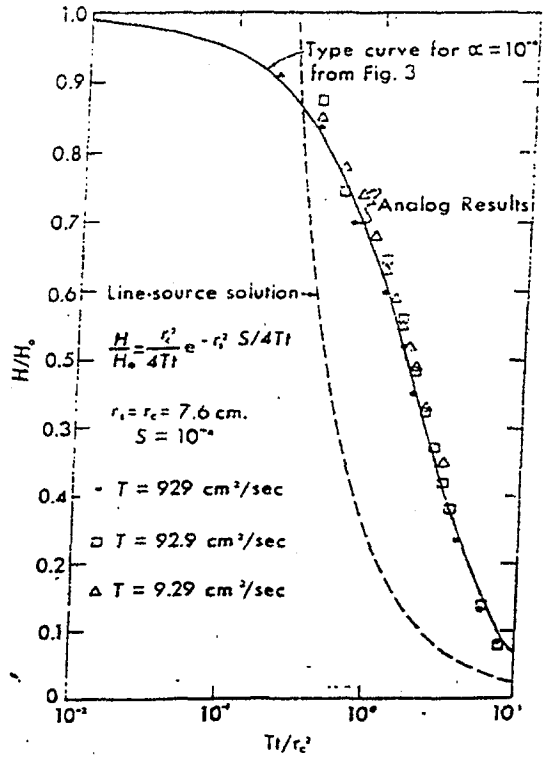

Fig. 1. Comparison of analog results with curve representing line-source solution.

an injection as a positive charge and a withdrawal as a negative one.) The water level in the well instantaneously moves to the height $H_o = V/\pi r_c^2$ above or below its initial level and immediately begins to return to its initial level according to some function of time $H(t)$. Meanwhile the head in the surrounding aquifer varies according to $h(r, t)$. Our objective is to find a solution for $h(r, t)$ and $H(t)$. The inertia of the column of water in the well will be neglected. (See, in this connection, *Bredehoeft et al.* [1966]). Since the solution to be obtained can be superposed on any initial condition, we can simplify the problem without loss of generality by assuming that the head is initially uniform and constant.

The problem is described mathematically by

$$\partial^2 h/\partial r^2 + 1/r(\partial h/\partial r) = S/T(\partial h/\partial t) \qquad (r > r_s) \qquad (5)$$

$$h(r_s + 0, t) = H(t) \qquad (t > 0) \qquad (5a)$$

$$h(\infty, t) = 0 \qquad (t > 0) \qquad (5b)$$

$$2\pi r_s T[\partial h(r_s + 0, t)]/\partial r = \pi r_c^2(\partial H(t)/\partial t) \qquad (t > 0) \qquad (5c)$$

$$h(r, 0) = 0 \qquad (r > r_s) \qquad (5d)$$

$$H(0) = H_o = V/\pi r_c^2 \qquad (5e)$$

Equation 5 is the differential equation governing nonsteady radial flow of confined groundwater. (See, for example, *Jacob*, 1950, p. 333.) Boundary condition 5*a* states that after the first instant the head in the aquifer at the face of the well is equal to that in the well. Boundary condition 5*b* states that as r approaches infinity the change in head approaches zero. Equation 5*c* expresses the fact that the rate of flow of water into (or out of) the aquifer is equal to the rate of decrease (or increase) in volume of water within the well. The conditions 5*d* and 5*e* state that initially the change in head is zero everywhere outside the well and equal to H_o inside the well.

By applying the Laplace transform with respect to time the problem is reduced to

$$\partial^2\bar{h}/\partial r^2 + 1/r\,(\partial\bar{h}/\partial r) = (S/T)\,(p\bar{h}) \qquad (6)$$

$$\bar{h}(\infty, p) = 0 \qquad (6a)$$

$$[\partial\bar{h}(r_s + 0, p)]/\partial r = (r_s^2/2r_sT)[p\bar{h}(r_s + 0, p) - H_o] \qquad (6b)$$

for which the solution is

$$\bar{h}(r, p) = \frac{r_s S H_o K_o(rq)}{Tq[r_s q K_o(r_s q) + 2\alpha K_o(r_s q)]} \qquad (7)$$

where $q = (pS/T)^{\frac{1}{2}}$, and $\alpha = r_s^2 S/r_c^2$. The solution $h(r, t)$ is the inverse transform, which is available from the analogous problem in heat flow [*Carslaw and Jaeger*, 1959, p. 342]

$$h = \frac{2H_o}{\pi}\int_0^\infty e^{-\beta u^2/\alpha}\{J_o(ur/r_s)\cdot[uY_o(u) - 2\alpha Y_1(u)] - Y_o(ur/r_s)\cdot[uJ_o(u) - 2\alpha J_1(u)]\}\frac{du}{\Delta(u)} \qquad (8)$$

where $\beta = Tt/r_s^2$ and

$$\Delta(u) = [uJ_o(u) - 2\alpha J_1(u)]^2 + [uY_o(u) - 2\alpha Y_1(u)]^2$$

Fig. 2. Idealized

The head $H(t)$ inside
stituting $r = r_s$ in eq

$H = (SH_o\alpha/\pi$

Values of H/H_o co
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It is apparent from
Figure 3 that the lin
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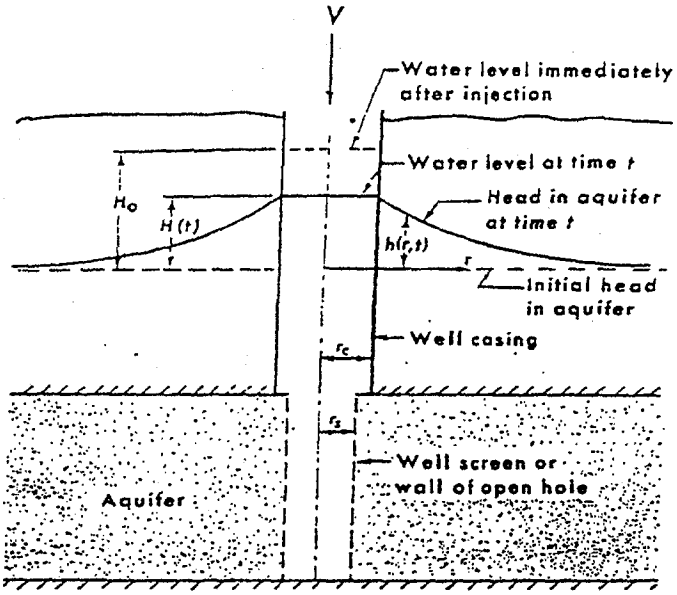

Fig. 2. Idealized representation of a well into which a volume V of water is suddenly injected.

The head $H(t)$ inside the well, obtained by substituting $r = r_s$ in equation 8, is

$$H = (8H_0\alpha/\pi^2) \int_0^\infty e^{-\beta u^2/\alpha}\, du/(u\,\Delta(u)) \qquad (9)$$

Values of H/H_0 computed by numerically integrating equation 9 are given in Table 1. Values computed from the line-source solutions, equations 3 and 4, are given in Table 2. In Figure 3 the values from Table 1 are represented as a family of five curves of H/H_0 versus the dimensionless time parameter $\beta = Tt/r_s^2$, one curve for each of five values of the parameter $\alpha = r_c^2S/r_s^2$. Also represented, by a dashed curve, are the values computed from equation 4.

It is apparent from Tables 1 and 2 and from Figure 3 that the line-source solutions 3 and 4 proposed by *Ferris and Knowles* [1954] give a close approximation of the finite-source solution 9 only for large values of the time parameter Tt/r_s^2. The approximation seems to be acceptable for Tt/r_s^2 greater than 100 (or, equivalently, for H/H_0 less than about 0.0025). (In the test at Speedway City, Indiana, used by Ferris and Knowles to exemplify their method, H/H_0 ranged from 0.01 to 0.001, and the value of transmissibility determined from these data agreed fairly well with one obtained by another method.)

A family of type curves plotted on semilogarithmic paper, as in Figure 3, permits a determination of the transmissibility. The method is similar to the Theis graphical method [*Wenzel*, 1942]. A test on a well near Dawsonville, Georgia, will be used to demonstrate the method. This well is cased to 24 m with 15.2-cm (6-inch) casing and drilled as a 15.2-cm open hole to a depth of 122 m. Figure 4 is a reproduction of a chart showing the hydrograph of the well after the sudden withdrawal of a long weighted float from the well. The weight of the float was 10.16 kilograms, and hence by the principle of Archimedes it had displaced a volume of 0.01016 m³ of water when floating in the well. Its withdrawal was therefore equivalent to a negative charge of $V = 0.01016$ m³. From the relation $H_0 = V/\pi r_s^2$ the initial head change is found to be $H_0 = 0.560$ m.

The hydrograph in Figure 4 was recorded electrically from a pressure transducer, which was suspended below the water surface in the well. Table 3 lists data from this chart. To determine the aquifer constants the data are

TABLE 1. Values of H/H_0 for a Well of Finite Diameter (computed from equation 9)

Tt/r_c^2	H/H_0				
	$\alpha = 10^{-1}$	$\alpha = 10^{-2}$	$\alpha = 10^{-3}$	$\alpha = 10^{-4}$	$\alpha = 10^{-5}$
1.00×10^{-3}	0.9771	0.9920	0.9969	0.9985	0.9992
2.15×10^{-3}	0.9658	0.9876	0.9949	0.9974	0.9985
4.64×10^{-3}	0.9490	0.9807	0.9914	0.9954	0.9970
1.00×10^{-2}	0.9238	0.9693	0.9853	0.9915	0.9942
2.15×10^{-2}	0.8860	0.9505	0.9744	0.9841	0.9888
4.64×10^{-2}	0.8293	0.9187	0.9545	0.9701	0.9781
1.00×10^{-1}	0.7460	0.8655	0.9183	0.9434	0.9572
2.15×10^{-1}	0.6289	0.7782	0.8538	0.8935	0.9167
4.64×10^{-1}	0.4782	0.6436	0.7436	0.8031	0.8410
1.00×10^{0}	0.3117	0.4598	0.5729	0.6520	0.7080
2.15×10^{0}	0.1665	0.2597	0.3543	0.4364	0.5038
4.64×10^{0}	0.07415	0.1086	0.1554	0.2082	0.2620
7.00×10^{0}	0.04625	0.06204	0.08519	0.1161	0.1521
1.00×10^{1}	0.03065	0.03780	0.04821	0.06355	0.08378
1.40×10^{1}	0.02092	0.02414	0.02844	0.03492	0.04426
2.15×10^{1}	0.01297	0.01414	0.01545	0.01723	0.01999
3.00×10^{1}	0.009070	0.009615	0.01016	0.01083	0.01169
4.64×10^{1}	0.005711	0.005919	0.006111	0.006319	0.006554
7.00×10^{1}	0.003722	0.003809	0.003884	0.003962	0.004046
1.00×10^{2}	0.002577	0.002618	0.002653	0.002688	0.002725
2.15×10^{2}	0.001179	0.001187	0.001194	0.001201	0.001208

plotted on semilogarithmic paper of the same scale as that of the type curves in Figure 3, and this plot is superposed on the type curves. With the arithmetic axes coincident, the data plot is translated horizontally to a position where the data best fit the type curves, as

TABLE 2. Values of H/H_0 for Line-source Approximation of a Well

Tt/r_c^2	H/H_0 from equation 3					H/H_0 from eq. 4
	$\alpha = 10^{-1}$	$\alpha = 10^{-2}$	$\alpha = 10^{-3}$	$\alpha = 10^{-4}$	$\alpha = 10^{-5}$	
1.00×10^{-3}	0.000000	20.52	194.7	243.8	249.4	250.0
2.15×10^{-3}	0.001035	36.35	103.5	115.0	116.2	116.3
4.64×10^{-3}	0.2463	31.44	51.05	53.59	53.85	53.88
1.00×10^{-2}	2.052	19.47	24.38	24.94	24.99	25.00
2.15×10^{-2}	3.635	10.35	11.50	11.62	11.63	11.63
4.64×10^{-2}	3.144	5.105	5.359	5.385	5.388	5.388
1.00×10^{-1}	1.947	2.438	2.494	2.499	2.500	2.500
2.15×10^{-1}	1.035	1.150	1.162	1.163		1.163
4.64×10^{-1}	0.5105	0.5359	0.5385	0.5388		0.5388
1.00×10^{0}	0.2438	0.2494	0.2499	0.2500		0.2500
2.15×10^{0}	0.1150	0.1162	0.1163			0.1163
4.64×10^{0}	0.05359	0.05385	0.05388			0.05388
7.00×10^{0}	0.03558	0.03570	0.03571			0.03571
1.00×10^{1}	0.02494	0.02499	0.02500			0.02500
1.40×10^{1}	0.01783	0.01786				0.01786
2.15×10^{1}	0.01162	0.01163				0.01163
3.00×10^{1}	0.008326	0.008333				0.008333
4.64×10^{1}	0.005385	0.005388				0.005388
7.00×10^{1}	0.003570	0.003571				0.003571
1.00×10^{2}	0.002499	0.002500				0.002500
2.15×10^{2}	0.001163					0.001163

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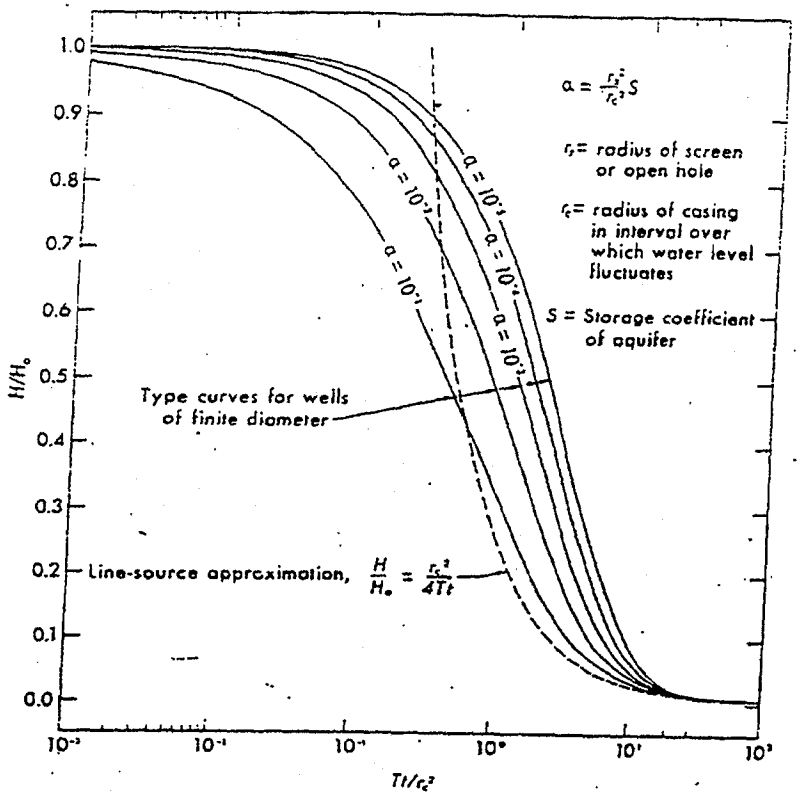

Fig. 3. Type curves for instantaneous charge in well of finite diameter.

shown in Figure 5. In this position the time $t = 11$ sec on the data coordinates is found to overlie the value $Tt/r_c^2 = 1.0$ on the type-curve coordinates. Hence the transmissibility is computed to be

$$T = \frac{1.0 r_c^2}{t} = \frac{(1.0)(7.6)^2}{(11)} = 5.3 \text{ cm}^2/\text{sec}$$

In principle the coefficient of storage can be determined by interpolating from its values for the curves that lie on either side of the data plot in the matched position. Thus, in the example just described, the coefficient of storage would be $S = 10^{-4}$, since for this well $r_c = r_s$, so that $\alpha = S$, and the points fall on the curve for $\alpha = 10^{-4}$. However, because the matching of data plot to the type curves depends upon the shapes of the type curves, which differ only slightly when α differs by an order of magnitude, a determination of S by this method has questionable reliability.

The determination of T is not so sensitive to the choice of the curves to be matched. Whereas the determined value of S will change by an

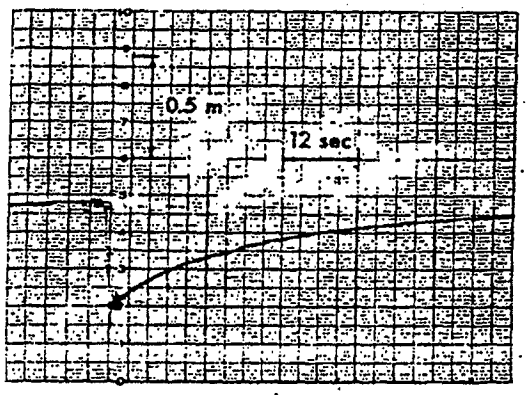

Fig. 4. Hydrograph of well at Dawsonville, Georgia, showing response of water level to the sudden withdrawal of a weighted float.

TABLE 3. Rise of Water Level in Dawsonville Well after Instantaneous Withdrawal of Weighted Float

t (sec)	$1/t$	Head (m)	H (m)	H/H_0
−1		0.896		
0		0.336	0.560	1.000
3	0.333	0.439	0.457	0.816
6	0.167	0.504	0.392	0.700
9	0.111	0.551	0.345	0.616
12	0.0833	0.588	0.308	0.550
15	0.0667	0.616	0.280	0.500
18	0.0556	0.644	0.252	0.450
21	0.0476	0.672	0.224	0.400
24	0.0417	0.691	0.205	0.366
27	0.0370	0.709	0.187	0.334
30	0.0333	0.728	0.168	0.300
33	0.0303	0.747	0.149	0.266
36	0.0278	0.756	0.140	0.250
39	0.0256	0.765	0.131	0.234
42	0.0238	0.784	0.112	0.200
45	0.0222	0.788	0.108	0.193
48	0.0208	0.803	0.093	0.166
51	0.0196	0.807	0.089	0.159
54	0.0185	0.814	0.082	0.146
57	0.0175	0.821	0.075	0.134
60	0.0167	0.825	0.071	0.127
63	0.0159	0.831	0.065	0.116

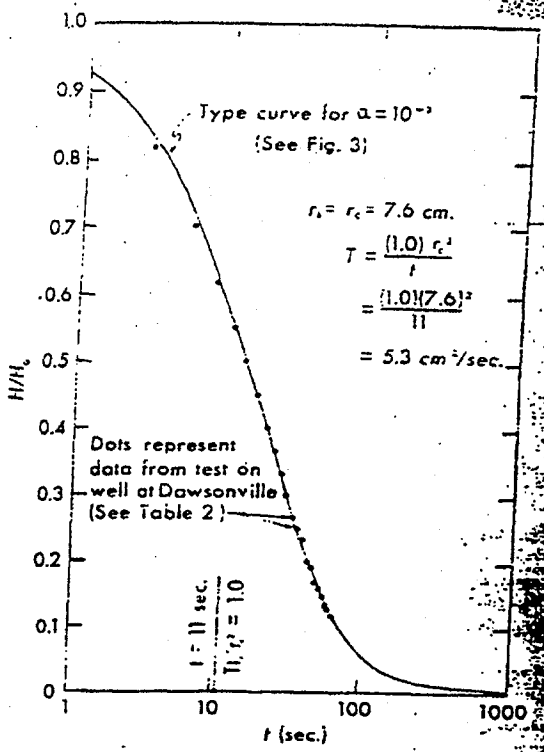

Fig. 5. Plot of data from test at Dawsonville, Georgia, superposed on type curve.

order of magnitude when the data plot is moved from one type curve to another, that of T will change much less. From a knowledge of the geologic conditions and other considerations one can ordinarily estimate S within an order of magnitude and thereby eliminate some of the doubt as to what value of α is to be used for matching the data plot.

Figure 6 shows the data from the test on the Dawsonville well plotted according to the Ferris-Knowles method. The points do not fall along a straight line as postulated in this method but, instead, fall along the trace of the type curve for $\alpha = 10^{-3}$, which has been transferred from Figure 5. Also shown is a straight line through the origin whose slope, when used according to the Ferris-Knowles method, will yield the transmissibility of 5.3 cm²/sec obtained by matching the data to the type curves.

CONCLUSION

The judgment of an experienced hydrologist is needed to decide the significance, if any, of a determination of T by the method of instantaneous charge. As *Ferris et al.* [1962] properly warned

> the duration of a 'slug' test is very short, hence the estimated transmissibility determined from the test will be representative only of the water-bearing material close to the well. Serious errors will be introduced unless the . . . well is fully developed and completely penetrates the aquifer.

Few wells completely penetrate an aquifer, but it is nevertheless possible under some circumstances for a hydrologist to derive useful information from a test on a partially penetrating well. Since the vertical permeabilities of most stratified aquifers are only small fractions of the horizontal permeabilities, the induced flow within the small radius of the cone that develops during the short period of observation is likely to be essentially 2-dimensional. Therefore, the determined value of T would represent approximately the transmissibility of that part

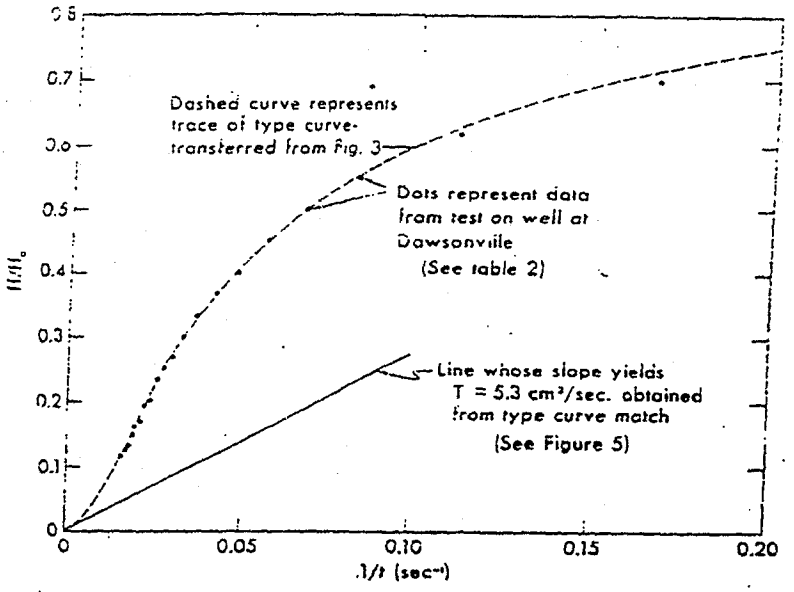

Fig. 6. Data from test on well of Dawsonville, Georgia, plotted according to the Ferris-Knowles method.

of the aquifer in which the well is screened or open, provided that the aquifer is reasonably homogeneous and isotropic in planes parallel to the bedding and provided that the effective radius r_e can be estimated closely.

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(Manuscript received May 12, 1966.)

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A Q T E S O L V   R E S U L T S

Version 1.10

10/29/91 16:13

TEST DESCRIPTION

Data set........... M1101Z.SET
Data set title..... RISING HEAD RESULT, M-11-01
Company............ J.M.MONTGOMERY, CONSULTING ENG
Project............ 2738.0257
Client............. NAVY - WESTDIV
Location........... Site 11, Building 14
Test date.......... September 18, 1991

Knowns and Constants:
No. of data points................... 56
Radius of well casing................ 0.083
Radius of well....................... 0.19
Aquifer saturated thickness.......... 1.1
Well screen length................... 1.1
Static height of water in well....... 1.1
Log(Re/Rw)........................... 1.262
A, B, C.............................. 0.000, 0.000, 0.961

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	5.9497E-004 ft/min = 3.0×10^{-4} cm/sec
y0 =	6.9315E+234

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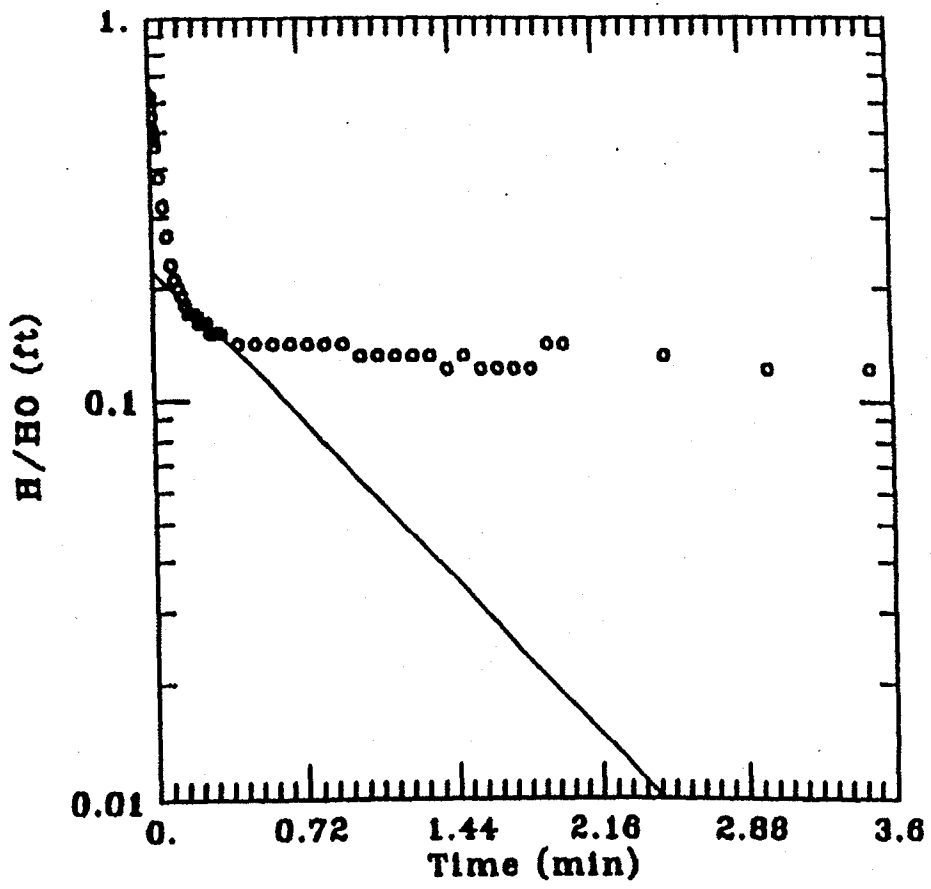
TYPE CURVE DATA

K = 4.98721E-003
y0 = 2.20874E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.209E-001	3.600E+000	2.351E-003		



DATA SET:
M11012.DAT
10/30/01

AQUIFER TYPE:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

TEST DATE:
September 10, 1991

ESTIMATED PARAMETERS:
K = 0.004907 ft/min
Y0 = 0.8800 ft

TEST DATA:
H0 = 0.62 ft
re = 0.055 ft
rw = 0.10 ft
L = 1.1 ft
b = 1.1 ft
B = 1.1 ft

RISING HEAD RESULT, M-11-01

J.M.MONTGOMERY, CONSULTING ENG	Client: NAVY - WESTDIV
Project No.: 2738.0257	Location: Site 11, Building 14

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Version 1.10

1/08/92 19:28:44

TEST DESCRIPTION

ata set........... m1102z.set
ata set title..... RISING HEAD RESULT, M-11-02
ompany............ J.M.MONTGOMERY, CONSULTING ENG
roject............ 2738.0257
lient............. NAVY - WESTDIV
ocation........... Site 11, Building 14
est date.......... September 18, 1991

nowns and Constants:
  No. of data points.................. 61
  Radius of well casing............... 0.083
  Radius of well...................... 0.19
  Aquifer saturated thickness......... 2.6
  Well screen length.................. 2.6
  Static height of water in well...... 2.6
  Log(Re/Rw).......................... 1.9
  A, B, C............................. 0.000, 0.000, 1.450

ANALYTICAL METHOD

uwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM VISUAL CURVE MATCHING

SUAL MATCH PARAMETER ESTIMATES

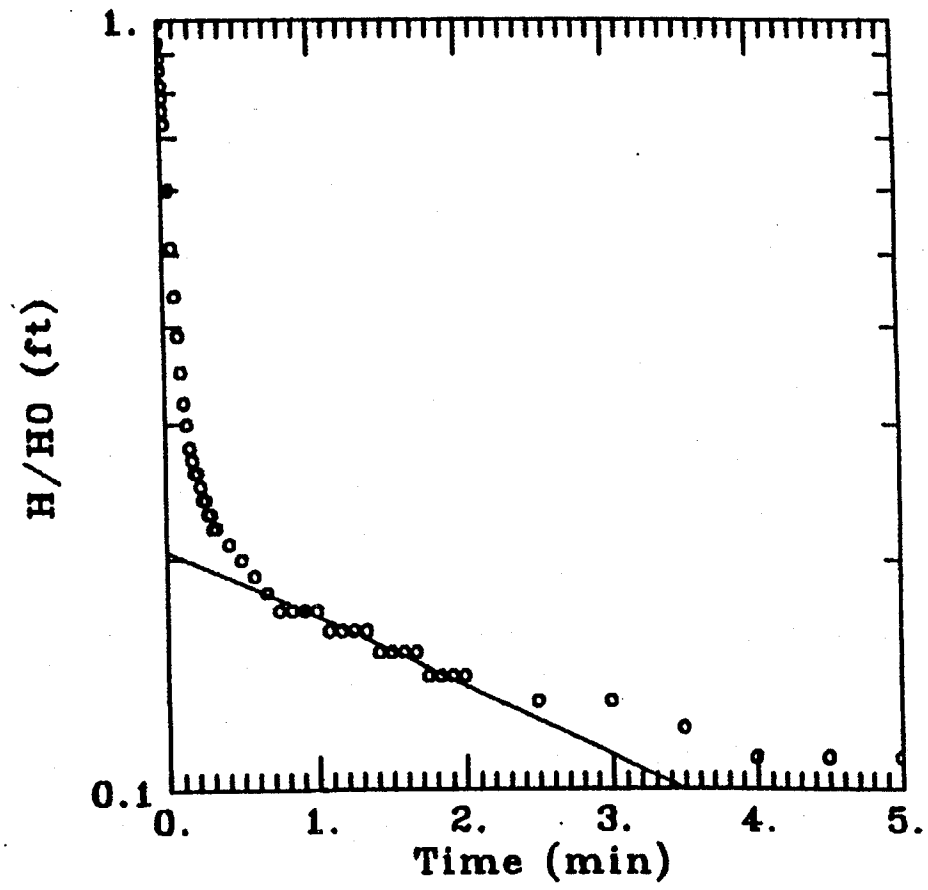
Estimate
K = 4.5031E-004 ft/min = $2.3 * 10^{-4}$ cm/sec
y0 = -8.9151E-287

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>

PE CURVE DATA

K = 5.30861E-004
y0 = 2.07558E-001

ime	Drawdown	Time	Drawdown	Time	Drawdown
000E+000	2.076E-001	4.000E+000	8.927E-002		



DATA SET:
m1102z.cet
01/10/02

AQUIFER TYPE:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

TEST DATE:
September 10, 1991

ESTIMATED PARAMETERS:
K = 0.0005105 ft/min
y0 = 0.2040 ft

TEST DATA:
H0 = 0.00 ft
re = 0.083 ft
rw = 0.10 ft
L = 3.0 ft
b = 2.6 ft
H = 2.6 ft

RISING HEAD RESULT, M-11-02

J.M.MONTGOMERY, CONSULTING ENG	Client: NAVY - WESTDIV
Project No.: 2738.0257	Location: Site 11, Building 14

M-11-02
RISING HEAD FIELD DATA
NAS ALAMEDA, CTO-121
1991

SE1000B
Environmental Logger
09/18 13:39

Unit# 00515 Test# 3

INPUT 1: Level (F) TOC

Reference 0.00
Scale factor 10.09
Offset 0.00

Step# 0 09/18 09:29

Elapsed Time (min)	Value (ft)
0.0000	1.46
0.0033	0.75
0.0066	1.17
0.0099	0.99
0.0133	0.93
0.0166	0.89
0.0200	0.86
0.0233	0.82
0.0266	0.79
0.0300	0.76
0.0333	0.73
0.0500	0.60
0.0666	0.51
0.0833	0.44
0.1000	0.39
0.1166	0.35
0.1333	0.32
0.1500	0.30
0.1666	0.28
0.1833	0.27
0.2000	0.26
0.2166	0.26
0.2333	0.25
0.2500	0.24
0.2666	0.24
0.2833	0.23
0.3000	0.23
0.3166	0.22
0.3333	0.22
0.4167	0.21
0.5000	0.20

Elapsed Time	Value
0.5833	0.19
0.6667	0.18
0.7500	0.17
0.8333	0.17
0.9167	0.17
1.0000	0.17
1.0833	0.16
1.1667	0.16
1.2500	0.16
1.3333	0.16
1.4166	0.15
1.5000	0.15
1.5833	0.15
1.6667	0.15
1.7500	0.14
1.8333	0.14
1.9167	0.14
2.0000	0.14
2.5000	0.13
3.0000	0.13
3.5000	0.12
4.0000	0.11
4.5000	0.11
5.0000	0.11
5.5000	0.10
6.0000	0.10
6.5000	0.10
7.0000	0.10
7.5000	0.09
8.0000	0.09
8.5000	0.08
9.0000	0.08
9.5000	0.08
10.0000	0.08

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

01/08/92 19:33

===

TEST DESCRIPTION

```
Data set........... m1103z.set
Data set title..... RISING HEAD RESULT, M-11-03
Company............ J.M.MONTGOMERY, CONSULTING ENG
Project............ 2738.0257
Client............. NAVY - WESTDIV
Location........... Site 11, Building 14
Test date.......... September 18, 1991

Knowns and Constants:
   No. of data points.................. 42
   Radius of well casing............... 0.083
   Radius of well...................... 0.19
   Aquifer saturated thickness......... 2.8
   Well screen length.................. 2.8
   Static height of water in well...... 2.8
   Log(Re/Rw).......................... 1.961
   A, B, C.............................  0.000,  0.000,  1.489
```

===

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

===

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

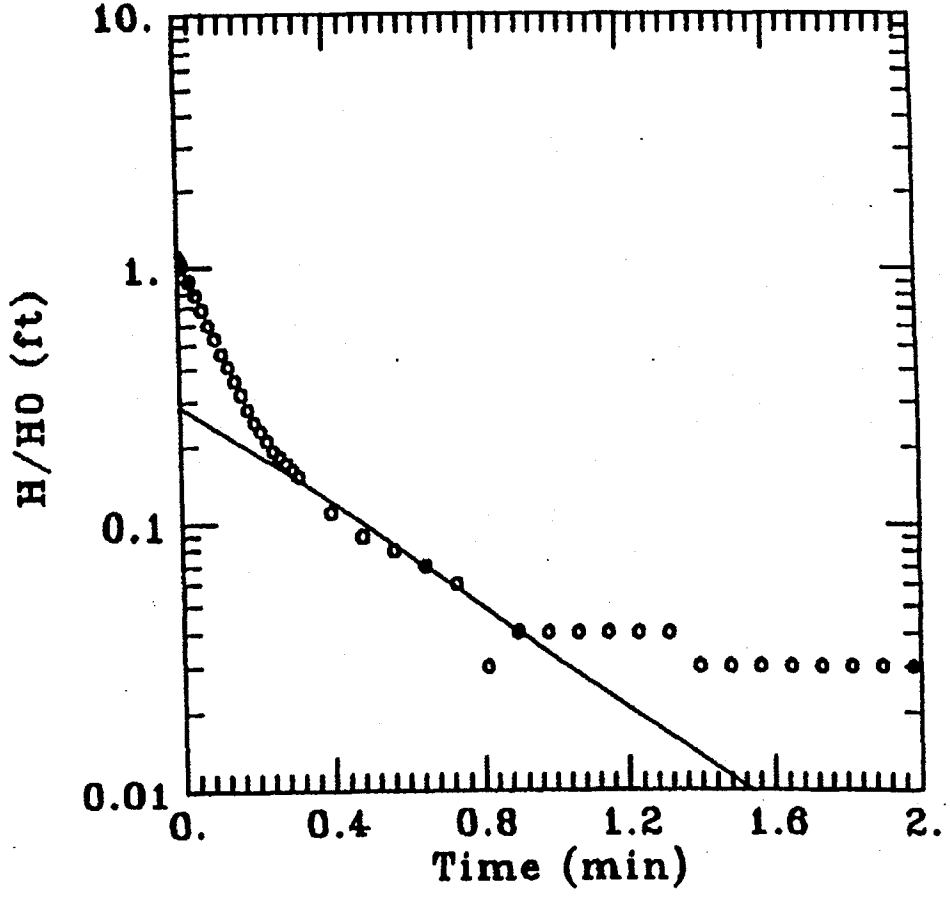
```
          Estimate
  K  =   4.3843E-003   ft/min = 2.2*10^-3 cm/sec
  y0 =  -8.9151E-287
```

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>:

TYPE CURVE DATA

```
    K  = 5.26024E-003
    y0 = 2.74544E-001
```

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.745E-001	2.000E+000	3.506E-003		



DATA SET:
m1103z.cst
01/18/02

AQUIFER TYPE:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

TEST DATE:
September 19, 1991

ESTIMATED PARAMETERS:
K = 0.005205 ft/min
y0 = 0.2962 ft

TEST DATA:
H0 = 1.13 ft
rc = 0.083 ft
rw = 0.19 ft
L = 2.6 ft
b = 2.0 ft
H = 2.0 ft

RISING HEAD RESULT, M-11-03

J.M.MONTGOMERY, CONSULTING ENG	Client: NAVY - WESTDIV
Project No.: 2738.0257	Location: Site 11, Building 14

M-11-03
RISING HEAD FIELD DATA
NAS ALAMEDA, CTO-121
1991

SE1000B
Environmental Logger
09/18 13:41

Unit# 00515 Test# 4

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	10.09
Offset	0.00

Step# 0 09/18 10:31

Elapsed Time (min)	Value (ft)
0.0000	0.00
0.0033	0.01
0.0066	2.95
0.0099	1.56
0.0133	1.29
0.0166	1.09
0.0200	1.12
0.0233	1.09
0.0266	1.07
0.0300	1.04
0.0333	1.01
0.0500	0.89
0.0666	0.79
0.0833	0.69
0.1000	0.60
0.1166	0.53
0.1333	0.46
0.1500	0.41
0.1666	0.36
0.1833	0.32
0.2000	0.28
0.2166	0.25
0.2333	0.23
0.2500	0.21
0.2666	0.19
0.2833	0.18
0.3000	0.17
0.3166	0.16
0.3333	0.15
0.4167	0.11
0.5000	0.09
0.5833	0.08
0.6667	0.07
0.7500	0.06
0.8333	0.03

Elapsed Time	Value
0.9167	0.04
1.0000	0.04
1.0833	0.04
1.1667	0.04
1.2500	0.04
1.3333	0.04
1.4166	0.03
1.5000	0.03
1.5833	0.03
1.6667	0.03
1.7500	0.03
1.8333	0.03
1.9167	0.03
2.0000	0.03

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>

A Q T E S O L V   R E S U L T S
Version 1.10

01/08/92 19:44:0

TEST DESCRIPTION

Data set........... m1104z.set
Data set title..... RISING HEAD RESULT, M-11-04
Company............ J.M.MONTGOMERY, CONSULTING ENG
Project............ 2738.0257
Client............. NAVY - WESTDIV
Location........... Site 11, Building 14
Test date.......... September 18, 1991

Knowns and Constants:
No. of data points.................. 58
Radius of well casing............... 0.083
Radius of well...................... 0.19
Aquifer saturated thickness......... 4.9
Well screen length.................. 4.9
Static height of water in well...... 4.9
Log(Re/Rw).......................... 2.441
A, B, C............................. 0.000, 0.000, 1.838

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

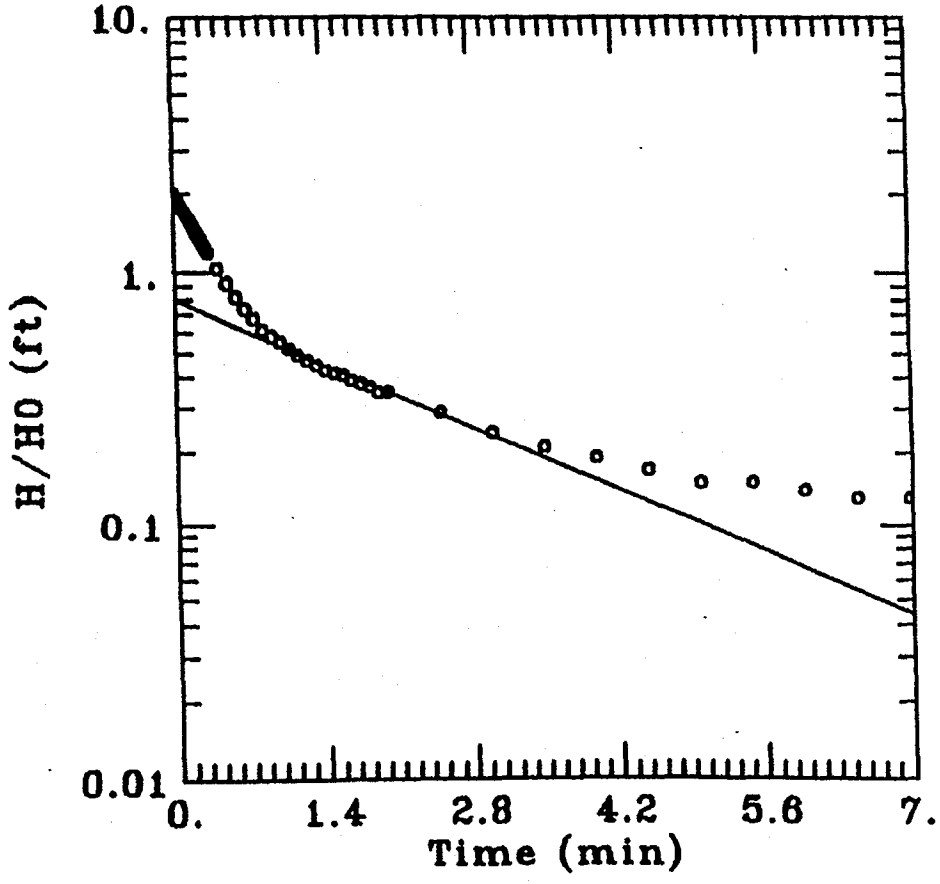
	Estimate
K =	5.4923E-004 ft/min = 2.8 * 10^{-4} cm/sec
y0 =	4.3937E-098

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>:

TYPE CURVE DATA

K = 6.71319E-004
y0 = 7.59904E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	7.599E-001	7.000E+000	4.912E-002		



DATA SET:
m1104z.001
01/10/92

AQUIFER TYPE:
Unconfined
SOLUTION METHOD:
Bouwer-Rice
TEST DATE:
September 10, 1991

ESTIMATED PARAMETERS:
K = 0.0007112 ft/min
y0 = 0.7666 ft

TEST DATA:
H0 = 2.01 ft
rc = 0.083 ft
rw = 0.10 ft
L = 4.0 ft
b = 4.0 ft
B = 4.0 ft

RISING HEAD RESULT, M-11-04

J.M.MONTGOMERY, CONSULTING ENG	Client: NAVY - WESTDIV
Project No.: 2738.0257	Location: Site 11, Building 14

M-11-04
RISING HEAD FIELD DATA
NAS ALAMEDA, CTO-121
1991

SE1000B
Environmental Logger
09/18 13:42

Unit# 00515 Test# 5

INPUT 1: Level (F) TOC

Reference 0.00
Scale factor 10.09
Offset 0.00

Step# 0 09/18 10:43

Elapsed Time (min)	Value (ft)
0.0000	0.00
0.0033	0.06
0.0066	4.84
0.0099	2.80
0.0133	2.00
0.0166	2.03
0.0200	2.01
0.0233	1.99
0.0266	1.98
0.0300	1.96
0.0333	1.95
0.0500	1.89
0.0666	1.84
0.0833	1.79
0.1000	1.73
0.1166	1.69
0.1333	1.65
0.1500	1.60
0.1666	1.56
0.1833	1.52
0.2000	1.48
0.2166	1.44
0.2333	1.40
0.2500	1.36
0.2666	1.33
0.2833	1.29
0.3000	1.26
0.3166	1.22
0.3333	1.19
0.4167	1.04
0.5000	0.92
0.5833	0.82

Elapsed Time	Value
0.6667	0.74
0.7500	0.68
0.8333	0.61
0.9167	0.58
1.0000	0.55
1.0833	0.52
1.1667	0.49
1.2500	0.47
1.3333	0.45
1.4166	0.43
1.5000	0.42
1.5833	0.41
1.6667	0.39
1.7500	0.38
1.8333	0.37
1.9167	0.35
2.0000	0.35
2.5000	0.29
3.0000	0.24
3.5000	0.21
4.0000	0.19
4.5000	0.17
5.0000	0.15
5.5000	0.15
6.0000	0.14
6.5000	0.13
7.0000	0.13
7.5000	0.12
8.0000	0.12
8.5000	0.11
9.0000	0.10
9.5000	0.09
10.0000	0.09

APPENDIX C
GEOTECHNICAL DATA

November 1990 86-018-1810

PHASE 2A GEOTECHNICAL TEST RESULTS
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA

ENCLOSURE 14

Prepared for Western Division Naval Facilities Engineering Command

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CanonieEnvironmental

APPENDIX A

MOISTURE CONTENT/DRY DENSITY RESULTS

COOPER TESTING LABORATORY

MOISTURE - DENSITY DATA SHEET

JOB NO. _____ SHEET ___ OF ___

CLIENT _____

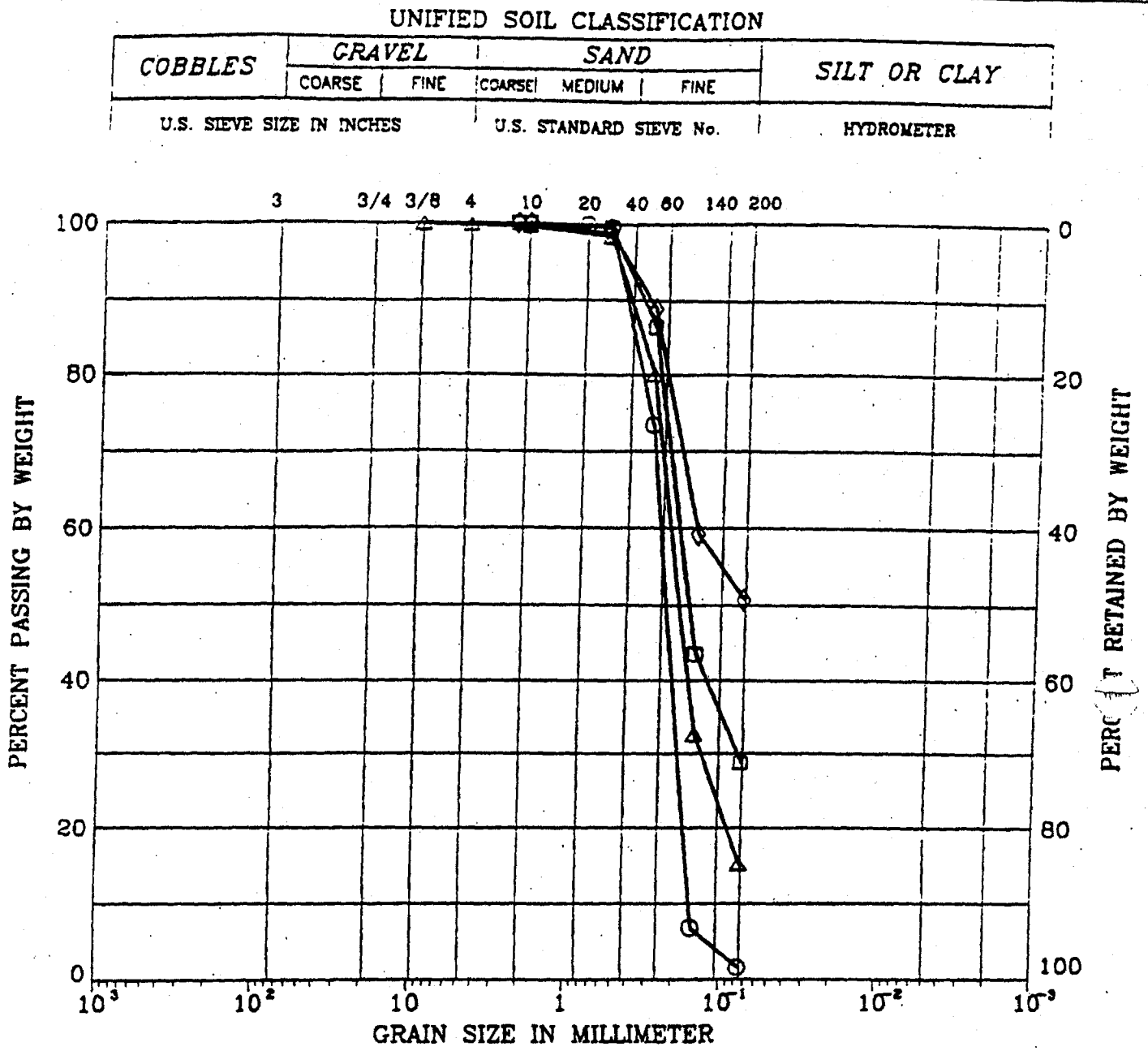
LOCATION ALAMEDA NAS

DATE SAMPLED _____ DATE TESTED 9/5/90 BY: DC CHECKED BY _____

BORING NUMBER	MW 360-1	MW 360-2	MW 360-3	MW 360-3	MW 360-3	MW 360-4	MW 547-2	MW 547-3	B 547-6	B 547-7
DEPTH (FEET)	10	5½	7	13½	3½	4	4	½	8	4
FIELD CLASSIFICATION										
LABORATORY CLASSIFICATION	BROWN SILTY FINE SAND (SM) SATURATED	GRAY GREEN SILTY FINE SAND (SM)	BROWN FINE SAND W/SOME SILT (SP)	BROWN FINE SAND W/SILT (SP/SM)	D. BROWN SILTY SAND TO BAY MUD CHANGE	BROWN FINE SAND (SP)	D. BROWN FINE SAND W/SILT (SP/SM)	BROWN SILTY SAND W/SAND-STONE	BROWN SILTY FINE SAND (SM)	GREEN BROWN FINE SAND (SP)
NUMBER OF RINGS	1	5	5	5	6	6	6	5	5	5
WT. IN GM. — RINGS & SOIL	135.3	697.9	676.3	675.8	677.2	669.7	767.5	601.5	666.7	550.8
WT. IN GM. — RINGS	34.7	175.2	162.1	163.7	181.2	171.7	162.6	178.5	179.2	160.7
WT. IN GM. — OF SOIL	100.6	522.7	514.2	512.1	496.0	498.0	604.9	423.0	487.5	390.1
RING FACTOR	1.342/1	1.302/5	1.302/5	1.302/5	1.342/6	1.342/6	1.302/6	1.342/5	1.302/5	1.302/5
WET DENSITY pcf	135.0	136.1	133.9	133.4	110.9	111.4	131.3	113.5	126.9	101.6
DRYING DISH NUMBER	68	55	133	14	65	14	109	29	133	14
WT. IN GM. — MOIST SOIL & DISH	142.1	149.2	145.3	149.3	107.6	150.1	117.7	143.4	142.4	157.9
WT. IN GM. — DRY SOIL & DISH	125.1	130.8	129.9	130.5	86.6	139.1	101.9	139.5	120.8	148.0
WT. IN GM. — MOISTURE	17.0	18.4	15.4	18.8	21.0	11.0	15.8	3.9	21.6	9.9
WT. IN GM. — DISH	19.8	19.9	20.6	21.1	19.7	21.1	20.4	20.6	20.6	21.1
WT. IN GM. — DRY SOIL	105.3	110.9	109.3	109.4	66.9	118.0	81.5	118.9	100.2	126.9
MOISTURE CONTENT %	16.1	16.6	14.1	17.2	31.4	9.3	19.4	3.3	21.6	7.8
DRY DENSITY pcf	116.2	116.7	117.4	113.8	84.4	101.9	109.9	109.9	104.4	94.2

APPENDIX B

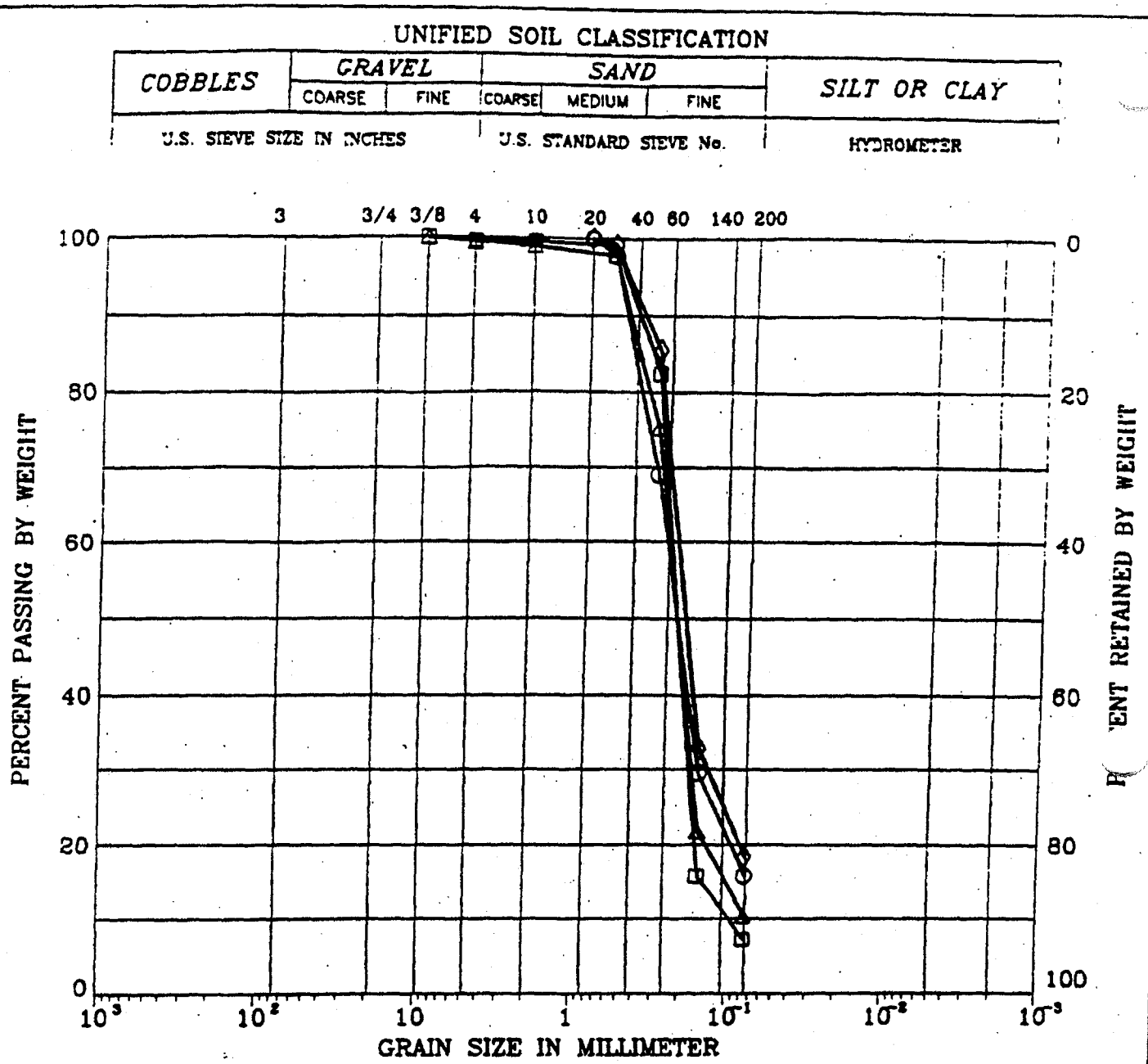
SIEVE ANALYSES RESULTS



SYMBOL	BORING	DEPTH (ft)	LL (%)	PI (%)	DESCRIPTION
○	MW360-1	4			Greenish brown fine sand (SP)
□	MW360-1	10.5			Brown clayey fine sand (SC)
△	MW360-2	5.5			Gray-green silty sand w/shells (SM)
◇	MW360-3	3.5			D. brown silty sand to gray baymud

Remark :

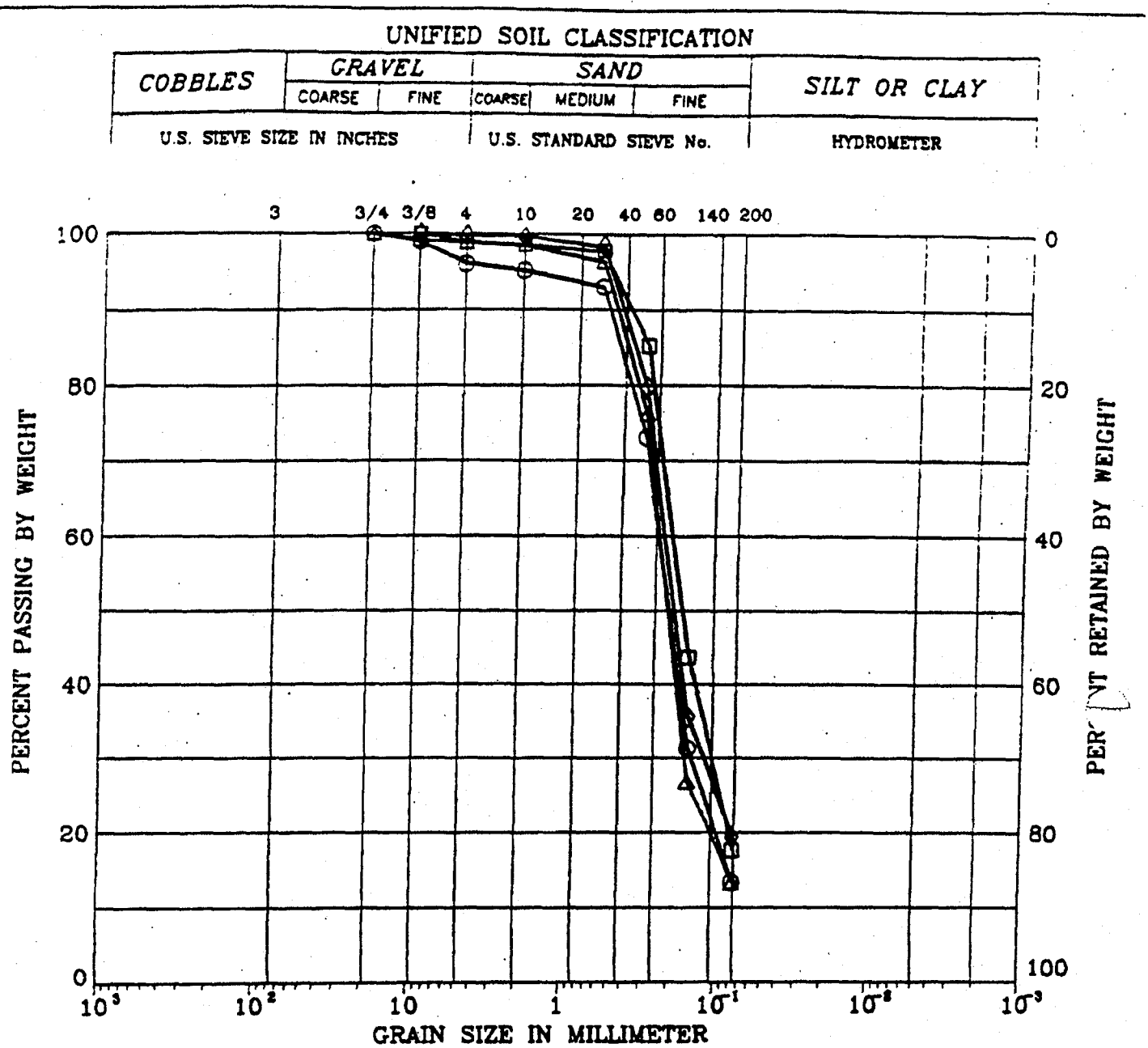
Project No.034-13	Canonie 86-018-1806
Cooper Testing Labs Mountain View CA	GRAIN SIZE DISTRIBUTION Figure No.1



SYMBOL	BORING	DEPTH (ft)	LL (%)	PI (%)	DESCRIPTION
○	MW360-3	7.5			Brown silty fine sand (SM)
□	MW360-4	4			Brown fine sand w/silt (SP/SM)
△	B360-5	4			Brown fine sand w/silt & shells (SP/SM)
◇	B360-5	13.5			Brown silty fine sand (SM)

Remark :

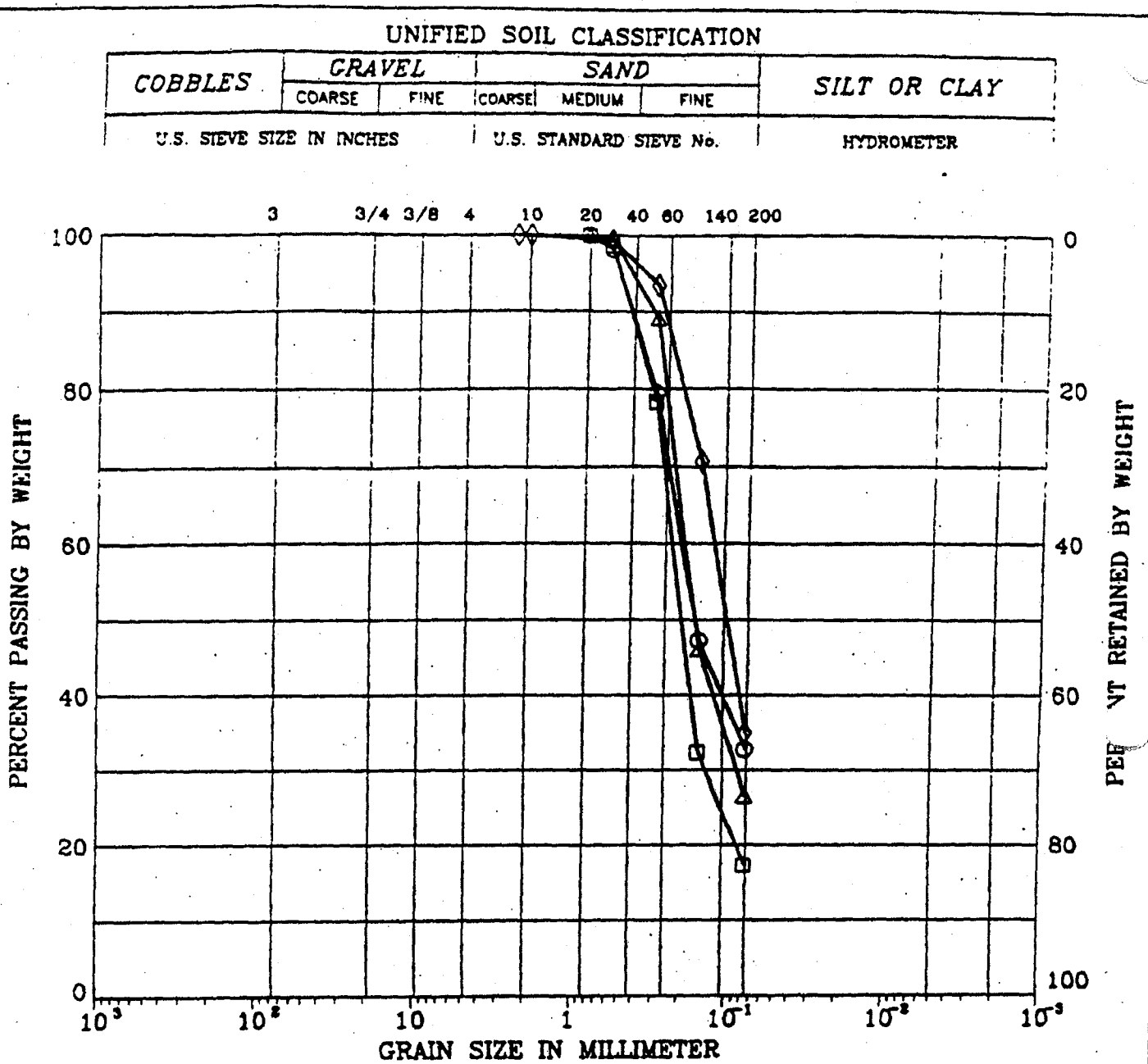
Project No.034-12a	Canonie 86-018-1806
Cooper Testing Labs Mountain View CA	GRAIN SIZE DISTRIBUTION Figure No.2



SYMBOL	BORING	DEPTH (ft)	LL (%)	PI (%)	DESCRIPTION
○	B360-6	4			Green-gray silty fine sand (SM) some cementation
□	B360-7	3.5			Brown silty fine sand (SM)
△	B360-6	6.5			Green-gray silty fine sand (SM) w/shells
◊	B360-8	4			Dark silty fine sand (SM)

Remark :

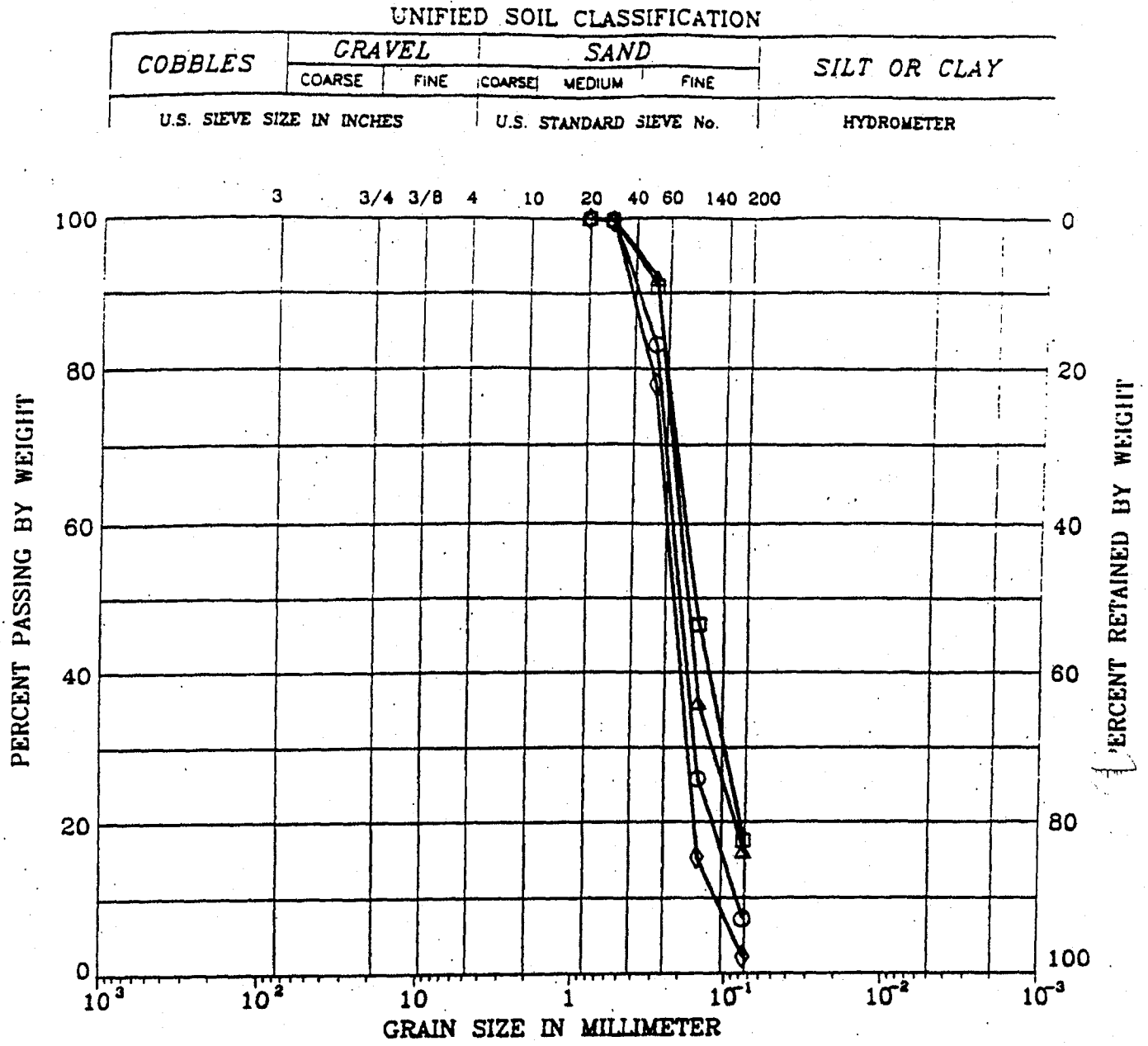
Project No.034-13b	Canonie 86-018-1806
Cooper Testing Labs Mountain View CA	GRAIN SIZE DISTRIBUTION Figure No.3



SYMBOL	BORING	DEPTH (ft)	LL (%)	PI (%)	DESCRIPTION
○	B360-8	7			Mottled gray & brown clayey sand (SC)
□	B360-9	4			Gray silty fine sand (SM)
△	B360-9	13			Brown silty fine sand (SM)
◇	MW547-1	3.5			Green-gray silty fine sand (SM)

Remark :

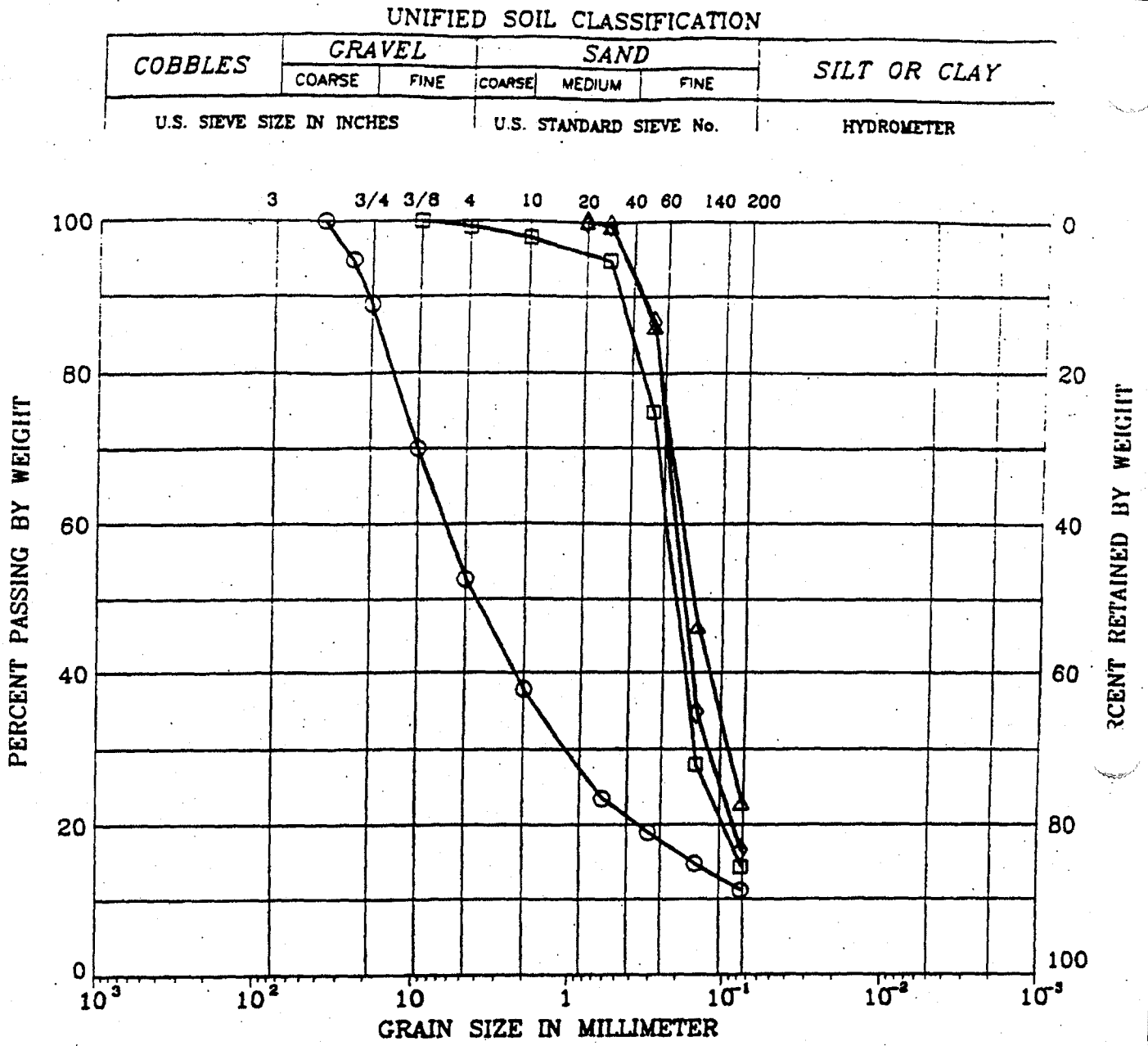
Project No.034-13c	Canonie 86-018-1806
Cooper Testing Labs Mountain View CA	GRAIN SIZE DISTRIBUTION Figure No.4



SYMBOL	BORING	DEPTH (ft)	LL (%)	PI (%)	DESCRIPTION
○	Bor 23	10			Greenish brown fine sand w/silt (SP/SM)
□	Bor 24	13			Brown silty fine sand (SM)
△	B360-7	10			Brown silty fine sand (SM)
◇	B410-5	3.5			Tan fine sand (SP)

Remark :

Project No.034-14	Canonie 86-018-1806
Cooper Testing Labs Mountain View CA	GRAIN SIZE DISTRIBUTION Figure No.7



SYMBOL	BORING	DEPTH (ft)	LL (%)	PI (%)	DESCRIPTION
○	MWOR-4	1			Red crushed rock (GP)
□	MW97-3	1			Brown silty fine sand (SM)
△	MW97-3	12.5			Brown silty fine sand (SM)
◇	MW360-2	11			Brown silty fine sand (SM)

Remark :

Project No.034-14	Canonie 86-018-1806
Cooper Testing Labs Mountain View CA	GRAIN SIZE DISTRIBUTION Figure No.14

APPENDIX C

PERMEABILITY RESULTS

COOPER TESTING LABORATORY

LABORATORY PERMEABILITY TEST DATA SHEET

Initial Moisture Content 5 %
Initial Dry Density 102.1 pcf.
Perm. at 20°C 2×10^{-3} cm/sec

Job 034-13 (CANONIE 86-018-1906) Boring No. 360-1 Sample No. ____ Depth 4'

Date Sampled ____ By ____ : Test Started 9/5/90 By DC : Computed by ____

Description of Soil GREENISH BROWN FINE SAND (SP) Checked by ____

☑ UNDISTURBED, d = ~~2.375~~ 1.90", ℓ = 1" ☑ or ℓ = 2" ☐

☐ REMOLDED, d = 4.00", ℓ = 4.59" (1/30 cubic foot mold)

____ blows of a ____ lb. hammer dropped ____ inches on each of ____ layers

Apparatus No. 1 Surcharge Pressure 300 lbs./sq. ft.

Dial Readings in .001 inch: Source Dial Before Corr.	Dial After Corr.	Date	Time	Elapsed Time, t, in hours	Burette Reading in cc	Volume of Water Used, V, in cc: Original	Corr. .95 x orig.	Head of Water, h in inches	Perm. in cm/sec at test temp.	Test Temp. in °C	Viscosity Correc. Factor	Permeability, K, in cm/sec at 20°C
544	631	9/5	1030	SATURATING								
-100			1120	0	5.0	0		1				
444	630		1130	.17	26.8	21.8	20.71		1.9×10^{-3}	23	.93	1.7×10^{-3}
			1141	.35	49.4	44.4	42.18		1.8×10^{-3}	23	.93	1.7×10^{-3}
			1159	.65	91.4	86.4	82.08		1.9×10^{-3}	23	.93	1.8×10^{-3}
			1306	0	4.2	0				—		
			1317	.18	34.8	30.6	29.07		2.5×10^{-3}	24	.91	2.2×10^{-3}
			1331	.42	72.4	68.2	64.79		2.3×10^{-3}	24	.91	2.1×10^{-3}
			1341½	.59	100.4	96.2	91.39		2.4×10^{-3}	24	.91	2.1×10^{-3}

CONSTANT-HEAD TEST

$$K = \frac{V\ell}{thA}$$

K = coeff. of perm. in cm/sec
V = volume of water in cc.
ℓ = length of sample in inches
t = elapsed time in hours
h = head of water in inches
A = area of sample in sq. inches

For a sample with ℓ = 1", d = 2.375"

$$K = 9.72 \times 10^{-4} \frac{V}{th}$$

For a sample with ℓ = 4.59", d = 4"

$$K = 1.57 \times 10^{-4} \frac{V}{th}$$

MOISTURE-DENSITY DATA

Before Test		After Test
123.3	Wt. of 1 rings + soil	126.7
34.7	Wt. of ____ rings	34.7
88.6	Wt. of soil	92.0
1.342	Ring Factor	1.342
118.9	WET DENSITY, PCF	123.5
	Wt. of soil + dish No. 39	113.2
	Dry wt. of soil + dish	97.3
	Net loss of moisture	15.9
	Wt. of dish	21.5
	Wt. of dry soil	75.8
16.5	MOISTURE CONTENT, %	21.0
102.1	DRY DENSITY, PCF	

d = 1.90"

$$K = 1.52 \times 10^{-5} \frac{V}{th}$$

VISCOSITY CORRECTION FACTORS

Test Temp. in °C	Viscosity Correc. Factor
16	1.11
17	1.08
18	1.05
19	1.03
20	1.00
21	.98
22	.95
23	.93
24	.91

CONVERSION FACTORS

(Multiply by these factors to convert from cm/sec to the indicated units)

ft/sec = 3.28×10^{-4}
ft/day = 2.84×10^{1}
ft/yr = 1.04×10^{4}
gal/ft²-day = 2.12×10^{4}

Lab 13 (4-60)

COOPER TESTING LABORATORY

LABORATORY PERMEABILITY TEST DATA SHEET

SUMMARY

Initial Moisture Content 21.5 %
Initial Dry Density 105.6 pcf.
Perm. at 20°C 5×10^{-8} cm/sec

Job 034-13 (CANONIE 86-018-1806) Boring No. 360-1 Sample No. _____ Depth 10.2'

Date Sampled _____ By _____ : Test Started 9/5/90 By DC : Computed by _____

Description of Soil BROWN CLAYEY FINE SAND (SC) DENSE Checked by _____

☑ UNDISTURBED, d = ~~2.375"~~ 1.90", ℓ = 1" ☑ or ℓ = 2" ☐

☐ REMOLDED, d = 4.00", ℓ = 4.59" (1/30 cubic foot mold)

_____ blows of a _____ lb. hammer dropped _____ inches on each of _____ layers

Apparatus No. 2 Surcharge Pressure 300 lbs./sq. ft.

Dial Readings in .001 inch: Surch Dial Before Corr.	Dial Readings in .001 inch: Defl. Dial After Corr.	Date	Time	Elapsed Time, t, in hours	Burette Reading in cc	Volume of Water Used, V, in cc: Original	Volume of Water Used, V, in cc: Corr. .95 x orig.	Head of Water, h in inches	Perm. in cm/sec at test temp.	Test Temp. in °C	Viscosity Correc. Factor	Permeability, K, in cm/sec at 20°C
675	575	9/5	1205	SATURATING								
-100		9/6	847	0	20.0	0		36		–		
575	572		1546	6.98	21.1	1.10	1.045		6.3×10^{-8}	25	.88	5.6×10^{-8}
		9/7	932	24.75	23.8	3.80	3.61		6.2×10^{-8}	22	.95	5.9×10^{-8}
			1701	32.23	24.8	4.80	4.56		6.0×10^{-8}	26	.87	5.2×10^{-8}
		9/8	1642	55.92	28.0	8.00	7.60		5.7×10^{-8}	26	.87	5.0×10^{-8}
		9/9	1132	74.75	30.1	10.10	9.60		5.4×10^{-8}	23	.93	5.0×10^{-8}

CONSTANT-HEAD TEST

$$K = \frac{V\ell}{thA}$$

K = coeff. of perm. in cm/sec
V = volume of water in cc.
ℓ = length of sample in inches
t = elapsed time in hours
h = head of water in inches
A = area of sample in sq. inches

For a sample with ℓ = 1", d = 2.375"
$K = 9.72 \times 10^{-4} \frac{V}{th}$

For a sample with ℓ = 4.59", d = 4"
$K = 1.57 \times 10^{-5} \frac{V}{th}$

MOISTURE-DENSITY DATA

Before Test		After Test
130.3	Wt. of 1 rings + soil	130.4
34.6	Wt. of ____ rings	34.6
95.7	Wt. of soil	95.8
1.342	Ring Factor	1.342
128.4	WET DENSITY, PCF	128.6
	Wt. of soil + dish No. 5	114.6
	Dry wt. of soil + dish	97.7
	Net loss of moisture	16.9
	Wt. of dish	19.8
	Wt. of dry soil	77.9
21.5	MOISTURE CONTENT, %	21.7
105.6	DRY DENSITY, PCF	

VISCOSITY CORRECTION FACTORS

Test Temp. in °C	Viscosity Correc. Factor
16	1.11
17	1.08
18	1.05
19	1.03
20	1.00
21	.98
22	.95
23	.93
24	.91

d = 1.90"
$K = 1.52 \times 10^{-5} \frac{V}{th}$

CONVERSION FACTORS

(Multiply by these factors to convert from cm/sec to the indicated units)

ft/sec = 3.28×10^{-8}
ft/day = 2.84×10^{3}
ft/yr = 1.04×10^{6}
gal/ft²-day = 2.12×10^{4}

Lab 13 (4-60)

COOPER TESTING LABORATORY

SUMMARY

Initial Moisture Content 23.3 %
Initial Dry Density 104.7 pcf.
Perm. at 20°C 9×10^{-7} cm/sec

LABORATORY PERMEABILITY TEST DATA SHEET

CANONIE

Job 034-13 86-018-1806 Boring No. 360-2 Sample No. _____ Depth 13.5'

Date Sampled _____ By _____ : Test Started 9/5/90 By DC : Computed by ___

Description of Soil BROWN SILTY SAND (SM) SATURATED Checked by

☑ UNDISTURBED, d = ~~2.375"~~ 1.90", ℓ = 1" ☑ or ℓ = 2" ☐

☐ REMOLDED, d = 4.00", ℓ = 4.59" (1/30 cubic foot mold)

_____ blows of a _____ lb. hammer dropped _____ inches on each of _____ layers

Apparatus No. 3 Surcharge Pressure 300 lbs./sq. ft.

Dial Readings in .001 inch: Surch Dial Before Corr.	Dial Readings in .001 inch: Defl. Dial After Corr.	Date	Time	Elapsed Time, t, in hours	Burette Reading in cc	Volume of Water Used, V, in cc: Original	Volume of Water Used, V, in cc: Corr. .95 x orig.	Head of Water, h in inches	Perm. in cm/sec at test temp.	Test Temp. in °C	Viscosity Correc. Factor	Permeability, K, in cm/sec at 20°C
817	590	9/5	1344	SATURATING								
-060		9/6	848	0	32.0	0		9		—		
757	585		1546	6.97	37.2	5.2	4.94		1.2×10^{-6}	25	.89	1.1×10^{-6}
		9/7	933	24.75	49.4	17.4	16.53		1.1×10^{-6}	22	.95	1.1×10^{-6}
			1702	32.23	54.1	22.1	21.0		1.1×10^{-6}	26	.87	9.6×10^{-7}
		9/8	1643	55.92	67.4	35.4	33.63		1.0×10^{-6}	26	.87	8.8×10^{-7}
		9/9	1132	74.73	77.0	45.0	42.75		9.7×10^{-7}	23	.93	9.0×10^{-7}
		9/10	1032	97.73	87.6	55.6	52.82		9.1×10^{-7}	22	.95	8.7×10^{-7}

CONSTANT-HEAD TEST

$$K = \frac{V\ell}{thA}$$

K = coeff. of perm. in cm/sec
V = volume of water in cc.
ℓ = length of sample in inches
t = elapsed time in hours
h = head of water in inches
A = area of sample in sq. inches

For a sample with ℓ = 1", d = 2.375"

$$K = 9.72 \times 10^{-6} \frac{V}{th}$$

For a sample with ℓ = 4.59", d = 4"

$$K = 1.57 \times 10^{-5} \frac{V}{th}$$

MOISTURE-DENSITY DATA

Before Test		After Test
130.8	Wt. of 1 rings + soil	128.4
34.6	Wt. of ____ rings	34.6
96.2	Wt. of soil	93.8
1.342	Ring Factor	1.342
129.1	WET DENSITY, PCF	125.9
	Wt. of soil + dish No. 68	112.6
	Dry wt. of soil + dish	97.0
	Net loss of moisture	15.6
	Wt. of dish	19.8
	Wt. of dry soil	77.2
23.3	MOISTURE CONTENT, %	20.2
104.7	DRY DENSITY, PCF	

d = 1.90"
$K = 1.52 \times 10^{-5} \frac{V}{th}$

VISCOSITY CORRECTION FACTORS

Test Temp. in °C	Viscosity Correc. Factor
16	1.11
17	1.08
18	1.05
19	1.03
20	1.00
21	.98
22	.95
23	.93
24	.91

CONVERSION FACTORS

(Multiply by these factors to convert from cm/sec to the indicated units)

ft/sec = 3.28×10^{-8}
ft/day = 2.84×10^{3}
ft/yr = 1.04×10^{6}
gal/ft²-day = 2.12×10^{4}

Lab 13 (4-60)

FALLING HEAD PERMEABILITY TEST

PROJECT & LOCATION: 034-13 (CANONITE 86-018-18016

BORING NO.: B 360-8 SAMPLE NO.: _____ DEPTH (FT): 7 SAMPLED BY: _____

LABORATORY CLASSIFICATION: MOTTLED GRAY & BROWN V. CLAYEY SAND (SC)

TESTED BY: DC 9/6/90 COMPUTED BY: _____ / / CHECKED BY: _____ /

TYPE OF SAMPLE: ☑ Undisturbed ☐ Remolded

SAMPLE DIMENSIONS	Initial	Final
Sample Height (In.)	1.00	.99
Sample Diameter (In.)	1.93	1.93
Sample Area (In.^{2})	2.93	2.93
Sample Volume (In.^{3})	2.93	2.90
VOID RATIO		
Volume of Sample - V_t (CC)	48.01	47.53
Volume of Solid - V_s (CC)	28.78	28.78
Volume of Void - V_v (CC)	19.23	18.75
Void Ratio - e	.668	.652
Degree of Saturation - S (%)	95.7	99.7

Specific Gravity (Assumed) 2.7

MOISTURE & DENSITY DATA

	Before	After
Wet Weight + Tare, gm		116.7
Dry Weight + Tare, gm		98.0
Weight of Water, gm		18.7
Weight of Tare, gm #32		20.3
Weight of Dry Soil, gm		77.7
Moisture Content, %	23.7	24.1
Total Wet Weight, gm	96.1	96.4
Total Dry Weight, gm	77.7	77.7
Weight of Water, gm	18.4	18.7
Wet Density, pcf	125.1	126.5
Dry Density, pcf	101.1	102.0

Cell# 1

SATURATION & CONSOLIDATION

DATE TIME	PRESSURE CELL	PRESSURE BACK	PORE PRESSURE	Δ U	Δ CELL	B

VISCOSITY CORRECTION FACTORS

Test Temp. in °C	Viscosity Correc. Factor
16	1.11
17	1.08
18	1.05
19	1.03
20	1.00
21	.98
22	.95
23	.93
24	.91

CONSOLIDATION DATA

DATE	TIME Hr.	TIME Elapsed Min.	Burette Reading
		0	

APPENDIX D

ATTERBURG LIMITS RESULTS

DATA SHEET FOR CLASSIFICATION TEST

COOPER TESTING LABORATORY

SUMMARY:

LIQUID LIMIT 92 PLASTICITY INDEX 57

% GRAVEL _____ SAND _____ FINES _____ CLASSIFICATION (CH)

JOB 034-14 (CANONIE 86-CIF-1806) BORING MW NO. 97-1 SAMPLE NO. _____ DEPTH 8.5'

DATE TESTED 9/25/90 BY DC COMPUTED BY _____ CHECKED BY _____

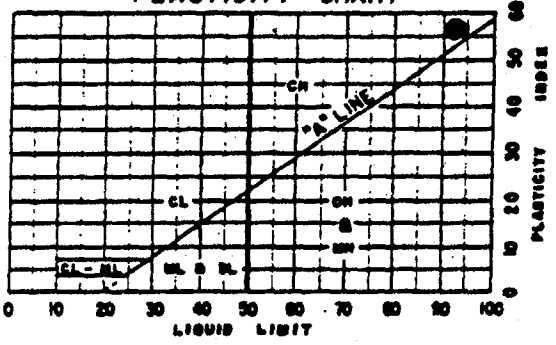
DESCRIPTION OF SOIL GRAY SILTY CLAY (BAYMUD)

PAN # 10

DISH NUMBER E-1		PLASTIC LIMIT B-52	B-58	B-60	LIQUID LIMIT A-4	A-20	A-31	A-34
WT. IN GMS.	MOIST SOIL & DISH	13.52	14.35	17.51	23.64	22.69	23.81	26.93
	DRY SOIL & DISH	11.74	12.39	14.65	17.87	17.42	17.94	19.24
	MOISTURE	1.78	1.96	2.86	5.77	5.27	5.87	7.69
	DISH	6.67	6.75	6.76	11.15	11.61	11.70	11.82
	DRY SOIL	5.07	5.64	7.89	6.72	5.81	6.24	7.42
MOISTURE CONTENT, %		35.1%	34.8%	36.2%	85.9%	90.7%	94.1%	103.6%
					48	29	19	11
					NUMBER OF BLOWS			

This line is 1/8" thick

PLASTICITY CHART



LIQUID LIMIT 92
PLASTIC LIMIT 35
PLASTICITY INDEX 57

WASH ANALYSIS (@ 200 SIEVE)

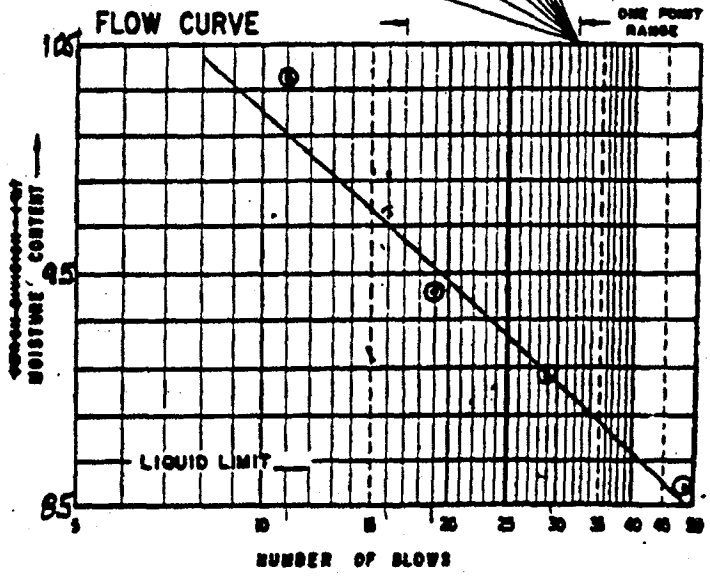
	BEFORE WASH	AFTER WASH
WT. OF DISH + OVEN - DRY SOIL		
WT. OF DISH NO. _____		
WT. OF OVEN - DRY SOIL		

% COARSE SOIL _____

SIEVE ANALYSIS

U.S. SIEVE NUMBER	CUMULATIVE WEIGHT RETAINED	CUMULATIVE % RETAINED	CUMULATIVE % PASSING
3"			
3/4"			
@ 4			
@ 10			
@ 40			
@ 200			
PAN		100	0

FLOW CURVE



* USE THE APPROPRIATE SLOPE TO EXTRAPOLATE ONE-POINT LIQUID LIMIT TRIALS (BETWEEN 17 AND 36 BLOWS) TO THE 25-BLOW LINE.

LAB 312

APPENDIX E

SPECIFIC GRAVITY RESULTS

COOPER TESTING LABS

DATA SHEET FOR SPECIFIC GRAVITY TEST

JOB NO. 031-13 NAME CANONIE 86-015-1506 LOCATION ALAMEDA NAS

TESTED BY DC DATE 9/11/90 CHECKED BY

Dish Number	E			
Boring Number	MW 360-1			
Depth of Sample in Feet	4 1/2			
Field Classification of Soil				
Lab Classification of Soil	BROWN FINE SAND (SP)			
Test Performed on Whole Sample? Or Some Fraction? Specify Percent	100%			
Pycnometer Number	3			
Wt. of Pycnometer + Soil + Water ..... Wb	323.1			
Test Temperature in °C, Tx	23			
Wt. of Pycnometer + Water ..... Wa (from calibration curve)	291.74			
Drying Dish Number				
Wt. of Dry Soil + Dish				
Wt. of Dish				
Wt. of Dry Soil ..... Wo	50.05			
Temp. Correction Factor ..... K (from chart below)	.9993			
K. Wo	50.015			
Wo + Wa — Wb	18.69			
Specify Gravity (20°C) = $\frac{K\ Wo}{Wo + Wa - Wb}$	2.68			

Notes: 1. Based on "Standard Method of Test for Specific Gravity of Soils," ASTM Designation D 854-52. (For sand and fines)

2. All weights are in grams.

Tx	K
18	1.0004
19	1.0002
20	1.0000
21	.9998
22	.9996
23	.9993
24	.9991
25	.9989
26	.9986
27	.9983
28	.9980
29	.9977
30	.9974

Lab 11 (2-60)

APPENDIX B
NAS ALAMEDA - SITE 4
SURFACE SOIL ANALYTICAL RESULTS FOR GENERAL CHEMICALS

Sample Number	B04-01	B04-02	B04-03	B04-04	B04-05	B04-06	B04-07	B04-08	B04-09
Date Sampled	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91
Depth of Sample	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft
PARAMETER REPORTED									
PHYSICAL PARAMETERS-LAB									
MOISTURE (% wet wt.)	7.5	8.6	7.6	6.6	7.8	7.7	6.1	6.4	7.6
TOTAL ORGANIC CARBON (% dry wt.)									
TOC as CARBON (OC/1.724)*	0.174	0.174	1.91	0.058	< 0.058	0.348	0.232	0.174	0.348
ORG. CONTENT (OC), Total @440 C	0.3	0.3	3.3	0.1	< 0.1	0.6	0.4	0.3	0.6
ANIONS (mg/kg-dry)									
CYANIDE	1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	16

Sample Number	B04-10	B04-11	Duplicate B04-11	B04-12	B04-13	B04-14	B04-15	B04-16	B04-17
Date Sampled	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91	09/05/91
Depth of Sample	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft
PARAMETER REPORTED									
PHYSICAL PARAMETERS-LAB									
MOISTURE (% wet wt.)	8.8	8.4	6.1	13.5	9.3	12.8	11.7	10.7	9.2
TOTAL ORGANIC CARBON (% dry wt.)									
TOC as CARBON (OC/1.724)*	0.406	0.174	0.754	0.116	< 0.058	0.812	0.638	1.16	1.28
ORG. CONTENT (OC), Total @440 C	0.7	0.3	1.3	0.2	< 0.1	1.4	1.1	2.0	2.2
ANIONS (mg/kg-dry)									
CYANIDE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1	1	19	2

Notes: NA = Not analyzed
< = Analyte reported below detection limit
* = conversion to TOC (Black, 1965)

APPENDIX B
NAS ALAMEDA - SITE 4
SURFACE SOIL ANALYTICAL RESULTS FOR GENERAL CHEMICALS

Sample Number	B04-18	B04-19	B04-20	W04-01	W04-02
Date Sampled	09/05/91	09/05/91	09/05/91	09/06/91	09/06/91
Depth of Sample	0.0 ft	0.0 ft	0.0 ft	0.0 ft	0.0 ft
PARAMETER REPORTED					
PHYSICAL PARAMETERS-LAB					
MOISTURE (% wet wt.)	11.1	12.7	7.2	7.4	6.3
TOTAL ORGANIC CARBON (% dry wt.)					
TOC as CARBON (OC/1.724)*	0.696	0.580	0.522	NA	NA
ORG. CONTENT (OC), Total @440 C	1.2	1.0	0.9	NA	NA
ANIONS (mg/kg-dry)					
CYANIDE	1	3	< 0.5	9	7870

Notes: NA = Not analyzed
< = Analyte reported below detection limit
* Conversion to TOC (Black, 1965)

APPENDIX B
NAS ALAMEDA - SITE 7B
SOIL ANALYTICAL RESULTS FOR GENERAL CHEMICALS

Sample Number	B07B-01-000	B07B-01-004	B07B-01-008	B07B-01-014	B07B-02-000	B07B-02-004	B07B-02-011
Date Sampled	06/24/91	06/24/91	06/24/91	06/24/91	06/24/91	06/24/91	06/24/91
Depth of Sample	0.0 ft	4.0 ft	8.0 ft	14.0 ft	0.0 ft	4.0 ft	11.0 ft
PARAMETER REPORTED							
PHYSICAL PARAMETERS-LAB							
MOISTURE (% wet wt.)	10.3	6.8	36.4	17.5	6.5	14.3	28.5
pH, SED (Std.Units)	NA	9.4	9.1	NA	NA	9.2	9.6
TOTAL ORGANIC CARBON (% dry wt)							
TOC as CARBON (OC/1.724)*	NA	0.116	4.00	NA	NA	< 0.058	0.232
ORG. CONTENT (OC), Total @440 C	NA	0.2	6.9	NA	NA	< 0.1	0.4

Sample Number	Duplicate B07B-02-011D	B07B-02-014	B07B-03-000	B07B-03-002	B07B-03-011	B07B-03-016
Date Sampled	06/24/91	06/24/91	06/21/91	06/21/91	06/21/91	06/21/91
Depth of Sample	11.0 ft	14.0 ft	0.0 ft	2.0 ft	11.0 ft	16.0 ft
PARAMETER REPORTED						
PHYSICAL PARAMETERS-LAB						
MOISTURE (% wet wt.)	37.9	17.3	8.2	4.1	14.5	16.3
pH, SED (Std.Units)	9.4	9.5	NA	NA	8.9	NA
TOTAL ORGANIC CARBON (% dry wt)						
TOC as CARBON (OC/1.724)*	0.058	0.638	NA	NA	0.116	NA
ORG. CONTENT (OC), Total @440 C	0.1	1.1	NA	NA	0.2	NA

Notes: NA = Not analyzed
< = Analyte reported below detection limit
* = conversion to TOC (Black, 1965)

APPENDIX B
NAS ALAMEDA - SITE 11
SOIL ANALYTICAL RESULTS FOR GENERAL CHEMICALS

Sample Number	B11-01-000	B11-01-002	B11-01-005	B11-01-014	B11-02-000	B11-02-005	B11-02-010	B11-02-014
Date Sampled	06/26/91	06/26/91	06/26/91	06/26/91	06/26/91	06/26/91	06/26/91	06/26/91
Depth of Sample	0.0 ft	2.0 ft	5.0 ft	14.0 ft	0.0 ft	5.0 ft	10.0 ft	14.0 ft
PARAMETER REPORTED								
PHYSICAL PARAMETERS-LAB								
MOISTURE (% wet wt.)	5.8	5.3	6.3	17.2	6.7	16.0	43.0	18.5
pH, SED (Std.Units)	NA	NA	8.8	NA	NA	NA	NA	9.1
TOTAL ORGANIC CARBON (% dry wt)								
TOC as CARBON (OC/1.724)*	NA	NA	1.10	NA	NA	NA	NA	0.464
ORG. CONTENT (OC), Total @440 C	NA	NA	1.9	NA	NA	NA	NA	0.8

Sample Number	B11-03-000	B11-03-004	B11-03-008	B11-03-014	B11-04-000	Duplicate B11-04-000	B11-04-004	B11-04-010
Date Sampled	06/25/91	06/25/91	06/25/91	06/25/91	06/25/91	06/25/91	06/25/91	06/25/91
Depth of Sample	0.0 ft	3.5 ft	8.0 ft	14.0 ft	0.0 ft	0.0 ft	3.5 ft	9.5 ft
PARAMETER REPORTED								
PHYSICAL PARAMETERS-LAB								
MOISTURE (% wet wt.)	5.6	4.6	16.8	14.2	3.6	4.0	6.4	23.6
pH, SED (Std.Units)	NA	9.3	NA	NA	NA	NA	9.3	9.0
TOTAL ORGANIC CARBON (% dry wt)								
TOC as CARBON (OC/1.724)*	NA	1.80	NA	NA	NA	NA	0.058	1.10
ORG. CONTENT (OC), Total @440 C	NA	3.1	NA	NA	NA	NA	0.1	1.9

Notes: NA = Not analyzed
< = Analyte reported below detection limit
* = conversion to TOC (Black, 1965)

APPENDIX B
NAS ALAMEDA - SITE 11
SOIL ANALYTICAL RESULTS FOR GENERAL CHEMICALS

Sample Number	B11-04-014	B11-05-000	B11-05-004	Duplicate B11-05-004	B11-05-005	B11-05-014	B11-06-000	B11-06-004
Date Sampled	06/25/91	06/26/91	06/26/91	06/26/91	06/26/91	06/26/91	06/25/91	06/25/91
Depth of Sample	14.0 ft	0.0 ft	3.5 ft	3.5 ft	5.0 ft	14.0 ft	0.0 ft	3.5 ft
PARAMETER REPORTED								
PHYSICAL PARAMETERS-LAB								
MOISTURE (% wet wt.)	14.9	6.9	5.1	4.6	13.9	13.7	5.1	6.7
pH, SED (Std.Units)	9.2	NA	NA	NA	9.3	NA	NA	NA
TOTAL ORGANIC CARBON (% dry wt)								
TOC as CARBON (OC/1.724)*	1.04	NA	NA	NA	1.74	NA	NA	NA
ORG. CONTENT (OC), Total @440 C	1.8	NA	NA	NA	3.0	NA	NA	NA

Sample Number	B11-06-008	Duplicate B11-06-008	B11-06-014	B11-07-000	B11-07-001	B11-07-008	B11-07-014
Date Sampled	06/25/91	06/25/91	06/25/91	06/24/91	06/24/91	06/24/91	06/24/91
Depth of Sample	8.0 ft	8.0 ft	14.0 ft	0.0 ft	1.0 ft	8.0 ft	14.0 ft
PARAMETER REPORTED							
PHYSICAL PARAMETERS-LAB							
MOISTURE (% wet wt.)	33.0	25.8	15.6	6.2	8.7	19.5	16.7
pH, SED (Std.Units)	9.2	9.5	NA	NA	NA	NA	9.0
TOTAL ORGANIC CARBON (% dry wt)							
TOC as CARBON (OC/1.724)*	1.39	0.116	NA	NA	NA	NA	< 0.058
ORG. CONTENT (OC), Total @440 C	2.4	0.2	NA	NA	NA	NA	< 0.1

Notes: NA = Not analyzed
< = Analyte reported below detection limit
* = conversion to TOC (Black, 1965)

TABLE 3

SUMMARY OF LABORATORY TEST RESULTS

PROJECT NAME: NAS-Alameda

TETC NO: 92-371-07001

PROJECT NUMBER: 2738.0258

CLIENT: James M. Montgomery

DATE: Nov. 18, 1991

SUMMARIZED BY: S. Sayawatana

SAMPLE NO.	DEPTH (ft)	MOISTURE CONTENT ASTM D2216 (%)	DRY DENSITY ASTM D2937 (pcf)	SPECIFIC GRAVITY ASTM D854	CEC EPA 9080 (meq/100g)	TOC WALKLEY BLACK (% w/w)
B-11-03	13-13.5				29.1	ND
B-11-02	8.5-9				14.6	ND
B-11-05	7-7.5				2.2	-
B-11-01	4-4.5				-	ND
B-11-04	13.5-14				-	ND
B-11-07	9-9.5				-	-
B-11-06	7-7.5				-	-
B-07A-06	8-8.5				39.2	0.9
B-07A-04	9-9.5				34.4	-
B-07A-03	14.5-15				15.3	0.8
B-07A-02	6-6.5				-	-
B-07A-06	16-16.5				-	1.1
B-07A-04	4.5-5				-	ND
B-07A-06	4.5-5				-	ND
B-07A-07	7-7.5				-	0.9
B-07A-02	1.5-2				-	-
B-07B-01	7.5-8				3.6	ND
B-07B-02	10-10.5				35.5	0.6
B-07B-03	15-15.5				37.2	ND
B-07B-02	2.5-3				-	-
B-07B-02	3-3.5				-	ND
B-07B-01	3-3.5				-	ND
B-07B-01	13.5-14				-	ND

ND = Not detected

Detection Limit: CEC = 0.3 meq/100g,
TOC = 0.1 % w/w

TABLE 6

SUMMARY OF LABORATORY TEST RESULTS

PROJECT NAME: NAS-Alameda

TETC NO: 92-371-07001

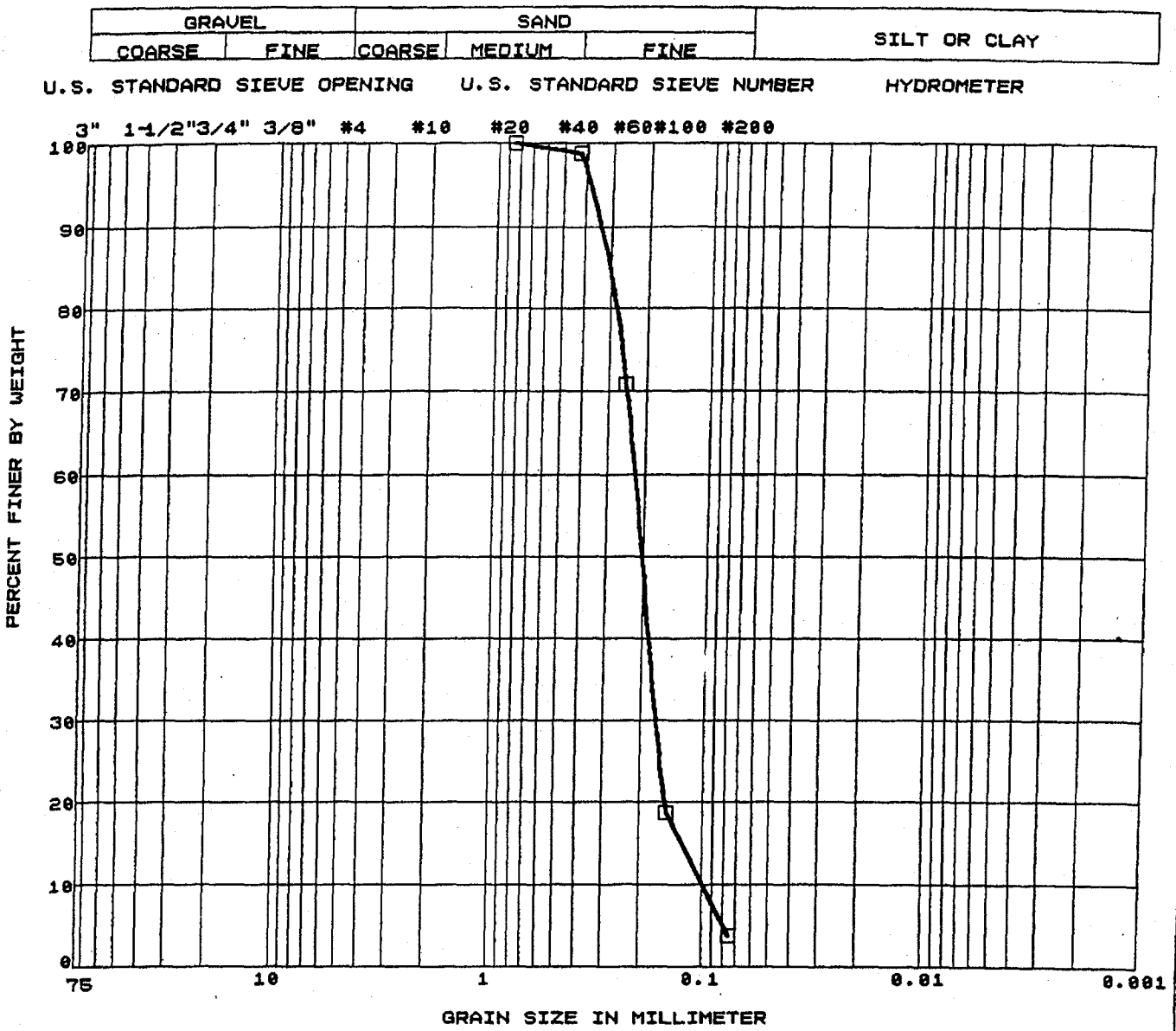
PROJECT NUMBER: 2738.0258

CLIENT: James M. Montgomery

DATE: Dec. 2, 1991

SUMMARIZED BY: S. Sayawatana

SAMPLE NO.	DEPTH (ft)	MOISTURE CONTENT ASTM D2216 (%)	DRY DENSITY ASTM D2937 (pcf)	PERMEABILITY	
				EFFECTIVE STRESSES (psi)	HYDRAULIC CONDUCTIVITY (EPA 9100) (cm/s)
B-011A-03	13-13.5	20.0	111.0	8	2.84E-07
B-011A-02	8.5-9	23.0	99.0	5	9.91E-05
B-011A-05	7-7.5	21.5	104.0	4	3.61E-06
B-011A-04	13.5-14	17.5	115.0	9	9.19E-09
B-011A-06	7-7.5	19.0	105.0	4	4.65E-04
B-07A-04	9-9.5	47.0	70.0	5	1.00E-07
B-07A-03	14.5-15	70.0	56.5	7	3.79E-08
B-07A-04	4.5-5	15.5	111.5	3	4.01E-04
B-07A-06	4.5-5	14.0	111.0	3	1.85E-04
B-07A-07	7-7.5	72.5	56.5	3	5.48E-08
B-07B-01	7.5-8	15.0	111.5	5	1.05E-05
B-07B-03	15-15.5	18.5	109.0	9	5.29E-07
B-07B-02	3-3.5	11.0	93.5	3	6.48E-04
B-05-06	13.5-14				
B-05-12	13.5-14	24.0	99.5	8	3.90E-05
B-05-04	13.5-14	71.0	57.5	6	3.81E-08
B-05-06	3.5-4	8.0	94.5	3	7.81E-04
B-05-02	8-8.5	14.0	109.0	5	5.73E-04
B-05-03	8.5-9	14.5	110.0	5	2.06E-04
B-15-01	13-13.5				
B-15-02	4-4.5				
B-15-03	10.5-11	17.0	111.5	7	1.14E-05
B-10-01	7-7.5	16.0	109.0	4	6.81E-04
B-10-01	13-13.5	43.0	81.0	7	2.82E-07
B-14-03	10-10.5	21.0	100.5	6	3.53E-04
B-14-01	10-10.5	20.0	104.0	6	8.90E-04
B-14-02	10-10.5	22.0	97.0	6	4.87E-05
B-08-03	13-13.5	40.0	81.5	7	7.13E-08
B-08-09	10-10.5	34.5	93.0	6	2.71E-06
B-06-12	10.5-11	86.0	50.0	5	4.95E-08
B-06-05	3.5-4	8.0	96.0	3	6.19E-04
B-06-14	7-7.5	25.0	99.0	4	9.88E-05
B-12-02	8.5-9	22.0	96.5	5	2.33E-04
B-12-08	8.5-9	18.5	98.0	5	2.52E-04
B-12-03	13-13.5				



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-011-01		4-4.5				

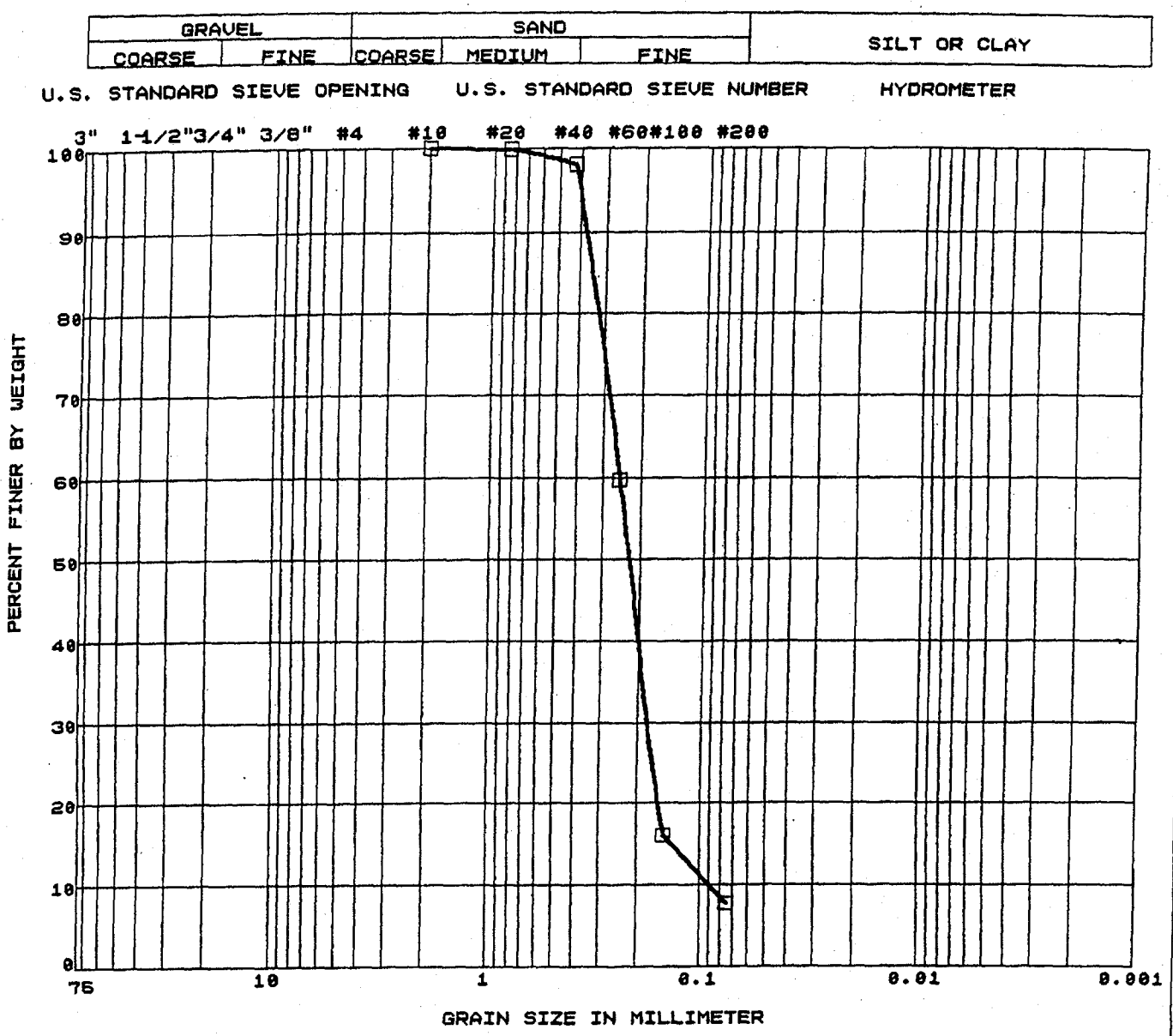
The Earth Technology Corporation

PROJECT NAME: NAS-Alameda

GRAIN SIZE DISTRIBUTION CURVE

12/91

FIGURE



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-011-02		8.5-9				

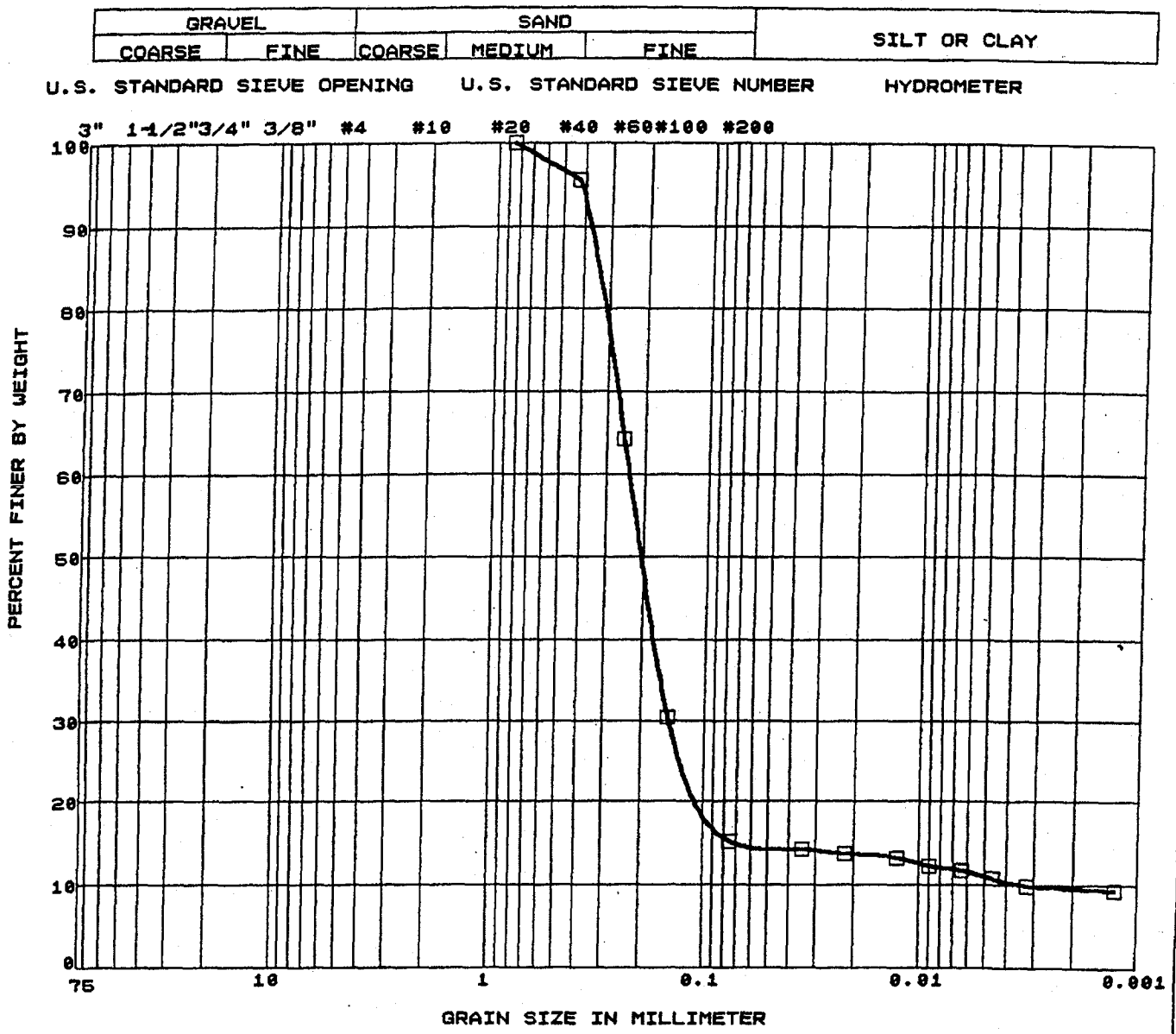
The Earth Technology Corporation

PROJECT NAME: NAS-Alameda

GRAIN SIZE DISTRIBUTION CURVE

12/91

FIGURE



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-011-03		13-13.5				

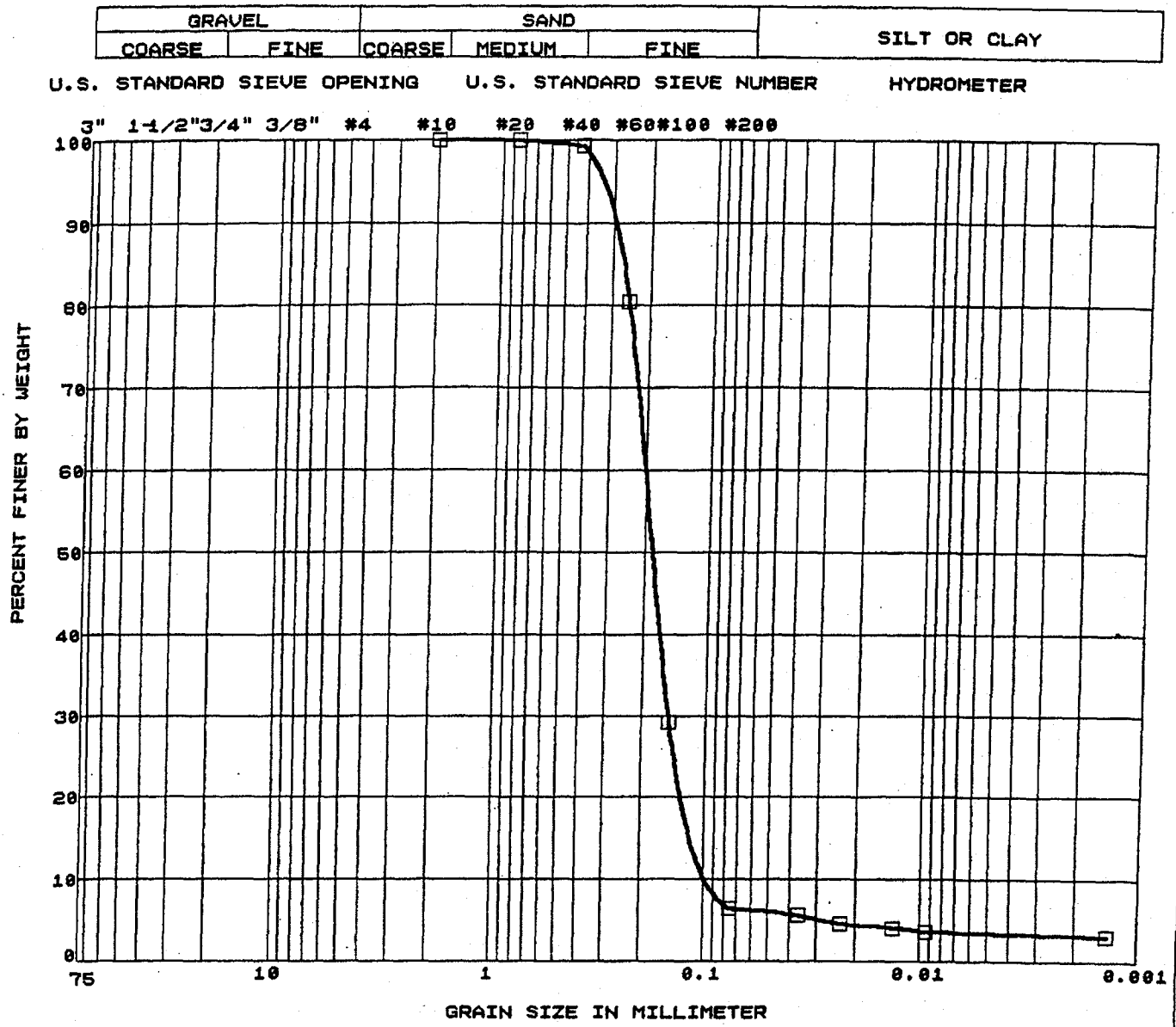
The Earth Technology Corporation

PROJECT NAME: NAS-Alameda

GRAIN SIZE DISTRIBUTION CURVE

12/91

FIGURE



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-07B-02		2.5-3				

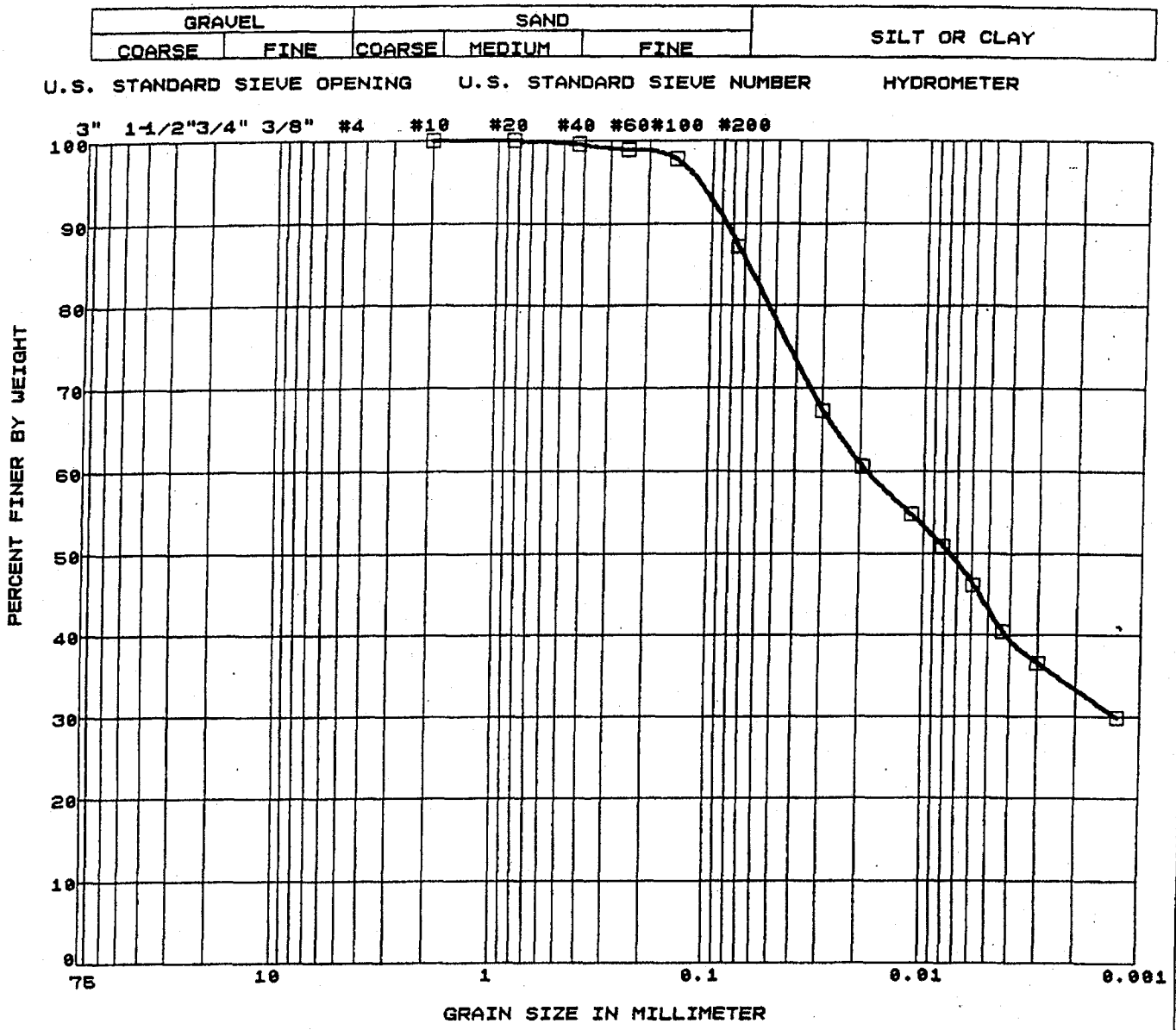
The Earth Technology Corporation

PROJECT NAME: NAS-Alameda

GRAIN SIZE DISTRIBUTION CURVE

12/91

FIGURE



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-07B-02	10-10.5					

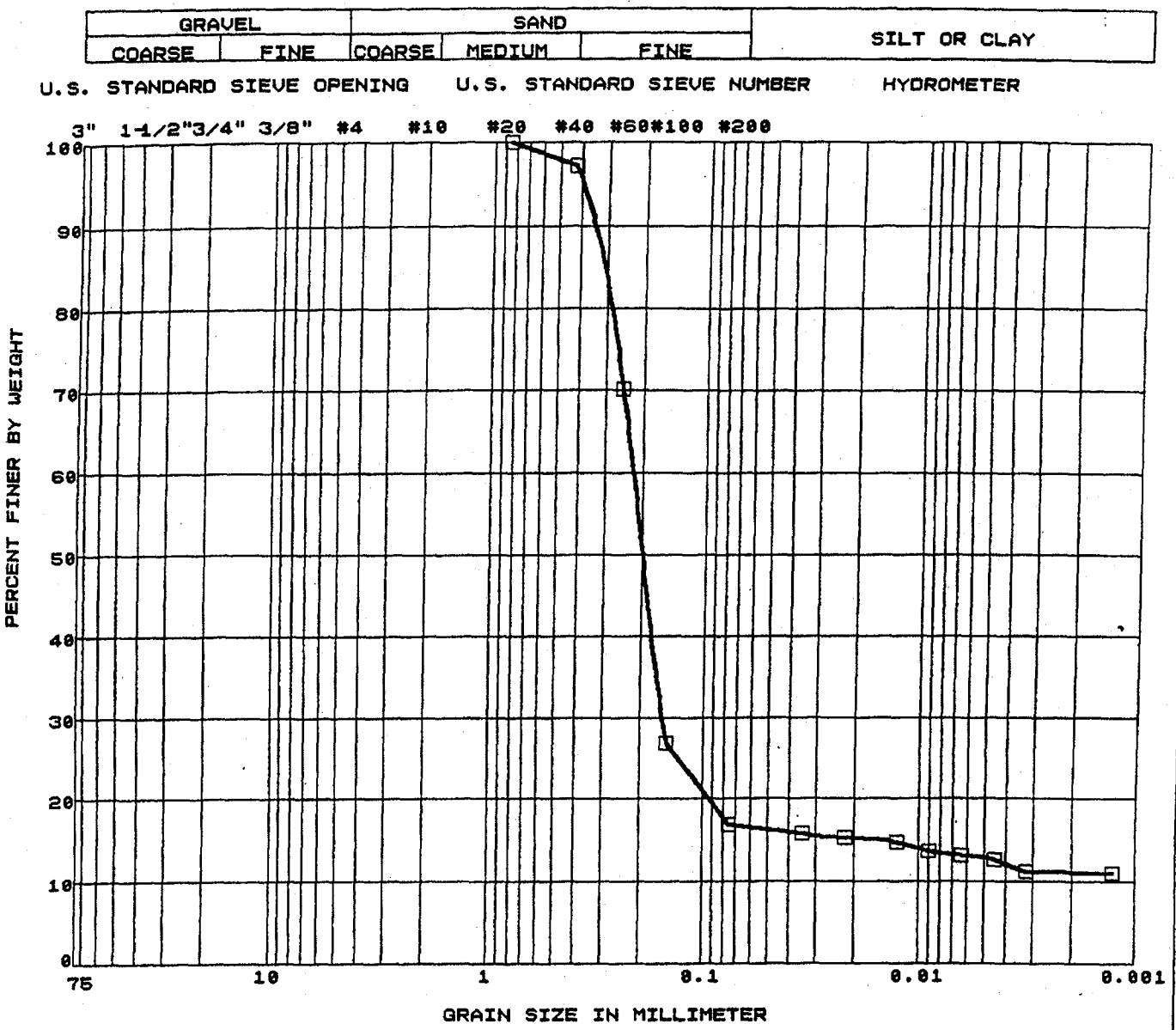
The Earth Technology Corporation

PROJECT NAME: NAS-Alameda

GRAIN SIZE DISTRIBUTION CURVE

12/91

FIGURE



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-07B-03		15-15.5				

The Earth Technology Corporation

PROJECT NAME: NAS-Alameda

GRAIN SIZE DISTRIBUTION CURVE

12/91

FIGURE

The Earth Technology Corporation

[illegible] Boulevard Street, Unit F
[illegible] Beach, California 92648
Telephone: (714) 842-7011 Fax: (714) 842-3735

April 6, 1992

James M. Montgomery
365 Lennon Lane
Walnut Creek, CA 94598

Attention: Ms. Donna Courington

Subject: Report/Laboratory Testing Results
Project Name: NAS Alameda
Project No.: 2738.0258
TETC Project No.: 92-371-07002

Dear Ms. Courington:

Enclosed are results of the laboratory testing program conducted on the samples from the NAS Alameda project. The testing performed for this program was conducted in general accordance with ASTM, USEPA testing procedures as follows:

TYPE OF TEST	TEST PROCEDURE
Grain Size Analysis	ASTM D422
Cation Exchange Capacity	EPA 9081
Total Organic Carbon	ASA-SSSA, Ch 29

Test results are presented in Table 1 and Figure of Grain Size distribution curves.

ASTM: American Society for Testing and Materials, Annual Book of ASTM Standards, Section 4, Vloume 04.08, Soil and Rock: Dimension Stone: Geosynthetics, 1991.

USEPA: United States Environmental Protection Agency, Test Methods for Evaluating Solid Waste, SW 846 Volume 1C, Labortory Manual Physical/Chemical Methods, November 1986.

ASA-SSSA: American Society of Agronomy, Inc. and Soil Science Society of America, Inc. Part 2, Chapter 29, 1982.

We appreciate the opportunity to provide testing services to JMM. If you have any questions regarding the test results, please contact us.

Very truly yours,

THE EARTH TECHNOLOGY CORPORATION (Commercial)

S. Sayawatana

Somboon Sayawatana
Staff Engineer

Kean Tan
Manager,
Geomechanics Laboratories

Enclosure

The Earth Technology Corporation

[illegible] Street [illegible]
[illegible] Beach, California 92648
Telephone (714) 842-7[illegible] Fax (714) 842-3735

PROJECT NAME: NAS Alameda
PROJECT NO.: 2738.0258
CLIENT: JMM Consulting

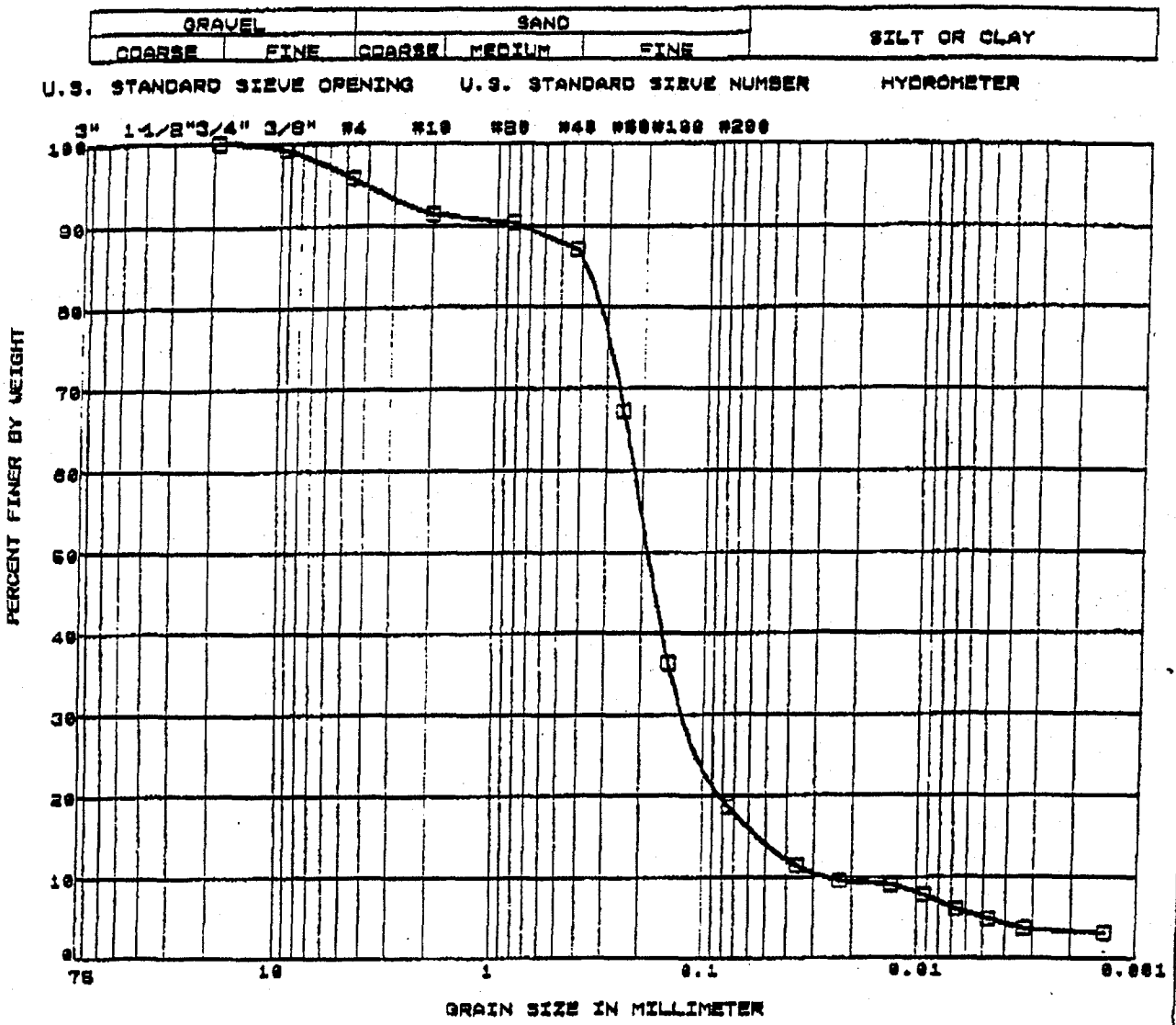
TETC NO.: 92-371-07002
DATE: April 6, 1992

TABLE 1

SUMMARY OF TEST RESULTS

SAMPLE ID	CEC (9081) meq/100g
B-04-01	7.4
B-04-04	8.2
B-04-05	7.7
B-04-09	4.9
B-04-10	7.0
B-04-13	6.8
B-04-18	9.8
B-04-02-008	7.8
Detection Limit	0.3

SAMPLE ID	TOC (Walkley Black) %
B-04-02-008	0.2
Dectection Limit	0.1



SYMBOL	SAMPLE ID.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTICITY INDEX
□	B-04-02		TUBE			

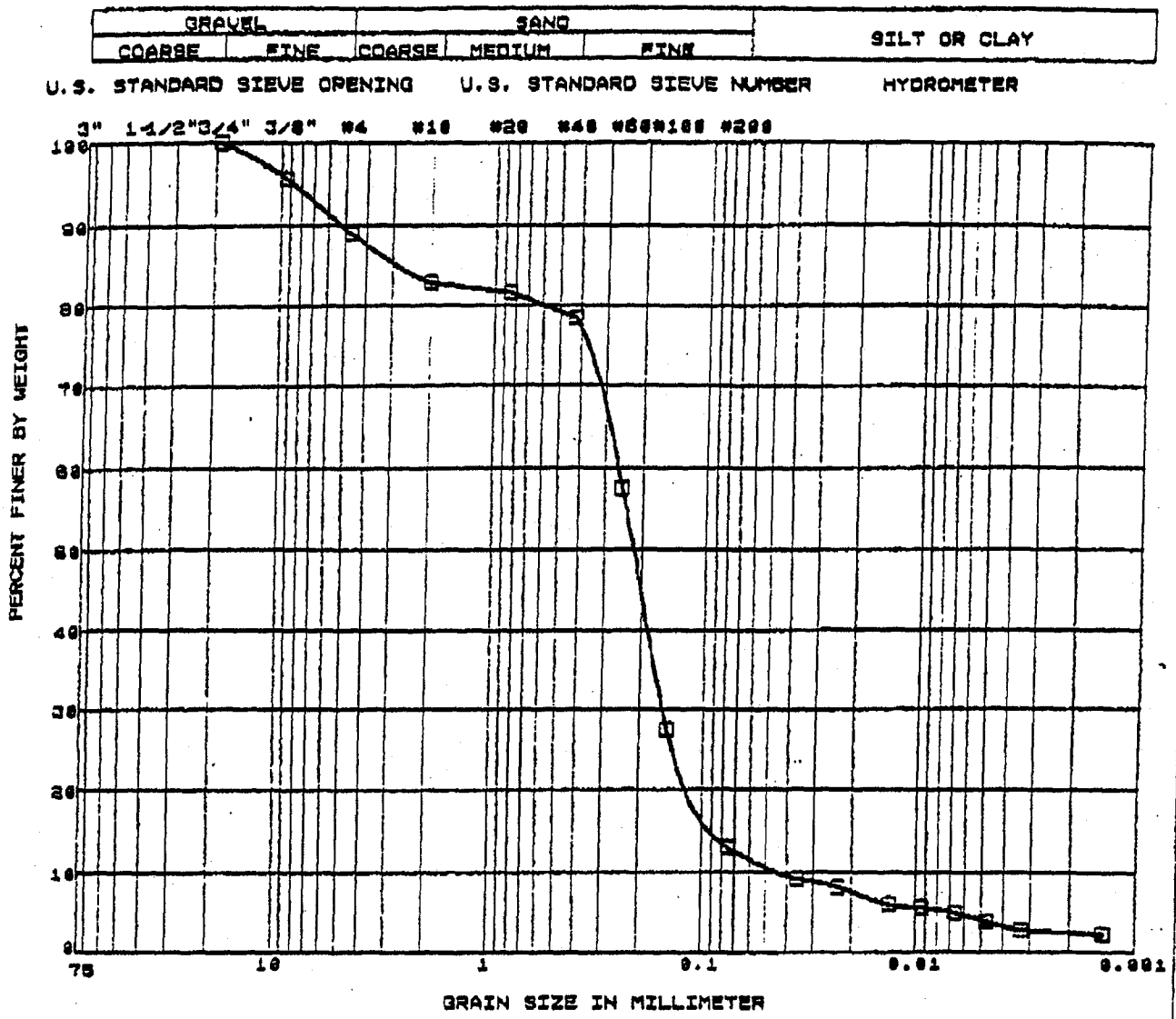
The Earth Technology Corporation

PROJECT NAME: NAS Alameda

GRAIN SIZE DISTRIBUTION CURVE

4/92

FIGURE



SYMBOL	SAMPLE ID.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-84-03		TUBE			

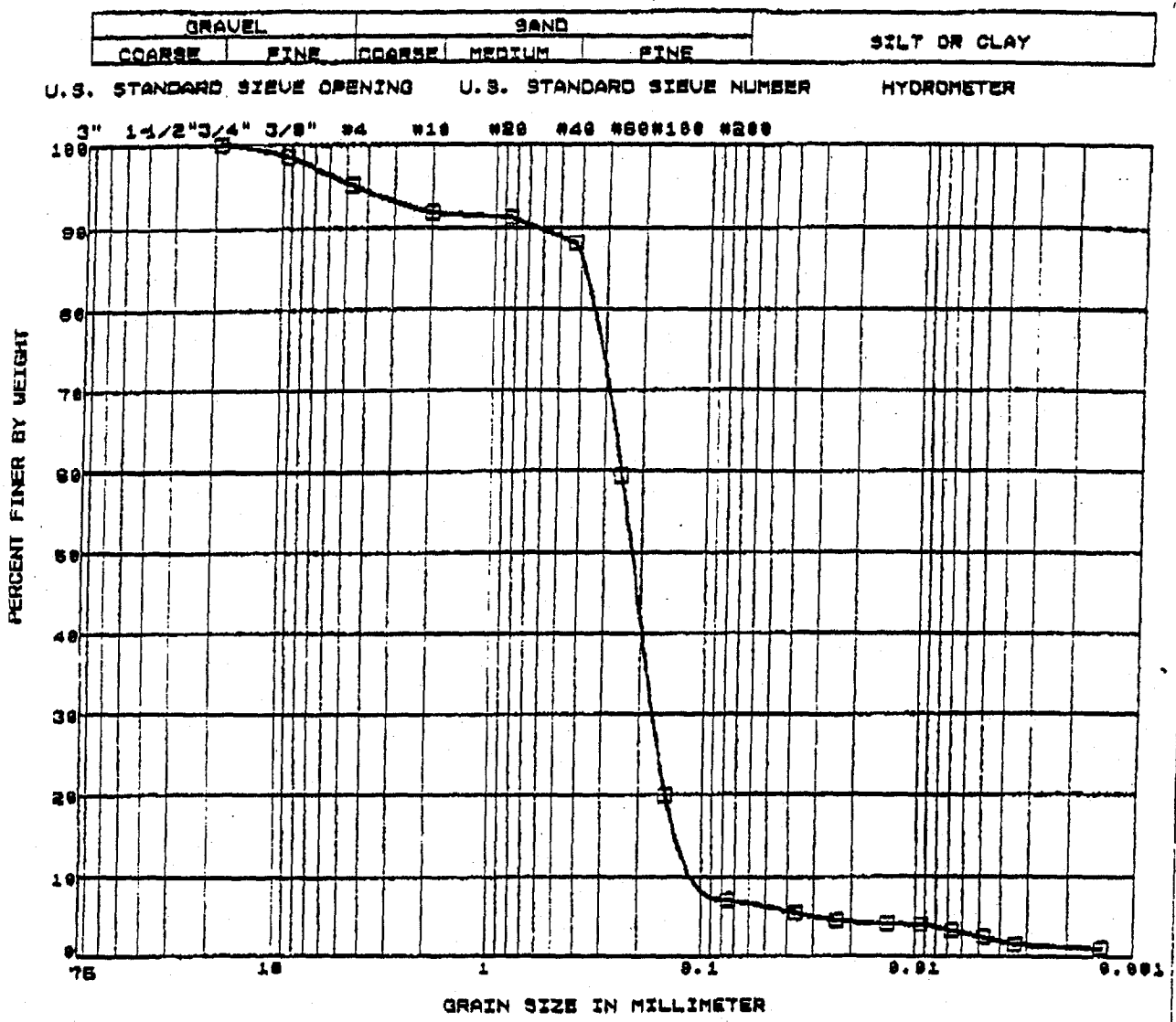
The Earth Technology Corporation

PROJECT NAME: NAS Alameda

GRAIN SIZE DISTRIBUTION CURVE

4/92

FIGURE



SYMBOL	SAMPLE ID.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-04-07		TUBE			

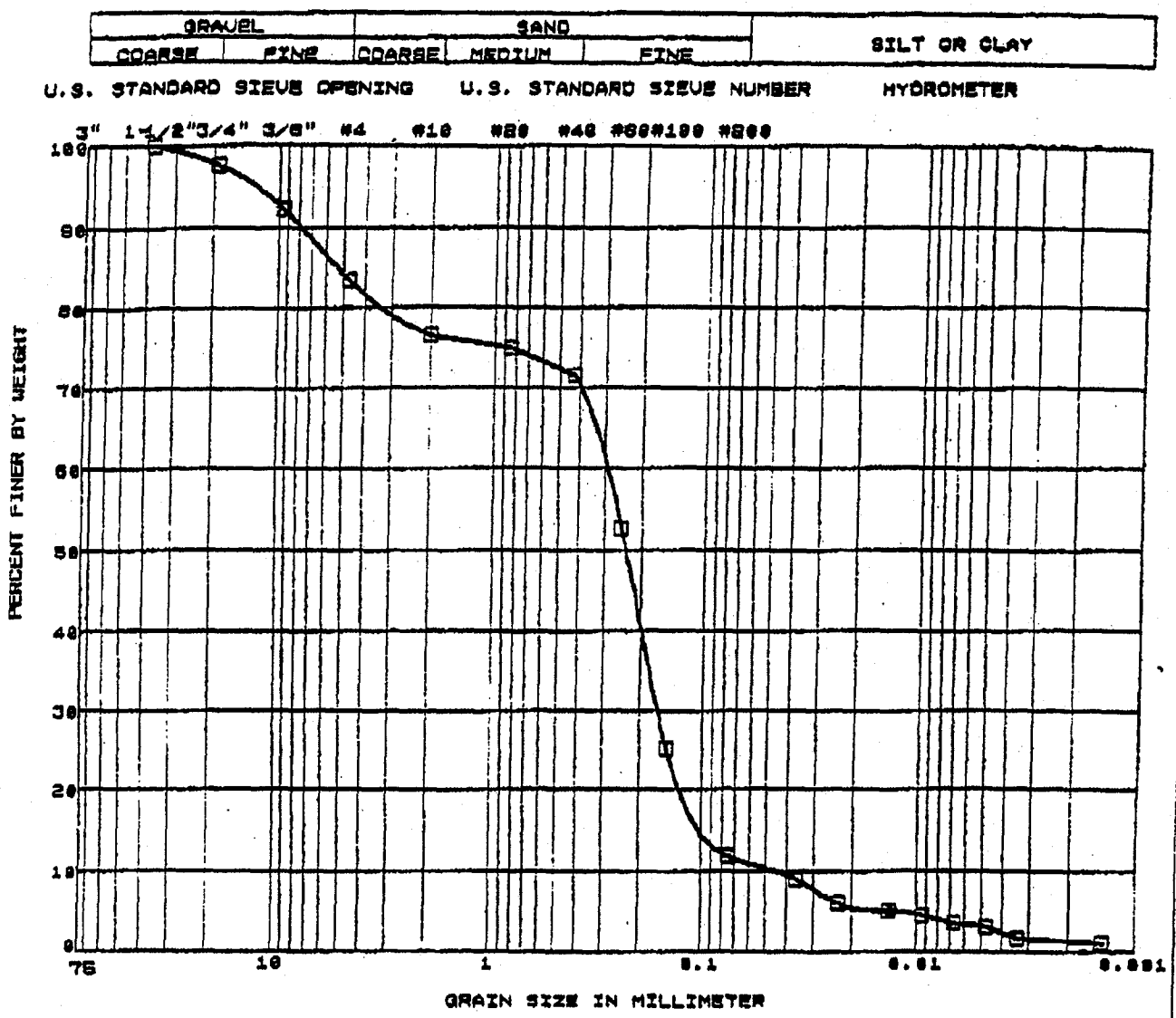
The Earth Technology Corporation

PROJECT NAME: NAS Alameda

GRAIN SIZE DISTRIBUTION CURVE

4/92

FIGURE



SYMBOL	SAMPLE ID.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-04-11		TUBE			

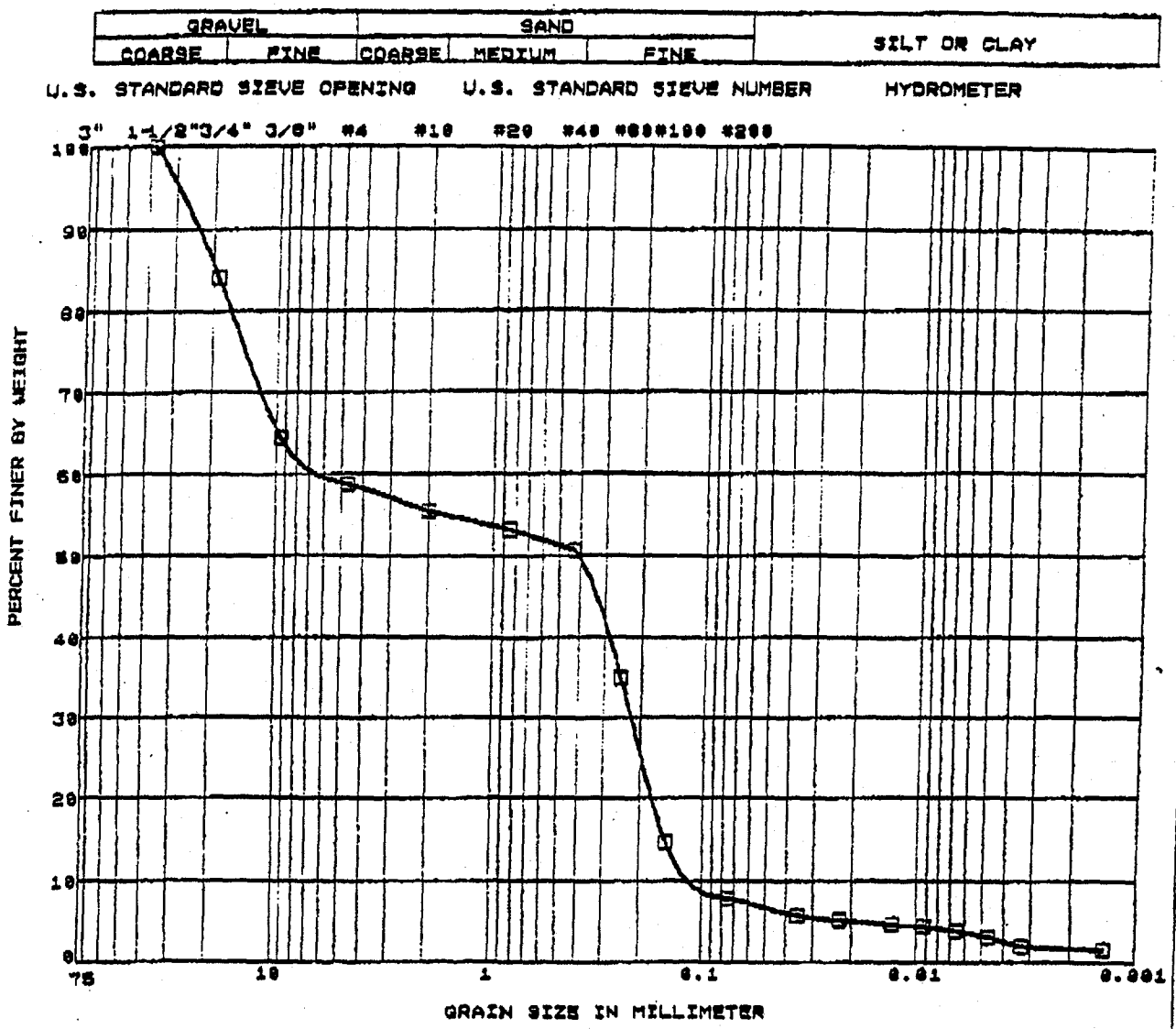
The Earth Technology Corporation

PROJECT NAME: NAS Alameda

GRAIN SIZE DISTRIBUTION CURVE

4/92

FIGURE



SYMBOL	SAMPLE ID.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	B-84-19		TUBE			

The Earth Technology Corporation

PROJECT NAME: NAS Alameda

GRAIN SIZE DISTRIBUTION CURVE

4/92

FIGURE

M-07B-01
RISING HEAD FIELD DATA
NAS ALAMEDA, CTO-121
1991

SE1000B
Environmental Logger
09/18 13:36

Unit# 00515 Test# 1

INPUT 1: Level (F) TOC

Reference 0.00
Scale factor 10.09
Offset 0.00

Step# 0 09/18 08:42

Elapsed Time (min)	Value (ft)
0.0000	-0.02
0.0033	0.29
0.0066	7.54
0.0099	7.54
0.0133	-1.72
0.0166	2.68
0.0200	1.24
0.0233	1.52
0.0266	1.61
0.0300	1.37
0.0333	1.45
0.0500	1.25
0.0666	1.10
0.0833	0.96
0.1000	0.84
0.1166	0.74
0.1333	0.65
0.1500	0.57
0.1666	0.52
0.1833	0.47
0.2000	0.43
0.2166	0.41
0.2333	0.38
0.2500	0.37
0.2666	0.35
0.2833	0.33
0.3000	0.32
0.3166	0.31
0.3333	0.30
0.4167	0.27
0.5000	0.22
0.5833	0.21

M-07B-01

Elapsed Time	Value
0.6667	0.20
0.7500	0.18
0.8333	0.16
0.9167	0.14
1.0000	0.13
1.0833	0.12
1.1667	0.11
1.2500	0.10
1.3333	0.08
1.4166	0.08
1.5000	0.08
1.5833	0.07
1.6667	0.07
1.7500	0.06
1.8333	0.06
1.9167	0.05
2.0000	0.05
2.5000	0.03
3.0000	0.02

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

01/08/92 17:37:

TEST DESCRIPTION

Data set........... m07b01z.set
Data set title..... RISING HEAD RESULT, M-07B-01
Company............ J.M.MONTGOMERY, CONSULTING ENG
Project............ 2738.0257
Client............. NAVY - WESTDIV
Location........... Site 7B, Building 162
Test date.......... September 18, 1991

Knowns and Constants:
No. of data points.................. 42
Radius of well casing............... 0.083
Radius of well...................... 0.19
Aquifer saturated thickness......... 6.3
Well screen length.................. 6.3
Static height of water in well...... 6.3
Log(Re/Rw).......................... 2.655
A, B, C............................. 0.000, 0.000, 2.070

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

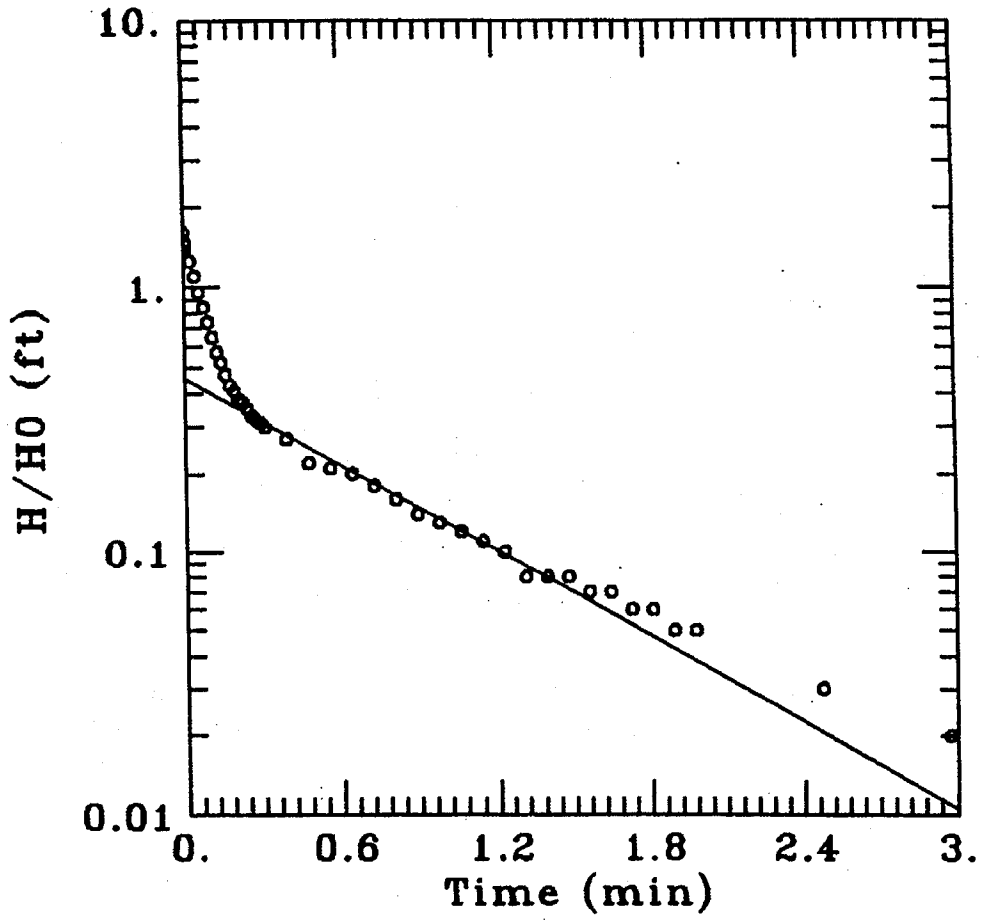
Estimate
K = 1.9796E-003 ft/min = 1.0×10^{-3} cm/sec
y0 = 4.3937E-098

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 1.52609E-003
y0 = 3.81130E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	3.811E-001	3.000E+000	1.627E-002		



DATA SET:
m07b01r.dat
01/10/02

AQUIFER TYPE:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

TEST DATE:
September 10, 1991

ESTIMATED PARAMETERS:
K = 0.001020 ft/min
y0 = 0.465 ft

TEST DATA:
H0 = 1.41 ft
re = 0.083 ft
rw = 0.18 ft
L = 0.3 ft
b = 0.3 ft
B = 0.3 ft

RISING HEAD RESULT, M-07B-01

J.M.MONTGOMERY, CONSULTING ENG	Client: NAVY - WESTDIV
Project No.: 2738.0257	Location: Site 7B, Building 162

M-11-01
RISING HEAD FIELD DATA
NAS ALAMEDA, CTO-121
1991

SE1000B
Environmental Logger
09/18 13:38

Unit# 00515 Test# 2

INPUT 1: Level (F) TOC

Reference 0.00
Scale factor 10.09
Offset 0.00

Step# 0 09/18 08:59

Elapsed Time (min)	Value (ft)
0.0000	0.00
0.0033	0.00
0.0066	0.04
0.0099	0.62
0.0133	0.62
0.0166	0.58
0.0200	0.55
0.0233	0.51
0.0266	0.50
0.0300	0.48
0.0333	0.46
0.0500	0.38
0.0666	0.32
0.0833	0.27
0.1000	0.23
0.1166	0.21
0.1333	0.20
0.1500	0.19
0.1666	0.18
0.1833	0.17
0.2000	0.17
0.2166	0.17
0.2333	0.16
0.2500	0.16
0.2666	0.16
0.2833	0.15
0.3000	0.15
0.3166	0.15
0.3333	0.15
0.4167	0.14
0.5000	0.14
0.5833	0.14

M-11-01

Elapsed Time	Value
0.6667	0.14
0.7500	0.14
0.8333	0.14
0.9167	0.14
1.0000	0.13
1.0833	0.13
1.1667	0.13
1.2500	0.13
1.3333	0.13
1.4166	0.12
1.5000	0.13
1.5833	0.12
1.6667	0.12
1.7500	0.12
1.8333	0.12
1.9167	0.14
2.0000	0.14
2.5000	0.13
3.0000	0.12
3.5000	0.12
4.0000	0.11
4.5000	0.11
5.0000	0.11
5.5000	0.11
6.0000	0.11
6.5000	0.11
7.0000	0.10
7.5000	0.08

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

10/29/91 16:13:

==

TEST DESCRIPTION

Data set........... M1101Z.SET
Data set title..... RISING HEAD RESULT, M-11-01
Company............ J.M.MONTGOMERY, CONSULTING ENG
Project............ 2738.0257
Client............. NAVY - WESTDIV
Location........... Site 11, Building 14
Test date.......... September 18, 1991

Knowns and Constants:
No. of data points.................. 56
Radius of well casing............... 0.083
Radius of well...................... 0.19
Aquifer saturated thickness......... 1.1
Well screen length.................. 1.1
Static height of water in well...... 1.1
Log(Re/Rw).......................... 1.262
A, B, C............................. 0.000, 0.000, 0.961

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

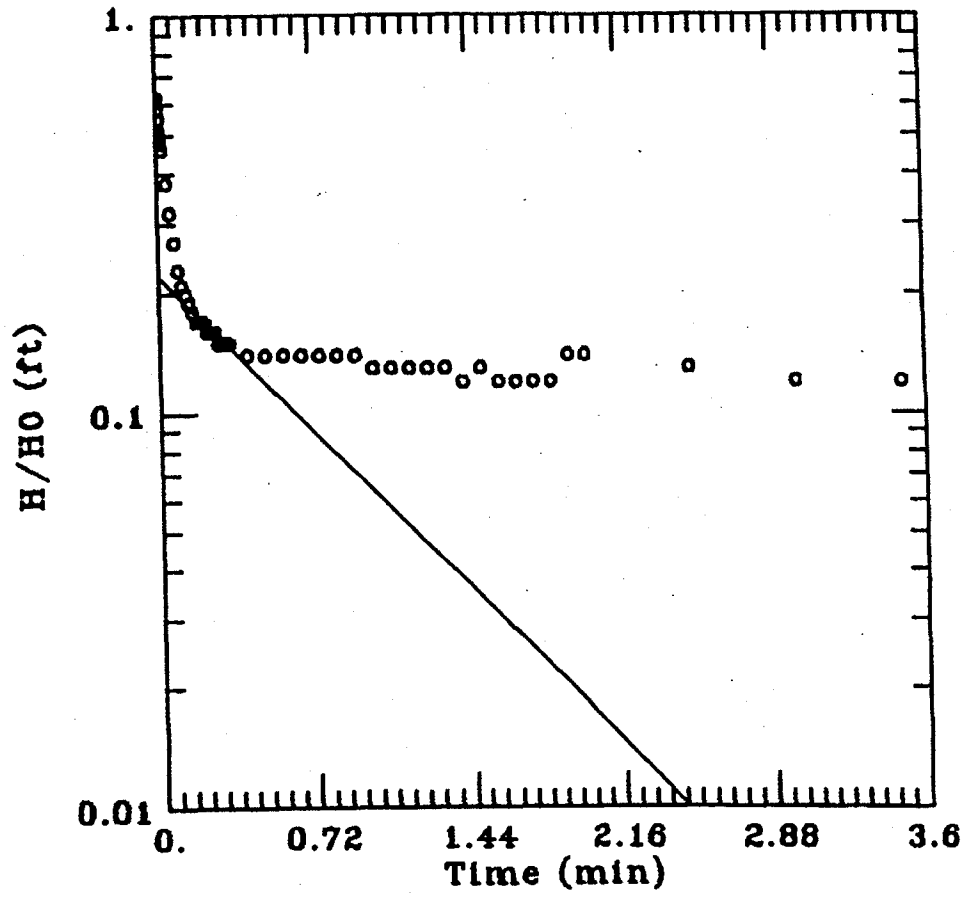
	Estimate
K =	5.9497E-004 ft/min = $3.0 * 10^{-4}$ cm/sec
y0 =	6.9315E+234

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 4.98721E-003
y0 = 2.20874E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.209E-001	3.600E+000	2.351E-003		



DATA SET:
M1101Z.DAT
10/20/01

AQUIFER TYPE:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

TEST DATE:
September 10, 1991

ESTIMATED PARAMETERS:
K = 0.004007 ft/min
y0 = 0.2800 ft

TEST DATA:
H0 = 0.62 ft
rc = 0.083 ft
rw = 0.18 ft
L = 1.1 ft
D = 1.1 ft
B = 1.1 ft

RISING HEAD RESULT, M-11-01

J.M.MONTGOMERY, CONSULTING ENG	Client: NAVY - WESTDIV
Project No.: 2738.0257	Location: Site 11, Building 14

M-11-02
RISING HEAD FIELD DATA
NAS ALAMEDA, CTO-121
1991

SE1000B
Environmental Logger
09/18 13:39

Unit# 00515 Test# 3

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	10.09
Offset	0.00

Step# 0 09/18 09:29

Elapsed Time (min)	Value (ft)
0.0000	1.46
0.0033	0.75
0.0066	1.17
0.0099	0.99
0.0133	0.93
0.0166	0.89
0.0200	0.86
0.0233	0.82
0.0266	0.79
0.0300	0.76
0.0333	0.73
0.0500	0.60
0.0666	0.51
0.0833	0.44
0.1000	0.39
0.1166	0.35
0.1333	0.32
0.1500	0.30
0.1666	0.28
0.1833	0.27
0.2000	0.26
0.2166	0.26
0.2333	0.25
0.2500	0.24
0.2666	0.24
0.2833	0.23
0.3000	0.23
0.3166	0.22
0.3333	0.22
0.4167	0.21
0.5000	0.20

Elapsed Time	Value
0.5833	0.19
0.6667	0.18
0.7500	0.17
0.8333	0.17
0.9167	0.17
1.0000	0.17
1.0833	0.16
1.1667	0.16
1.2500	0.16
1.3333	0.16
1.4166	0.15
1.5000	0.15
1.5833	0.15
1.6667	0.15
1.7500	0.14
1.8333	0.14
1.9167	0.14
2.0000	0.14
2.5000	0.13
3.0000	0.13
3.5000	0.12
4.0000	0.11
4.5000	0.11
5.0000	0.11
5.5000	0.10
6.0000	0.10
6.5000	0.10
7.0000	0.10
7.5000	0.09
8.0000	0.09
8.5000	0.08
9.0000	0.08
9.5000	0.08
10.0000	0.08

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A Q T E S O L V   R E S U L T S
Version 1.10

01/08/92 19:28:4

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TEST DESCRIPTION

```
Data set........... m1102z.set
Data set title..... RISING HEAD RESULT, M-11-02
Company............ J.M.MONTGOMERY, CONSULTING ENG
Project............ 2738.0257
Client............. NAVY - WESTDIV
Location........... Site 11, Building 14
Test date.......... September 18, 1991

Knowns and Constants:
   No. of data points.................. 61
   Radius of well casing............... 0.083
   Radius of well...................... 0.19
   Aquifer saturated thickness......... 2.6
   Well screen length.................. 2.6
   Static height of water in well...... 2.6
   Log(Re/Rw).......................... 1.9
   A, B, C.............................  0.000,  0.000,  1.450
```

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

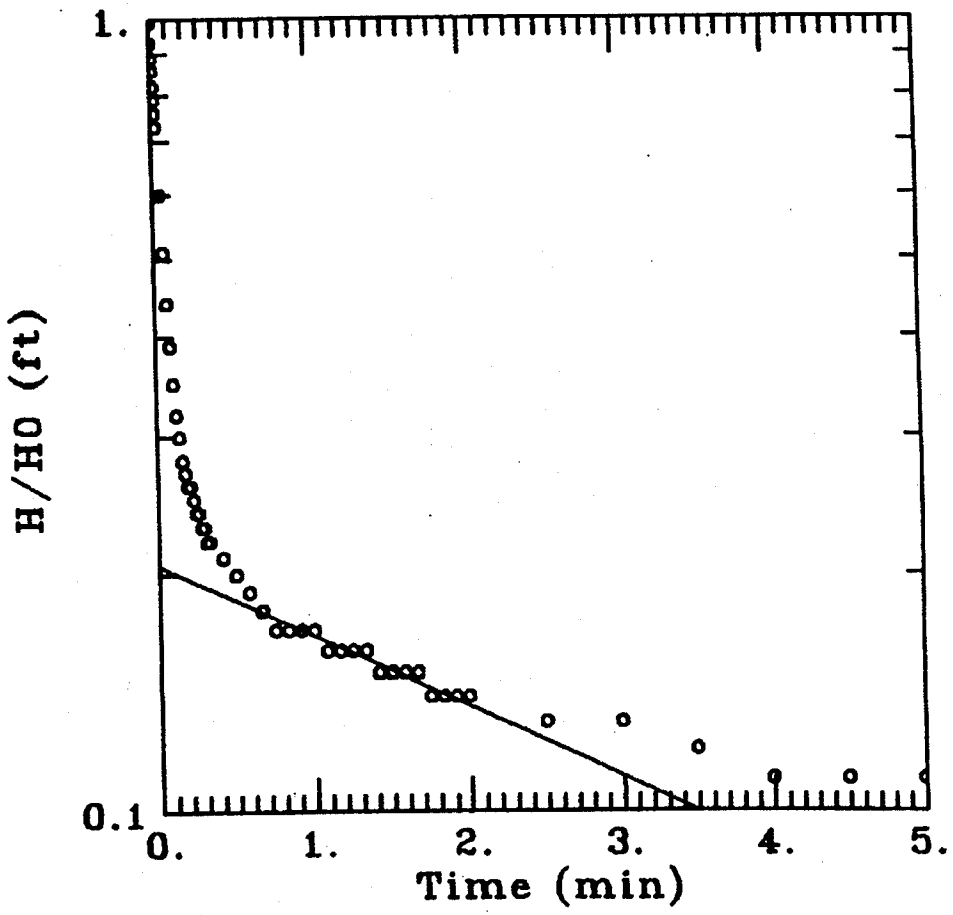
```
          Estimate
   K  =  4.5031E-004 ft/min = 2.3*10^-4 cm/sec
   y0 = -8.9151E-287
```

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

```
     K  = 5.30861E-004
     y0 = 2.07558E-001
```

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.076E-001	4.000E+000	8.927E-002		



DATA SET:
m1102z.001
01/10/02

AQUIFER TYPE:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

TEST DATE:
September 10, 1991

ESTIMATED PARAMETERS:
K = 0.0005165 ft/min
y0 = 0.5040 ft

TEST DATA:
H0 = 0.60 ft
rc = 0.083 ft
rw = 0.10 ft
L = 3.6 ft
b = 2.6 ft
H = 2.6 ft

RISING HEAD RESULT, M-11-02

J.M.MONTGOMERY, CONSULTING ENG	Client: NAVY - WESTDIV
Project No.: 2738.0257	Location: Site 11, Building 14

M-11-03
RISING HEAD FIELD DATA
NAS ALAMEDA, CTO-121
1991

SE1000B
Environmental Logger
09/18 13:41

Unit# 00515 Test# 4

INPUT 1: Level (F) TOC

Reference	0.00
Scale factor	10.09
Offset	0.00

Step# 0 09/18 10:31

Elapsed Time (min)	Value (ft)
0.0000	0.00
0.0033	0.01
0.0066	2.95
0.0099	1.56
0.0133	1.29
0.0166	1.09
0.0200	1.12
0.0233	1.09
0.0266	1.07
0.0300	1.04
0.0333	1.01
0.0500	0.89
0.0666	0.79
0.0833	0.69
0.1000	0.60
0.1166	0.53
0.1333	0.46
0.1500	0.41
0.1666	0.36
0.1833	0.32
0.2000	0.28
0.2166	0.25
0.2333	0.23
0.2500	0.21
0.2666	0.19
0.2833	0.18
0.3000	0.17
0.3166	0.16
0.3333	0.15
0.4167	0.11
0.5000	0.09
0.5833	0.08
0.6667	0.07
0.7500	0.06
0.8333	0.03

Elapsed Time	Value
0.9167	0.04
1.0000	0.04
1.0833	0.04
1.1667	0.04
1.2500	0.04
1.3333	0.04
1.4166	0.03
1.5000	0.03
1.5833	0.03
1.6667	0.03
1.7500	0.03
1.8333	0.03
1.9167	0.03
2.0000	0.03

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A Q T E S O L V   R E S U L T S

Version 1.10

01/08/92 19:33:

TEST DESCRIPTION

Data set........... m1103z.set
Data set title..... RISING HEAD RESULT, M-11-03
Company............ J.M.MONTGOMERY, CONSULTING ENG
Project............ 2738.0257
Client............. NAVY - WESTDIV
Location........... Site 11, Building 14
Test date.......... September 18, 1991

Knowns and Constants:
No. of data points.................. 42
Radius of well casing............... 0.083
Radius of well...................... 0.19
Aquifer saturated thickness......... 2.8
Well screen length.................. 2.8
Static height of water in well...... 2.8
Log(Re/Rw).......................... 1.961
A, B, C............................. 0.000, 0.000, 1.489

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

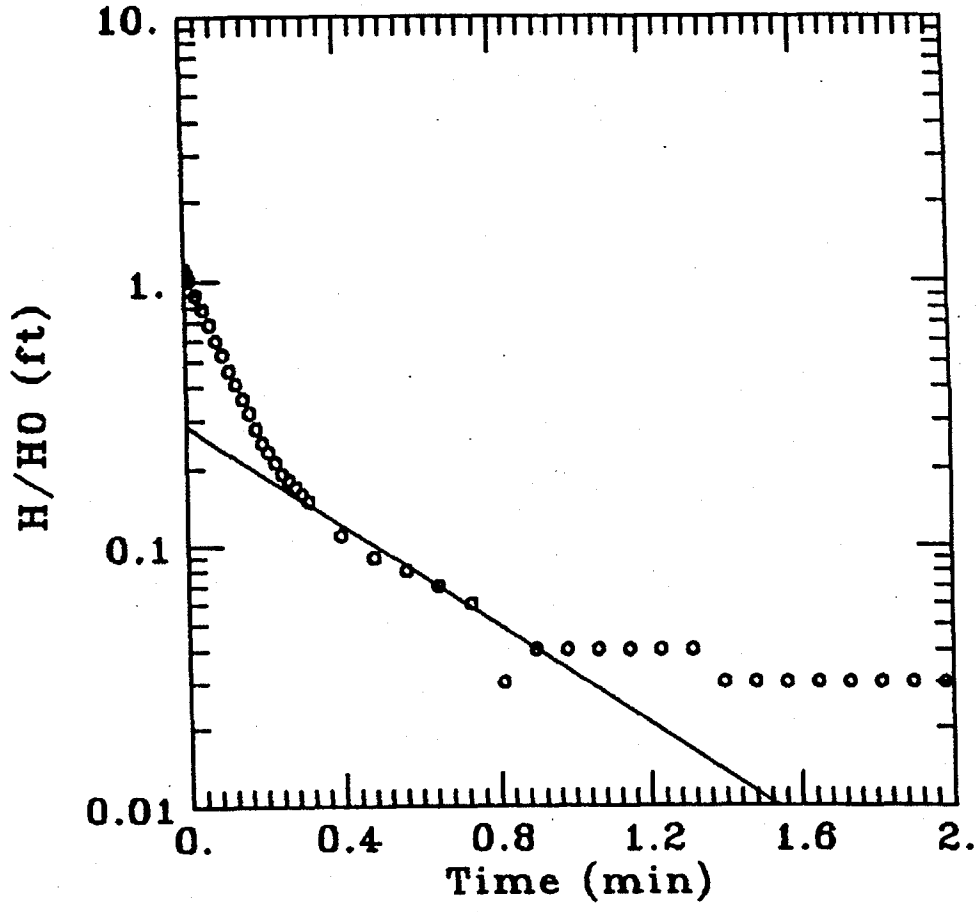
Estimate
K = 4.3843E-003 ft/min = $2.2 * 10^{-3}$ cm/sec
y0 = -8.9151E-287

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 5.26024E-003
y0 = 2.74544E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.745E-001	2.000E+000	3.506E-003		



DATA SET:
m1103z.001
01/10/02

AQUIFER TYPE:
Unconfined
SOLUTION METHOD:
Bouwer-Rice
TEST DATE:
September 10, 1991

ESTIMATED PARAMETERS:
K = 0.005206 ft/min
y0 = 0.8862 ft

TEST DATA:
H0 = 1.12 ft
re = 0.083 ft
rw = 0.18 ft
L = 2.0 ft
b = 2.0 ft
H = 2.0 ft

RISING HEAD RESULT, M-11-03

J.M.MONTGOMERY, CONSULTING ENG	Client: NAVY - WESTDIV
Project No.: 2738.0257	Location: Site 11, Building 14

M-11-04
RISING HEAD FIELD DATA
NAS ALAMEDA, CTO-121
1991

SE1000B
Environmental Logger
09/18 13:42

Unit# 00515 Test# 5

INPUT 1: Level (F) TOC

Reference 0.00
Scale factor 10.09
Offset 0.00

Step# 0 09/18 10:43

Elapsed Time (min)	Value (ft)
0.0000	0.00
0.0033	0.06
0.0066	4.84
0.0099	2.80
0.0133	2.00
0.0166	2.03
0.0200	2.01
0.0233	1.99
0.0266	1.98
0.0300	1.96
0.0333	1.95
0.0500	1.89
0.0666	1.84
0.0833	1.79
0.1000	1.73
0.1166	1.69
0.1333	1.65
0.1500	1.60
0.1666	1.56
0.1833	1.52
0.2000	1.48
0.2166	1.44
0.2333	1.40
0.2500	1.36
0.2666	1.33
0.2833	1.29
0.3000	1.26
0.3166	1.22
0.3333	1.19
0.4167	1.04
0.5000	0.92
0.5833	0.82

Elapsed Time	Value
0.6667	0.74
0.7500	0.68
0.8333	0.61
0.9167	0.58
1.0000	0.55
1.0833	0.52
1.1667	0.49
1.2500	0.47
1.3333	0.45
1.4166	0.43
1.5000	0.42
1.5833	0.41
1.6667	0.39
1.7500	0.38
1.8333	0.37
1.9167	0.35
2.0000	0.35
2.5000	0.29
3.0000	0.24
3.5000	0.21
4.0000	0.19
4.5000	0.17
5.0000	0.15
5.5000	0.15
6.0000	0.14
6.5000	0.13
7.0000	0.13
7.5000	0.12
8.0000	0.12
8.5000	0.11
9.0000	0.10
9.5000	0.09
10.0000	0.09

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A Q T E S O L V   R E S U L T S

Version 1.10

01/08/92 19:44:

==

TEST DESCRIPTION

Data set........... m1104z.set
Data set title..... RISING HEAD RESULT, M-11-04
Company............ J.M.MONTGOMERY, CONSULTING ENG
Project............ 2738.0257
Client............. NAVY - WESTDIV
Location........... Site 11, Building 14
Test date.......... September 18, 1991

Knowns and Constants:

No. of data points..................	58
Radius of well casing...............	0.083
Radius of well......................	0.19
Aquifer saturated thickness.........	4.9
Well screen length..................	4.9
Static height of water in well......	4.9
Log(Re/Rw)..........................	2.441
A, B, C.............................	0.000, 0.000, 1.838

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

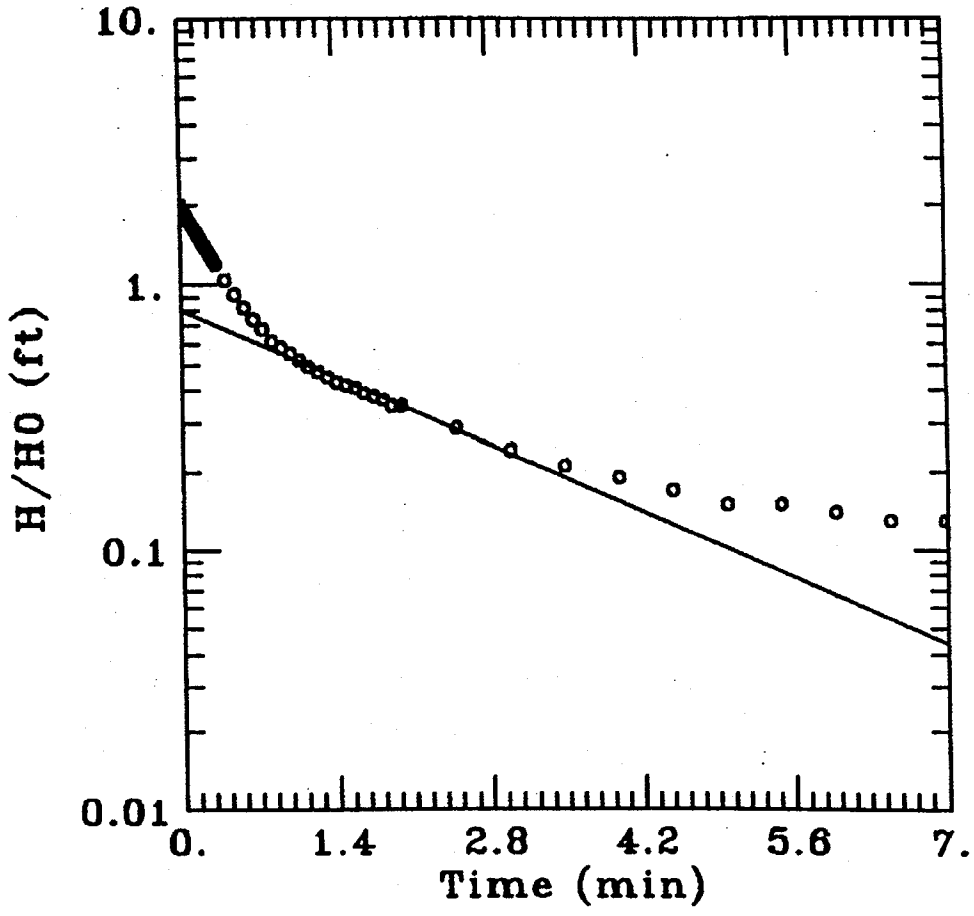
	Estimate
K =	5.4923E-004 ft/min = 2.8 * 10^{-4} cm/sec
y0 =	4.3937E-098

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>:

TYPE CURVE DATA

K = 6.71319E-004
y0 = 7.59904E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	7.599E-001	7.000E+000	4.912E-002		



DATA SET:
m1104z.sel
01/10/02

AQUIFER TYPE:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

TEST DATE:
September 16, 1991

ESTIMATED PARAMETERS:
K = 0.0007112 ft/min
y0 = 0.7866 ft

TEST DATA:
H0 = 2.01 ft
rc = 0.083 ft
rw = 0.18 ft
L = 4.0 ft
b = 4.0 ft
B = 4.0 ft

RISING HEAD RESULT, M-11-04

J.M.MONTGOMERY, CONSULTING ENG	Client: NAVY - WESTDIV
Project No.: 2738.0257	Location: Site 11, Building 14

Bearing Zone Hydrologic Property Estimate," lists the results of the data analysis and provides average values for the hydrologic properties. Type curve matches are shown in Attachment 2, "Installation Restoration Site 9 Intermediate Pumping Test Analysis Report."

Values for hydraulic conductivity, transmissivity and storativity are reasonable. No estimates are provided for well P9-MWI10. This well is completed 10 feet below the bottom of the pumping well and if any drawdown occurred it was by tidal influences that could not be removed.

Table 1-3
Site 9 Intermediate Second Water-Bearing Zone Hydrologic Property Estimates

Well Name	Hydraulic Conductivity (feet per day)	Transmissivity (square feet per day)	Storativity
P9-MWI02	2.5	57	3.5 E-03
P9-MWI03	1.9	44	1.2 E-03
P9-MWI04	2.3	53	1.9 E-03
P9-MWI05	2.3	53	6.7 E-04
P9-MWI06	2.3	52	7.0 E-04
P9-MWI07	3.3	76	1.2 E-04
P9-MWI08	1.3	30	3.0 E-04
P9-MWI09	2.3	52	7.8 E-04
Average	2.3	52	2.4 E-03

1.3 Sites 11/21 Intermediate Results

The objective of the test was to determine the aquifer properties for the SWBZ at Sites 11/21. The pumping well (P11/21-IW01) and six monitoring wells were completed in the SWBZ. Well P11-MWI03 was completed in the FWBZ and was also monitored. The wells monitored, screened interval, water-bearing zone, and other information are listed on Table 1-4, "Sites 11/21 Well Attributes." Also monitored was well M03-05 which is completed in the first water-bearing zone and background well D11-01.

Pretest monitoring was started at 15:00 on August 23, 2002 and ended at 07:40 on August 27, 2002. Pretest monitoring consisted of monitoring water levels in the pumping and monitoring wells P11-MW01, P11-MW02, P11-MW03, and P11-MW04 and recording barometric pressure and tidal changes using data loggers. The barometric pressure was recorded and tidal changes were recorded using a pressure transducer placed in Seaplane Lagoon located approximately ¼ mile west of the test site.

Table 1-4
Sites 11/21 Well Attributes

Well Name	Screen Interval (feet below ground surface)	Water-Bearing Zone	Distance from Pumping Well (feet)	Estimated Tidal Efficiency
P11/21-IW01	22 – 42	SWBZ	Pumping well	0.035
P11/21-MW01	32 – 42	SWBZ	10.4	0.008
P11/21-MW02	22 – 32	SWBZ	11.1	0.03
P11/21-MW03	32 – 42	SWBZ	30.1	0.008
P11/21-MW04	22 – 32	SWBZ	30.6	0.008
P11-MWI03	11 – 19	FWBZ	99.5	NC
P11-MWI07	22 – 32	SWBZ	96.9	NC
P11-MWI11	32 - 42	SWBZ	94.7	0.008
M03-05	3 – 13	FWBZ	48.2	0.008
D11B-01	50 - 60	SWBZ	482.6	NC

NC denotes tidal efficiency not calculated

Pretest data were evaluated to determine whether barometric pressure or tidal changes influenced water levels at the site. Wells completed in the SWBZ were strongly influenced by tidal changes and to a much lesser degree from barometric pressure changes. The tidal data were used to estimate a tidal efficiency for each well. Estimated tidal efficiency for each well is listed on Table 1-4. The tidal efficiency is an estimate of the relative water level response to changes in tides. No barometric efficiency was calculated for wells completed in the SWBZ as barometric response was overwhelmed by the tidal response and could not be accurately determined.

The Site 11 Intermediate aquifer test was started at 10:21 on August 27, 2002 and terminated at 02:32 on August 28, 2002 for a total of 971 minutes pumping time. The well was pumped at 2.5 gallons per minute (gpm). Well development testing indicated that a pumping rate of 2.5 gpm would stress the aquifer sufficiently to achieve measurable drawdown in the monitored wells. Water level recovery was monitored following termination of pumping. During the test, barometric pressure and tidal changes were recorded using pressure transducers and data loggers.

The SWBZ at Site 11 is a leaky confined aquifer. The term leaky refers to vertical recharge that occurs through the overlying or underlying aquitard. Water levels within the SWBZ are significantly influenced by changes in earth tides. Based on pretest monitoring, water levels change in response to water level changes at Seaplane Lagoon with a delay time of approximately 60 minutes. All data were processed to remove tidal effects by subtracting the

water level change recorded at Seaplane Lagoon, corrected for tidal efficiency, from the recorded water level in the well. The data for wells P11-MWI07 and P11-MWI11 were also corrected for tidal influence by comparing uncorrected drawdown plots with a plot of tidal changes and estimating a tidal efficiency correction. The estimated tidal efficiency is listed on Table 1-4.

Although, the two observation wells completed in the FWBZ were not monitored during the pretest monitoring period, barometric efficiency estimates were made by comparing uncorrected drawdown data to recorded barometric pressure changes. A barometric efficiency correction of 0.6 was applied to the drawdown data from wells P11-MWI03 and M03-05.

These data were then used for analysis. Water level data were analyzed using the aquifer test analysis program *AquiferTest Version 3.5*. The data were evaluated using the analysis method of Walton (1962). This method is an extension of the Hantush-Jacob Method (1955) for drawdown leaky confined aquifers with nonsteady-state flow. Table 1-5, "Sites 11/21 Intermediate Second Water-Bearing Zone Hydrologic Property Estimates," lists the results of the data analysis and provides average values for the hydrologic properties. Type curve matches are shown in Attachment 3, "Installation Restoration Sites 11/21 Intermediate Pumping Test Analysis Report."

Table 1-5
Sites 11/21 Intermediate Second Water-Bearing Zone Hydrologic Property Estimates

Well Name	Hydraulic Conductivity (feet per day)	Transmissivity (square feet per day)	Storativity
P11/21-MW01	2.5	55	2.9 E-03
P11/21-MW02	2.4	53	2.0 E-03
P11/21-MW03	3.8	84	1.5 E-03
P11/21-MW04	3.8	84	7.5 E-04
P11-MWI07	7.3	160	4.6 E-04
P11-MWI11	6.8	150	5.2 E-04
Average	**4.4**	**98**	**1.4 E-03**

The values for hydraulic conductivity, transmissivity, and storativity are reasonable.

No estimates are provided for wells P11-MWI03 and M03-05. These wells are completed in the FWBZ and although drawdown was observed no estimate of aquifer properties can be made as pumping was completed in an underlying aquifer. Observed drawdown in these two FWBZ wells demonstrates that either the Bay Sediment Unit is not of infinite areal extent, the aquitard is leaky, or a combination of the two. The Bay Sediment Unit is known to be absent east of the

test site and is thin (less than 3 feet thick) at the test site. Therefore, the drawdown in these wells is considered to be the result of both limited areal extent and leakage.

1.4 Site 16 North Shallow Results

The objective of the test was to determine the aquifer properties for the FWBZ at Site 16 North. The pumping well (P16-IW02) and four monitoring wells were completed in the FWBZ with screens set at 5 to 15 feet below ground surface. Wells monitored in the FWBZ were P16-MWS02, P16-MWS04, P16-MWS06, P16-MWS08, and MWC2-1. Also monitored was well P16-MWI02 completed in the upper portion on the SWBZ. Table 1-6, "Site 16 North Well Attributes," shows the well completions and distances from the pumping well P16S-IW01.

Table 1-6
Site 16 North Well Attributes

Well Name	Screen Interval (feet below ground surface)	Water-Bearing Zone	Distance from Pumping Well (feet)
P16-IWS02	5 – 15	FWBZ	Pumping well
P16-MWS02	5 –15	FWBZ	4.3
P16-MWS04	5 – 15	FWBZ	21.3
P16-MWS06	5 – 15	FWBZ	10.5
P16-MWS08	5 – 15	FWBZ	30.0
MWC2-1	5 –15	FWBZ	219.7
P16-MWI02	20 – 25	SWBZ	21.9

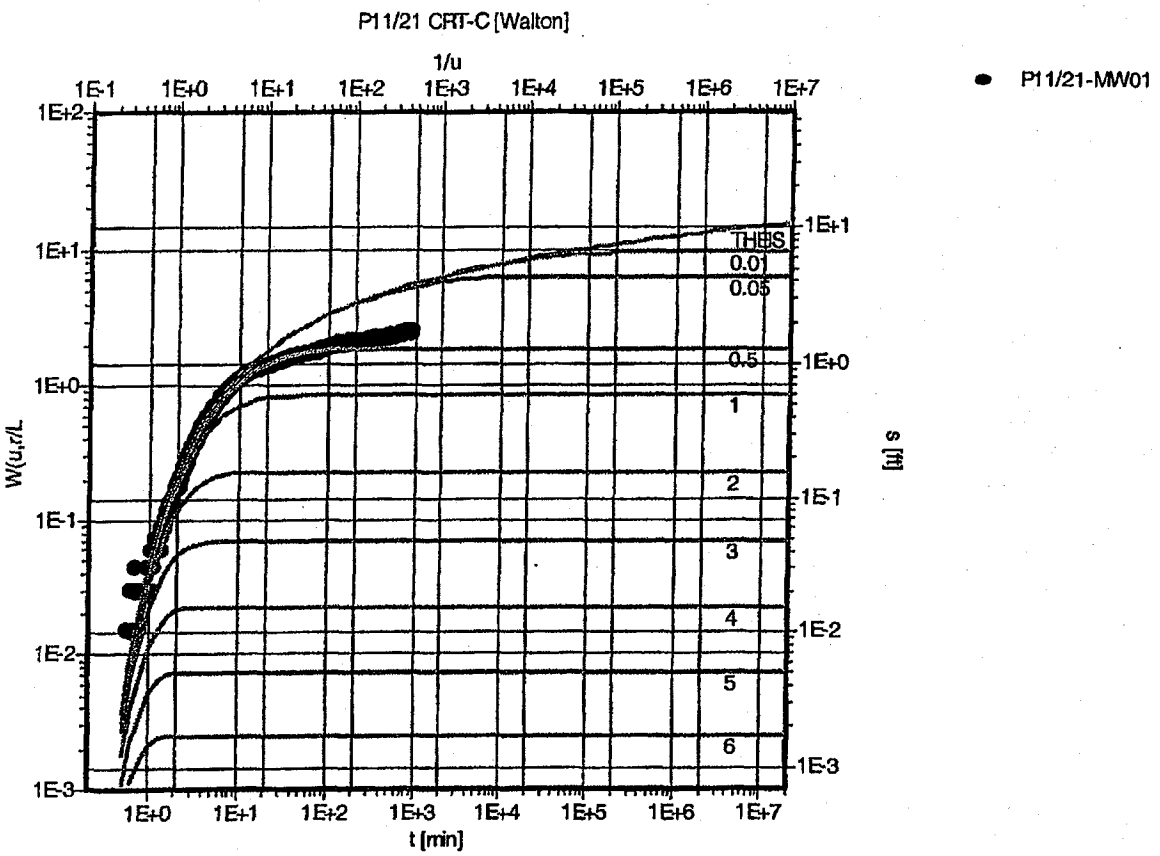
FWBZ denotes first water-bearing zone

Pretest monitoring was started at 14:00 on August 19, 2002 and ended at 08:00 on August 22, 2002. Pretest monitoring consisted of monitoring water levels in the pumping and all monitoring wells and recording barometric pressure and tidal changes using data loggers. The barometric pressure was recorded at the IT office at Alameda Point and tidal changes were recorded using a pressure transducer placed in Seaplane Lagoon located approximately ½ mile west of the test site. However, the data logger files for the barometric pressure and tidal recordings were lost and could not be recovered.

Pretest data were evaluated to determine whether barometric pressure or tidal changes influenced water levels at the site. Wells completed in the FWBZ were strongly influenced by barometric pressure changes but not tides. The well completed in the SWBZ (P16-MWI02) was strongly influenced by tidal changes and to a lesser extent barometric pressure changes. Because of the lost data logger data, the barometric efficiency (0.6) calculated for the test at Site 16 South was used. This is appropriate as the two tests are completed in the same water-bearing zone and with

Attachment 3
Installation Restoration Site 11/21 Intermediate Pumping Test Analysis Report

Shaw E & I 1045 Jadwin Ave. Suite C Richland, WA	**Pumping Test Analysis Report**
	Project: IR Site 11/21 Intermediate
	Number:
	Client:



Pumping Test: **IR Site 11/21 Inter - B**

Analysis Method: **Walton**

Analysis Results:	Transmissivity:	5.54E+1 [ft²/d]	Conductivity:	2.52E+0 [ft/d]
	Storativity:	2.90E-3	c:	2.82E+7 [min]

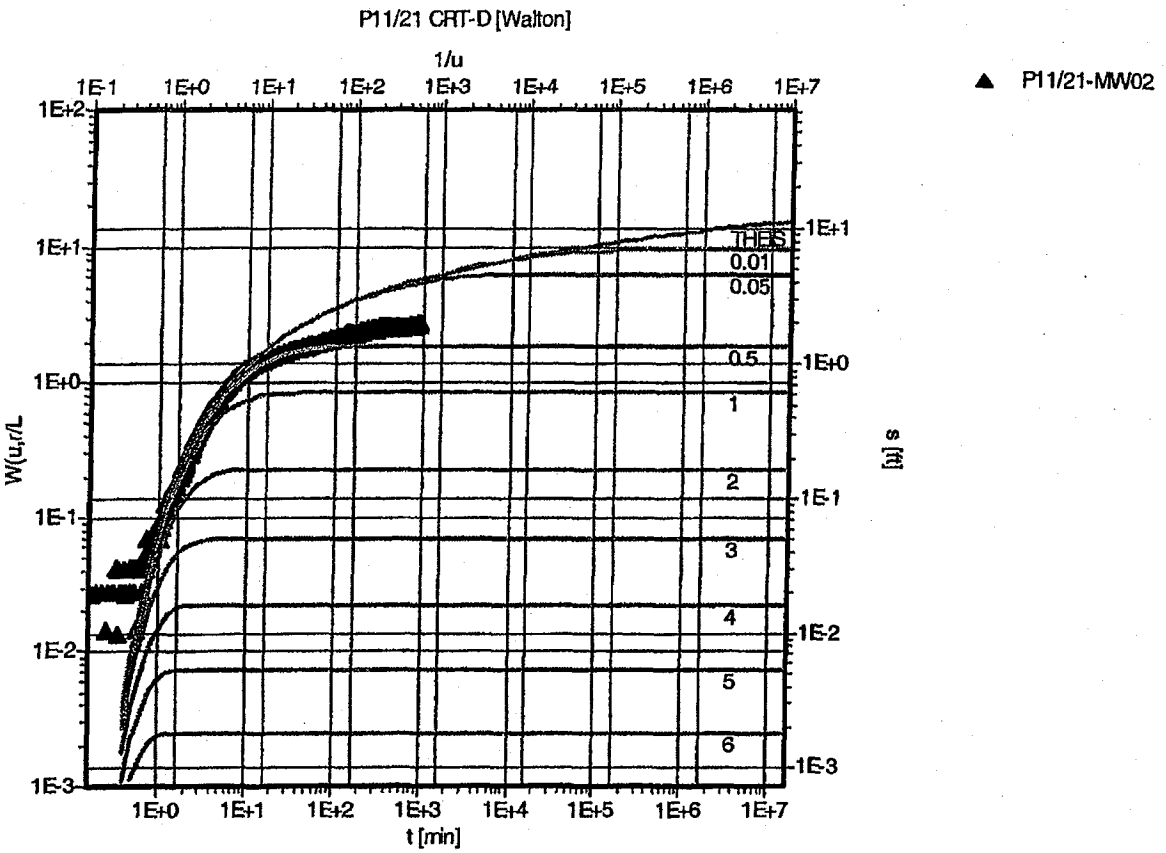
Test parameters:	Pumping Well:	P11/21-IWI1	Aquifer Thickness:	22 [ft]
	Casing radius:	0.1667 [ft]	r/L:	0.01
	Screen length:	20 [ft]		
	Boring radius:	0.334 [ft]		
	Discharge Rate:	2.5 [U.S. gal/min]		

Comments:

Evaluated by: R. D. Landon

Evaluation Date: 9/25/2002

Shaw E & I 1045 Jadwin Ave. Suite C Richland, WA	**Pumping Test Analysis Report**
	Project: IR Site 11/21 Intermediate
	Number:
	Client:



Pumping Test: **IR Site 11/21 Inter - C**

Analysis Method: **Walton**

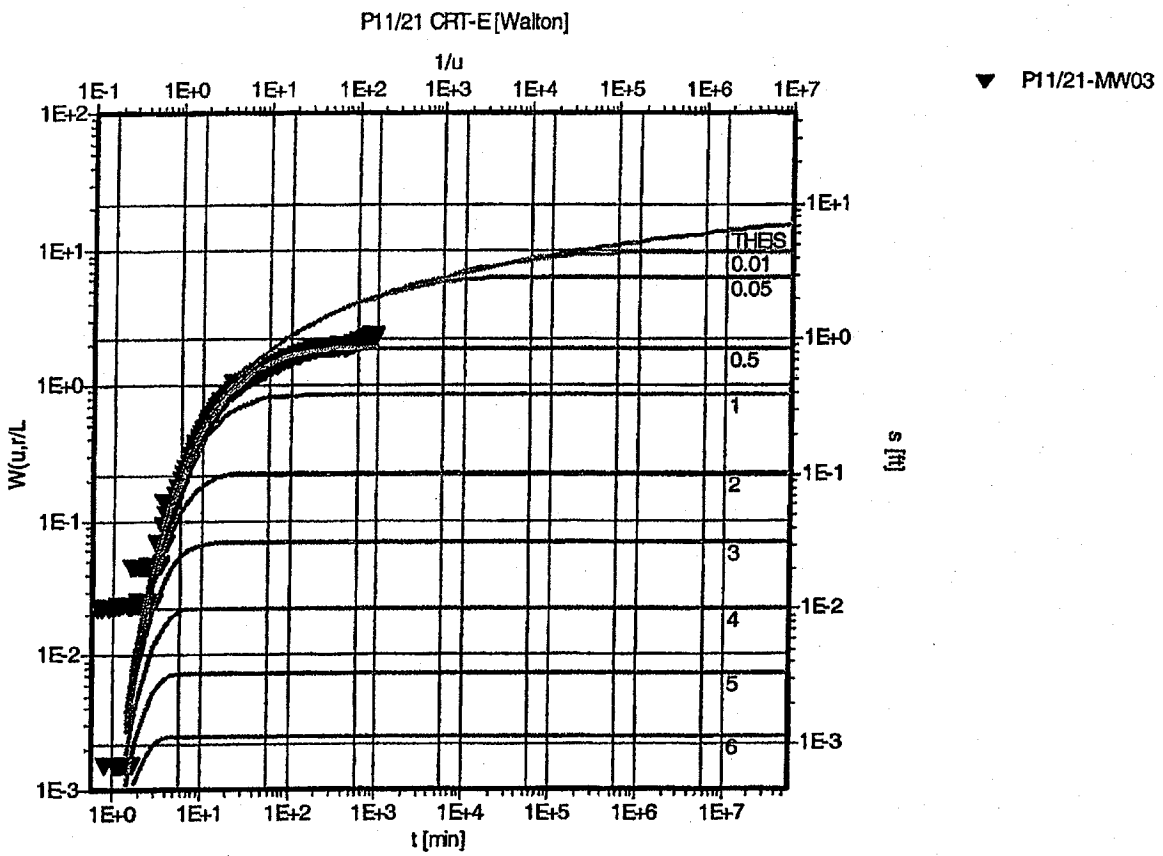
Analysis Results:	Transmissivity:	5.29E+1 [ft²/d]	Conductivity:	2.40E+0 [ft/d]
	Storativity:	1.97E-3	c:	3.36E+7 [min]
Test parameters:	Pumping Well:	P11/21-IWI1	Aquifer Thickness:	22 [ft]
	Casing radius:	0.1667 [ft]	r/L:	0.01
	Screen length:	20 [ft]		
	Boring radius:	0.334 [ft]		
	Discharge Rate:	2.5 [U.S. gal/min]		

Comments:

Evaluated by: R. D. Landon

Evaluation Date: 9/25/2002

Shaw E & I 1045 Jadwin Ave. Suite C Richland, WA	**Pumping Test Analysis Report**
	Project: IR Site 11/21 Intermediate
	Number:
	Client:



Pumping Test: **IR Site 11/21 Inter-D**

Analysis Method: **Walton**

Analysis Results:	Transmissivity:	8.38E+1 [ft²/d]	Conductivity:	3.81E+0 [ft/d]
	Storativity:	1.48E-3	c:	1.56E+8 [min]

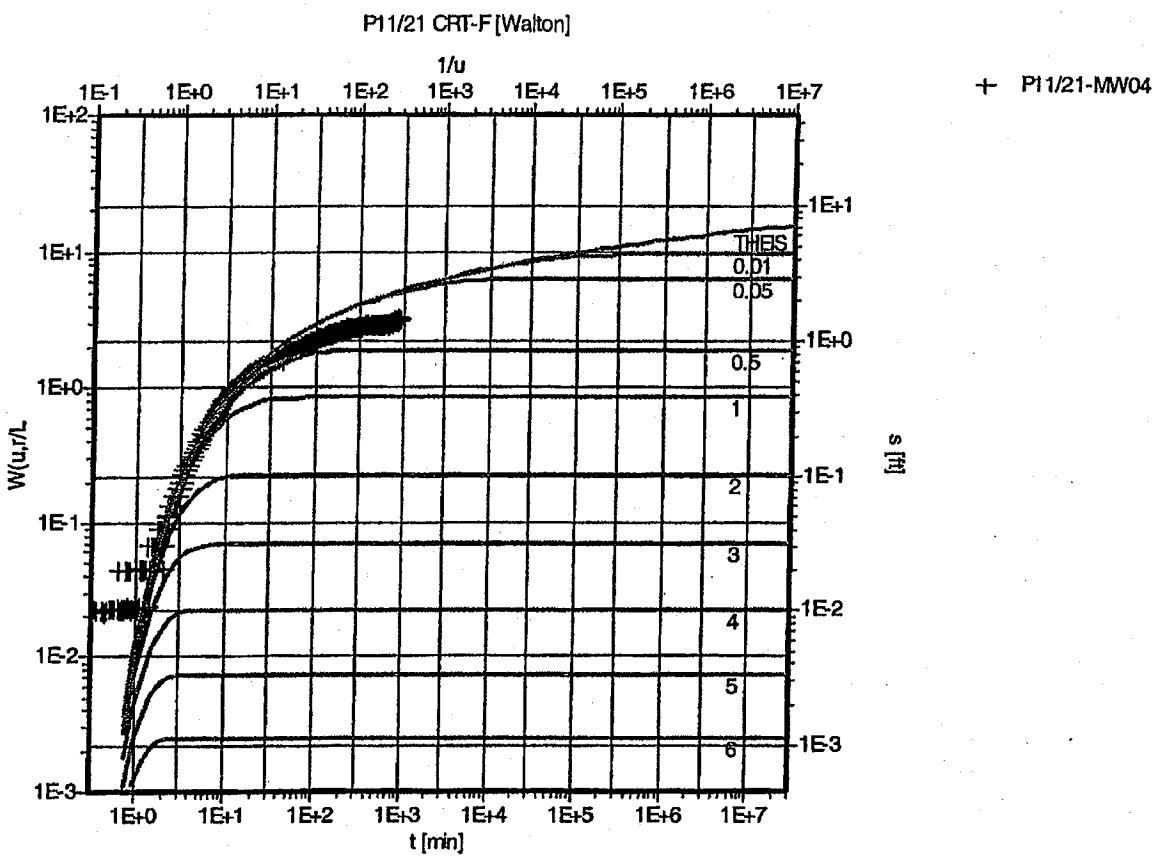
Test parameters:	Pumping Well:	P11/21-IWI1	Aquifer Thickness:	22 [ft]
	Casing radius:	0.1667 [ft]	r/L:	0.01
	Screen length:	20 [ft]		
	Boring radius:	0.334 [ft]		
	Discharge Rate:	2.5 [U.S. gal/min]		

Comments:

Evaluated by: R. D. Landon

Evaluation Date: 9/25/2002

Shaw E & I 1045 Jadwin Ave. Suite C Richland, WA	Pumping Test Analysis Report Project: IR Site 11/21 Intermediate Number: Client:



Pumping Test: **IR Site 11/21 Inter - E**

Analysis Method: **Walton**

Analysis Results:	Transmissivity:	8.38E+1 [ft²/d]	Conductivity:	3.81E+0 [ft/d]
	Storativity:	7.50E-4	c:	1.61E+8 [min]

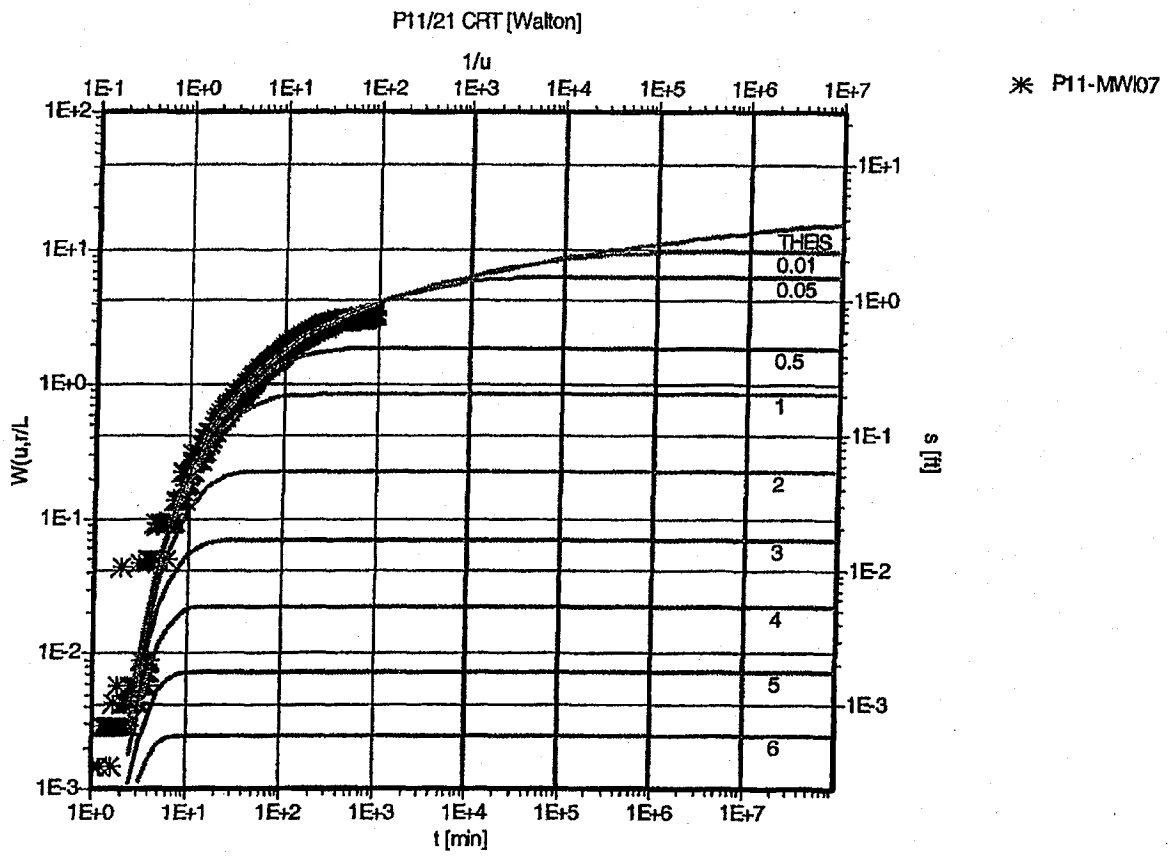
Test parameters:	Pumping Well:	P11/21-IWI1	Aquifer Thickness:	22 [ft]
	Casing radius:	0.1667 [ft]	r/L:	0.01
	Screen length:	20 [ft]		
	Boring radius:	0.334 [ft]		
	Discharge Rate:	2.5 [U.S. gal/min]		

Comments:

Evaluated by: R. D. Landon

Evaluation Date: 9/25/2002

Shaw E & I 1045 Jadwin Ave. Suite C Richland, WA	**Pumping Test Analysis Report**
	Project: IR Site 11/21 Intermediate
	Number:
	Client:



Pumping Test: **IR Site 11/21 Inter-A**

Analysis Method: **Walton**

Analysis Results:				
	Transmissivity:	1.60E+2 [ft²/d]	Conductivity:	7.26E+0 [ft/d]
	Storativity:	4.61E-4	c:	8.47E+8 [min]

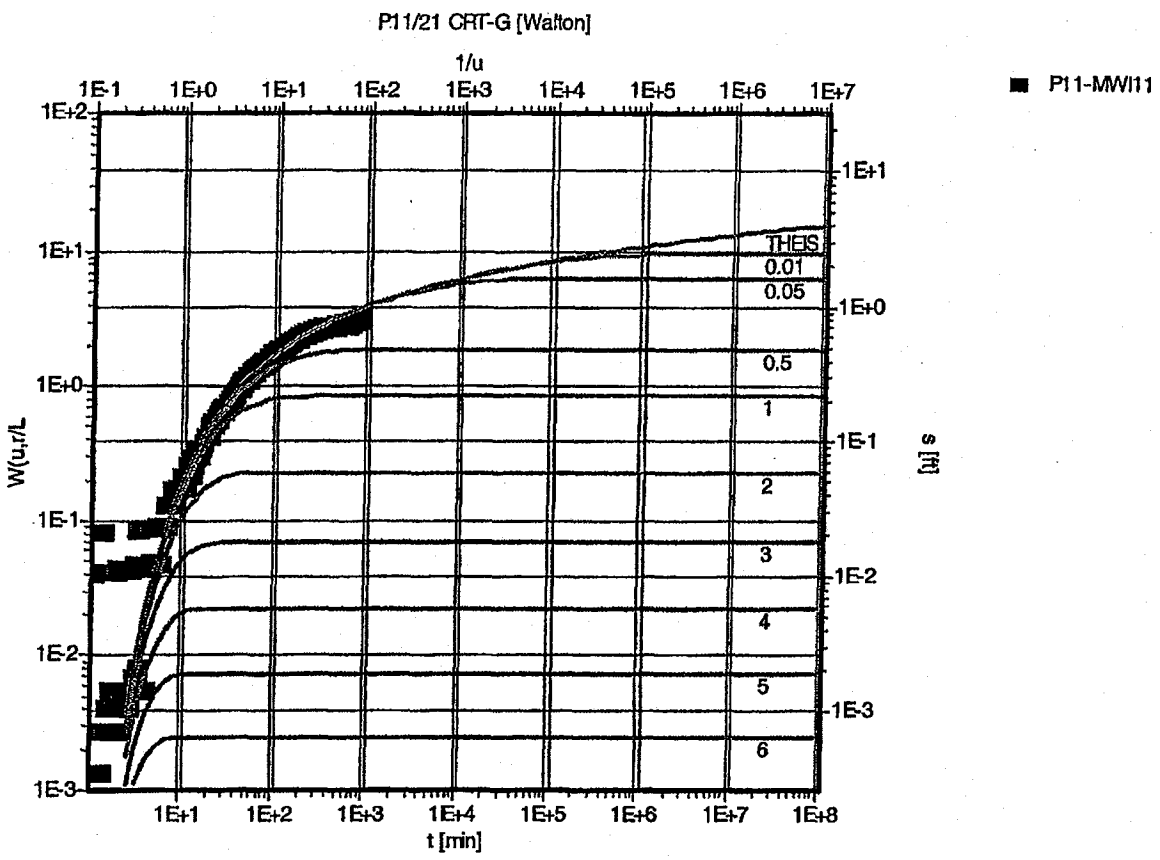
Test parameters:				
	Pumping Well:	P11/21-IWI1	Aquifer Thickness:	22 [ft]
	Casing radius:	0.1667 [ft]	r/L:	0.01
	Screen length:	20 [ft]		
	Boring radius:	0.334 [ft]		
	Discharge Rate:	2.5 [U.S. gal/min]		

Comments:

Evaluated by: R. D. Landon

Evaluation Date: 9/25/2002

Shaw E & I 1045 Jadwin Ave. Suite C Richland, WA	**Pumping Test Analysis Report**
	Project: IR Site 11/21 Intermediate
	Number:
	Client:



Pumping Test: **IR Site 11/21 Inter-F**

Analysis Method: **Walton**

Analysis Results:	Transmissivity:	1.49E+2 [ft²/d]	Conductivity:	6.77E+0 [ft/d]
	Storativity:	5.18E-4	c:	8.67E+8 [min]

Test parameters:	Pumping Well:	P11/21-IWI1	Aquifer Thickness:	22 [ft]
	Casing radius:	0.1667 [ft]	r/L:	0.01
	Screen length:	20 [ft]		
	Boring radius:	0.334 [ft]		
	Discharge Rate:	2.5 [U.S. gal/min]		

Comments:

Evaluated by: R. D. Landon

Evaluation Date: 9/25/2002

APPENDIX D
SOIL, GROUNDWATER, AND SOIL GAS ANALYTICAL RESULTS

APPENDIX D TABLES

Environmental Baseline Survey Investigations
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D-2 Site 3 Semivolatile Organic Compounds in Soil
D-3 Site 3 Volatile Organic Compounds in Soil
D-4 Site 3 Total Metals in Soil
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D-8 Site 3 Pesticides and PCBs in Groundwater
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Remedial Investigations
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D-14 Site 3 Total Metals in Soil
D-15 Site 3 Total Petroleum Hydrocarbons in Soil
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D-18 Site 3 Semivolatile Organic Compounds in Groundwater
D-19 Site 3 Polynuclear Aromatic Hydrocarbons in Groundwater
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D-41 Site 4 Volatile Organic Compounds in Groundwater
D-42 Site 4 Metals in Groundwater
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D-44 Site 4 Volatile Organic Compounds in Air

Remedial Investigations
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D-49 Site 4 Total Petroleum Hydrocarbons in Soil
D-50 Site 4 General Chemicals in Soil
D-51 Site 4 Pesticides and PCBs in Groundwater
D-52 Site 4 Semivolatile Organic Compounds in Groundwater
D-53 Site 4 Polynuclear Aromatic Hydrocarbons in Groundwater
D-54 Site 4 Volatile Organic Compounds in Groundwater
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Environmental Baseline Survey Investigations
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D-75 Site 11 Semivolatile Organic Compounds in Soil
D-76 Site 11 Volatile Organic Compounds in Soil
D-77 Site 11 Total Metals in Soil
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D-81 Site 11 Pesticides, PCBs, and Herbicides in Sediment
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D-83 Site 11 Volatile Organic Compounds in Sediment
D-84 Site 11 Cyanide in Sediment
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D-86 Site 11 Total Petroleum Hydrocarbons in Sediment
D-87 Site 11 General Chemicals in Sediment

Remedial Investigations
D-88 Site 11 PCBs in Soil
D-89 Site 11 Semivolatile Organic Compounds in Soil
D-90 Site 11 Volatile Organic Compounds in Soil
D-91 Site 11 Total Metals in Soil
D-92 Site 11 Total Petroleum Hydrocarbons in Soil
D-93 Site 11 General Chemicals in Soil
D-94 Site 11 Pesticides and PCBs in Groundwater
D-95 Site 11 Semivolatile Organic Compounds in Groundwater
D-96 Site 11 Polynuclear Aromatic Hydrocarbons in Groundwater
D-97 Site 11 Volatile Organic Compounds in Groundwater
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D-99 Site 11 Total Metals in Groundwater
D-100 Site 11 Total Petroleum Hydrocarbons in Groundwater
D-101 Site 11 Dissolved Gases in Groundwater
D-102 Site 11 General Chemicals in Groundwater
D-103 Site 11 Semivolatile Organic Compounds in Sediment
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D-105 Site 11 Total Petroleum Hydrocarbons in Sediment
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Environmental Baseline Survey Investigations
D-107 Site 21 Pesticides, PCBs, and Herbicides in Soil
D-108 Site 21 Semivolatile Organic Compounds in Soil
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D-110 Site 21 Total Metals in Soil
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D-115 Site 21 Pesticides, PCBs, and Herbicides in Sediment
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D-118 Site 21 Organic Metals in Sediment
D-119 Site 21 Total Petroleum Hydrocarbons in Sediment
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Remedial Investigations

D-121 Site 21 Pesticides and PCBs in Soil
D-122 Site 21 Semivolatile Organic Compounds in Soil
D-123 Site 21 Volatile Organic Compounds in Soil
D-124 Site 21 Total Metals in Soil
D-125 Site 21 Total Petroleum Hydrocarbons in Soil
D-126 Site 21 General Chemicals in Soil
D-127 Site 21 Pesticides and PCBs in Groundwater
D-128 Site 21 Semivolatile Organic Compounds in Groundwater
D-129 Site 21 Polynuclear Aromatic Hydrocarbons in Groundwater
D-130 Site 21 Volatile Organic Compounds in Groundwater
D-131 Site 21 Dissolved Metals in Groundwater
D-132 Site 21 Total Metals in Groundwater
D-133 Site 21 Total Petroleum Hydrocarbons in Groundwater
D-134 Site 21 Dissolved Gases in Groundwater
D-135 Site 21 General Chemicals in Groundwater
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D-137 Site 21 Volatile Organic Compounds in Air
D-138 Site 21 Semivolatile Organic Compounds in Sediment
D-139 Site 21 Volatile Organic Compounds in Sediment
D-140 Site 21 Total Petroleum Hydrocarbons in Sediment
D-141 Site 21 General Chemicals in Sediment

TABLE D-1: SITE 3 PESTICIDES, PCBs AND HERBICIDES IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	116-Z21-002	116-Z21-002	116-Z21-003	116-Z21-004	116-Z21-004
Sample Code	116-0002	116-0002M	116-0003M	116-0005	116-0006
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2B	EBS PHASE 2B
Sampling Date	6/26/1995	6/26/1995	6/26/1995	11/8/1995	11/8/1995
Sampling Depth (feet bgs)	.5 - 1	.5 - 1	.5 - 1	1 - 2	3 - 4
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
2,4,5-T					
2,4,5-TP (SILVEX)					
2,4-D					
2,4-DB					
4,4'-DDD	3.7 U	6.5 U	7.6 U	3.9 U	3.7 U
4,4'-DDE	3.7 U	6.5 U	7.6 U	3.9 U	3.7 U
4,4'-DDT	3.7 U	6.5 U	7.6 U	3.9 U	3.7 U
ALDRIN	1.9 U	3.2 U	3.8 U	2 U	1.9 U
ALPHA-BHC	1.9 U	3.2 U	3.8 U	2 U	1.9 U
ALPHA-CHLORDANE	1.9 U			2 U	1.9 U
AROCLOR-1016	37 U	13 U	15 U	39 U	37 U
AROCLOR-1221	74 U	26 U	30 U	79 U	74 U
AROCLOR-1232	37 U	13 U	15 U	39 U	37 U
AROCLOR-1242	37 U	13 U	15 U	39 U	37 U
AROCLOR-1248	37 U	13 U	15 U	39 U	37 U
AROCLOR-1254	37 U	13 U	15 U	39 U	37 U
AROCLOR-1260	37 U	9.5 J	15 U	39 U	37 U
AZINPHOS-METHYL					
BETA-BHC	1.9 U	3.2 U	3.8 U	2 U	1.9 U
CHLORDANE		32 U	38 U		
DALAPON; 2,2-DICHLOROPROPANOIC					
DELTA-BHC	1.9 U	3.2 U	3.8 U	2 U	1.9 U
DEMETON					
DIAZINON					
DICAMBA					
DICHLORPROP					
DIELDRIN	3.7 U	6.5 U	7.6 U	3.9 U	3.7 U
DINOSEB					
DISULFOTON					
ENDOSULFAN I	1.9 U	3.2 U	3.8 U	2 U	1.9 U
ENDOSULFAN II	3.7 U	6.5 U	7.6 U	3.9 U	3.7 U
ENDOSULFAN SULFATE	3.7 U	6.5 U	7.6 U	3.9 U	3.7 U
ENDRIN	3.7 U	6.5 U	7.6 U	3.9 U	3.7 U
ENDRIN ALDEHYDE	3.7 U	6.5 U	7.6 U	3.9 U	3.7 U
ENDRIN KETONE	3.7 U			3.9 U	3.7 U
ETHION					
ETHYL PARATHION					
GAMMA-BHC (LINDANE)	1.9 U	3.2 U	3.8 U	2 U	1.9 PJ
GAMMA-CHLORDANE	1.9 U			2 U	1.9 U
HEPTACHLOR	1.9 U	3.2 U	3.8 U	2 U	1.9 U
HEPTACHLOR EPOXIDE	1.9 U	3.2 U	3.8 U	2 U	1.9 U
MALATHION					
MCPA					
MCPP					
METHOXYCHLOR	19 U	32 U	38 U	20 U	19 U
METHYL PARATHION					
TOXAPHENE	190 U	65 U	76 U	200 U	190 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-1: SITE 3 PESTICIDES, PCBs AND HERBICIDES IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	116-Z21-005	116-Z21-005	116-Z21-006	116-Z21-006	118-Z21-003
Sample Code	116-0007	116-0008	116-0010	116-0011	118-0003M
Investigation	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2A
Sampling Date	11/8/1995	11/8/1995	11/8/1995	11/8/1995	6/23/1995
Sampling Depth (feet bgs)	4 - 5	4 - 5	2.5 - 3.5	3.5 - 4.5	.5 - 1
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
2,4,5-T					
2,4,5-TP (SILVEX)					
2,4-D					
2,4-DB					
4,4'-DDD	3.5 UJ	4.8 U	3.8 U	4 UJ	13 U
4,4'-DDE	3.5 UJ	4.8 U	3.8 U	4 UJ	140 U
4,4'-DDT	3.5 UJ	4.8 U	3.8 U	4 UJ	13 U
ALDRIN	1.8 UJ	2.5 U	1.9 U	2.1 UJ	6.7 U
ALPHA-BHC	1.8 UJ	2.5 U	1.9 U	2.1 UJ	50 U
ALPHA-CHLORDANE	1.8 UJ	2.5 U	1.9 U	2.1 UJ	
AROCLOR-1016	35 UJ	48 U	38 U	40 UJ	27 U
AROCLOR-1221	72 UJ	98 U	76 U	81 UJ	53 U
AROCLOR-1232	35 UJ	48 U	38 U	40 UJ	27 U
AROCLOR-1242	35 UJ	48 U	38 U	40 UJ	27 U
AROCLOR-1248	35 UJ	48 U	38 U	40 UJ	27 U
AROCLOR-1254	35 UJ	48 U	38 U	40 UJ	27 U
AROCLOR-1260	35 UJ	48 U	38 U	40 UJ	5200
AZINPHOS-METHYL					
BETA-BHC	1.8 UJ	2.5 U	1.9 U	2.1 UJ	6.7 U
CHLORDANE					67 U
DALAPON; 2,2-DICHLOROPROPANOIC					
DELTA-BHC	1.8 UJ	2.5 U	1.9 U	2.1 UJ	36 U
DEMETON					
DIAZINON					
DICAMBA					
DICHLORPROP					
DIELDRIN	3.5 UJ	4.8 U	3.8 U	4 UJ	110 U
DINOSEB					
DISULFOTON					
ENDOSULFAN I	1.8 UJ	2.5 U	1.9 U	2.1 UJ	200 U
ENDOSULFAN II	3.5 UJ	4.8 U	3.8 U	4 UJ	1500 U
ENDOSULFAN SULFATE	3.5 UJ	4.8 U	3.8 U	4 UJ	13 U
ENDRIN	3.5 UJ	4.8 U	3.8 U	4 UJ	560 U
ENDRIN ALDEHYDE	3.5 UJ	4.8 U	3.8 U	4 UJ	180 U
ENDRIN KETONE	3.5 UJ	4.8 U	3.8 U	4 UJ	
ETHION					
ETHYL PARATHION					
GAMMA-BHC (LINDANE)	1.8 UJ	2.5 U	1.9 U	2.1 UJ	6.7 U
GAMMA-CHLORDANE	1.8 UJ	2.5 U	1.9 U	2.1 UJ	
HEPTACHLOR	1.8 UJ	2.5 U	1.9 U	2.1 UJ	130 U
HEPTACHLOR EPOXIDE	1.8 UJ	2.5 U	1.9 U	2.1 UJ	6.7 U
MALATHION					
MCPA					
MCPP					
METHOXYCHLOR	18 UJ	25 U	19 U	21 UJ	67 U
METHYL PARATHION					
TOXAPHENE	180 UJ	250 U	190 U	210 UJ	130 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-1: SITE 3 PESTICIDES, PCBs AND HERBICIDES IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	118-Z21-004	118-Z21-005	118-Z21-007	118-Z21-007	118-Z21-008
Sample Code	118-0004M	118-0005M	118-0009	118-0010	118-0012
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B
Sampling Date	6/23/1995	6/26/1995	11/8/1995	11/8/1995	11/8/1995
Sampling Depth (feet bgs)	.5 - 1	.5 - 1	1 - 2	3.5 - 4.5	1 - 2
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
2,4,5-T					
2,4,5-TP (SILVEX)					
2,4-D					
2,4-DB					
4,4'-DDD	6.5 U	6.8 U	3.5 U	3.5 U	3.5 U
4,4'-DDE	6.5 U	6.8 U	3.5 U	3.5 U	3.5 U
4,4'-DDT	6.5 U	6.8 U	3.5 U	3.5 U	3.5 U
ALDRIN	3.2 U	3.4 U	1.8 U	1.8 U	1.8 U
ALPHA-BHC	3.2 U	3.4 U	1.8 U	1.8 U	1.8 U
ALPHA-CHLORDANE			1.8 U	1.8 U	1.8 U
AROCLOR-1016	13 U	14 U	35 U	35 U	35 U
AROCLOR-1221	26 U	27 U	70 U	71 U	70 U
AROCLOR-1232	13 U	14 U	35 U	35 U	35 U
AROCLOR-1242	13 U	14 U	35 U	35 U	35 U
AROCLOR-1248	13 U	14 U	35 U	35 U	35 U
AROCLOR-1254	13 U	14 U	35 U	35 U	35 U
AROCLOR-1260	90	14 U	35 PJ	35 U	35 U
AZINPHOS-METHYL					
BETA-BHC	3.2 U	3.4 U	1.8 U	1.8 U	1.8 U
CHLORDANE	32 U	34 U			
DALAPON; 2,2-DICHLOROPROPANOIC					
DELTA-BHC	3.2 U	3.4 U	1.8 U	1.8 U	1.8 U
DEMETON					
DIAZINON					
DICAMBA					
DICHLORPROP					
DIELDRIN	6.5 U	6.8 U	3.5 U	3.5 U	3.5 U
DINOSEB					
DISULFOTON					
ENDOSULFAN I	3.5 U	3.4 U	1.8 U	1.8 U	1.8 U
ENDOSULFAN II	25 U	6.8 U	3.5 U	3.5 U	3.5 U
ENDOSULFAN SULFATE	6.5 U	6.8 U	3.5 U	3.5 U	3.5 U
ENDRIN	9.7 U	6.8 U	3.5 U	3.5 U	3.5 U
ENDRIN ALDEHYDE	6.5 U	6.8 U	3.5 U	3.5 U	3.5 U
ENDRIN KETONE			3.5 U	3.5 U	3.5 U
ETHION					
ETHYL PARATHION					
GAMMA-BHC (LINDANE)	3.2 U	3.4 U	1.8 U	1.8 U	1.8 U
GAMMA-CHLORDANE			1.8 U	1.8 U	1.8 U
HEPTACHLOR	3.2 U	3.4 U	1.8 U	1.8 U	1.8 U
HEPTACHLOR EPOXIDE	3.2 U	3.4 U	1.8 U	1.8 U	1.8 U
MALATHION					
MCPA					
MCPP					
METHOXYCHLOR	32 U	34 U	18 U	18 U	18 U
METHYL PARATHION					
TOXAPHENE	65 U	68 U	180 U	180 U	180 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-1: SITE 3 PESTICIDES, PCBs AND HERBICIDES IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	118-Z21-008	120-Z21-001	120-Z21-001	120-Z21-002	121-Z21-001
Sample Code	118-0013	120-0001	120-0001M	120-0002	121-0001
Investigation	EBS PHASE 2B	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	11/8/1995	6/28/1995	6/28/1995	6/28/1995	6/28/1995
Sampling Depth (feet bgs)	2 - 3	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
2,4,5-T				190 U	170 U
2,4,5-TP (SILVEX)				190 U	170 U
2,4-D				190 U	170 U
2,4-DB				190 U	170 U
4,4'-DDD	3.7 U	3.9 U	69 U	3.7 U	3.4 U
4,4'-DDE	3.7 U	3.9 U	14 U	3.7 U	3.4 U
4,4'-DDT	3.7 U	3.9 U	15	7.4 PJ	3.4 U
ALDRIN	1.9 U	2 U	10 U	1.9 U	1.8 U
ALPHA-BHC	1.9 U	2 U	7.1 U	1.9 U	1.8 U
ALPHA-CHLORDANE	1.9 U	1.9 JP		1.9 U	1.8 U
AROCLOR-1016	37 U	39 U	29 U	37 U	34 U
AROCLOR-1221	75 U	80 U	57 U	75 U	70 U
AROCLOR-1232	37 U	39 U	29 U	37 U	34 U
AROCLOR-1242	37 U	39 U	29 U	37 U	34 U
AROCLOR-1248	37 U	39 U	29 U	37 U	34 U
AROCLOR-1254	37 U	39 U	29 U	37 U	34 U
AROCLOR-1260	37 U	32 J	29 U	39	34 U
AZINPHOS-METHYL					
BETA-BHC	1.9 U	2 U	7.1 U	1.9 U	1.8 U
CHLORDANE			180		
DALAPON; 2,2-DICHLOROPROPANOIC				190 U	170 U
DELTA-BHC	1.9 U	2 U	20 U	1.9 U	1.8 U
DEMETON					
DIAZINON					
DICAMBA				190 U	170 U
DICHLORPROP				190 U	170 U
DIELDRIN	3.7 U	3.9 U	14 U	3.7 U	3.4 U
DINOSEB				190 UJ	170 U
DISULFOTON					
ENDOSULFAN I	1.9 U	2 U	7.1 U	1.9 U	1.8 U
ENDOSULFAN II	3.7 U	3.9 U	14 U	3.7 U	3.4 U
ENDOSULFAN SULFATE	3.7 U	3.9 U	14 U	3.7 U	3.4 U
ENDRIN	3.7 U	3.9 U	15 U	3.7 U	3.4 U
ENDRIN ALDEHYDE	3.7 U	3.9 U	100 U	3.7 U	3.4 U
ENDRIN KETONE	3.7 U	3.9 U		3.7 U	3.4 U
ETHION					
ETHYL PARATHION					
GAMMA-BHC (LINDANE)	1.9 U	2 U	77 U	1.9 U	1.8 U
GAMMA-CHLORDANE	1.9 U	2 J		1.9 U	1.8 U
HEPTACHLOR	1.9 U	2 U	120 U	1.9 U	1.8 U
HEPTACHLOR EPOXIDE	1.9 U	2 U	35 U	1.9 U	1.8 U
MALATHION					
MCPA				9300 U	8600 U
MCPP				9300 U	8600 U
METHOXYCHLOR	19 U	20 U	71 U	19 U	18 U
METHYL PARATHION					
TOXAPHENE	190 U	200 U	140 U	190 U	180 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-1: SITE 3 PESTICIDES, PCBs AND HERBICIDES IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	121-Z21-001	127-SS-001	127-SS-003	127-SS-004	128-SN-001
Sample Code	121-0001M	127M-001	127M-003	127M-004	128S-001
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/28/1995	2/14/1995	6/2/1995	2/14/1995	1/24/1995
Sampling Depth (feet bgs)	0 - 0.5	7 - 8	3 - 3.5	3 - 4	8 - 9.5
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
2,4,5-T					
2,4,5-TP (SILVEX)					
2,4-D					
2,4-DB					
4,4'-DDD	6.3 U	4 U	3.6 U	3.5 U	4 U
4,4'-DDE	6.3 U	4 U	3.6 U	3.5 U	4 U
4,4'-DDT	6.3 U	4 U	3.6 U	3.5 U	4 U
ALDRIN	3.1 U	2 U	1.8 U	1.8 U	2.1 U
ALPHA-BHC	3.1 U	2 U	1.8 U	1.8 U	2.1 U
ALPHA-CHLORDANE		2 U	1.8 U	1.8 U	2.1 U
AROCLOR-1016	13 U	40 U	36 U	35 U	40 U
AROCLOR-1221	25 U	81 U	73 U	71 U	82 U
AROCLOR-1232	13 U	40 U	36 U	35 U	40 U
AROCLOR-1242	13 U	40 U	36 U	35 U	40 U
AROCLOR-1248	13 U	40 U	36 U	35 U	40 U
AROCLOR-1254	13 U	40 U	36 U	35 U	40 U
AROCLOR-1260	13 U	40 U	36 U	35 U	40 U
AZINPHOS-METHYL					
BETA-BHC	3.1 U	2 U	1.8 U	1.8 U	2.1 U
CHLORDANE	31 U				
DALAPON; 2,2-DICHLOROPROPANOIC					
DELTA-BHC	3.1 U	2 U	1.8 U	1.8 U	2.1 U
DEMETON					
DIAZINON					
DICAMBA					
DICHLORPROP					
DIELDRIN	6.3 U	4 U	3.6 U	3.5 U	4 U
DINOSEB					
DISULFOTON					
ENDOSULFAN I	3.1 U	2 U	1.8 U	1.8 U	2.1 U
ENDOSULFAN II	6.3 U	4 U	3.6 U	3.5 U	4 U
ENDOSULFAN SULFATE	6.3 U	4 U	3.6 U	3.5 U	4 U
ENDRIN	6.3 U	4 U	3.6 U	3.5 U	4 U
ENDRIN ALDEHYDE	6.3 U	4 U	3.6 U	3.5 U	4 U
ENDRIN KETONE		4 U	3.6 U	3.5 U	4 U
ETHION					
ETHYL PARATHION					
GAMMA-BHC (LINDANE)	3.1 U	2 U	1.8 U	1.8 U	2.1 U
GAMMA-CHLORDANE		2 U	1.8 U	1.8 U	2.1 U
HEPTACHLOR	3.1 U	2 U	1.8 U	1.8 U	2.1 U
HEPTACHLOR EPOXIDE	3.1 U	2 U	1.8 U	1.8 U	2.1 U
MALATHION					
MCPA					
MCPP					
METHOXYCHLOR	31 U	20 U	18 U	18 U	21 U
METHYL PARATHION					
TOXAPHENE	63 U	200 U	180 U	180 U	210 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-1: SITE 3 PESTICIDES, PCBs AND HERBICIDES IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	131-SS-001	131-SS-002	134-IW-001	197-Z21-006	197-Z21-006
Sample Code	131M-001	131M-002	134I-001	197-0006	197-0006M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	2/14/1995	2/21/1995	2/17/1995	6/30/1995	6/30/1995
Sampling Depth (feet bgs)	3 - 4	10 - 11	4 - 4.5	2 - 3	2 - 3
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
2,4,5-T			100 U		
2,4,5-TP (SILVEX)			100 U		
2,4-D			100 U		
2,4-DB			100 U		
4,4'-DDD	4.9 U	4.2 U	3.6 U		
4,4'-DDE	4.9 U	4.2 U	3.6 U		
4,4'-DDT	4.9 U	4.2 U	3.6 U		
ALDRIN	2.5 U	2.2 U	1.8 U		
ALPHA-BHC	2.5 U	2.2 U	1.8 U		
ALPHA-CHLORDANE	2.5 U	2.2 U	1.8 U		
AROCLOR-1016	49 U	42 U	36 U	36 U	25 U
AROCLOR-1221	100 U	86 U	73 U	74 U	25 U
AROCLOR-1232	49 U	42 U	36 U	36 U	25 U
AROCLOR-1242	49 U	42 U	36 U	36 U	25 U
AROCLOR-1248	49 U	42 U	36 U	36 U	25 U
AROCLOR-1254	49 U	42 U	36 U	36 U	25 U
AROCLOR-1260	49 U	42 U	36 U	36 U	25 U
AZINPHOS-METHYL			180 U		
BETA-BHC	2.5 U	2.2 U	1.8 U		
CHLORDANE					
DALAPON; 2,2-DICHLOROPROPANOIC			100 U		
DELTA-BHC	2.5 U	2.2 U	1.8 U		
DEMETON			180 U		
DIAZINON			180 U		
DICAMBA			100 U		
DICHLORPROP			100 U		
DIELDRIN	4.9 U	4.2 U	3.6 U		
DINOSEB			100 U		
DISULFOTON			180 U		
ENDOSULFAN I	2.5 U	2.2 U	1.8 U		
ENDOSULFAN II	4.9 U	4.2 U	3.6 U		
ENDOSULFAN SULFATE	4.9 U	4.2 U	3.6 U		
ENDRIN	4.9 U	4.2 U	3.6 U		
ENDRIN ALDEHYDE	4.9 U	4.2 U	3.6 U		
ENDRIN KETONE	4.9 U	4.2 U	3.6 U		
ETHION			180 U		
ETHYL PARATHION			180 U		
GAMMA-BHC (LINDANE)	2.5 U	2.2 U	1.8 U		
GAMMA-CHLORDANE	2.5 U	2.2 U	1.8 U		
HEPTACHLOR	2.5 U	2.2 U	1.8 U		
HEPTACHLOR EPOXIDE	2.5 U	2.2 U	1.8 U		
MALATHION			180 U		
MCPA			5000 U		
MCPP			5000 U		
METHOXYCHLOR	25 U	22 U	18 U		
METHYL PARATHION			180 U		
TOXAPHENE	250 U	220 U	180 U		

Notes:

UG/KG Micrograms per kilogram

TABLE D-2: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	115-Z21-003	115-Z21-003	115-Z21-003	116-Z21-001	116-Z21-001	116-Z21-004	116-Z21-004	116-Z21-005	116-Z21-005	116-Z21-006	116-Z21-006	118-Z21-001	118-Z21-002	118-Z21-002	118-Z21-001
Sample Code	115-0003M	115-0006	115-0006M	116-0001M	116-0004M	116-0005	116-0006	116-0007	116-0008	116-0010	116-0011	118-0001M	118-0002	118-0002M	118-0006M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/19/1995	6/19/1995	6/19/1995	6/26/1995	6/26/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	6/23/1995	6/23/1995	6/23/1995	6/23/1995
Sampling Depth (feet bgs)	.5 - 1	5 - 6	5 - 6	.5 - 1	4 - 4.5	1 - 2	3 - 4	4 - 5	4 - 5	2.5 - 3.5	3.5 - 4.5	.5 - 1	.5 - 1	.5 - 1	4 - 4.5
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte															
1,2,4-TRICHLOROBENZENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 UJ	4000 U	360 U	380 U	1800 U	410 U
1,2-DICHLOROBENZENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
1,3-DICHLOROBENZENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
1,4-DICHLOROBENZENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 UJ	4000 U	360 U	380 U	1800 U	410 U
2,2'-OXYBIS(1-CHLOROPROPANE)	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
2,4,5-TRICHLOROPHENOL	2000 U	1000 U	2000 U	1900 U	2600 U	930 U	880 U	850 U	1200 U	910 U	9700 U	1800 U	930 U	9200 U	2100 U
2,4,6-TRICHLOROPHENOL	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
2,4-DICHLOROPHENOL	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
2,4-DIMETHYLPHENOL	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
2,4-DINITROPHENOL	2000 U	1000 U	2000 U	1900 U	2600 U	930 U	880 U	850 U	1200 U	910 U	9700 U	1800 U	930 U	9200 U	2100 U
2,4-DINITROTOLUENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
2,6-DINITROTOLUENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
2-CHLORONAPHTHALENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
2-CHLOROPHENOL	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 UJ	4000 U	360 U	380 U	1800 U	410 U
2-METHYLNAPHTHALENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	220 J	1800 U	410 U
2-METHYLPHENOL	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
2-NITROANILINE	2000 U	1000 U	2000 U	1900 U	2600 U	930 U	880 U	850 U	1200 U	910 U	9700 U	1800 U	930 U	9200 U	2100 U
2-NITROPHENOL	2000 U	410 U	2000 U	1900 U	2600 U	380 U	360 U	350 U	480 U	380 U	4000 U	1800 U	380 U	9200 U	2100 U
3,3'-DICHLOROBENZIDINE	2000 U	410 U	2000 U	1900 U	2600 U	380 U	360 U	350 U	480 U	380 U	4000 U	1800 U	380 U	9200 U	2100 U
3-NITROANILINE	2000 U	1000 U	2000 U	1900 U	2600 U	930 U	880 U	850 U	1200 U	910 U	9700 U	1800 U	930 U	9200 U	2100 U
4,6-DINITRO-2-METHYLPHENOL	2000 U	1000 U	2000 U	1900 U	2600 U	930 U	880 U	850 U	1200 U	910 U	9700 U	1800 U	930 U	9200 U	2100 U
4-BROMOPHENYL-PHENYLETHER	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
4-CHLORO-3-METHYLPHENOL	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 UJ	4000 U	360 U	380 U	1800 U	410 U
4-CHLOROANILINE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
4-CHLOROPHENYL-PHENYLETHER	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
4-METHYLPHENOL	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
4-NITROANILINE	2000 U	1000 U	2000 U	1900 U	2600 U	930 U	880 U	850 U	1200 U	910 U	9700 U	1800 U	930 U	9200 U	2100 U
4-NITROPHENOL	2000 U	1000 U	2000 U	1900 U	2600 U	930 U	880 U	850 U	1200 U	910 U	9700 U	1800 U	930 U	9200 U	2100 U
ACENAPHTHENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	270 J	1500 J	410 U
ACENAPHTHYLENE	400 U	410 U	400 U	380 U	530 U	61 J	81 J	350 U	480 U	380 UJ	4000 U	360 U	30 J	1800 U	410 U
ANILINE	400 U		400 U	380 U	530 U							360 U		1800 U	410 U
ANTHRACENE	400 U	410 U	400 U	380 U	530 U	43 J	360 U	350 U	480 U	380 U	4000 U	360 U	390	5100	410 U
AZOBENZENE	400 U		400 U	380 U	530 U							360 U		1800 U	410 U
BENZIDINE	400 U		400 U	380 U	530 U							360 U		1800 U	410 U
BENZO(A)ANTHRACENE	400 U	410 U	400 U	380 U	790	420	180 J	350 U	480 U	380 U	4000 U	360 U	820	7900	410 U
BENZO(A)PYRENE	400 U	67 J	400 U	380 U	650	930	380	350 U	480 U	380 U	4000 U	360 U	680	5700	410 U
BENZO(B)FLUORANTHENE	400 U	91 J	400 U	380 U	1200	860	300 J	350 U	480 U	380 U	4000 U	360 U	1000	3400	410 U
BENZO(G,H,I)PERYLENE	400 U	38 J	400 U	380 U	830	930	260 J	350 U	480 U	380 U	4000 U	360 U	430	2200	410 U
BENZO(K)FLUORANTHENE	400 U	410 U	400 U	380 U	990	230 J	86 J	350 U	480 U	380 U	4000 U	360 U	380 U	5500	410 U
BENZOIC ACID															
BENZYL ALCOHOL	400 U		400 U	380 U	530 U							360 U		1800 U	410 U
BIS(2-CHLOROETHOXY)METHANE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
BIS(2-CHLOROETHYL)ETHER	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
BIS(2-ETHYLHEXYL)PHTHALATE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
BUTYLBENZYLPHTHALATE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
CARBAZOLE		410 U				380 U	360 U	350 U	480 U	380 U	4000 U		160 J		
CHRYSENE	400 U	56 J	400 U	380 U	2100	550	290 J	350 U	480 U	380 U	580 J	360 U	710	8900	410 U
DIBENZO(A,H)ANTHRACENE	400 U	410 U	400 U	380 U	530 U	140 J	61 J	350 U	480 U	380 U	4000 U	360 U	120 J	1800 U	410 U
DIBENZOFURAN	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	210 J	1200 J	410 U
DIETHYLPHTHALATE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	22 J	1800 U	410 U
DIMETHYLPHTHALATE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
DI-N-BUTYLPHTHALATE	400 U	49 J	400 U	380 U	530 U	130 J	360 U	350 U	480 U	380 U	4000 U	360 U	30 J	1800 U	410 U

TABLE D-2: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	115-Z21-003	115-Z21-003	115-Z21-003	116-Z21-001	116-Z21-001	116-Z21-004	116-Z21-004	116-Z21-005	116-Z21-005	116-Z21-006	116-Z21-006	118-Z21-001	118-Z21-002	118-Z21-002	118-Z21-001
Sample Code	115-0003M	115-0006	115-0006M	116-0001M	116-0004M	116-0005	116-0006	116-0007	116-0008	116-0010	116-0011	118-0001M	118-0002	118-0002M	118-0006M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/19/1995	6/19/1995	6/19/1995	6/26/1995	6/26/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	6/23/1995	6/23/1995	6/23/1995	6/23/1995
Sampling Depth (feet bgs)	.5 - 1	5 - 6	5 - 6	.5 - 1	4 - 4.5	1 - 2	3 - 4	4 - 5	4 - 5	2.5 - 3.5	3.5 - 4.5	.5 - 1	.5 - 1	.5 - 1	4 - 4.5
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte															
DI-N-OCTYLPHTHALATE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
FLUORANTHENE	400 U	79 J	400 U	390	2600	910	180 J	350 U	480 U	380 U	440 J	210 J	1500	13000	410 U
FLUORENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	300 J	2000	410 U
HEXACHLOROBENZENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
HEXACHLOROBUTADIENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
HEXACHLOROCYCLOPENTADIENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
HEXACHLOROETHANE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
INDENO(1,2,3-CD)PYRENE	400 U	62 J	400 U	380 U	670	870	220 J	350 U	480 U	380 U	4000 U	360 U	340 J	2200	410 U
ISOPHORONE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
NAPHTHALENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	320 J	1800 U	410 U
NITROBENZENE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	4000 U	360 U	380 U	1800 U	410 U
N-NITROSODIMETHYLAMINE	400 U		400 U	380 U	530 U							360 U		1800 U	410 U
N-NITROSO-DI-N-PROPYLAMINE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 UJ	4000 U	360 U	380 U	1800 U	410 U
N-NITROSODIPHENYLAMINE	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 U	550 J	360 U	27 J	1800 U	410 U
PENTACHLOROPHENOL	2000 U	1000 U	2000 U	1900 U	2600 U	930 U	880 U	850 U	1200 U	910 U	9700 U	1800 U	930 U	9200 U	2100 U
PHENANTHRENE	400 U	410 U	400 U	260 J	530 U	240 J	360 U	350 U	480 U	380 U	4000 U	360 U	1500	15000	410 U
PHENOL	400 U	410 U	400 U	380 U	530 U	380 U	360 U	350 U	480 U	380 UJ	4000 U	360 U	380 U	1800 U	410 U
PYRENE	230 J	130 J	400 U	450	2200	980	420	350 U	50 J	380 U	620 J	280 J	1200	16000	220 J

Notes:

UG/KG Micrograms per kilogram

TABLE D-2: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	118-Z21-002	118-Z21-007	118-Z21-007	118-Z21-008	118-Z21-008	122-001-001	122-001-001	122-001-002	127-SS-001	127-SS-003	127-SS-004	128-SN-001	129-001-001	129-001-001	129-001-002
Sample Code	118-0007M	118-0009	118-0010	118-0012	118-0013	122-0001	122-0001M	122-0002M	127M-001	127M-003	127M-004	128S-001	129-0001	129-0001M	129-0002M
Investigation	EBS PHASE 2A	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/23/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	6/8/1995	6/8/1995	6/8/1995	2/14/1995	6/2/1995	2/14/1995	1/24/1995	6/30/1995	6/30/1995	6/30/1995
Sampling Depth (feet bgs)	4 - 4.5	1 - 2	3.5 - 4.5	1 - 2	2 - 3	.5 - 1	.5 - 1	1 - 1.5	7 - 8	3 - 3.5	3 - 4	8 - 9.5	.5 - 1	.5 - 1	.5 - 1
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte															
1,2,4-TRICHLOROBENZENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
1,2-DICHLOROBENZENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
1,3-DICHLOROBENZENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
1,4-DICHLOROBENZENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2,2'-OXYBIS(1-CHLOROPROPANE)	2600 U	350 U	350 U	350 U	370 U	350 U			400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2,4,5-TRICHLOROPHENOL	13000 U	840 U	840 U	850 U	890 U	850 U	1800 U	1800 U	960 U	870 U	840 U	980 U	850 U	35000 U	9300 U
2,4,6-TRICHLOROPHENOL	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2,4-DICHLOROPHENOL	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2,4-DIMETHYLPHENOL	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2,4-DINITROPHENOL	13000 U	840 U	840 U	850 U	890 U		1800 U	1800 U	960 U	870 U	840 U	980 U	850 U	35000 U	9300 U
2,4-DINITROTOLUENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2,6-DINITROTOLUENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2-CHLORONAPHTHALENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2-CHLOROPHENOL	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2-METHYLNAPHTHALENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	90 J	350 U	7100 U	1900 U
2-METHYLPHENOL	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
2-NITROANILINE	13000 U	840 U	840 U	850 U	890 U	850 U	1800 U	1800 U	960 U	870 U	840 U	980 U	850 U	35000 U	9300 U
2-NITROPHENOL	13000 U	350 U	350 U	350 U	370 U	350 U	1800 U	1800 U	400 U	360 U	350 U	400 U	350 U	35000 U	9300 U
3,3'-DICHLOROBENZIDINE	13000 U	350 U	350 U	350 U	370 U	350 U	1800 U	1800 U	400 U	360 U	350 U	400 U	350 U	35000 U	9300 U
3-NITROANILINE	13000 U	840 U	840 U	850 U	890 U	850 U	1800 U	1800 U	960 U	870 U	840 U	980 U	850 U	35000 U	9300 U
4,6-DINITRO-2-METHYLPHENOL	13000 U	840 U	840 U	850 U	890 U	850 U	1800 U	1800 U	960 U	870 U	840 U	980 U	850 U	35000 U	9300 U
4-BROMOPHENYL-PHENYLETHER	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
4-CHLORO-3-METHYLPHENOL	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
4-CHLOROANILINE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
4-CHLOROPHENYL-PHENYLETHER	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
4-METHYLPHENOL	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
4-NITROANILINE	13000 U	840 U	840 U	850 U	890 U	850 U	1800 U	1800 U	960 U	870 U	840 U	980 U	850 U	35000 U	9300 U
4-NITROPHENOL	13000 U	840 U	840 U	850 U	890 U	850 U	1800 U	1800 U	960 U	870 U	840 U	980 U	850 U	35000 U	9300 U
ACENAPHTHENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	69 J	350 U	7100 U	1900 U
ACENAPHTHYLENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	47 J	350 U	7100 U	1900 U
ANILINE	2600 U						350 U	350 U						7100 U	1900 U
ANTHRACENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	100 J	350 U	7100 U	1900 U
AZOBENZENE	2600 U						350 U	350 U						7100 U	1900 U
BENZIDINE	2600 U						350 U	350 U						7100 U	1900 U
BENZO(A)ANTHRACENE	1400 J	110 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	340 J	350 U	7100 U	1900 U
BENZO(A)PYRENE	2600 U	130 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	1100	26 J	7100 U	1900 U
BENZO(B)FLUORANTHENE	2600 U	130 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	29 J	1100	38 J	7100 U	1900 U
BENZO(G,H,I)PERYLENE	2600 U	82 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	25 J	1200	350 U	7100 U	1900 U
BENZO(K)FLUORANTHENE	2600 U	36 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	490	350 U	7100 U	1900 U
BENZOIC ACID															
BENZYL ALCOHOL	2600 U						350 U	350 U						7100 U	1900 U
BIS(2-CHLOROETHOXY)METHANE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
BIS(2-CHLOROETHYL)ETHER	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
BIS(2-ETHYLHEXYL)PHTHALATE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	23 J	360 U	19 J	100 J	350 U	7100 U	1900 U
BUTYLBENZYLPHTHALATE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
CARBAZOLE		350 U	350 U	350 U	370 U	350 U			400 U	360 U	350 U	27 J	350 U		
CHRYSENE	1900 J	130 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	32 J	510	29 J	7100 U	1900 U
DIBENZO(A,H)ANTHRACENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
DIBENZOFURAN	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	32 J	350 U	7100 U	1900 U
DIETHYLPHTHALATE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
DIMETHYLPHTHALATE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
DI-N-BUTYLPHTHALATE	2600 U	350 U	350 U	350 U	370 U	68 J	350 U	350 U	84 J	86 J	93 J	980 U	350 U	7100 U	1900 U

TABLE D-2: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	118-Z21-002	118-Z21-007	118-Z21-007	118-Z21-008	118-Z21-008	122-001-001	122-001-001	122-001-002	127-SS-001	127-SS-003	127-SS-004	128-SN-001	129-001-001	129-001-001	129-001-002
Sample Code	118-0007M	118-0009	118-0010	118-0012	118-0013	122-0001	122-0001M	122-0002M	127M-001	127M-003	127M-004	128S-001	129-0001	129-0001M	129-0002M
Investigation	EBS PHASE 2A	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/23/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	6/8/1995	6/8/1995	6/8/1995	2/14/1995	6/2/1995	2/14/1995	1/24/1995	6/30/1995	6/30/1995	6/30/1995
Sampling Depth (feet bgs)	4 - 4.5	1 - 2	3.5 - 4.5	1 - 2	2 - 3	.5 - 1	.5 - 1	1 - 1.5	7 - 8	3 - 3.5	3 - 4	8 - 9.5	.5 - 1	.5 - 1	.5 - 1
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte															
DI-N-OCTYLPHTHALATE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
FLUORANTHENE	2600 J	250 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	800	35 J	7100 U	1900 U
FLUORENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	81 J	350 U	7100 U	1900 U
HEXACHLOROBENZENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
HEXACHLOROBUTADIENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
HEXACHLOROCYCLOPENTADIENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
HEXACHLOROETHANE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
INDENO(1,2,3-CD)PYRENE	2600 U	82 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	970	28 J	7100 U	1900 U
ISOPHORONE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
NAPHTHALENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	74 J	350 U	7100 U	1900 U
NITROBENZENE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
N-NITROSODIMETHYLAMINE	2600 U						350 U	350 U						7100 U	1900 U
N-NITROSO-DI-N-PROPYLAMINE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
N-NITROSODIPHENYLAMINE	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
PENTACHLOROPHENOL	13000 U	840 U	840 U	850 U	890 U	850 U	1800 U	1800 U	960 U	870 U	840 U	980 U	850 U	35000 U	9300 U
PHENANTHRENE	2000 J	160 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	340 J	350 U	7100 U	1900 U
PHENOL	2600 U	350 U	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	350 U	400 U	350 U	7100 U	1900 U
PYRENE	3400	310 J	350 U	350 U	370 U	350 U	350 U	350 U	400 U	360 U	39 J	1700	43 J	7100 U	1900 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-2: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	129-001-003	129-002-004	129-002-004	129-002-005	129-002-006	129-001-001	129-001-001	129-001-002	129-001-003	129-002-004	129-002-004	129-002-005	129-002-006	131-SS-001	131-SS-002
Sample Code	129-0003M	129-0004	129-0004M	129-0005M	129-0006M	129-0007	129-0007M	129-0008M	129-0009M	129-0010	129-0010M	129-0011M	129-0012M	131M-001	131M-002
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/30/1995	6/30/1995	6/30/1995	7/10/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	7/10/1995	6/30/1995	2/14/1995	2/21/1995
Sampling Depth (feet bgs)	.5 - 1.5	1 - 1.5	1 - 1.5	.5 - 1	1 - 1.5	4 - 5	4 - 5	4 - 4.5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3 - 4	10 - 11
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte															
1,2,4-TRICHLOROBENZENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
1,2-DICHLOROBENZENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
1,3-DICHLOROBENZENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
1,4-DICHLOROBENZENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
2,2'-OXYBIS(1-CHLOROPROPANE)	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
2,4,5-TRICHLOROPHENOL	3600 U	840 U	8900 U	45000 U	1800 U	930 U	5500 U	4400 U	2400 U	980 U	4000 U	2900 U	5100 U	1200 U	1000 U
2,4,6-TRICHLOROPHENOL	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
2,4-DICHLOROPHENOL	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
2,4-DIMETHYLPHENOL	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	43 J	420 U
2,4-DINITROPHENOL	3600 U	840 U	8900 U	45000 U	1800 U	930 U	5500 U	4400 U	2400 U	980 U	4000 U	2900 U	5100 U	1200 U	1000 U
2,4-DINITROTOLUENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
2,6-DINITROTOLUENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
2-CHLORONAPHTHALENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
2-CHLOROPHENOL	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
2-METHYLNAPHTHALENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	47 J	420 U
2-METHYLPHENOL	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
2-NITROANILINE	3600 U	840 U	8900 U	45000 U	1800 U	930 U	5500 U	4400 U	2400 U	980 U	4000 U	2900 U	5100 U	1200 U	1000 U
2-NITROPHENOL	3600 U	350 U	8900 U	45000 U	1800 U	380 U	5500 U	4400 U	2400 U	400 U	4000 U	2900 U	5100 U	490 U	420 U
3,3'-DICHLOROBENZIDINE	3600 U	350 U	8900 U	45000 U	1800 U	380 U	5500 U	4400 U	2400 U	400 U	4000 U	2900 U	5100 U	490 U	420 U
3-NITROANILINE	3600 U	840 U	8900 U	45000 U	1800 U	930 U	5500 U	4400 U	2400 U	980 U	4000 U	2900 U	5100 U	1200 U	1000 U
4,6-DINITRO-2-METHYLPHENOL	3600 U	840 U	8900 U	45000 U	1800 U	930 U	5500 U	4400 U	2400 U	980 U	4000 U	2900 U	5100 U	1200 U	1000 U
4-BROMOPHENYL-PHENYLETHER	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
4-CHLORO-3-METHYLPHENOL	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
4-CHLOROANILINE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
4-CHLOROPHENYL-PHENYLETHER	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
4-METHYLPHENOL	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
4-NITROANILINE	3600 U	840 U	8900 U	45000 U	1800 U	930 U	5500 U	4400 U	2400 U	980 U	4000 U	2900 U	5100 U	1200 U	1000 U
4-NITROPHENOL	3600 U	840 U	8900 U	45000 U	1800 U	930 U	5500 U	4400 U	2400 U	980 U	4000 U	2900 U	5100 U	1200 U	1000 U
ACENAPHTHENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
ACENAPHTHYLENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
ANILINE	720 U		1800 U	9000 U	360 U		1100 U	890 U	480 U		790 U	580 U	1000 U		
ANTHRACENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	32 J	420 U
AZOBENZENE	720 U		1800 U	9000 U	360 U		1100 U	890 U	480 U		790 U	580 U	1000 U		
BENZIDINE	720 U		1800 U	9000 U	360 U		1100 U	890 U	480 U		790 U	580 U	1000 U		
BENZO(A)ANTHRACENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	320 J	26 J	790 U	580 U	1000 U	230 J	110 J
BENZO(A)PYRENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	520 J	360 J	45 J	790 U	580 U	680 J	640	160 J
BENZO(B)FLUORANTHENE	720 U	350 U	1800 U	9000 U	360 U	20 J	1100 U	890 U	650	57 J	790 U	580 U	520 J	1000	190 J
BENZO(G,H,I)PERYLENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	480 J	550	400 U	790 U	580 U	1000 U	300 J	110 J
BENZO(K)FLUORANTHENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	550	400 U	790 U	580 U	1000 U	330 J	420 U
BENZOIC ACID															
BENZYL ALCOHOL	720 U		1800 U	9000 U	360 U		1100 U	890 U	480 U		790 U	580 U	1000 U		
BIS(2-CHLOROETHOXY)METHANE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
BIS(2-CHLOROETHYL)ETHER	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
BIS(2-ETHYLHEXYL)PHTHALATE	720 U	350 U	1800 U	9000 U	360 U	50 J	1100 U	890 U	480 U	29 J	790 U	580 U	1000 U	49 J	160 J
BUTYLBENZYLPHTHALATE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
CARBAZOLE		350 U				380 U				400 U				490 U	420 U
CHRYSENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	560 J	720	26 J	790 U	580 U	1000 U	260 J	120 J
DIBENZO(A,H)ANTHRACENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
DIBENZOFURAN	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
DIETHYLPHTHALATE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
DIMETHYLPHTHALATE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
DI-N-BUTYLPHTHALATE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U

TABLE D-2: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	129-001-003	129-002-004	129-002-004	129-002-005	129-002-006	129-001-001	129-001-001	129-001-002	129-001-003	129-002-004	129-002-004	129-002-005	129-002-006	131-SS-001	131-SS-002
Sample Code	129-0003M	129-0004	129-0004M	129-0005M	129-0006M	129-0007	129-0007M	129-0008M	129-0009M	129-0010	129-0010M	129-0011M	129-0012M	131M-001	131M-002
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/30/1995	6/30/1995	6/30/1995	7/10/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	7/10/1995	6/30/1995	2/14/1995	2/21/1995
Sampling Depth (feet bgs)	.5 - 1.5	1 - 1.5	1 - 1.5	.5 - 1	1 - 1.5	4 - 5	4 - 5	4 - 4.5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3 - 4	10 - 11
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte															
DI-N-OCTYLPHTHALATE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
FLUORANTHENE	720 U	35 J	1800 U	9000 U	360 U	380 U	1100 U	930	620	61 J	790 U	580 U	520 J	320 J	210 J
FLUORENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
HEXACHLOROBENZENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
HEXACHLOROBUTADIENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
HEXACHLOROCYCLOPENTADIENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
HEXACHLOROETHANE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
INDENO(1,2,3-CD)PYRENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	430 J	33 J	790 U	580 U	1000 U	950	120 J
ISOPHORONE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
NAPHTHALENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	38 J	420 U
NITROBENZENE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
N-NITROSODIMETHYLAMINE	720 U		1800 U	9000 U	360 U		1100 U	890 U	480 U		790 U	580 U	1000 U		
N-NITROSO-DI-N-PROPYLAMINE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
N-NITROSODIPHENYLAMINE	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
PENTACHLOROPHENOL	3600 U	840 U	8900 U	45000 U	1800 U	930 U	5500 U	4400 U	2400 U	980 U	4000 U	2900 U	5100 U	1200 U	1000 U
PHENANTHRENE	720 U	21 J	1800 U	9000 U	360 U	380 U	1100 U	710 J	390 J	22 J	790 U	580 U	1000 U	98 J	59 J
PHENOL	720 U	350 U	1800 U	9000 U	360 U	380 U	1100 U	890 U	480 U	400 U	790 U	580 U	1000 U	490 U	420 U
PYRENE	720 U	33 J	1800 U	9000 U	360 U	38 J	1100	1000	920	130 J	510 J	340 J	1400	730	360 J

Notes:

UG/KG Micrograms per kilogram

TABLE D-2: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	134-IW-001	197-Z21-006	197-Z21-006
Sample Code	134I-001	197-0006	197-0006M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	2/17/1995	6/30/1995	6/30/1995
Sampling Depth (feet bgs)	4 - 4.5	2 - 3	2 - 3
Units	UG/KG	UG/KG	UG/KG
Analyte			
1,2,4-TRICHLOROBENZENE	360 U	360 U	410 U
1,2-DICHLOROBENZENE	360 U	360 U	410 U
1,3-DICHLOROBENZENE	360 U	360 U	410 U
1,4-DICHLOROBENZENE	360 U	360 U	410 U
2,2'-OXYBIS(1-CHLOROPROPANE)	360 U	360 U	410 U
2,4,5-TRICHLOROPHENOL	870 U	880 U	2100 U
2,4,6-TRICHLOROPHENOL	360 U	360 U	410 U
2,4-DICHLOROPHENOL	360 U	360 U	410 U
2,4-DIMETHYLPHENOL	360 U	360 U	410 U
2,4-DINITROPHENOL	870 U	880 U	2100 U
2,4-DINITROTOLUENE	360 U	360 U	410 U
2,6-DINITROTOLUENE	360 U	360 U	410 U
2-CHLORONAPHTHALENE	360 U	360 U	410 U
2-CHLOROPHENOL	360 U	360 U	410 U
2-METHYLNAPHTHALENE	360 U	360 U	410 U
2-METHYLPHENOL	360 U	360 U	410 U
2-NITROANILINE	870 U	880 U	2100 U
2-NITROPHENOL	360 U	360 U	2100 U
3,3'-DICHLOROBENZIDINE	360 U	360 U	2100 U
3-NITROANILINE	870 U	880 U	2100 U
4,6-DINITRO-2-METHYLPHENOL	870 U	880 U	2100 U
4-BROMOPHENYL-PHENYLETHER	360 U	360 U	410 U
4-CHLORO-3-METHYLPHENOL	360 U	360 U	410 U
4-CHLOROANILINE	360 U	360 U	410 U
4-CHLOROPHENYL-PHENYLETHER	360 U	360 U	410 U
4-METHYLPHENOL	360 U	360 U	410 U
4-NITROANILINE	870 U	880 U	2100 U
4-NITROPHENOL	870 U	880 U	2100 U
ACENAPHTHENE	360 U	360 U	410 U
ACENAPHTHYLENE	360 U	360 U	410 U
ANILINE			410 U
ANTHRACENE	360 U	360 U	410 U
AZOBENZENE			410 U
BENZIDINE			410 U
BENZO(A)ANTHRACENE	360 U	360 U	410 U
BENZO(A)PYRENE	360 U	42 J	410 U
BENZO(B)FLUORANTHENE	360 U	50 J	410 U
BENZO(G,H,I)PERYLENE	360 U	25 J	410 U
BENZO(K)FLUORANTHENE	360 U	360 U	410 U
BENZOIC ACID			
BENZYL ALCOHOL			410 U
BIS(2-CHLOROETHOXY)METHANE	360 U	360 U	410 U
BIS(2-CHLOROETHYL)ETHER	360 U	360 U	410 U
BIS(2-ETHYLHEXYL)PHTHALATE	360 U	42 J	410 U
BUTYLBENZYLPHTHALATE	360 U	360 U	410 U
CARBAZOLE	360 U	360 U	
CHRYSENE	360 U	29 J	410 U
DIBENZO(A,H)ANTHRACENE	360 U	360 U	410 U
DIBENZOFURAN	360 U	360 U	410 U
DIETHYLPHTHALATE	360 U	360 U	410 U
DIMETHYLPHTHALATE	360 U	360 U	410 U
DI-N-BUTYLPHTHALATE	360 U	360 U	410 U

TABLE D-2: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California
(Page 8 of 8)

Location	134-IW-001	197-Z21-006	197-Z21-006
Sample Code	134I-001	197-0006	197-0006M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	2/17/1995	6/30/1995	6/30/1995
Sampling Depth (feet bgs)	4 - 4.5	2 - 3	2 - 3
Units	UG/KG	UG/KG	UG/KG
Analyte			
DI-N-OCTYLPHTHALATE	360 U	94 J	410 U
FLUORANTHENE	360 U	82 J	410 U
FLUORENE	360 U	360 U	410 U
HEXACHLOROBENZENE	360 U	360 U	410 U
HEXACHLOROBUTADIENE	360 U	360 U	410 U
HEXACHLOROCYCLOPENTADIENE	360 U	360 U	410 U
HEXACHLOROETHANE	360 U	360 U	410 U
INDENO(1,2,3-CD)PYRENE	360 U	40 J	410 U
ISOPHORONE	360 U	360 U	410 U
NAPHTHALENE	360 U	360 U	410 U
NITROBENZENE	360 U	360 U	410 U
N-NITROSODIMETHYLAMINE			410 U
N-NITROSO-DI-N-PROPYLAMINE	360 U	360 U	410 U
N-NITROSODIPHENYLAMINE	360 U	360 U	410 U
PENTACHLOROPHENOL	870 U	880 U	2100 U
PHENANTHRENE	360 U	23 J	410 U
PHENOL	360 U	360 U	410 U
PYRENE	360 U	110 J	410 U

Notes:
UG/KG Micrograms per kilogram

TABLE D-3: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	115-Z21-003	115-Z21-003	116-Z21-001	118-Z21-001	118-Z21-002	127-SS-001
Sample Code	115-0006	115-0006M	116-0004M	118-0006M	118-0007M	127M-001M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/19/1995	6/19/1995	6/26/1995	6/23/1995	6/23/1995	2/14/1995
Sampling Depth (feet bgs)	5 - 6	5 - 6	4 - 4.5	4 - 4.5	4 - 4.5	7 - 8
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte						
1,1,1-TRICHLOROETHANE	12 U	6 U	7.9 U	6.2 U	7.9 U	10 U
1,1,2,2-TETRACHLOROETHANE	12 U	6 U	7.9 U	6.2 U	7.9 U	
1,1,2-TRICHLOROETHANE	12 U	6 U	7.9 U	6.2 U	7.9 U	
1,1-DICHLOROETHANE	12 U	6 U	7.9 U	6.2 U	7.9 U	
1,1-DICHLOROETHENE	12 U	6 U	7.9 U	6.2 U	7.9 U	10 U
1,2-DICHLOROETHANE	12 U	6 U	7.9 U	6.2 U	7.9 U	10 U
1,2-DICHLOROETHENE (TOTAL)	12 U					
1,2-DICHLOROPROPANE	12 U	6 U	7.9 U	6.2 U	7.9 U	
2-BUTANONE	12 U	12 U	20 UJ	12 U	20 UJ	10 U
2-HEXANONE	12 U	12 U	16 U	12 U	16 U	
4-METHYL-2-PENTANONE	12 U	12 U	16 U	12 U	16 U	
ACETONE	21 UJ	24 U	82 UJ	25 U	67 UJ	
BENZENE	12 U	6 U	7.9 U	6.2 U	7.9 U	10 U
BROMODICHLOROMETHANE	12 U	6 U	7.9 U	6.2 U	7.9 U	
BROMOFORM	12 U	6 U	7.9 U	6.2 U	7.9 U	
BROMOMETHANE	12 U	12 U	16 U	12 U	16 U	
CARBON DISULFIDE	12 U	6 U	7.9 U	6.2 U	7.9 U	
CARBON TETRACHLORIDE	12 U	6 U	7.9 U	6.2 U	7.9 U	
CHLOROBENZENE	12 U	6 U	7.9 U	6.2 U	7.9 U	
CHLOROETHANE	12 U	12 U	16 U	12 U	16 U	
CHLOROFORM	12 U	6 U	7.9 U	6.2 U	7.9 U	
CHLOROMETHANE	12 U	12 U	16 U	12 U	16 U	
CIS-1,2-DICHLOROETHENE		6 U	7.9 U	6.2 U	7.9 U	10 U
CIS-1,3-DICHLOROPROPENE	12 U	6 U	7.9 U	6.2 U	7.9 U	
DIBROMOCHLOROMETHANE	12 U	6 U	7.9 U	6.2 U	7.9 U	
ETHYLBENZENE	12 U	6 U	7.9 U	6.2 U	7.9 U	10 U
HEXANE		6 U	7.9 U	6.2 U	7.9 U	20 U
M,P-XYLENE						20 U
METHYLENE CHLORIDE	12 U	24 U	32 U	25 U	32 U	10 U
O-XYLENE		6 U	7.9 U	6.2 U	7.9 U	10 U
STYRENE	12 U	6 U	7.9 U	6.2 U	7.9 U	
TETRACHLOROETHENE	12 U	6 U	7.9 U	6.2 U	7.9 U	10 U
TOLUENE	12 U	6 U	7.9 U	6.2 U	7.9 U	10 U
TRANS-1,2-DICHLOROETHENE		6 U	7.9 U	6.2 U	7.9 U	10 U
TRANS-1,3-DICHLOROPROPENE	12 U	6 U	7.9 U	6.2 U	7.9 U	
TRICHLOROETHENE	12 U	6 U	7.9 U	6.2 U	7.9 U	10 U
TRICHLOROFLUOROMETHANE		6 U	7.9 U	6.2 U	7.9 U	
VINYL ACETATE		60 U	79 U	62 U	79 U	
VINYL CHLORIDE	12 U	12 U	16 U	12 U	16 U	10 U
XYLENE (TOTAL)	12 U	6 U	7.9 U	6.2 U	7.9 U	

Notes:

UG/KG Micrograms per kilogram

TABLE D-3: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	127-SS-003	127-SS-004	128-SN-001	129-001-001	129-001-001	129-001-002
Sample Code	127M-003M	127M-004M	128S-001M	129-0007	129-0007M	129-0008M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/2/1995	2/14/1995	1/24/1995	6/30/1995	6/30/1995	6/30/1995
Sampling Depth (feet bgs)	3 - 3.5	3 - 4	8 - 9.5	4 - 5	4 - 5	4 - 4.5
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte						
1,1,1-TRICHLOROETHANE	5 U	10 U	400 U	12 U	8.2 U	6.7 U
1,1,2,2-TETRACHLOROETHANE	5 U			12 U	8.2 U	6.7 U
1,1,2-TRICHLOROETHANE	5 U			12 U	8.2 U	6.7 U
1,1-DICHLOROETHANE	5 U			12 U	8.2 U	6.7 U
1,1-DICHLOROETHENE	5 U	10 U	400 U	12 U	8.2 U	6.7 U
1,2-DICHLOROETHANE	5 U	10 U	400 U	12 U	8.2 U	6.7 U
1,2-DICHLOROETHENE (TOTAL)				12 U		
1,2-DICHLOROPROPANE	5 U			12 U	8.2 U	6.7 U
2-BUTANONE	11 U	10 U	400 U	12 U	16 U	13 U
2-HEXANONE	5 U			12 U	16 U	13 U
4-METHYL-2-PENTANONE	7 J			12 U	16 U	13 U
ACETONE	88 UJ			13 UJ	16 U	66
BENZENE	5 U	750	2000 U	12 U	8.2 U	6.7 U
BROMODICHLOROMETHANE	5 U			12 U	8.2 U	6.7 U
BROMOFORM	5 U			12 U	8.2 U	6.7 U
BROMOMETHANE	11 U			12 U	16 U	13 U
CARBON DISULFIDE	5 U			12 U	8.2 U	6.7 U
CARBON TETRACHLORIDE	5 U			12 U	8.2 U	6.7 U
CHLOROBENZENE	5 U			12 U	8.2 U	6.7 U
CHLOROETHANE	11 U			12 U	16 U	13 U
CHLOROFORM	5 U			12 U	8.2 U	6.7 U
CHLOROMETHANE	11 U			12 U	16 U	13 U
CIS-1,2-DICHLOROETHENE	5 U	10 U	400 U		8.2 U	6.7 U
CIS-1,3-DICHLOROPROPENE	5 U			12 U	8.2 U	6.7 U
DIBROMOCHLOROMETHANE	5 U			12 U	8.2 U	6.7 U
ETHYLBENZENE	5 U	480	5100	12 U	8.2 U	6.7 U
HEXANE	5 U	20 U	14000		8.2 U	6.7 U
M,P-XYLENE		400	4000 U			
METHYLENE CHLORIDE	22 U	10 U	400 U	12 U	42	53
O-XYLENE	5 U	400	2000 U		8.2 U	6.7 U
STYRENE	5 U			12 U	8.2 U	6.7 U
TETRACHLOROETHENE	5 U	10 U	400 U	12 U	8.2 U	6.7 U
TOLUENE	5 U	10 U	18000	12 U	8.2 U	6.7 U
TRANS-1,2-DICHLOROETHENE	5 U	10 U	400 U		8.2 U	6.7 U
TRANS-1,3-DICHLOROPROPENE	5 U			12 U	8.2 U	6.7 U
TRICHLOROETHENE	5 U	10 U	400 U	12 U	8.2 U	6.7 U
TRICHLOROFLUOROMETHANE	5 U				8.2 U	6.7 U
VINYL ACETATE	54 U				82 U	67 U
VINYL CHLORIDE	11 U	10 U	400 U	12 U	16 U	13 U
XYLENE (TOTAL)	5 U			12 U	8.2 U	6.7 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-3: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	129-001-003	129-002-004	129-002-004	129-002-005	129-002-006	131-SS-001
Sample Code	129-0009M	129-0010	129-0010M	129-0011M	129-0012M	131M-001M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/30/1995	6/30/1995	6/30/1995	7/10/1995	6/30/1995	2/14/1995
Sampling Depth (feet bgs)	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5	3 - 4
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte						
1,1,1-TRICHLOROETHANE	7.1 U	12 U	6 U	8.8 U	7.7 U	10 U
1,1,2,2-TETRACHLOROETHANE	7.1 U	12 U	6 U	8.8 U	7.7 U	
1,1,2-TRICHLOROETHANE	7.1 U	12 U	6 U	8.8 U	7.7 U	
1,1-DICHLOROETHANE	7.1 U	12 U	6 U	8.8 U	7.7 U	
1,1-DICHLOROETHENE	7.1 U	12 U	6 U	8.8 U	7.7 U	10 U
1,2-DICHLOROETHANE	7.1 U	12 U	6 U	8.8 U	7.7 U	10 U
1,2-DICHLOROETHENE (TOTAL)		12 U				
1,2-DICHLOROPROPANE	7.1 U	12 U	6 U	8.8 U	7.7 U	
2-BUTANONE	15 UJ	12 U	12 U	18 U	15 U	10 U
2-HEXANONE	14 U	12 U	12 U	18 U	15 U	
4-METHYL-2-PENTANONE	14 U	12 U	12 U	18 U	15 U	
ACETONE	80	12 U	49 UJ	39 UJ	220 UJ	
BENZENE	7.1 U	46	30	8.8 U	5.5 J	12000
BROMODICHLOROMETHANE	7.1 U	12 U	6 U	8.8 U	7.7 U	
BROMOFORM	7.1 U	12 U	6 U	8.8 U	7.7 U	
BROMOMETHANE	14 U	12 U	12 U	18 U	15 U	
CARBON DISULFIDE	7.1 U	12 U	6 U	12	11	
CARBON TETRACHLORIDE	7.1 U	12 U	6 U	8.8 U	7.7 U	
CHLOROBENZENE	7.1 U	12 U	6 U	8.8 U	7.7 U	
CHLOROETHANE	14 U	12 U	12 U	18 U	15 U	
CHLOROFORM	7.1 U	12 U	6 U	8.8 U	7.7 U	
CHLOROMETHANE	14 U	12 U	12 U	18 U	15 U	
CIS-1,2-DICHLOROETHENE	7.1 U		6 U	8.8 U	7.7 U	10 U
CIS-1,3-DICHLOROPROPENE	7.1 U	12 U	6 U	8.8 U	7.7 U	
DIBROMOCHLOROMETHANE	7.1 U	12 U	6 U	8.8 U	7.7 U	
ETHYLBENZENE	7.1 U	41	20	8.8 U	81	7900
HEXANE	7.1 U		6 U	8.8 U	7.7 U	20 U
M,P-XYLENE						4000
METHYLENE CHLORIDE	32	12 U	24 U	35 U	94	10 U
O-XYLENE	7.1 U		6 U	8.8 U	7.7 U	4000
STYRENE	7.1 U	12 U	6 U	8.8 U	7.7 U	
TETRACHLOROETHENE	7.1 U	12 U	6 U	8.8 U	7.7 U	10 U
TOLUENE	7.1 U	12 U	6 U	8.8 U	7.7 U	10 U
TRANS-1,2-DICHLOROETHENE	7.1 U		6 U	8.8 U	7.7 U	10 U
TRANS-1,3-DICHLOROPROPENE	7.1 U	12 U	6 U	8.8 U	7.7 U	
TRICHLOROETHENE	7.1 U	12 U	6 U	8.8 U	7.7 U	10 U
TRICHLOROFLUOROMETHANE	7.1 U		6 U	8.8 U	7.7 U	
VINYL ACETATE	71 U		60 U	88 U	77 U	
VINYL CHLORIDE	14 U	12 U	12 U	18 U	15 U	10 U
XYLENE (TOTAL)	7.1 U	9 J	6 U	8.8 U	7.7 U	

Notes:

UG/KG *Micrograms per kilogram*

TABLE D-3: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California
(Page 4 of 4)

Location	131-SS-002	134-IW-001	134-IW-001
Sample Code	131M-002M	134I-001	134I-001M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	2/21/1995	2/17/1995	2/17/1995
Sampling Depth (feet bgs)	10 - 11	4 - 4.5	4 - 4.5
Units	UG/KG	UG/KG	UG/KG
Analyte			
1,1,1-TRICHLOROETHANE	10 U	11 U	10 U
1,1,2,2-TETRACHLOROETHANE		11 U	
1,1,2-TRICHLOROETHANE		11 U	
1,1-DICHLOROETHANE		11 U	
1,1-DICHLOROETHENE	10 U	11 U	10 U
1,2-DICHLOROETHANE	10 U	11 U	10 U
1,2-DICHLOROETHENE (TOTAL)		11 U	
1,2-DICHLOROPROPANE		11 U	
2-BUTANONE	10 U	17 UJ	10 U
2-HEXANONE		11 U	
4-METHYL-2-PENTANONE		45	
ACETONE		1500 DBJ	
BENZENE	10 U	11 U	10 U
BROMODICHLOROMETHANE		11 U	
BROMOFORM		11 U	
BROMOMETHANE		11 U	
CARBON DISULFIDE		11 U	
CARBON TETRACHLORIDE		11 U	
CHLOROBENZENE		11 U	
CHLOROETHANE		11 U	
CHLOROFORM		11 U	
CHLOROMETHANE		11 U	
CIS-1,2-DICHLOROETHENE	10 U		10 U
CIS-1,3-DICHLOROPROPENE		11 U	
DIBROMOCHLOROMETHANE		11 U	
ETHYLBENZENE	10 U	11 U	11
HEXANE	10 U		20 U
M,P-XYLENE	20 U		20 U
METHYLENE CHLORIDE	20 U	11 U	10 U
O-XYLENE	10 U		10 U
STYRENE		11 U	
TETRACHLOROETHENE	10 U	11 U	10 U
TOLUENE	10 U	11 U	10 U
TRANS-1,2-DICHLOROETHENE	10 U		10 U
TRANS-1,3-DICHLOROPROPENE		11 U	
TRICHLOROETHENE	10 U	11 U	10 U
TRICHLOROFLUOROMETHANE			
VINYL ACETATE			
VINYL CHLORIDE	10 U	11 U	10 U
XYLENE (TOTAL)		11 U	

Notes:
UG/KG Micrograms per kilogram

TABLE D-4: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

ZINC	101	144 J	131	41	81	48.3	717	47.5	156
VANADIUM	38	40.2	26.5	27	66	57.4	24.8	24.1	74.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
TITANIUM									
THALLIUM	0.3 U	3.3	0.3 U	0.28 U	0.38 U	0.12 U	0.11 UJ	0.12 UJ	0.32 U
SODIUM		163 B				512 B	508 B	171 B	1460 B
SILVER	0.59 U	0.24 BNJ	0.59 U	0.56 U	0.76 U	1.4 U	1.3 U	1.3 U	1.8 U
SELENIUM	0.3 U	0.65 UNJ	0.3 U	0.28 U	0.38 U	0.83 U	1.4 U	0.56 U	0.76 U
Sampling Depth (feet bgs)	.5 - 1	5 - 6	5 - 6	.5 - 1	4 - 4.5	1 - 2	3 - 4	4 - 5	4 - 5
Sampling Date	6/19/1995	6/19/1995	6/19/1995	6/26/1995	6/26/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995
Sample Code	115-0003M	115-0006	115-0006M	116-0001M	116-0004M	116-0005	116-0006	116-0007	116-0008
POTASSIUM		1280				535 B	1210	514 B	4840
Notes:									
NICKEL	42.3	44.4	20.5	18	67	4.3 B	28.2	3.9 B	72.1
MOLYBDENUM	1.2 U	2.4 U	1.2 U	1.1 U	1.5 U	1.7 U	1.6 U	1.5 U	2 U
MG/KG Milligrams per kilogram									
MERCURY	0.66	0.18 U	0.53	0.11 U	0.33	0.08 B	0.94	0.11	2.2
MANGANESE		238 NJ				804	315	891	252
MAGNESIUM		5160				6770	4630	5470	11500
Location	115-Z21-003	115-Z21-003	115-Z21-003	116-Z21-001	116-Z21-001	116-Z21-004	116-Z21-004	116-Z21-005	116-Z21-005
LEAD	60.5	117 NJ	57.2	8.4	30	0.19 U	613	0.17 U	55.1
IRON		20400 J				35400	39700	34600	39200
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B
CYANIDE									
COPPER	128	53.9 J	18.3	45	68	26.6	177	52.5	58.8
COBALT	8.9	8.2 BJ	6.8	8.2	11	10.8 B	7.5 B	10.7 B	11 B
CHROMIUM	43.2	40.3 N*J	25.9	22	86	9.8	36.6	7	99
CALCIUM		3830				110000	12300	1280	3320
CADMIUM	0.57	0.28 BNJ	0.71	1.1	1.8	0.54 U	1.7 U	0.49 U	0.67 U
BERYLLIUM	0.51	0.49 B	0.36	0.38	0.94	0.55 U	0.53 U	0.42 U	0.79 U
BARIUM	80.1	142 N*J	94.8	42	68	15.4 B	436	35.5 B	253
ARSENIC	7.9	7.4 NJ	28.8	8.5	9.1	1.5 U	31.5	2 U	8.4
ANTIMONY	3.6 U	1.6 UNJ	3.6 U	3.3 U	4.6 U	1.5 UJ	5 J	0.77 UJ	3.5 UJ
Analyte									
ALUMINUM		11400 J				22500	8720	15100	28100

TABLE D-4: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

ZINC	61.4	22.8	44	512	66	30	570	46.3	15.3
VANADIUM	33.8	35.5	22	23	23	21	17	16.2	14
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
TITANIUM									
THALLIUM	0.12 UJ	0.12 UJ	0.27 U	1.1 B	0.27 U	0.3 U	0.4 U	0.11 UJ	0.11 UJ
SODIUM	191 B	224 B		295 B				90.7 B	66.4 B
SILVER	1.4 U	1.5 U	0.54 U	0.45 B	0.55 U	0.6 U	0.8 U	1.3 U	1.3 U
SELENIUM	0.6 U	0.63 U	0.27 U	0.61 JU	0.27 U	0.3 U	0.4 U	0.55 U	0.56 U
Sampling Depth (feet bgs)	2.5 - 3.5	3.5 - 4.5	.5 - 1	.5 - 1	.5 - 1	4 - 4.5	4 - 4.5	1 - 2	3.5 - 4.5
Sampling Date	11/8/1995	11/8/1995	6/23/1995	6/23/1995	6/23/1995	6/23/1995	6/23/1995	11/8/1995	11/8/1995
Sample Code	116-0010	116-0011	118-0001M	118-0002	118-0002M	118-0006M	118-0007M	118-0009	118-0010
POTASSIUM	511 B	757 B		732 B				596 B	608 B
Notes:									
NICKEL	5.5 B	21.9	24	36.6	21	29	24	18.8	19.3
MOLYBDENUM	1.6 U	1.7 U	1.1 U	2.3 U	1.1 U	1.2 U	1.6 U	1.5 U	1.5 U
MG/KG Milligrams per kilogram									
MERCURY	0.17	0.06 U	0.11 U	1.1	0.13	0.12 U	0.62	0.1 B	0.05 U
MANGANESE	335	288		339				81.5	74.9
MAGNESIUM	9410	3290		4040				1890	1760
Location	116-Z21-006	116-Z21-006	118-Z21-001	118-Z21-002	118-Z21-002	118-Z21-001	118-Z21-002	118-Z21-007	118-Z21-007
LEAD	0.18 U	1.4	26	474 *J	61	12	3000	12.3	2.7
IRON	30500	12300		32400 J				7030	6210
Investigation	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2B	EBS PHASE 2B
CYANIDE									
COPPER	33.2 J	10.5 J	22	128	31	20	280	7 J	3.4 U
COBALT	6.2 B	7 B	6.1	6.9 B	5.8	6.2	8.1	4 B	3.6 B
CHROMIUM	9.1	28.7	27	27.5 EJ	29	30	26	28.9	23.1
CALCIUM	1330	11600		13300				2200	2000
CADMIUM	0.53 U	0.56 U	0.7	1.2 B	0.86	0.55	4.3	0.66 U	0.58 U
BERYLLIUM	0.55 U	0.29 U	0.25	0.94 B	0.27	0.27	1	0.16 U	0.13 U
BARIUM	26.9 BJ	27.1 BJ	40	233	48	40	770	36.7 BJ	34 BJ
ARSENIC	5.7	2.9 U	2.5	10.2	3.6	2.2	16	1.7 U	1.4 U
ANTIMONY	1.2 UJ	1.4 UJ	3.2 U	1.5 UNJ	3.3 U	3.6 U	4.8 U	0.76 UJ	0.77 UJ
Analyte									
ALUMINUM	17000	5840		6420				3380	3130

TABLE D-4: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

ZINC	59.8	23.4	23.2 *J	23.6	143	29.9 *J	18.2	25 U	19.7
VANADIUM	25	21.9	20.8	23	18.7	14.9	17.8		16
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
TITANIUM									
THALLIUM	0.11 UJ	0.12 UJ	2.6	0.27 U	0.26 U	2.1	0.27 U		0.27 U
SODIUM	136 B	146 B	522 BJ			104 BJ			
SILVER	1.3 U	1.3 U	0.19 U	0.54 U	0.52 U	0.19 U	0.53 U	25 U	0.54 U
SELENIUM	0.95 U	1.2 U	0.56 U	0.27 U	0.26 U	0.54 U	0.27 U		0.27 U
Sampling Depth (feet bgs)	1 - 2	2 - 3	.5 - 1	.5 - 1	1 - 1.5	1 - 1.5	1 - 1.5	7 - 8	3 - 3.5
Sampling Date	11/8/1995	11/8/1995	6/8/1995	6/8/1995	6/8/1995	6/5/1995	6/5/1995	2/14/1995	6/2/1995
Sample Code	118-0012	118-0013	122-0001	122-0001M	122-0002M	122-0004	122-0004M	127M-001M	127M-003M
POTASSIUM	748 B	714 B	704 B			541 B			
Notes:									
NICKEL	20.7	29	20 J	27.9	19.9	19.9 J	23.6	25 U	20.5
MOLYBDENUM	1.5 U	1.6 U	2.1 U	1.1 U	1 U	2.1 U	1.1 U		1.1 U
MG/KG Milligrams per kilogram									
MERCURY	0.15	0.06 U	0.16 UJ	0.11	0.16	0.16 UJ	0.11 U	25 U	0.11 U
MANGANESE	229	101	160 NJ			88.5 NJ			
MAGNESIUM	3430	2350	2870 J			2070 J			
Location	118-Z21-008	118-Z21-008	122-001-001	122-001-001	122-001-002	122-002-004	122-002-004	127-SS-001	127-SS-003
LEAD	34	3.1	3.5	2.8	1.8	2.8	4	25 U	2.2
IRON	16600	9240	10100 J			6840 J			
Investigation	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
CYANIDE									
COPPER	17.4 J	4.1 U	25.9 *J	17	10.9	6.5 *J	7.2	25 U	10.1
COBALT	6.9 B	4.3 B	5.4 B	6.6	4.7	3.6 B	4.3		3.9
CHROMIUM	26	32.1	26.3 NJ	35	22.8	24.1 NJ	26.7	25 U	24.4
CALCIUM	2910	2260	3030			1900			
CADMIUM	0.49 U	0.51 U	0.06 B	0.35	0.36	0.06 U	0.22	25 U	0.25
BERYLLIUM	0.25 U	0.18 U	0.28 B	0.3	0.27	0.15 U	0.23	25 U	0.24
BARIUM	34.7 BJ	22.4 BJ	35.1 B	31.9	28	33.4 B	28.4		28.2
ARSENIC	4.5 U	2 U	2.2 UNJ	1.8	1.9	1.6 UNJ	1.6		1.7
ANTIMONY	1.9 UJ	1.2 UJ	1.4 UNJ	3.2 U	3.1 U	1.3 UNJ	3.2 U	25 U	3.3 U
Analyte									
ALUMINUM	7150	4550	6170 J			3780 J			

TABLE D-4: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

ZINC	25 U	61	35.3 N*J	17	25	13	34 N*J	14	20
VANADIUM			27.7 J	17	23	16	23.7 J	16	28
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
TITANIUM									
THALLIUM			4.3	0.27 U	0.27 U	0.27 U	4.6	0.26 U	0.27 U
SODIUM			171 B				94.7 B		
SILVER	25 U	25 U	0.19 U	0.53 U	0.54 U	0.54 U	0.19 U	0.52 U	0.54 U
SELENIUM			0.73 U	0.27 U	0.27 U	0.27 U	1.1 U	0.26 U	0.27 U
Sampling Depth (feet bgs)	3 - 4	8 - 9.5	.5 - 1	.5 - 1	.5 - 1	.5 - 1.5	1 - 1.5	1 - 1.5	.5 - 1
Sampling Date	2/14/1995	1/24/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	7/10/1995
Sample Code	127M-004M	128S-001M	129-0001	129-0001M	129-0002M	129-0003M	129-0004	129-0004M	129-0005M
POTASSIUM			823 BJ				808 BJ		
Notes:									
NICKEL	28	60	28.2 J	23	38	21	23.9 J	20	30
MOLYBDENUM			2.1 U	1.1 U	1.1 U	1.1 U	2.1 U	1 U	1.1 U
MG/KG Milligrams per kilogram									
MERCURY	25 U	25 U	0.16 U	0.11 U	0.11 U	0.11 U	0.16 U	0.11 U	0.11 U
MANGANESE			154 NJ				162 NJ		
MAGNESIUM			3220				3290		
Location	127-SS-004	128-SN-001	129-001-001	129-001-001	129-001-002	129-001-003	129-002-004	129-002-004	129-002-005
LEAD	25 U	25 U	6.7	3	5.9	2.2	3.1	2.2	5.3
IRON			10700				11000		
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
CYANIDE									
COPPER	25 U	25 U	11.2	9.1	11	5.7	14.2	7.8	11
COBALT			5 BJ	4	8.3	3.8	5 BJ	4.5	5.9
CHROMIUM	25 U	25 U	38.1 NJ	27	35	27	25.5 NJ	24	30
CALCIUM			3350				2950		
CADMIUM	25 U	25 U	0.06 U	0.28	0.51	0.25	0.06 U	0.31	0.66
BERYLLIUM	25 U	25 U	0.31 B	0.2	0.34	0.2	0.29 B	0.22	0.32
BARIUM			50.6	19	34	26	40 B	24	45
ARSENIC			1 B	1.4	2.4	1.4	0.96 B	1.1	2.8
ANTIMONY	25 U	25 U	1.4 UNJ	3.2 U	3.2 U	3.2 U	1.4 UNJ	3.1 U	3.2 U
Analyte									
ALUMINUM			6790 J				6600 J		

TABLE D-4: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

ZINC	15	187 N*J	88	650	90	133 N*J	36	71	65
VANADIUM	17	45 J	48	21	57	31.6 J	25	74	64
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
TITANIUM									
THALLIUM	0.26 U	4.6	0.41 U	0.32 U	0.35 U	4.1	0.3 U	0.43 U	0.38 U
SODIUM		1350				676 B			
SILVER	0.53 U	0.21 U	0.82 U	0.93	0.7 U	0.22 U	0.6 U	0.87 U	0.77 U
SELENIUM	0.26 U	1.9 U	0.41 U	0.59	0.35 U	1.4 U	0.3 U	0.43 U	0.38 U
Sampling Depth (feet bgs)	1 - 1.5	4 - 5	4 - 5	4 - 4.5	4 - 5	4 - 5	4 - 5	4 - 5	4 - 5
Sampling Date	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	7/10/1995	6/30/1995
Sample Code	129-0006M	129-0007	129-0007M	129-0008M	129-0009M	129-0010	129-0010M	129-0011M	129-0012M
POTASSIUM		2910 J				1430 J			
Notes:									
NICKEL	24	50.3 J	79	30	58	38 J	36	93	91
MOLYBDENUM	1.1 U	2.3 U	1.6 U	1.3 U	1.4 U	2.4 U	1.2 U	1.7 U	1.5 U
MG/KG Milligrams per kilogram									
MERCURY	0.11 U	0.31	0.71	0.54	1.8	0.18 U	0.12 U	0.18 U	0.23
MANGANESE		249 NJ				227 NJ			
MAGNESIUM		7330				5650			
Location	129-002-006	129-001-001	129-001-001	129-001-002	129-001-003	129-002-004	129-002-004	129-002-005	129-002-006
LEAD	2.8	61.3	25	1600	56	6.2	6.8	15	14
IRON		24100				19000			
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
CYANIDE									
COPPER	5.9	243	46	290	62	67.6	24	43	36
COBALT	4.4	8.4 BJ	13	4.9	9.5	8 BJ	6.6	17	17
CHROMIUM	30	51.4 NJ	66	27	77	34.6 NJ	38	98	92
CALCIUM		3600				3070			
CADMIUM	0.28	0.07 U	1.3	3.8	1.2	0.07 U	0.57	2.3	1.6
BERYLLIUM	0.21	0.82 B	0.77	0.93	0.79	0.49 B	0.37	1.1	0.98
BARIUM	31	97.5	110	630	120	61.9	49	73	73
ARSENIC	1.4	4.8	7.1	6.3	6.1	4.7	4.6	8.6	7.7
ANTIMONY	3.2 U	1.5 UNJ	4.9 U	3.9 U	4.2 U	1.6 UNJ	3.6 U	5.2 U	4.6 U
Analyte									
ALUMINUM		19100 J				11600 J			

TABLE D-4: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

ZINC	43.7	168	25	68	30.2	25 U		
VANADIUM	31.1	69.6			15.4			
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
TITANIUM								
THALLIUM	0.13 U	0.16 U			0.8 JU			
SODIUM	228 B	2030			66.3 BJ			
SILVER	1.3 U	2 U	25 U	25 U	0.42 U	25 U		
SELENIUM	0.56 U	0.85 U			0.57 U			
Sampling Depth (feet bgs)	3.5 - 4	3.5 - 4	3 - 4	10 - 11	4 - 4.5	4 - 4.5	2 - 3	2 - 3
Sampling Date	11/10/1995	11/10/1995	2/14/1995	2/21/1995	2/17/1995	2/17/1995	6/30/1995	6/30/1995
Sample Code	129-0017	129-0019	131M-001M	131M-002M	134I-001	134I-001M	197-0006	197-0006M
POTASSIUM	1470	4220			649 B			
Notes:								
NICKEL	42	76.3	30	72	22.6	25		
MOLYBDENUM	1.5 U	2.3 U			2 U			
MG/KG Milligrams per kilogram								
MERCURY	0.07 B	3.1	25 U	25 U	0.16 U	25 U		
MANGANESE	406 J	274 J			72.7			
MAGNESIUM	6740	10400			1960			
Location	129-003-007	129-003-008	131-SS-001	131-SS-002	134-IW-001	134-IW-001	197-Z21-006	197-Z21-006
LEAD	7.7 J	30.2 J	25 U	66	3.8 J	25 U	3	3.6
IRON	21100	37800			7410			
Investigation	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
CYANIDE			0.36 U	0.31 UNJ	0.26 UNJ			
COPPER	25.3	57.4	25 U	37	10.2	25 U		
COBALT	11.2	13.5 B			4.1 B			
CHROMIUM	34.8 J	95 J	25 U	31	24.6 EJ	25 U		
CALCIUM	4610	3260			1460 J			
CADMIUM	0.49 U	0.92 U	25 U	25 U	0.08 U	25 U		
BERYLLIUM	0.42 U	1 U	25 U	25 U	0.17 U	25 U		
BARIUM	112	239			21.9 B			
ARSENIC	3.1 U	8.3			1.1 U			
ANTIMONY	0.77 UJ	2.6 UJ	25 U	25 U	0.46 UNJ	25 U		
Analyte								
ALUMINUM	10600	23500			3810			

TABLE D-5: SITE 3 ORGANIC METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	127-SS-001	127-SS-003	127-SS-004	128-SN-001	131-SS-001	131-SS-002	134-IW-001
Sample Code	127M-001	127M-003	127M-004	128S-001	131M-001	131M-002	134I-001
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	2/14/1995	6/2/1995	2/14/1995	1/24/1995	2/14/1995	2/21/1995	2/17/1995
Sampling Depth (feet bgs)	7 - 8	3 - 3.5	3 - 4	8 - 9.5	3 - 4	10 - 11	4 - 4.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte							
DIBUTYL TIN	1 UJ	1 UJ	1 UJ		2 UJ	1 UJ	1 UJ
ORGANIC LEAD				0.47 JN	0.74 U	0.64 UJ	0.54 U
MONOBUTYL TIN	1 UJ	1 UJ	1 UJ		2 UJ	1 UJ	1 UJ
TETRABUTYL TIN	1 UJ	1 UJ	1 UJ		2 UJ	1 UJ	1 UJ
TRIBUTYL TIN	1 UJ	1 UJ	1 UJ		2 UJ	1 UJ	1 UJ

Notes:

MG/KG Milligrams per kilogram

TABLE D-6: SITE 3 TOTAL PETROLEUM HYDROCARBONS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	115-Z21-003	115-Z21-003	115-Z21-003	116-Z21-001	116-Z21-001	118-Z21-001	118-Z21-002	118-Z21-002	118-Z21-001
Sample Code	115-0003M	115-0006	115-0006M	116-0001M	116-0004M	118-0001M	118-0002	118-0002M	118-0006M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/19/1995	6/19/1995	6/19/1995	6/26/1995	6/26/1995	6/23/1995	6/23/1995	6/23/1995	6/23/1995
Sampling Depth (feet bgs)	.5 - 1	5 - 6	5 - 6	.5 - 1	4 - 4.5	.5 - 1	.5 - 1	.5 - 1	4 - 4.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
DIESEL RANGE ORGANICS	4	12 U	5	13	130	25	12 U	12	15
GASOLINE RANGE ORGANICS	0.6 U		0.6 U	0.57 U	0.79 U	0.54 U	0.6 U	0.55 U	0.62 U
MOTOR OIL RANGE ORGANICS	700	320 YJ	270	130	450	210	130 YJ	200	120

Location	118-Z21-002	122-001-001	122-001-001	122-001-002	127-SS-001	127-SS-001	127-SS-003	127-SS-003	127-SS-004
Sample Code	118-0007M	122-0001	122-0001M	122-0002M	127M-001	127M-001M	127M-003	127M-003M	127M-004
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/23/1995	6/8/1995	6/8/1995	6/8/1995	2/14/1995	2/14/1995	6/2/1995	6/2/1995	2/14/1995
Sampling Depth (feet bgs)	4 - 4.5	.5 - 1	.5 - 1	1 - 1.5	7 - 8	7 - 8	3 - 3.5	3 - 3.5	3 - 4
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
DIESEL RANGE ORGANICS	150	11 U	2	1 U		50 U		1 U	
GASOLINE RANGE ORGANICS	0.79 U	0.5 U	0.5 U	0.5 U		50 U		0.5 U	
MOTOR OIL RANGE ORGANICS	530	21 U	30	27 U				27 U	
OIL & GREASE					647 J		109 U*		458 J

Location	127-SS-004	128-001-001	128-001-002	128-001-003	128-001-004	128-001-005	128-001-005	128-001-001	128-001-002
Sample Code	127M-004M	128-0001M	128-0002M	128-0003M	128-0004M	128-0005	128-0005M	128-0006M	128-0007M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	2/14/1995	6/6/1995	6/5/1995	6/6/1995	6/6/1995	6/6/1995	6/6/1995	6/6/1995	6/5/1995
Sampling Depth (feet bgs)	3 - 4	1 - 1.5	.8 - 1.3	.5 - 1	.5 - 1	.5 - 1	.5 - 1	4 - 4.5	4 - 4.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
DIESEL RANGE ORGANICS	50 U	8	1 U	99	6	12 U	45	240	380
GASOLINE RANGE ORGANICS	160	0.6 U	0.6 U	110	0.5 U	9 ZJ	3	86	10
MOTOR OIL RANGE ORGANICS		57 U	28 U	920	27 U	90 YJ	170	590	1000
OIL & GREASE									

Notes:

MG/KG Milligrams per kilogram

TABLE D-6: SITE 3 TOTAL PETROLEUM HYDROCARBONS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	128-001-003	128-001-004	128-001-005	128-001-005	128-SN-001	129-001-001	129-001-001	129-001-002	129-001-003
Sample Code	128-0008M	128-0009M	128-0010	128-0010M	128S-001M	129-0001	129-0001M	129-0002M	129-0003M
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/6/1995	6/6/1995	6/6/1995	6/6/1995	1/24/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995
Sampling Depth (feet bgs)	2.5 - 3	4 - 4.5	4 - 4.5	4 - 4.5	8 - 9.5	.5 - 1	.5 - 1	.5 - 1	.5 - 1.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
DIESEL RANGE ORGANICS	25	1 U	11 U	1 U	50 U	11 U	11 U	4.6	1.1 U
GASOLINE RANGE ORGANICS	61	2	2200 ZJ	220	950	0.5 U	0.53 U	0.56 U	0.54 U
MOTOR OIL RANGE ORGANICS	320	26 U	22 U	27 U		77 YJ	1300	230	130

Location	129-002-004	129-002-004	129-002-005	129-002-006	129-001-001	129-001-001	129-001-002	129-001-003	129-002-004
Sample Code	129-0004	129-0004M	129-0005M	129-0006M	129-0007	129-0007M	129-0008M	129-0009M	129-0010
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/30/1995	6/30/1995	7/10/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995
Sampling Depth (feet bgs)	1 - 1.5	1 - 1.5	.5 - 1	1 - 1.5	4 - 5	4 - 5	4 - 4.5	4 - 5	4 - 5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
DIESEL RANGE ORGANICS	11 U	1.1 U	240	1.1 U	12 U	46	76	49	12 U
GASOLINE RANGE ORGANICS	4 ZJ	0.53 U	0.54 U	1.1	0.6 U	0.82 U	0.67 U	0.71 U	8 ZJ
MOTOR OIL RANGE ORGANICS	60 YJ	27 U	1600	140	370 YJ	320	670	860	91 YJ
OIL & GREASE									

Location	129-002-004	129-002-005	129-002-006	131-SS-001	131-SS-001	131-SS-002	131-SS-002	134-IW-001	197-Z21-006
Sample Code	129-0010M	129-0011M	129-0012M	131M-001	131M-001M	131M-002	131M-002M	134I-001	197-0006
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/30/1995	7/10/1995	6/30/1995	2/14/1995	2/14/1995	2/21/1995	2/21/1995	2/17/1995	6/30/1995
Sampling Depth (feet bgs)	4 - 5	4 - 5	4 - 5	3 - 4	3 - 4	10 - 11	10 - 11	4 - 4.5	2 - 3
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
DIESEL RANGE ORGANICS	36	140	57		50 U		50 U	31 YJ	11 U
GASOLINE RANGE ORGANICS	26	0.88 U	34		930		50 U	0.7 ZJ	0.5 U
MOTOR OIL RANGE ORGANICS	240	540	380					22 U	22 U
OIL & GREASE				536 J		2420		320	

Notes:

MG/KG Milligrams per kilogram

TABLE D-6: SITE 3 TOTAL PETROLEUM HYDROCARBONS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California
(Page 3 of 3)

Location	197-Z21-006
Sample Code	197-0006M
Investigation	EBS PHASE 2A
Sampling Date	6/30/1995
Sampling Depth (feet bgs)	2 - 3
Units	MG/KG
Analyte	
DIESEL RANGE ORGANICS	1.2 U
GASOLINE RANGE ORGANICS	0.62 U
MOTOR OIL RANGE ORGANICS	31 U

Notes:
MG/KG Milligrams per kilogram

TABLE D-7: SITE 3 GENERAL CHEMICALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	115-Z21-003	116-Z21-002	118-Z21-002	120-Z21-001	120-Z21-002	121-Z21-001	122-001-001	122-002-004	127-SS-001
Sample Code	115-0006	116-0002	118-0002	120-0001	120-0002	121-0001	122-0001	122-0004	127M-001
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/19/1995	6/26/1995	6/23/1995	6/28/1995	6/28/1995	6/28/1995	6/8/1995	6/5/1995	2/14/1995
Sampling Depth (feet bgs)	5 - 6	.5 - 1	.5 - 1	0 - 0.5	0 - 0.5	0 - 0.5	.5 - 1	1 - 1.5	7 - 8
Analyte									
PERCENT MOISTURE	20	10	14	16	11	4	6	6	17
PH	7.7	9.1	8.6	8.4	8.8	9.3	8.3		8.5

Location	127-SS-003	127-SS-004	128-001-005	128-001-005	128-SN-001	129-001-001	129-002-004	129-001-001	129-002-004
Sample Code	127M-003	127M-004	128-0005	128-0010	128S-001	129-0001	129-0004	129-0007	129-0010
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A
Sampling Date	6/2/1995	2/14/1995	6/6/1995	6/6/1995	1/24/1995	6/30/1995	6/30/1995	6/30/1995	6/30/1995
Sampling Depth (feet bgs)	3 - 3.5	3 - 4	.5 - 1	4 - 4.5	8 - 9.5	.5 - 1	1 - 1.5	4 - 5	4 - 5
Analyte									
PERCENT MOISTURE	8	5	16	7	18	6	5	14	18
PH	9.2	8.4			8.5	8.6	8.1	8.4	8.9

Location	131-SS-001	131-SS-002	134-IW-001	197-Z21-006	116-Z21-004	116-Z21-004	116-Z21-005	116-Z21-005	116-Z21-006
Sample Code	131M-001	131M-002	134I-001	197-0006	116-0005	116-0006	116-0007	116-0008	116-0010
Investigation	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2A	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B
Sampling Date	2/14/1995	2/21/1995	2/17/1995	6/30/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995
Sampling Depth (feet bgs)	3 - 4	10 - 11	4 - 4.5	2 - 3	1 - 2	3 - 4	4 - 5	4 - 5	2.5 - 3.5
Analyte									
PERCENT MOISTURE	33	22	8	9	15	10	7	32	13
PH	6.7	7.1	7	8.5	8.5	8.4	8.8	8	8.9
SULFIDE (MG/KG)	37.2 JU	32 U	27.1 UJ						

Notes:

MG/KG Milligrams per kilogram

TABLE D-7: SITE 3 GENERAL CHEMICALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	116-Z21-006	118-Z21-007	118-Z21-007	118-Z21-008	118-Z21-008	129-003-007	129-003-008
Sample Code	116-0011	118-0009	118-0010	118-0012	118-0013	129-0017	129-0019
Investigation	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B	EBS PHASE 2B
Sampling Date	11/8/1995	11/8/1995	11/8/1995	11/8/1995	11/8/1995	11/10/1995	11/10/1995
Sampling Depth (feet bgs)	3.5 - 4.5	1 - 2	3.5 - 4.5	1 - 2	2 - 3	3.5 - 4	3.5 - 4
Analyte							
PERCENT MOISTURE	18	6	6	6	11	6.22	39.13
PH	8	8.8	8.7	8.4	8.6		

Notes:

MG/KG Milligrams per kilogram

TABLE D-8: SITE 3 PESTICIDES AND PCBs IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	116-Z21-005	118-Z21-007
Sample Code	116-0009	118-0011
Investigation	EBS PHASE 2B	EBS PHASE 2B
Sampling Date	11/8/1995	11/8/1995
Sampling Depth (feet bgs)	8 - 9	8 - 9
Units	UG/L	UG/L
Analyte		
4,4'-DDD	0.096 U	0.096 U
4,4'-DDE	0.096 U	0.096 U
4,4'-DDT	0.096 U	0.096 U
ALDRIN	0.048 U	0.048 U
ALPHA-BHC	0.048 U	0.048 U
ALPHA-CHLORDANE	0.048 U	0.048 U
AROCLOR-1016	0.96 U	0.96 U
AROCLOR-1221	1.9 U	1.9 U
AROCLOR-1232	0.96 U	0.96 U
AROCLOR-1242	0.96 U	0.96 U
AROCLOR-1248	0.96 U	0.96 U
AROCLOR-1254	0.96 U	0.96 U
AROCLOR-1260	0.96 U	0.96 U
BETA-BHC	0.048 U	0.048 U
DELTA-BHC	0.048 U	0.048 U
DIELDRIN	0.096 U	0.096 U
ENDOSULFAN I	0.048 U	0.048 U
ENDOSULFAN II	0.096 U	0.096 U
ENDOSULFAN SULFATE	0.096 U	0.096 U
ENDRIN	0.096 U	0.096 U
ENDRIN ALDEHYDE	0.096 U	0.096 U
ENDRIN KETONE	0.096 U	0.096 U
GAMMA-BHC (LINDANE)	0.048 U	0.048 U
GAMMA-CHLORDANE	0.048 U	0.048 U
HEPTACHLOR	0.048 U	0.048 U
HEPTACHLOR EPOXIDE	0.048 U	0.048 U
METHOXYCHLOR	0.48 U	0.48 U
TOXAPHENE	4.8 U	4.8 U

Notes:

PCB Polychlorinated biphenyl

UG/L Micrograms per kilogram

TABLE D-9: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

(Page 1 of 2)

Location	116-Z21-005	118-Z21-007
Sample Code	116-0009	118-0011
Investigation	EBS PHASE 2B	EBS PHASE 2B
Sampling Date	11/8/1995	11/8/1995
Sampling Depth (feet bgs)	8 - 9	8 - 9
Units	UG/L	UG/L
Analyte		
1,2,4-TRICHLOROBENZENE	10 U	10 U
1,2-DICHLOROBENZENE	10 U	10 U
1,3-DICHLOROBENZENE	10 U	10 U
1,4-DICHLOROBENZENE	10 U	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	10 U
2,4,5-TRICHLOROPHENOL	25 U	25 U
2,4,6-TRICHLOROPHENOL	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U
2,4-DINITROPHENOL	25 U	25 U
2,4-DINITROTOLUENE	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U
2-CHLOROPHENOL	10 U	10 U
2-METHYLNAPHTHALENE	10 U	10 U
2-METHYLPHENOL	10 U	10 U
2-NITROANILINE	25 U	25 U
2-NITROPHENOL	10 U	10 U
3,3'-DICHLOROBENZIDINE	10 U	10 UJ
3-NITROANILINE	25 U	25 U
4,6-DINITRO-2-METHYLPHENOL	25 U	25 U
4-BROMOPHENYL-PHENYLETHER	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U
4-CHLOROANILINE	10 U	10 U
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U
4-METHYLPHENOL	10 U	10 U
4-NITROANILINE	25 U	25 U
4-NITROPHENOL	25 U	25 U
ACENAPHTHENE	2 J	10 U
ACENAPHTHYLENE	10 U	10 U
ANTHRACENE	10 U	10 U
BENZO(A)ANTHRACENE	10 U	10 UJ
BENZO(A)PYRENE	10 U	10 UJ
BENZO(B)FLUORANTHENE	10 U	10 UJ
BENZO(G,H,I)PERYLENE	10 U	10 UJ
BENZO(K)FLUORANTHENE	10 U	10 UJ
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 UJ
BUTYLBENZYLPHTHALATE	10 U	10 UJ
CARBAZOLE	10 U	10 U
CHRYSENE	10 U	10 U
DIBENZO(A,H)ANTHRACENE	10 U	10 UJ
DIBENZOFURAN	10 U	10 U
DIETHYLPHTHALATE	10 U	10 U
DIMETHYLPHTHALATE	10 U	10 U
DI-N-BUTYLPHTHALATE	10 U	10 U
DI-N-OCTYLPHTHALATE	10 U	10 UJ
FLUORANTHENE	10 U	10 U
FLUORENE	1 J	10 U
HEXACHLOROBENZENE	10 U	10 U
HEXACHLOROBUTADIENE	10 U	10 U

TABLE D-9: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

(Page 2 of 2)

Location	116-Z21-005	118-Z21-007
Sample Code	116-0009	118-0011
Investigation	EBS PHASE 2B	EBS PHASE 2B
Sampling Date	11/8/1995	11/8/1995
Sampling Depth (feet bgs)	8 - 9	8 - 9
Units	UG/L	UG/L
Analyte		
HEXACHLOROCYCLOPENTADIENE	10 U	10 U
HEXACHLOROETHANE	10 U	10 U
INDENO(1,2,3-CD)PYRENE	10 U	10 UJ
ISOPHORONE	10 U	10 U
NAPHTHALENE	10 U	10 U
NITROBENZENE	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U
N-NITROSODIPHENYLAMINE	10 U	10 U
PENTACHLOROPHENOL	25 U	25 U
PHENANTHRENE	2 J	10 U
PHENOL	10 U	10 U
PYRENE	10 U	10 UJ

Notes:

UG/L Micrograms per liter

TABLE D-10: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

(Page 1 of 2)

Location	116-0013	118-0015
Sample Code	116-0013	118-0015
Investigation	EBS PHASE 2C	EBS PHASE 2C
Sampling Date	12/28/1998	12/28/1998
Sampling Depth (feet bgs)	9 - 12	9 - 12
Units	UG/L	UG/L
Analyte		
1,1,1,2-TETRACHLOROETHANE	1 U	1 U
1,1,1-TRICHLOROETHANE	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U
1,1-DICHLOROETHANE	1 U	1 U
1,1-DICHLOROETHENE	1 U	1 U
1,1-DICHLOROPROPENE	1 U	1 U
1,2,3-TRICHLOROBENZENE	1 U	1 U
1,2,3-TRICHLOROPROPANE	1 U	1 U
1,2,4-TRICHLOROBENZENE	1 U	1 U
1,2,4-TRIMETHYLBENZENE	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	1 U	1 U
1,2-DICHLOROBENZENE	1 U	1 U
1,2-DICHLOROETHANE	1 U	1 U
1,2-DICHLOROPROPANE	1 U	1 U
1,3,5-TRIMETHYLBENZENE	1 U	1 U
1,3-DICHLOROBENZENE	1 U	1 U
1,3-DICHLOROPROPANE	1 U	1 U
1,4-DICHLOROBENZENE	1 U	1 U
2,2-DICHLOROPROPANE	1 U	1 U
2-CHLOROTOLUENE	1 U	1 U
4-CHLOROTOLUENE	1 U	1 U
BENZENE	1 U	1 U
BROMOBENZENE	1 U	1 U
BROMOCHLOROMETHANE	1 U	1 U
BROMODICHLOROMETHANE	1 U	1 U
BROMOFORM	1 U	1 U
BROMOMETHANE	1 U	1.3 U
CARBON TETRACHLORIDE	1 U	1 U
CHLOROBENZENE	1 U	1 U
CHLOROETHANE	1 U	1 U
CHLOROFORM	1 U	1 U
CHLOROMETHANE	1 U	1 U
CIS-1,2-DICHLOROETHENE	1 U	0.9 J
CIS-1,3-DICHLOROPROPENE	1 U	1 U
DIBROMOCHLOROMETHANE	1 U	1 U
DIBROMOMETHANE	1 U	1 U
DICHLORODIFLUOROMETHANE	1 U	1 U
ETHYLBENZENE	1 U	1 U
ETHYLENE DIBROMIDE	1 U	1 U
HEXACHLOROBUTADIENE	1 U	1 U
ISOPROPYLBENZENE	1 U	1 U
METHYLENE CHLORIDE	1 U	1 U
NAPHTHALENE	1 U	1 U
N-BUTYLBENZENE	1 U	1 U
N-PROPYLBENZENE	1 U	1 U
P-ISOPROPYLTOLUENE	1 U	1 U
SEC-BUTYLBENZENE	1 U	1 U
STYRENE	1 U	1 U
TETRACHLOROETHENE	1 U	1 U
TOLUENE	1 U	1 U
TRANS-1,2-DICHLOROETHENE	1 U	1 U

TABLE D-10: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

(Page 2 of 2)

Location	116-0013	118-0015
Sample Code	116-0013	118-0015
Investigation	EBS PHASE 2C	EBS PHASE 2C
Sampling Date	12/28/1998	12/28/1998
Sampling Depth (feet bgs)	9 - 12	9 - 12
Units	UG/L	UG/L
Analyte		
TRANS-1,3-DICHLOROPROPENE	1 U	1 U
TRICHLOROETHENE	1 U	1 U
TRICHLOROFLUOROMETHANE	1 U	1 U
VINYL CHLORIDE	1 U	1 U
XYLENE (TOTAL)	1 U	1 U

Notes:

UG/L Micrograms per liter

TABLE D-11: SITE 3 METALS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	116-Z21-005	116-0013	116-0013	118-Z21-007	118-0015	118-0015	129-003-007
Sample Code	116-0009	116-0013	116-0014	118-0011	118-0015	118-0016	129-0018
Investigation	EBS PHASE 2B	EBS PHASE 2C	EBS PHASE 2C	EBS PHASE 2B	EBS PHASE 2C	EBS PHASE 2C	EBS PHASE 2B
Sampling Date	11/8/1995	12/28/1998	12/28/1998	11/8/1995	12/28/1998	12/28/1998	11/10/1995
Sampling Depth (feet bgs)	8 - 9	9 - 12	9 - 12	8 - 9	9 - 12	9 - 12	8 - 9
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte							
ALUMINUM	915	250 UP	5340 P	49600	250 UP	17700 P	332000
ANTIMONY	2.5 B	50 UP	50 UP	19.9	50 UP	13.3 BP	169
ARSENIC	15	10.1 BP	28 P	62.7	7.6 BP	56.2 P	526
BARIUM	449	1360 P	1890 P	9140	768 P	2770 P	17200
BERYLLIUM	0.5 U	10 UP	10 UP	9.3	10 UP	10 UP	24.4 B
CADMIUM	2.1 U	10 UP	10 UP	32.7	10 UP	4.7 BP	119
CALCIUM	29700	23100 P	29100 P	157000	61400 P	215000 P	577000
CHROMIUM	5 B	25 UP	20.3 BP	136	25 UP	178 P	1370
COBALT	5.2 U	25 UP	12.2 BP	17.4 B	2.5 BP	25.4 P	375
COPPER	21 B	24.6 BP	141 P	5920	22.1 BP	1120 P	13500
IRON	12400	2280 P	46400 P	216000	8330 P	263000 P	2230000
LEAD	107	25 UP	856 P	28700	25 UP	9210 P	105000
MAGNESIUM	33700	102000 P	113000 P	58800	94000 P	106000 P	306000
MANGANESE	296	33.9 P	377 P	1790	246 P	1680 P	17100
MERCURY	0.2 U	0.5 UCV	0.5 UCV	16.3	0.5 UCV	16.5 CV	46.3
MOLYBDENUM	3.4 U	4.3 BP	4.6 BP	10.9 U	4.2 BP	2.7 BP	95 B
NICKEL	7.8 B	6.5 BP	44 P	146	4.9 BP	81.9 P	4470
POTASSIUM	29200	91200 P	90600 P	35000	55700 P	57600 P	118000
SELENIUM	2.1 U	50 UP	50 UP	2.1 U	15.4 BP	50 UP	10.5 U
SILVER	1.5 U	50 UP	1.7 BP	18.5	50 UP	50 UP	144
SODIUM	387000	1110000 P	1190000 P	286000	604000 P	602000 P	1990000
THALLIUM	1.2 UWNJ	4.4 BPJ	4.3 BPJ	1.2 UWNJ	2.1 BPJ	2.9 PJ	7.2 BWNJ
VANADIUM	4.9 B	50 UP	11.8 BP	92.2	50 UP	56.8 P	916
ZINC	82.9	4.1 BP	720 P	11900	7.8 BP	6030 P	39400

Notes:

UG/L Micrograms per liter

TABLE D-12: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	030-S07-068	030-S07-069	030-S07-071	MW97-1	MW97-1
Sample Code	030-S07-068	030-S07-069	030-S07-071	MW97-1 [1.5-2.0]	MW97-1 [10.5-11.0]
Investigation	TPH	TPH	TPH	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	10/24/1998	10/27/1998	11/2/1998	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	0 - 9.5	0 - 5	0 - 5.5	1.5 - 2	10.5 - 11
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
1,2,4-TRICHLOROBENZENE	150 U	150 U	37 U	360 U	400 U
1,2-DICHLOROBENZENE	73 U	72 U	18 U	360 U	400 U
1,3-DICHLOROBENZENE	73 U	72 U	18 U	360 U	400 U
1,4-DICHLOROBENZENE	73 U	72 U	18 U	360 U	400 U
2,2'-OXYBIS(1-CHLOROPROPANE)	150 U	150 U	37 U		
2,4,5-TRICHLOROPHENOL	360 U	360 U	89 U	1700 U	2000 U
2,4,6-TRICHLOROPHENOL	150 U	150 U	37 U	360 U	400 U
2,4-DICHLOROPHENOL	150 U	150 U	37 U	360 U	400 U
2,4-DIMETHYLPHENOL	150 U	150 U	37 U	360 U	400 U
2,4-DINITROPHENOL	360 UJ			1700 U	2000 U
2,4-DINITROTOLUENE	150 U	150 U	37 U	360 U	400 U
2,6-DINITROTOLUENE	150 U	150 U	37 U	360 U	400 U
2-CHLORONAPHTHALENE	150 U	150 U	37 U	360 U	400 U
2-CHLOROPHENOL	150 U	150 U	37 U	360 U	400 U
2-METHYLNAPHTHALENE	150 U	24 J	59	360 U	400 U
2-METHYLPHENOL	150 U	150 U	37 U	360 U	400 U
2-NITROANILINE	360 U	360 U	89 U	1700 U	2000 U
2-NITROPHENOL	150 U	150 U	37 U	360 U	400 U
3,3'-DICHLOROBENZIDINE	150 U	150 UJ	37 UJ	710 U	810 U
3-NITROANILINE	360 UJ	360 UJ	89 UJ	1700 U	2000 U
4,6-DINITRO-2-METHYLPHENOL	360 U			1700 U	2000 U
4-BROMOPHENYL-PHENYLETHER	150 U	150 U	37 U	360 U	400 U
4-CHLORO-3-METHYLPHENOL	150 U	150 U	37 U	360 U	400 U
4-CHLOROANILINE	150 U	150 U	37 U	360 U	400 U
4-CHLOROPHENYL-PHENYLETHER	150 U	150 U	37 U	360 U	400 U
4-METHYLPHENOL	150 U	150 U	37 U	360 U	400 U
4-NITROANILINE	360 U	360 U	89 U	1700 U	2000 U
4-NITROPHENOL	360 U	360 U	89 U	1700 U	2000 U
ACENAPHTHENE	150 U	370	30 J	360 U	400 U
ACENAPHTHYLENE	150 U	150 U	37 U	360 U	400 U
ANTHRACENE	150 U	440	27 J	360 U	400 U
BENZO(A)ANTHRACENE	150 U	360	42	360 U	400 U
BENZO(A)PYRENE	18 J	340	30 J	360 U	400 U
BENZO(B)FLUORANTHENE	24 J	360	39	360 U	400 U
BENZO(G,H,I)PERYLENE	150 U	110 J	8 J	360 U	400 U
BENZO(K)FLUORANTHENE	150 U	160	16 J	360 U	400 U
BENZOIC ACID				1700 U	2000 U
BENZYL ALCOHOL				360 U	400 U
BIS(2-CHLOROETHOXY)METHANE	150 U	150 U	37 U	360 U	400 U
BIS(2-CHLOROETHYL)ETHER	150 U	150 U	37 U	360 U	400 U
BIS(2-ETHYLHEXYL)PHTHALATE	59 UJ	60 UJ	14 UJ	360 U	400 U
BUTYLBENZYLPHTHALATE	150 U	150 U	37 UJ	360 U	400 U
CARBAZOLE	150 U	110 J	24 J		
CHRYSENE	150 U	310	46	360 U	400 U
DIBENZO(A,H)ANTHRACENE	150 U	150 U	37 U	360 U	400 U
DIBENZOFURAN	150 U	220	12 J	360 U	400 U
DIETHYLPHTHALATE	150 U	150 U	37 U	360 U	400 U
DIMETHYLPHTHALATE	150 U	150 U	37 U	360 U	400 U
DI-N-BUTYLPHTHALATE	150 U	150 U	37 UJ	360 U	400 U
DI-N-OCTYLPHTHALATE	150 UJ	150 U	37 U	360 U	400 U
FLUORANTHENE	150 U	1000	110	360 U	400 U
FLUORENE	150 U	370	30 J	360 U	400 U

TABLE D-12: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	030-S07-068	030-S07-069	030-S07-071	MW97-1	MW97-1
Sample Code	030-S07-068	030-S07-069	030-S07-071	MW97-1 [1.5-2.0]	MW97-1 [10.5-11.0]
Investigation	TPH	TPH	TPH	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	10/24/1998	10/27/1998	11/2/1998	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	0 - 9.5	0 - 5	0 - 5.5	1.5 - 2	10.5 - 11
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
HEXACHLOROBENZENE	150 U	150 U	37 U	360 U	400 U
HEXACHLOROBUTADIENE	150 U	150 U	37 U	360 U	400 U
HEXACHLOROCYCLOPENTADIENE	150 UJ	150 UJ	37 UJ	360 U	400 U
HEXACHLOROETHANE	150 U	150 U	37 U	360 U	400 U
INDENO(1,2,3-CD)PYRENE	150 U	120 J	10 J	360 U	400 U
ISOPHORONE	150 U	150 U	37 U	360 U	400 U
NAPHTHALENE	150 U	150 U	160	360 U	400 U
NITROBENZENE	150 U	150 U	37 U	360 U	400 U
N-NITROSO-DI-N-PROPYLAMINE	150 U	150 U	37 U	360 U	400 U
N-NITROSODIPHENYLAMINE	150 U	150 U	37 U	360 U	400 U
PENTACHLOROPHENOL	360 U	360 U	89 U	1700 U	2000 U
PHENANTHRENE	150 U	1300	97	360 U	400 U
PHENOL	150 U	150 U	37 U	360 U	400 U
PYRENE	17 J	900	120	360 U	400 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-12: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-1	MW97-1	MW97-1	MW97-2	MW97-2
Sample Code	MW97-1 [14.0-14.5]	MW97-1 [3.0-3.5]	MW97-1 [7.0-7.5]	MW97-2 [1.0-1.5]	MW97-2 [11.0-11.5]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	14 - 14.5	3 - 3.5	7 - 7.5	1 - 1.5	11 - 11.5
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
1,2,4-TRICHLOROBENZENE	400 U	380 U	9900 U	3700 U	390 U
1,2-DICHLOROBENZENE	400 U	380 U	9900 U	3700 U	390 U
1,3-DICHLOROBENZENE	400 U	380 U	9900 U	3700 U	390 U
1,4-DICHLOROBENZENE	400 U	380 U	9900 U	3700 U	390 U
2,2'-OXYBIS(1-CHLOROPROPANE)					
2,4,5-TRICHLOROPHENOL	1900 U	1800 U	48000 U	18000 U	1900 U
2,4,6-TRICHLOROPHENOL	400 U	380 U	9900 U	3700 U	390 U
2,4-DICHLOROPHENOL	400 U	380 U	9900 U	3700 U	390 U
2,4-DIMETHYLPHENOL	400 U	380 U	9900 U	3700 U	390 U
2,4-DINITROPHENOL	1900 U	1800 U	48000 U	18000 U	1900 U
2,4-DINITROTOLUENE	400 U	380 U	9900 U	3700 U	390 U
2,6-DINITROTOLUENE	400 U	380 U	9900 U	3700 U	390 U
2-CHLORONAPHTHALENE	400 U	380 U	9900 U	3700 U	390 U
2-CHLOROPHENOL	400 U	380 U	9900 U	3700 U	390 U
2-METHYLNAPHTHALENE	400 U	380 U	9900 U	3700 U	390 U
2-METHYLPHENOL	400 U	380 U	9900 U	3700 U	390 U
2-NITROANILINE	1900 U	1800 U	48000 U	18000 U	1900 U
2-NITROPHENOL	400 U	380 U	9900 U	3700 U	390 U
3,3'-DICHLOROBENZIDINE	800 U	760 U	20000 U	7300 U	770 U
3-NITROANILINE	1900 U	1800 U	48000 U	18000 U	1900 U
4,6-DINITRO-2-METHYLPHENOL	1900 U	1800 U	48000 U	18000 U	1900 U
4-BROMOPHENYL-PHENYLETHER	400 U	380 U	9900 U	3700 U	390 U
4-CHLORO-3-METHYLPHENOL	400 U	380 U	9900 U	3700 U	390 U
4-CHLOROANILINE	400 U	380 U	9900 U	3700 U	390 U
4-CHLOROPHENYL-PHENYLETHER	400 U	380 U	9900 U	3700 U	390 U
4-METHYLPHENOL	400 U	380 U	9900 U	3700 U	390 U
4-NITROANILINE	1900 U	1800 U	48000 U	18000 U	1900 U
4-NITROPHENOL	1900 U	1800 U	48000 U	18000 U	1900 U
ACENAPHTHENE	400 U	380 U	9900 U	3700 U	390 U
ACENAPHTHYLENE	400 U	380 U	9900 U	3700 U	390 U
ANTHRACENE	400 U	380 U	9900 U	3700 U	390 U
BENZO(A)ANTHRACENE	400 U	380 U	9900 U	3700 U	390 U
BENZO(A)PYRENE	400 U	380 U	9900 U	3700 U	390 U
BENZO(B)FLUORANTHENE	400 U	380 U	9900 U	3700 U	390 U
BENZO(G,H,I)PERYLENE	400 U	380 U	9900 U	3700 U	390 U
BENZO(K)FLUORANTHENE	400 U	380 U	9900 U	3700 U	390 U
BENZOIC ACID	1900 U	1800 U	48000 U	18000 U	1900 U
BENZYL ALCOHOL	400 U	380 U	9900 U	3700 U	390 U
BIS(2-CHLOROETHOXY)METHANE	400 U	380 U	9900 U	3700 U	390 U
BIS(2-CHLOROETHYL)ETHER	400 U	380 U	9900 U	3700 U	390 U
BIS(2-ETHYLHEXYL)PHTHALATE	400 U	380 U	9900 U	3700 U	390 U
BUTYLBENZYLPHTHALATE	400 U	380 U	9900 U	3700 U	390 U
CARBAZOLE					
CHRYSENE	400 U	380 U	9900 U	3700 U	390 U
DIBENZO(A,H)ANTHRACENE	400 U	380 U	9900 U	3700 U	390 U
DIBENZOFURAN	400 U	380 U	9900 U	3700 U	390 U
DIETHYLPHTHALATE	400 U	380 U	9900 U	3700 U	390 U
DIMETHYLPHTHALATE	400 U	380 U	9900 U	3700 U	390 U
DI-N-BUTYLPHTHALATE	400 U	380 U	9900 U	3700 U	390 U
DI-N-OCTYLPHTHALATE	400 U	380 U	9900 U	3700 U	390 U
FLUORANTHENE	400 U	380 U	9900 U	3700 U	390 U
FLUORENE	400 U	380 U	9900 U	3700 U	390 U

TABLE D-12: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-1	MW97-1	MW97-1	MW97-2	MW97-2
Sample Code	MW97-1 [14.0-14.5]	MW97-1 [3.0-3.5]	MW97-1 [7.0-7.5]	MW97-2 [1.0-1.5]	MW97-2 [11.0-11.5]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	14 - 14.5	3 - 3.5	7 - 7.5	1 - 1.5	11 - 11.5
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
HEXACHLOROBENZENE	400 U	380 U	9900 U	3700 U	390 U
HEXACHLOROBUTADIENE	400 U	380 U	9900 U	3700 U	390 U
HEXACHLOROCYCLOPENTADIENE	400 U	380 U	9900 U	3700 U	390 U
HEXACHLOROETHANE	400 U	380 U	9900 U	3700 U	390 U
INDENO(1,2,3-CD)PYRENE	400 U	380 U	9900 U	3700 U	390 U
ISOPHORONE	400 U	380 U	9900 U	3700 U	390 U
NAPHTHALENE	400 U	380 U	9900 U	3700 U	390 U
NITROBENZENE	400 U	380 U	9900 U	3700 U	390 U
N-NITROSO-DI-N-PROPYLAMINE	400 U	380 U	9900 U	3700 U	390 U
N-NITROSODIPHENYLAMINE	400 U	380 U	9900 U	3700 U	390 U
PENTACHLOROPHENOL	1900 U	1800 U	48000 U	18000 U	1900 U
PHENANTHRENE	400 U	380 U	9900 U	3700 U	390 U
PHENOL	400 U	380 U	9900 U	3700 U	390 U
PYRENE	400 U	380 U	9900 U	3700 U	390 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-12: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-2	MW97-2	MW97-2	MW97-3	MW97-3
Sample Code	MW97-2 [14.0-14.5]	MW97-2 [3.5-4.0]	MW97-2 [7.0-7.5]	MW97-3 [0.5-1.0]	MW97-3 [10.5-11.0]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	14 - 14.5	3.5 - 4	7 - 7.5	.5 - 1	10.5 - 11
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
1,2,4-TRICHLOROBENZENE	410 U	1100 U	450 U	760 U	1500 U
1,2-DICHLOROBENZENE	410 U	1100 U	450 U	760 U	1500 U
1,3-DICHLOROBENZENE	410 U	1100 U	450 U	760 U	1500 U
1,4-DICHLOROBENZENE	410 U	1100 U	450 U	760 U	1500 U
2,2'-OXYBIS(1-CHLOROPROPANE)					
2,4,5-TRICHLOROPHENOL	2000 U	5300 U	2200 U	3700 U	7400 U
2,4,6-TRICHLOROPHENOL	410 U	1100 U	450 U	760 U	1500 U
2,4-DICHLOROPHENOL	410 U	1100 U	450 U	760 U	1500 U
2,4-DIMETHYLPHENOL	410 U	1100 U	450 U	760 U	1500 U
2,4-DINITROPHENOL	2000 U	5300 U	2200 U	3700 U	7400 U
2,4-DINITROTOLUENE	410 U	1100 U	450 U	760 U	1500 U
2,6-DINITROTOLUENE	410 U	1100 U	450 U	760 U	1500 U
2-CHLORONAPHTHALENE	410 U	1100 U	450 U	760 U	1500 U
2-CHLOROPHENOL	410 U	1100 U	450 U	760 U	1500 U
2-METHYLNAPHTHALENE	410 U	1100 U	450 U	760 U	1500 U
2-METHYLPHENOL	410 U	1100 U	450 U	760 U	1500 U
2-NITROANILINE	2000 U	5300 U	2200 U	3700 U	7400 U
2-NITROPHENOL	410 U	1100 U	450 U	760 U	1500 U
3,3'-DICHLOROBENZIDINE	820 U	2200 U	900 U	1500 U	3100 U
3-NITROANILINE	2000 U	5300 U	2200 U	3700 U	7400 U
4,6-DINITRO-2-METHYLPHENOL	2000 U	5300 U	2200 U	3700 U	7400 U
4-BROMOPHENYL-PHENYLETHER	410 U	1100 U	450 U	760 U	1500 U
4-CHLORO-3-METHYLPHENOL	410 U	1100 U	450 U	760 U	1500 U
4-CHLOROANILINE	410 U	1100 U	450 U	760 U	1500 U
4-CHLOROPHENYL-PHENYLETHER	410 U	1100 U	450 U	760 U	1500 U
4-METHYLPHENOL	410 U	1100 U	450 U	760 U	1500 U
4-NITROANILINE	2000 U	5300 U	2200 U	3700 U	7400 U
4-NITROPHENOL	2000 U	5300 U	2200 U	3700 U	7400 U
ACENAPHTHENE	410 U	1100 U	450 U	760 U	1500 U
ACENAPHTHYLENE	410 U	1100 U	450 U	760 U	1500 U
ANTHRACENE	410 U	1100 U	450 U	760 U	1500 U
BENZO(A)ANTHRACENE	410 U	1100 U	450 U	760 U	1500 U
BENZO(A)PYRENE	410 U	1100 U	450 U	760 U	1500 U
BENZO(B)FLUORANTHENE	410 U	1100 U	450 U	760 U	1500 U
BENZO(G,H,I)PERYLENE	410 U	1100 U	450 U	760 U	1600
BENZO(K)FLUORANTHENE	410 U	1100 U	450 U	760 U	1500 U
BENZOIC ACID	2000 U	5300 U	2200 U	3700 U	7400 U
BENZYL ALCOHOL	410 U	1100 U	450 U	760 U	1500 U
BIS(2-CHLOROETHOXY)METHANE	410 U	1100 U	450 U	760 U	1500 U
BIS(2-CHLOROETHYL)ETHER	410 U	1100 U	450 U	760 U	1500 U
BIS(2-ETHYLHEXYL)PHTHALATE	410 U	1100 U	450 U	760 U	1500 U
BUTYLBENZYLPHTHALATE	410 U	1100 U	450 U	760 U	1500 U
CARBAZOLE					
CHRYSENE	410 U	1100 U	450 U	760 U	1500 U
DIBENZO(A,H)ANTHRACENE	410 U	1100 U	450 U	760 U	1500 U
DIBENZOFURAN	410 U	1100 U	450 U	760 U	1500 U
DIETHYLPHTHALATE	410 U	1100 U	450 U	760 U	1500 U
DIMETHYLPHTHALATE	410 U	1100 U	450 U	760 U	1500 U
DI-N-BUTYLPHTHALATE	410 U	1100 U	450 U	760 U	1500 U
DI-N-OCTYLPHTHALATE	410 U	1100 U	450 U	760 U	1500 U
FLUORANTHENE	410 U	1100 U	450 U	760 U	1500 U
FLUORENE	410 U	1100 U	450 U	760 U	1500 U

TABLE D-12: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-2	MW97-2	MW97-2	MW97-3	MW97-3
Sample Code	MW97-2 [14.0-14.5]	MW97-2 [3.5-4.0]	MW97-2 [7.0-7.5]	MW97-3 [0.5-1.0]	MW97-3 [10.5-11.0
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	14 - 14.5	3.5 - 4	7 - 7.5	.5 - 1	10.5 - 11
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte					
HEXACHLOROBENZENE	410 U	1100 U	450 U	760 U	1500 U
HEXACHLOROBUTADIENE	410 U	1100 U	450 U	760 U	1500 U
HEXACHLOROCYCLOPENTADIENE	410 U	1100 U	450 U	760 U	1500 U
HEXACHLOROETHANE	410 U	1100 U	450 U	760 U	1500 U
INDENO(1,2,3-CD)PYRENE	410 U	1100 U	450 U	760 U	1500 U
ISOPHORONE	410 U	1100 U	450 U	760 U	1500 U
NAPHTHALENE	410 U	1100 U	450 U	760 U	1500 U
NITROBENZENE	410 U	1100 U	450 U	760 U	1500 U
N-NITROSO-DI-N-PROPYLAMINE	410 U	1100 U	450 U	760 U	1500 U
N-NITROSODIPHENYLAMINE	410 U	1100 U	450 U	760 U	1500 U
PENTACHLOROPHENOL	2000 U	5300 U	2200 U	3700 U	7400 U
PHENANTHRENE	410 U	1100 U	450 U	760 U	1500 U
PHENOL	410 U	1100 U	450 U	760 U	1500 U
PYRENE	410 U	1100 U	450 U	760 U	3100

Notes:

UG/KG Micrograms per kilogram

TABLE D-12: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-3	MW97-3	MW97-3
Sample Code	MW97-3 [14.0-14.5]	MW97-3 [3.5-4.0]	MW97-3 [7.0-7.5]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	14 - 14.5	3.5 - 4	7 - 7.5
Units	UG/KG	UG/KG	UG/KG
Analyte			
1,2,4-TRICHLOROBENZENE	390 U	750 U	400 U
1,2-DICHLOROBENZENE	390 U	750 U	400 U
1,3-DICHLOROBENZENE	390 U	750 U	400 U
1,4-DICHLOROBENZENE	390 U	750 U	400 U
2,2'-OXYBIS(1-CHLOROPROPANE)			
2,4,5-TRICHLOROPHENOL	1900 U	3600 U	2000 U
2,4,6-TRICHLOROPHENOL	390 U	750 U	400 U
2,4-DICHLOROPHENOL	390 U	750 U	400 U
2,4-DIMETHYLPHENOL	390 U	750 U	400 U
2,4-DINITROPHENOL	1900 U	3600 U	2000 U
2,4-DINITROTOLUENE	390 U	750 U	400 U
2,6-DINITROTOLUENE	390 U	750 U	400 U
2-CHLORONAPHTHALENE	390 U	750 U	400 U
2-CHLOROPHENOL	390 U	750 U	400 U
2-METHYLNAPHTHALENE	390 U	750 U	400 U
2-METHYLPHENOL	390 U	750 U	400 U
2-NITROANILINE	1900 U	3600 U	2000 U
2-NITROPHENOL	390 U	750 U	400 U
3,3'-DICHLOROBENZIDINE	790 U	1500 U	800 U
3-NITROANILINE	1900 U	3600 U	2000 U
4,6-DINITRO-2-METHYLPHENOL	1900 U	3600 U	2000 U
4-BROMOPHENYL-PHENYLETHER	390 U	750 U	400 U
4-CHLORO-3-METHYLPHENOL	390 U	750 U	400 U
4-CHLOROANILINE	390 U	750 U	400 U
4-CHLOROPHENYL-PHENYLETHER	390 U	750 U	400 U
4-METHYLPHENOL	390 U	750 U	400 U
4-NITROANILINE	1900 U	3600 U	2000 U
4-NITROPHENOL	1900 U	3600 U	2000 U
ACENAPHTHENE	390 U	750 U	400 U
ACENAPHTHYLENE	390 U	750 U	400 U
ANTHRACENE	390 U	750 U	400 U
BENZO(A)ANTHRACENE	390 U	750 U	400 U
BENZO(A)PYRENE	390 U	750 U	400 U
BENZO(B)FLUORANTHENE	390 U	750 U	400 U
BENZO(G,H,I)PERYLENE	390 U	750 U	400 U
BENZO(K)FLUORANTHENE	390 U	750 U	400 U
BENZOIC ACID	1900 U	3600 U	2000 U
BENZYL ALCOHOL	390 U	750 U	400 U
BIS(2-CHLOROETHOXY)METHANE	390 U	750 U	400 U
BIS(2-CHLOROETHYL)ETHER	390 U	750 U	400 U
BIS(2-ETHYLHEXYL)PHTHALATE	390 U	750 U	400 U
BUTYLBENZYLPHTHALATE	390 U	750 U	400 U
CARBAZOLE			
CHRYSENE	390 U	750 U	400 U
DIBENZO(A,H)ANTHRACENE	390 U	750 U	400 U
DIBENZOFURAN	390 U	750 U	400 U
DIETHYLPHTHALATE	390 U	750 U	400 U
DIMETHYLPHTHALATE	390 U	750 U	400 U
DI-N-BUTYLPHTHALATE	390 U	750 U	400 U
DI-N-OCTYLPHTHALATE	390 U	750 U	400 U
FLUORANTHENE	390 U	750 U	400 U
FLUORENE	390 U	750 U	400 U

TABLE D-12: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-3	MW97-3	MW97-3
Sample Code	MW97-3 [14.0-14.5]	MW97-3 [3.5-4.0]	MW97-3 [7.0-7.5]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	14 - 14.5	3.5 - 4	7 - 7.5
Units	UG/KG	UG/KG	UG/KG
Analyte			
HEXACHLOROBENZENE	390 U	750 U	400 U
HEXACHLOROBUTADIENE	390 U	750 U	400 U
HEXACHLOROCYCLOPENTADIENE	390 U	750 U	400 U
HEXACHLOROETHANE	390 U	750 U	400 U
INDENO(1,2,3-CD)PYRENE	390 U	750 U	400 U
ISOPHORONE	390 U	750 U	400 U
NAPHTHALENE	390 U	750 U	400 U
NITROBENZENE	390 U	750 U	400 U
N-NITROSO-DI-N-PROPYLAMINE	390 U	750 U	400 U
N-NITROSODIPHENYLAMINE	390 U	750 U	400 U
PENTACHLOROPHENOL	1900 U	3600 U	2000 U
PHENANTHRENE	390 U	750 U	400 U
PHENOL	390 U	750 U	400 U
PYRENE	390 U	750 U	400 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-13: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	030-FLI-078	030-FLI-079	030-FLI-080	030-FLI-087	030-S07-068	030-S07-069	030-S07-071	097-004	097-011	097-006	097-001	097-002	097-003	097-007	097-008	097-009	CPT-S03-01
Sample Code	030-FLI-078	030-FLI-079	030-FLI-080	030-FLI-087	030-S07-068	030-S07-069	030-S07-071	030-USTF-018	030-USTF-019	030-USTF-020	030-USTF-021	030-USTF-022	030-USTF-023	030-USTF-024	030-USTF-025	030-USTF-026	280-S03-024
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	FO 1994
Sampling Date	10/28/1998	10/29/1998	10/30/1998	11/2/1998	10/24/1998	10/27/1998	11/2/1998	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	8/31/1994
Sampling Depth (feet bgs)	0 - 4.5	0 - 5.5	0 - 6	0 - 6.5	0 - 9.5	0 - 5	0 - 5.5	9 - 10	6 - 7	8 - 9	9 - 10	9 - 10	8 - 9	9 - 10	9 - 10	9 - 10	0 - 1
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte																	
1,1,1,2-TETRACHLOROETHANE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,1,1-TRICHLOROETHANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
1,1,2,2-TETRACHLOROETHANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
1,1,2-TRICHLOROETHANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
1,1-DICHLOROETHANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
1,1-DICHLOROETHENE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
1,1-DICHLOROPROPENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,2,3-TRICHLOROBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,2,3-TRICHLOROPROPANE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,2,4-TRICHLOROBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,2,4-TRIMETHYLBENZENE								8.7 U	6.1 U	6 U	4000	2.4 J	6 U	9.1 U	8.8 U	8.3 U	
1,2-DIBROMO-3-CHLOROPROPANE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,2-DICHLOROBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,2-DICHLOROETHANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
1,2-DICHLOROETHENE (TOTAL)					11 U	11 U	11 U										11 U
1,2-DICHLOROPROPANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
1,3,5-TRIMETHYLBENZENE								8.7 U	6.1 U	6 U	2500 J	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,3-DICHLOROBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,3-DICHLOROPROPANE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
1,4-DICHLOROBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
2,2-DICHLOROPROPANE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
2-BUTANONE					11 UJ	11 U	11 U	170 U	120 U	120 U	58000 U	110 U	120 U	180 U	180 U	170 U	11 U
2-CHLOROTOLUENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
2-HEXANONE					11 U	11 U	11 U										11 U
4-CHLOROTOLUENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
4-METHYL-2-PENTANONE					11 UJ	4 J	11 U	87 U	61 U	60 U	15000 J	56 U	60 U	91 U	88 U	83 U	11 U
ACETONE					11 UJ	11 UJ	41 UJ	262 UJ	133 UJ	193 UJ	58000 U	48 UJ	195 UJ	234 UJ	180 UJ	77 UJ	11 UJ
BENZENE	0.6 UJ	0.59 U	0.58 U	0.56 U	11 U	11 U	2 J	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
BROMOBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
BROMOCHLOROMETHANE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
BROMODICHLOROMETHANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
BROMOFORM					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
BROMOMETHANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
CARBON DISULFIDE					11 U	11 U	11 U	3.5 J	6.1 U	6 U	2900 U	4 J	6 U	10	19	8.3 U	11 U
CARBON TETRACHLORIDE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
CHLOROBENZENE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
CHLOROETHANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
CHLOROFORM					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
CHLOROMETHANE					11 UJ	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 UJ
CIS-1,2-DICHLOROETHENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
CIS-1,3-DICHLOROPROPENE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
DIBROMOCHLOROMETHANE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
DIBROMOMETHANE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
DICHLORODIFLUOROMETHANE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
ETHYLBENZENE	0.6 UJ	0.59 UJ	0.58 U	0.56 U	11 U	11 U	11 U	8.7 U	6.1 U	6 U	5000	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
ETHYLENE DIBROMIDE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
HEXACHLOROBUTADIENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
ISOPROPYLBENZENE								8.7 U	6.1 U	6 U	18000	3 J	6 U	9.1 U	8.8 U	8.3 U	
M,P-XYLENE																	
METHYLENE CHLORIDE					11 U	11 UJ	11 UJ	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
METHYL-T-BUTYL ETHER	4 J	30 U	29 U	28 U	28 U	11 U		17 U	12 U	12 U	5800 U	11 U	12 U	18 U	18 U	17 U	
NAPHTHALENE								8.7 U	6.1 U	6 U	2900 U	8	6 U	9.1 U	8.8 U	8.3 U	

TABLE D-13: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	030-FLI-078	030-FLI-079	030-FLI-080	030-FLI-087	030-S07-068	030-S07-069	030-S07-071	097-004	097-011	097-006	097-001	097-002	097-003	097-007	097-008	097-009	CPT-S03-01
Sample Code	030-FLI-078	030-FLI-079	030-FLI-080	030-FLI-087	030-S07-068	030-S07-069	030-S07-071	030-USTF-018	030-USTF-019	030-USTF-020	030-USTF-021	030-USTF-022	030-USTF-023	030-USTF-024	030-USTF-025	030-USTF-026	280-S03-024
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	FO 1994
Sampling Date	10/28/1998	10/29/1998	10/30/1998	11/2/1998	10/24/1998	10/27/1998	11/2/1998	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	8/31/1994
Sampling Depth (feet bgs)	0 - 4.5	0 - 5.5	0 - 6	0 - 6.5	0 - 9.5	0 - 5	0 - 5.5	9 - 10	6 - 7	8 - 9	9 - 10	9 - 10	8 - 9	9 - 10	9 - 10	9 - 10	0 - 1
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte																	
N-BUTYLBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
N-PROPYLBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
O-XYLENE																	
P-ISOPROPYLTOLUENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
SEC-BUTYLBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
STYRENE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
TERT-BUTYLBENZENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
TETRACHLOROETHENE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
TOLUENE	0.6 UJ	0.59 UJ	0.58 U	0.56 U	11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
TRANS-1,2-DICHLOROETHENE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
TRANS-1,3-DICHLOROPROPENE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
TRICHLOROETHENE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
TRICHLOROFLUOROMETHANE								8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	
VINYL ACETATE																	
VINYL CHLORIDE					11 U	11 U	11 U	8.7 U	6.1 U	6 U	2900 U	5.6 U	6 U	9.1 U	8.8 U	8.3 U	11 U
XYLENE (TOTAL)	1.2 UJ	1.8 UJ	1.7 U	4.9	11 U	2 J	11 U	8.7 U	6.1 U	6 U	15000	4 J	6 U	9.1 U	8.8 U	8.3 U	11 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-13: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	CPT-S03-01	CPT-S03-01	M03-04	M03-04	M03-04	M03-04	M03-07	M03-07	M03-07	M03-08	M03-08	M03-08	S03-DGS-DP01	S03-DGS-DP02	S03-DGS-DP03	398-MW3	398-MW4	398-1-MOJ
Sample Code	280-S03-025	280-S03-026	280-S03-027	280-S03-028	280-S03-030	280-S03-094	280-S03-106	280-S03-107	280-S03-108	280-S03-109	280-S03-110	280-S03-111	385-S03-001	385-S03-003	385-S03-005	398-MW3	398-MW4	398-P1
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	DGS	DGS	DGS	TPH	TPH	TPH
Sampling Date	8/31/1994	8/31/1994	11/6/1994	11/6/1994	11/6/1994	11/6/1994	11/20/1994	11/20/1994	11/20/1994	11/6/1994	11/6/1994	11/6/1994	7/23/2001	7/23/2001	7/23/2001	1/25/1995	1/25/1995	9/4/1997
Sampling Depth (feet bgs)	2.5 - 3.5	5 - 6	1 - 2	2.5 - 3.5	5 - 6	10 - 11	1 - 2	2.5 - 3.5	4.5 - 5.5	1 - 2	2.5 - 3.5	5 - 6	5 - 5.5	5.5 - 6	5 - 5.5	4 -	4 -	6 -
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	MG/KG	MG/KG	MG/KG
Analyte																		
1,1,1,2-TETRACHLOROETHANE													2 U	2 U	2 U			
1,1,1-TRICHLOROETHANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
1,1,2,2-TETRACHLOROETHANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
1,1,2-TRICHLOROETHANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
1,1-DICHLOROETHANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
1,1-DICHLOROETHENE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
1,1-DICHLOROPROPENE																		
1,2,3-TRICHLOROBENZENE																		
1,2,3-TRICHLOROPROPANE																		
1,2,4-TRICHLOROBENZENE																		
1,2,4-TRIMETHYLBENZENE																		
1,2-DIBROMO-3-CHLOROPROPANE																		
1,2-DICHLOROBENZENE													2 U	2 U	2 U			
1,2-DICHLOROETHANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 UJ	16 U	12 UJ	11 U	13 U	14 U	2 U	2 U	2 U			
1,2-DICHLOROETHENE (TOTAL)	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
1,2-DICHLOROPROPANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
1,3,5-TRIMETHYLBENZENE																		
1,3-DICHLOROBENZENE													2 U	2 U	2 U			
1,3-DICHLOROPROPANE																		
1,4-DICHLOROBENZENE													2 U	2 U	2 U			
2,2-DICHLOROPROPANE																		
2-BUTANONE	1300 U	6200 U	11 UJ	13000 U	1400 U	14 UJ	12 UJ	240 J	12 UJ	11 UJ	13 UJ	14 UJ						
2-CHLOROTOLUENE																		
2-HEXANONE	1300 UJ	6200 UJ	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
4-CHLOROTOLUENE																		
4-METHYL-2-PENTANONE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
ACETONE	1300 UJ	6200 UJ	140 J	13000 U	1400 U	29 UJ	71 UJ	580 J	14 UJ	11 UJ	25 UJ	30 UJ						
BENZENE	1300 U	6200 U	11 U	7500 J	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	21	11 U	11 U	0.9
BROMOBENZENE																		
BROMOCHLOROMETHANE																		
BROMODICHLOROMETHANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
BROMOFORM	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
BROMOMETHANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
CARBON DISULFIDE	1300 U	6200 U	11 UJ	13000 UJ	1400 UJ	3 J	16 U	10 J	12 U	11 UJ	13 UJ	14 UJ						
CARBON TETRACHLORIDE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
CHLOROBENZENE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
CHLOROETHANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 UJ	16 UJ	12 UJ	11 U	13 U	14 U	2 U	2 U	2 U			
CHLOROFORM	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
CHLOROMETHANE	1300 UJ	6200 UJ	11 U	13000 U	1400 U	14 U	16 U	16 UJ	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
CIS-1,2-DICHLOROETHENE													2 U	2 U	2 U			
CIS-1,3-DICHLOROPROPENE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
DIBROMOCHLOROMETHANE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
DIBROMOMETHANE																		
DICHLORODIFLUOROMETHANE																		
ETHYLBENZENE	940 J	5200 J	11 U	50000	800 J	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	11	11 U	11 U	22
ETHYLENE DIBROMIDE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
HEXACHLOROBUTADIENE																		
ISOPROPYLBENZENE																		
M,P-XYLENE													2 U	2 U	32			
METHYLENE CHLORIDE	1300 U	6200 U	11 UJ	13000 U	1400 U	14 UJ	16 UJ	16 UJ	12 UJ	11 UJ	13 UJ	14 UJ	2 U	2 U	2 U			
METHYL-T-BUTYL ETHER													2 U	2 U	2 U			3.1 U
NAPHTHALENE													2 U	2 U	2 U			

TABLE D-13: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	CPT-S03-01	CPT-S03-01	M03-04	M03-04	M03-04	M03-04	M03-07	M03-07	M03-07	M03-08	M03-08	M03-08	S03-DGS-DP01	S03-DGS-DP02	S03-DGS-DP03	398-MW3	398-MW4	398-1-MO
Sample Code	280-S03-025	280-S03-026	280-S03-027	280-S03-028	280-S03-030	280-S03-094	280-S03-106	280-S03-107	280-S03-108	280-S03-109	280-S03-110	280-S03-111	385-S03-001	385-S03-003	385-S03-005	398-MW3	398-MW4	398-P1
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	DGS	DGS	DGS	TPH	TPH	TPH
Sampling Date	8/31/1994	8/31/1994	11/6/1994	11/6/1994	11/6/1994	11/6/1994	11/20/1994	11/20/1994	11/20/1994	11/6/1994	11/6/1994	11/6/1994	7/23/2001	7/23/2001	7/23/2001	1/25/1995	1/25/1995	9/4/1997
Sampling Depth (feet bgs)	2.5 - 3.5	5 - 6	1 - 2	2.5 - 3.5	5 - 6	10 - 11	1 - 2	2.5 - 3.5	4.5 - 5.5	1 - 2	2.5 - 3.5	5 - 6	5 - 5.5	5.5 - 6	5 - 5.5	4 -	4 -	6 -
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	MG/KG	MG/KG	MG/KG
Analyte																		
N-BUTYLBENZENE																		
N-PROPYLBENZENE																		
O-XYLENE													2 U	2 U	9.6			
P-ISOPROPYLTOLUENE																		
SEC-BUTYLBENZENE																		
STYRENE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
TERT-BUTYLBENZENE																		
TETRACHLOROETHENE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
TOLUENE	310 J	2000 J	11 U	210000	1900	5 J	16 U	2 J	12 U	11 U	13 U	14 U	2 U	2 U	68	11 U	11 U	0.62 U
TRANS-1,2-DICHLOROETHENE													2 U	2 U	2 U			
TRANS-1,3-DICHLOROPROPENE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U						
TRICHLOROETHENE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
TRICHLOROFLUOROMETHANE																		
VINYL ACETATE																		
VINYL CHLORIDE	1300 U	6200 U	11 U	13000 U	1400 U	14 U	16 U	16 U	12 U	11 U	13 U	14 U	2 U	2 U	2 U			
XYLENE (TOTAL)	2300	24000	11 U	250000	3900	6 J	16 U	16 U	12 U	11 U	13 U	14 U				11 U	9 U	96

Notes:

UG/KG Micrograms per kilogram

TABLE D-13: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	398-2-MOJ	398-11-ERM	398-14-ERM	03GB017	03GB017	03GB017	MW97-1	MW97-1	MW97-1	MW97-1	MW97-1	MW97-2	MW97-2	MW97-2
Sample Code	398-P2	398-S11	398-S14	GPS03-017-1.0	GPS03-017-3.0	GPS03-017-5.5	MW97-1 [11.5-12.0]	MW97-1 [14.5-15.0]	MW97-1 [2.5-3.0]	MW97-1 [5.0-5.5]	MW97-1 [8.0-8.5]	MW97-2 [11.5-12.0]	MW97-2 [14.5-15.0]	MW97-2 [2.0-2.5]
Investigation	TPH	TPH	TPH	FO 1994	FO 1994	FO 1994	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	9/5/1997	1/11/1995	1/11/1995	8/16/1994	8/16/1994	8/16/1994	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	6 -	5 -	5 -	.5 - 1	2.5 - 3	4.5 - 5.5	11.5 - 12	14.5 - 15	2.5 - 3	5 - 5.5	8 - 8.5	11.5 - 12	14.5 - 15	2 - 2.5
Units	MG/KG	MG/KG	MG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte														
1,1,1,2-TETRACHLOROETHANE														
1,1,1-TRICHLOROETHANE				11 U	10 U	11 U	6 U		6 U	6 U	100 U	6 U	5 U	6 U
1,1,2,2-TETRACHLOROETHANE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
1,1,2-TRICHLOROETHANE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
1,1-DICHLOROETHANE				11 U	10 U	11 U	6 U	6 U	6 U	6 U	10 U	6 U	5 U	6 U
1,1-DICHLOROETHENE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
1,1-DICHLOROPROPENE														
1,2,3-TRICHLOROBENZENE														
1,2,3-TRICHLOROPROPANE														
1,2,4-TRICHLOROBENZENE														
1,2,4-TRIMETHYLBENZENE														
1,2-DIBROMO-3-CHLOROPROPANE														
1,2-DICHLOROBENZENE														
1,2-DICHLOROETHANE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
1,2-DICHLOROETHENE (TOTAL)				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
1,2-DICHLOROPROPANE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
1,3,5-TRIMETHYLBENZENE														
1,3-DICHLOROBENZENE														
1,3-DICHLOROPROPANE														
1,4-DICHLOROBENZENE														
2,2-DICHLOROPROPANE														
2-BUTANONE				11 U	10 UJ	11 U	12 U		12 U	11 U	21 U	12 U	10 U	12 U
2-CHLOROTOLUENE														
2-HEXANONE				11 U	10 U	11 U	12 U		12 U	11 U	21 U	12 U	10 U	12 U
4-CHLOROTOLUENE														
4-METHYL-2-PENTANONE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	10 U	6 U
ACETONE				44 UJ	67 UJ	110 UJ	28 UJ		12 U	13 UJ	21 U	39 UJ	15 UJ	17 UJ
BENZENE	1 U	0.1	0.29	11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
BROMOBENZENE														
BROMOCHLOROMETHANE														
BROMODICHLOROMETHANE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
BROMOFORM				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
BROMOMETHANE				11 U	10 U	11 U	12 U		12 U	11 U	21 U	12 U	10 U	12 U
CARBON DISULFIDE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
CARBON TETRACHLORIDE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
CHLOROBENZENE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
CHLOROETHANE				11 U	10 U	11 U	12 U		12 U	11 U	21 U	12 U	10 U	12 U
CHLOROFORM				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
CHLOROMETHANE				11 UJ	10 U	11 U	12 U	12 U	12 U	11 U	21 U	12 U	10 U	12 U
CIS-1,2-DICHLOROETHENE														
CIS-1,3-DICHLOROPROPENE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
DIBROMOCHLOROMETHANE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
DIBROMOMETHANE														
DICHLORODIFLUOROMETHANE														
ETHYLBENZENE	9.9	0.02	0.08	11 U	10 U	130	6 U		6 U	6 U	10 U	6 U	5 U	6 U
ETHYLENE DIBROMIDE														
HEXACHLOROBUTADIENE														
ISOPROPYLBENZENE														
M,P-XYLENE														
METHYLENE CHLORIDE				11 U	10 UJ	11 U	17 UJ		6 U	7 UJ	29 UJ	11 UJ	16 UJ	11 UJ
METHYL-T-BUTYL ETHER	5 U													
NAPHTHALENE														

TABLE D-13: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	398-2-MOJ	398-11-ERM	398-14-ERM	03GB017	03GB017	03GB017	MW97-1	MW97-1	MW97-1	MW97-1	MW97-1	MW97-2	MW97-2	MW97-2
Sample Code	398-P2	398-S11	398-S14	GPS03-017-1.0	GPS03-017-3.0	GPS03-017-5.5	MW97-1 [11.5-12.0]	MW97-1 [14.5-15.0]	MW97-1 [2.5-3.0]	MW97-1 [5.0-5.5]	MW97-1 [8.0-8.5]	MW97-2 [11.5-12.0]	MW97-2 [14.5-15.0]	MW97-2 [2.0-2.5]
Investigation	TPH	TPH	TPH	FO 1994	FO 1994	FO 1994	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	9/5/1997	1/11/1995	1/11/1995	8/16/1994	8/16/1994	8/16/1994	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	6 -	5 -	5 -	.5 - 1	2.5 - 3	4.5 - 5.5	11.5 - 12	14.5 - 15	2.5 - 3	5 - 5.5	8 - 8.5	11.5 - 12	14.5 - 15	2 - 2.5
Units	MG/KG	MG/KG	MG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte														
N-BUTYLBENZENE														
N-PROPYLBENZENE														
O-XYLENE														
P-ISOPROPYLTOLUENE														
SEC-BUTYLBENZENE														
STYRENE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
TERT-BUTYLBENZENE														
TETRACHLOROETHENE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
TOLUENE	1 U	0.03	0.05	11 U	10 U	360	6 U		6	15	32	46	5 U	6
TRANS-1,2-DICHLOROETHENE														
TRANS-1,3-DICHLOROPROPENE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
TRICHLOROETHENE				11 U	10 U	11 U	6 U		6 U	6 U	10 U	6 U	5 U	6 U
TRICHLOROFLUOROMETHANE														
VINYL ACETATE							12 U		12 U	11 U	21 U	12 U	10 U	12 U
VINYL CHLORIDE				11 U	10 U	11 U	12 U		12 U	11 U	21 U	12 U	10 U	12 U
XYLENE (TOTAL)	19	0.07	0.1	11 U	10 U	500	6 U		6 U	6 U	10 U	6 U	5 U	6 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-13: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-2	MW97-2	MW97-3	MW97-3	MW97-3	MW97-3	MW97-3
Sample Code	MW97-2 [5.0-5.5]	MW97-2 [8.0-8.5]	MW97-3 [11.5-12.0]	MW97-3 [14.5-15.0]	MW97-3 [2.0-2.5]	MW97-3 [5.0-5.5]	MW97-3 [8.0-8.5]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	5 - 5.5	8 - 8.5	11.5 - 12	14.5 - 15	2 - 2.5	5 - 5.5	8 - 8.5
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte							
1,1,1,2-TETRACHLOROETHANE							
1,1,1-TRICHLOROETHANE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
1,1,2,2-TETRACHLOROETHANE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
1,1,2-TRICHLOROETHANE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
1,1-DICHLOROETHANE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
1,1-DICHLOROETHENE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
1,1-DICHLOROPROPENE							
1,2,3-TRICHLOROBENZENE							
1,2,3-TRICHLOROPROPANE							
1,2,4-TRICHLOROBENZENE							
1,2,4-TRIMETHYLBENZENE							
1,2-DIBROMO-3-CHLOROPROPANE							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
1,2-DICHLOROETHENE (TOTAL)	9 U	6 U	6 U	6 U	5 U	7 U	9 U
1,2-DICHLOROPROPANE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
1,3,5-TRIMETHYLBENZENE							
1,3-DICHLOROBENZENE							
1,3-DICHLOROPROPANE							
1,4-DICHLOROBENZENE							
2,2-DICHLOROPROPANE							
2-BUTANONE	19 U	12 U	12 U	12 U	11 U	14 U	19 U
2-CHLOROTOLUENE							
2-HEXANONE	19 U	12 U	12 U	12 U	11 U	14 U	19 U
4-CHLOROTOLUENE							
4-METHYL-2-PENTANONE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
ACETONE	200	32 UJ	26 UJ	15 UJ	11 U	22 UJ	70 UJ
BENZENE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
BROMOBENZENE							
BROMOCHLOROMETHANE							
BROMODICHLOROMETHANE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
BROMOFORM	9 U	6 U	6 U	6 U	5 U	7 U	9 U
BROMOMETHANE	19 U	12 U	12 U	12 U	11 U	14 U	19 U
CARBON DISULFIDE	15 UJ	6 U	6 U	6 U	5 U	7 U	9 U
CARBON TETRACHLORIDE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
CHLOROBENZENE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
CHLOROETHANE	19 U	12 U	12 U	12 U	11 U	14 U	19 U
CHLOROFORM	9 U	6 U	6 U	6 U	5 U	7 U	9 U
CHLOROMETHANE	19 U	12 U	12 U	12 U		14 U	19 U
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
DIBROMOCHLOROMETHANE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
ETHYLBENZENE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
ETHYLENE DIBROMIDE							
HEXACHLOROBUTADIENE							
ISOPROPYLBENZENE							
M,P-XYLENE							
METHYLENE CHLORIDE	28 UJ	11 UJ	11 UJ	11 UJ	13 UJ	9 UJ	22 UJ
METHYL-T-BUTYL ETHER							
NAPHTHALENE							

TABLE D-13: SITE 3 VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-2	MW97-2	MW97-3	MW97-3	MW97-3	MW97-3	MW97-3
Sample Code	MW97-2 [5.0-5.5]	MW97-2 [8.0-8.5]	MW97-3 [11.5-12.0]	MW97-3 [14.5-15.0]	MW97-3 [2.0-2.5]	MW97-3 [5.0-5.5]	MW97-3 [8.0-8.5]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	5 - 5.5	8 - 8.5	11.5 - 12	14.5 - 15	2 - 2.5	5 - 5.5	8 - 8.5
Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Analyte							
N-BUTYLBENZENE							
N-PROPYLBENZENE							
O-XYLENE							
P-ISOPROPYLTOLUENE							
SEC-BUTYLBENZENE							
STYRENE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
TERT-BUTYLBENZENE							
TETRACHLOROETHENE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
TOLUENE	130	110	10	11	26	11	50
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
TRICHLOROETHENE	9 U	6 U	6 U	6 U	5 U	7 U	9 U
TRICHLOROFLUOROMETHANE							
VINYL ACETATE	19 U	12 U	12 U	12 U	11 U	14 U	19 U
VINYL CHLORIDE	19 U	12 U	12 U	12 U	11 U	14 U	19 U
XYLENE (TOTAL)	9 U	6 U	6 U	6 U	5 U	7 U	9 U

Notes:

UG/KG Micrograms per kilogram

TABLE D-14: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	030-S07-068	030-S07-069	030-S07-071	097-004	097-011	097-006	097-001	097-002	097-003	097-007
Sample Code	030-S07-068	030-S07-069	030-S07-071	030-USTF-018	030-USTF-019	030-USTF-020	030-USTF-021	030-USTF-022	030-USTF-023	030-USTF-024
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH
Sampling Date	10/24/1998	10/27/1998	11/2/1998	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999
Sampling Depth (feet bgs)	0 - 9.5	0 - 5	0 - 5.5	9 - 10	6 - 7	8 - 9	9 - 10	9 - 10	8 - 9	9 - 10
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte										
ALUMINUM	8680	7860	4240	26200	4250	4510	5300	11700	6310	29500
ANTIMONY	0.45 U	0.45 U	0.44 U	1.8 B	0.65 B	0.56 B	0.41 B	1.1 B	1 B	2.7 B
ARSENIC	4	2.3	1.8 J	9.8	1.5 B	0.22 U	0.82 B	3.6	1.4 B	7.1
BARIUM	50.9	62.8	24.9 J	120	20	24.9	77.2	67.5	61.9	125
BERYLLIUM	0.025 U	0.025 U	0.024 U	0.02 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U
CADMIUM	0.12 J	0.048 U	0.047 U	0.71 B	0.027 U	0.026 U	0.026 U	0.59 B	0.028 B	0.31 B
CALCIUM	3100	4940	1360	3960	2590	2550	1730	12000	2370	3260
CHROMIUM	42.8	35	26.5	91.1	30.5	34	30	51.6	31.7	104
COBALT	8.4 J	7.8 J	5.1 J	18.6	4.8	3.6	3.4	9.5	4.6	19
COPPER	10.6	16.2	4.8 UJ	60.9	4.1	3	3.9	18.2	7.4	53.1
IRON	14400	14400	7800	43200	8760	8560	9470	19200	10200	44000
LEAD	17.2 J	17.2 J	7.3 J	46.5	1.8	8	7.7	68.2	19.1	34.1
MAGNESIUM	3400	4050	1900	12800	1840	1760	1900	4830	2330	13500
MANGANESE	228 J	252 J	80.2	469	95.9	74.3	80.1	242	114	393
MERCURY	0.11 U	0.12 UJ	0.061 U	1.3	0.2 B	0.34	0.19 B	52.5	0.19 B	0.81
MOLYBDENUM	0.11 U	0.11 U	0.11 U	0.38 U	0.27 U	0.26 U	0.34 B	0.48 B	0.27 U	0.4 U
NICKEL	42.1	33.7	26.4	102	27.8	18.6	14.6	46.7	19.7	107
POTASSIUM	959 J	802 J	429 J	3770	304	347	535	1200	709	4390
SELENIUM	0.5 U	0.5 U	0.49 U	0.95 B	0.53 U	0.53 U	0.51 U	0.49 U	0.53 U	0.82 B
SILVER	0.059 U	0.059 U	0.058 U	0.15 U	0.11 U	0.11 U	0.1 U	0.098 U	0.11 U	0.16 U
SODIUM	52.6 U	157 UJ	51.6 U	3090	41 U	40 U	39 U	343	166 B	3580
THALLIUM	0.29 U	0.29 U	0.29 U	0.59 U	0.41 U	0.41 U	0.4 U	0.38 U	0.41 U	0.62 U
TITANIUM										
VANADIUM	29.9	27.4	15.7	74.4	22.6	25.1	22	36.4	24.2	80.4
ZINC	33.3	38.5	16.6	162	17.7	14.2	14.5	61	24	129

Notes:

MG/KG Milligrams per kilogram

TABLE D-14: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	097-008	097-009	CPT-S03-01	CPT-S03-01	CPT-S03-01	M03-04	M03-04	M03-04	M03-04	M03-07
Sample Code	030-USTF-025	030-USTF-026	280-S03-024	280-S03-025	280-S03-026	280-S03-027	280-S03-028	280-S03-030	280-S03-094	280-S03-106
Investigation	TPH	TPH	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	9/1/1999	9/1/1999	8/31/1994	8/31/1994	8/31/1994	11/6/1994	11/6/1994	11/6/1994	11/6/1994	11/20/1994
Sampling Depth (feet bgs)	9 - 10	9 - 10	0 - 1	2.5 - 3.5	5 - 6	1 - 2	2.5 - 3.5	5 - 6	10 - 11	1 - 2
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte										
ALUMINUM	26200	30100	11200	5770	3740	4230	6740	5690	18900	9080
ANTIMONY	2 B	1.9 B	0.82 UJ	0.52 UJ	0.72 UJ	0.71 UJ	1 J	0.73 UJ	1.1 J	1 UJ
ARSENIC	7.5	5.4	3.1	1.6 UJ	1.5 UJ	2 J	1.6 J	4.1	9.2	6.1
BARIUM	80.2	156	17.3 J	35.8 J	28.4 J	32.1 J	43.9	36.8 J	102	76.1
BERYLLIUM	0.02 U	0.02 U	1.7	0.57 J	0.3 J	0.21 U	0.31 J	0.22 U	0.41 J	1 J
CADMIUM	0.37 B	0.1 B	0.09 U	0.09 U	0.08 U	0.06 U	0.07 J	0.07 J	0.29 J	0.38 J
CALCIUM	3860	3080	6570	2180	1460	2010	2980	3300	17000	4110
CHROMIUM	92.1	105	1.9 UJ	32.7	24.8	33.6 J	29.9 J	32.9 J	54.2 J	41.7 J
COBALT	18.5	14.3	10.5 J	5.3 UJ	3.3 UJ	4.4 J	5.5 J	4.8 J	14.2	11.1 J
COPPER	47.1	45	40.8	10.3	10.2	5.1 J	8.6	8.7	32.8	24.5
IRON	43900	40800	34300 J	10700 J	7300 J	7630	11300	9470	25600	17500
LEAD	22.8	20.5	3.2 J	6.3	52.2 J	9.8	7.2	5.9	26.8	124
MAGNESIUM	14400	11800	4100	3130	1960	1830	2960	2540	8760	4480
MANGANESE	508	362	887 J	162 J	73.4 J	76.1	145	118	405	283
MERCURY	0.48	0.67	0.16 U	0.17 U	0.16 U	0.16 U	0.15 U	0.17 U	0.31	0.82 J
MOLYBDENUM	0.45 B	0.37 U	3 U	3.1 U	2.9 U	2.7 U	2.7 U	2.8 U	3.5 U	3.9 U
NICKEL	102	88.3	3.5 U	27.3	21.2	20	27.8	25.5	58.2	48.2
POTASSIUM	4310	4310	213 J	859 J	590 J	643 J	1040 J	835 J	2950	1400 J
SELENIUM	0.77 U	0.73 U	0.59 UJ	0.61 U	0.56 UJ	0.64 U	0.65 U	0.67 U	0.84 U	0.93 U
SILVER	0.15 U	0.15 U	0.21 UJ	0.2 U	0.19 U	0.3 U	0.3 U	0.31 U	0.39 U	0.43 U
SODIUM	6440	538	468 J	434 J	399 J	621 UJ	715 J	420 UJ	5800	867 J
THALLIUM	0.6 U	0.57 U	0.44 U	0.45 U	0.41 U	0.49 U	2.2 UJ	0.51 U	0.64 U	0.71 U
TITANIUM										
VANADIUM	72.8	86.3	43.1	21	15.6	17.2	27.5	22.7	52	38.2
ZINC	121	90.2	83.3 J	25.4 J	17.8 J	18.4	23.9	22.8	87.7	108

Notes:

MG/KG Milligrams per kilogram

TABLE D-14: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	M03-07	M03-07	M03-08	M03-08	M03-08	MW97-1	MW97-1	MW97-1	MW97-1
Sample Code	280-S03-107	280-S03-108	280-S03-109	280-S03-110	280-S03-111	MW97-1 [1.5-2.0]	MW97-1 [10.5-11.0]	MW97-1 [14.0-14.5]	MW97-1 [3.0-3.5]
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	11/20/1994	11/20/1994	11/6/1994	11/6/1994	11/6/1994	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	2.5 - 3.5	4.5 - 5.5	1 - 2	2.5 - 3.5	5 - 6	1.5 - 2	10.5 - 11	14 - 14.5	3 - 3.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
ALUMINUM	19600	5020	5570	8240	12600	4270	5850	5430	3820
ANTIMONY	1.1 UJ	0.76 UJ	0.73 UJ	0.92 J	0.9 UJ	6.5 U	7.3 U	7.2 U	6.9 U
ARSENIC	8.6	2.4	1.2 J	2.3 J	8.8	11 U	12 U	12 U	12 U
BARIUM	1060	64.3	25.3 J	42.3 J	98	34	30	34	31
BERYLLIUM	1.9	0.53 J	0.22 U	0.36 J	0.59 J	1.1 U	1.2 U	1.2 U	1.2 U
CADMIUM	1.3 J	0.07 U	0.07 U	0.16 J	0.27 J	1.1 U	1.2 U	1.2 U	1.2 U
CALCIUM	15000	1490	3070	3380	21000	2000	1900	3700	20000
CHROMIUM	49.7 J	25.4 J	36.4 J	38.3 J	42.5 J	25	25	25	22
COBALT	6 J	3.2 J	6.4 J	7.9 J	10.5 J	5.4 U	6.1 U	6 U	5.8 U
COPPER	119	7.5	4.9 J	12.3	28.5	10	8.4	38	5.8 U
IRON	30700	7430	9660	14100	21300	8190	6980	8340	7050
LEAD	2380	5.4	1.7	8.2	33.1	5.4 U	6.1 U	6 U	5.8 U
MAGNESIUM	3140	1920	2280	3800	6830	2200	2500	2300	2100
MANGANESE	243	57.7	116	169	326	95	58	58	110
MERCURY	0.24 U	0.18 U	0.17 U	0.2 U	0.32				
MOLYBDENUM	3.9 U	2.9 U	2.8 U	3.4 U	3.5 U	5.4 U	6.1 U	6 U	5.8 U
NICKEL	47.5	16.2	29.1	35.7	47.1	23	15	23	24
POTASSIUM	2020	886 J	655 J	1500	2150	670	1100	970	630
SELENIUM	0.93 U	0.69 U	0.66 U	0.79 U	0.82 U	11 U	12 U	12 U	12 U
SILVER	2.4 J	0.32 U	0.31 U	0.37 U	0.38 U	5.4 U	6.1 U	6 U	5.8 U
SODIUM	2810 J	786 J	328 UJ	693 UJ	1630	540 U	2800	2800	580 U
THALLIUM	0.71 U	0.53 U	0.51 U	0.61 U	0.63 U	11 U	12 U	12 U	12 U
TITANIUM						350	360	280	310
VANADIUM	69.3	20.8	26.6	30	40.9	17	22	18	16
ZINC	1260	20.3	21.9	37.8	81.9	28	17	23	18

Notes:

MG/KG Milligrams per kilogram

TABLE D-14: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-1	MW97-2	MW97-2	MW97-2	MW97-2	MW97-2	MW97-3
Sample Code	MW97-1 [7.0-7.5]	MW97-2 [1.0-1.5]	MW97-2 [11.0-11.5]	MW97-2 [14.0-14.5]	MW97-2 [3.5-4.0]	MW97-2 [7.0-7.5]	MW97-3 [0.5-1.0]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	7 - 7.5	1 - 1.5	11 - 11.5	14 - 14.5	3.5 - 4	7 - 7.5	.5 - 1
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte							
ALUMINUM	11800	4440	5920	8240	22400	15400	7720
ANTIMONY	9 U	6.6 U	7 U	7.4 U	9.9 U	8.2 U	6.9 U
ARSENIC	22	11 U	12 U	12 U	21	21	11 U
BARIUM	94	32	24	39	260	92	55
BERYLLIUM	1.5 U	1.1 U	1.2 U	1.2 U	1.6 U	1.4 U	1.1 U
CADMIUM	1.5 U	1.1 U	1.2 U	1.2 U	1.6 U	1.4 U	1.1 U
CALCIUM	4000	2000	1000	1100	2500	3500	3100
CHROMIUM	50	27	27	27	79	57	35
COBALT	12	5.5 U	5.9 U	6.2 U	8.8	14	6.5
COPPER	110	6.9	5.9 U	6.2 U	61	44	18
IRON	25600	7790	9460	13200	31200	33300	13600
LEAD	44	5.5 U	5.9 U	6.2 U	59	100	22
MAGNESIUM	6800	2400	2400	3100	10000	8800	3600
MANGANESE	290	99	59	94	230	420	180
MERCURY							
MOLYBDENUM	7.5 U	5.5 U	5.9 U	6.2 U	8.2 U	6.9 U	5.7 U
NICKEL	60	24	23	39	66	84	37
POTASSIUM	2500	700	900	1200	4100	2900	1000
SELENIUM	15 U	11 U	12 U	12 U	16 U	14 U	11 U
SILVER	7.5 U	5.5 U	5.9 U	6.2 U	8.2 U	6.9 U	5.7 U
SODIUM	4000	550 U	2500	3700	6400	4700	570 U
THALLIUM	15 U	11 U	12 U	12 U	16 U	14 U	11 U
TITANIUM	440	390	310	400	670	430	400
VANADIUM	43	18	21	21	57	46	27
ZINC	120	20	16	24	100	98	60

Notes:

MG/KG Milligrams per kilogram

TABLE D-14: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-3	MW97-3	MW97-3	MW97-3
Sample Code	MW97-3 [10.5-11.0]	MW97-3 [14.0-14.5]	MW97-3 [3.5-4.0]	MW97-3 [7.0-7.5]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	10.5 - 11	14 - 14.5	3.5 - 4	7 - 7.5
Units	MG/KG	MG/KG	MG/KG	MG/KG
Analyte				
ALUMINUM	6720	8230	7110	4340
ANTIMONY	7 U	7.2 U	6.8 U	7.3 U
ARSENIC	12 U	12 U	11 U	12 U
BARIUM	33	72	35	24 U
BERYLLIUM	1.2 U	1.2 U	1.1 U	1.2 U
CADMIUM	1.2 U	1.2 U	1.1 U	1.2 U
CALCIUM	2100	1200	2400	1700
CHROMIUM	27	31	33	24
COBALT	5.8 U	6 U	6.4	6.1 U
COPPER	32	17	18	11
IRON	9660	13400	15400	8400
LEAD	5.8 U	6 U	9.8	27
MAGNESIUM	2400	3000	4300	2200
MANGANESE	81	100	150	85
MERCURY				
MOLYBDENUM	5.8 U	6 U	5.6 U	6.1 U
NICKEL	23	40	34	20
POTASSIUM	870	1100	1000	830
SELENIUM	12 U	12 U	11 U	12 U
SILVER	5.8 U	6 U	5.6 U	6.1 U
SODIUM	580 U	1200	560 U	610 U
THALLIUM	12 U	12 U	11 U	12 U
TITANIUM	380	440	360	320
VANADIUM	23	23	26	17
ZINC	31	30	37	32

Notes:

MG/KG Milligrams per kilogram

TABLE D-14: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S03-DGS-DP06	S03-DGS-DP06	S03-DGS-DP06	S03-DGS-DP08	S03-DGS-DP08	S03-DGS-DP08	S03-DGS-DP09	S03-DGS-DP09	S03-DGS-DP09
Sample Code	385-S03-011	385-S03-012	385-S03-013	385-S03-019	385-S03-020	385-S03-021	385-S03-023	385-S03-024	385-S03-025
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001
Sampling Depth (feet bgs)	.5 - 1	2.5 - 3	4.5 - 5	.5 - 1	2.5 - 3	4.5 - 5	.5 - 1	3.5 - 4	5.5 - 6
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
LEAD	9.4 J	5.7 J	7.7 J	0.27 UJ	9.3 J	1.1 UJ	49.1 J	49.7 J	955 J
ORGANIC LEAD	0.34 U	0.35 U	0.42 U	0.35 U	0.42 U	0.39 U	0.34 U	0.35 U	0.44 U

Location	S03-DGS-DP10	S03-DGS-DP10	S03-DGS-DP10	S03-DGS-DP11	S03-DGS-DP11	S03-DGS-DP11	S03-DGS-DP12	S03-DGS-DP12	S03-DGS-DP13
Sample Code	385-S03-027	385-S03-028	385-S03-029	385-S03-030	385-S03-031	385-S03-032	385-S03-033	385-S03-034	385-S03-037
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	6/18/2001	6/18/2001	6/18/2001	6/19/2001	6/19/2001	6/19/2001	6/19/2001	6/19/2001	6/19/2001
Sampling Depth (feet bgs)	.5 - 1	3.5 - 4	5.5 - 6	1 - 1.5	4 - 4.5	6 - 6.5	1 - 1.5	4 - 4.5	1 - 1.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
LEAD	80.3 J	446 J	35.4 J	42.3 J	56 J	1330 J		4 J	17.4 J
ORGANIC LEAD	0.36 U	0.41 U	0.45 U	0.35 U	0.38 U	0.44 U	0.4 U	0.4 U	0.37 U

Location	S03-DGS-DP13	S03-DGS-DP13	S03-DGS-DP14	S03-DGS-DP14	S03-DGS-DP15	S03-DGS-DP15	S03-DGS-DP15	S03-DGS-DP16	S03-DGS-DP16
Sample Code	385-S03-038	385-S03-039	385-S03-069	385-S03-071	385-S03-073	385-S03-074	385-S03-075	385-S03-076	385-S03-077
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	6/19/2001	6/19/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/1/2001	8/1/2001
Sampling Depth (feet bgs)	4 - 4.5	6 - 6.5	1 - 1.5	6 - 6.5	1 - 1.5	4 - 4.5	6 - 6.4	1 - 1.5	4 - 4.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
LEAD	1300 J	1780 J	12 J	1030 J	511 J	3870 J	13700 J	229	137
ORGANIC LEAD	0.42 U	3.2							

Location	S03-DGS-DP16	S03-DGS-DP17	S03-DGS-DP17	S03-DGS-DP17	S03-DGS-DP18	S03-DGS-DP18	S03-DGS-DP19	S03-DGS-DP19	S03-DGS-DP33
Sample Code	385-S03-078	385-S03-079	385-S03-080	385-S03-081	385-S03-082	385-S03-083	385-S03-084	385-S03-085	385-S03-112
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/2/2001	8/2/2001	9/24/2001
Sampling Depth (feet bgs)	6 - 6.5	1 - 1.5	4 - 4.5	6 - 6.5	4 - 4.5	6 - 6.5	4 - 4.5	6 - 6.5	.5 - 1
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
LEAD	705	2.9	52.3	40.6	29.8	85.3	12.5 J	61.8 J	24

Notes:

MG/KG Milligrams per kilogram

TABLE D-14: SITE 3 TOTAL METALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S03-DGS-DP33	S03-DGS-DP33	S03-DGS-DP31	S03-DGS-DP34	S03-DGS-DP34	S03-DGS-DP34	S03-DGS-DP32	S03-DGS-DP32
Sample Code	385-S03-113	385-S03-114	385-S03-117	385-S03-119	385-S03-120	385-S03-121	385-S03-125	385-S03-126
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	9/24/2001	9/24/2001	9/24/2001	9/24/2001	9/24/2001	9/24/2001	9/24/2001	9/24/2001
Sampling Depth (feet bgs)	3.5 - 4	5.5 - 6	5.5 - 6	.5 - 1	3.5 - 4	5.5 - 6	3.5 - 4	5.5 - 6
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte								
LEAD	17.1	198	20.6	47.6	8.6	1480	2.7 UJ	195

Location	S03-DGS-DP36	S03-DGS-DP37	S03-DGS-DP38	S03-DGS-DP39
Sample Code	385-S03-128	385-S03-130	385-S03-132	385-S03-134
Investigation	DGS	DGS	DGS	DGS
Sampling Date	11/6/2001	11/6/2001	2/8/2002	2/8/2002
Sampling Depth (feet bgs)	6 - 6.5	6 - 6.5	6 - 6.5	6 - 6.5
Units	MG/KG	MG/KG	MG/KG	MG/KG
Analyte				
LEAD	11	533	18.6	14.8

Notes:

MG/KG Milligrams per kilogram

TABLE D-15: SITE 3 TOTAL PETROLEUM HYDROCARBONS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	030-FLI-078	030-FLI-079	030-FLI-080	030-FLI-087	030-S07-068	030-S07-069	030-S07-071	097-004	097-011
Sample Code	030-FLI-078	030-FLI-079	030-FLI-080	030-FLI-087	030-S07-068	030-S07-069	030-S07-071	030-USTF-018	030-USTF-019
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH
Sampling Date	10/28/1998	10/29/1998	10/30/1998	11/2/1998	10/24/1998	10/27/1998	11/2/1998	9/1/1999	9/1/1999
Sampling Depth (feet bgs)	0 - 4.5	0 - 5.5	0 - 6	0 - 6.5	0 - 9.5	0 - 5	0 - 5.5	9 - 10	6 - 7
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
DIESEL RANGE ORGANICS	12 U	12 U	12 U	11 U	11 U	57 U	35 J	280 Y	8 JZ
GASOLINE RANGE ORGANICS	0.6 UJ	0.59 U	0.58 U	1	3.6 J	0.3 J	45 J	0.87 U	0.61 U
JP5 RANGE ORGANICS	12 U	12 U	12 U	11 U	11 U	57 U	11 U	87 U	12 U
MOTOR OIL RANGE ORGANICS	12 U	12 U	57 J	36	75	420 J	11 U	87 U	12 U

Location	097-006	097-001	097-002	097-003	097-007	097-008	097-009	CPT-S03-01	CPT-S03-01
Sample Code	030-USTF-020	030-USTF-021	030-USTF-022	030-USTF-023	030-USTF-024	030-USTF-025	030-USTF-026	280-S03-024	280-S03-025
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH	FO 1994	FO 1994
Sampling Date	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	8/31/1994	8/31/1994
Sampling Depth (feet bgs)	8 - 9	9 - 10	9 - 10	8 - 9	9 - 10	9 - 10	9 - 10	0 - 1	2.5 - 3.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
DIESEL RANGE ORGANICS	13 Z	25 Z	180 Y	16 Z	150 Y	92 Y	68 Y	11 U	11 U
GASOLINE RANGE ORGANICS	1 Z	2000 Y	0.56 U	0.6 U	1 Y	0.88 U	0.83 U	1.4 J	62 J
JP5 RANGE ORGANICS	12 U	12 U	56 U	12 U	18 U	18 U	17 U	11 U	11 U
MOTOR OIL RANGE ORGANICS	12 U	12 U	56 U	12 U	18 U	18 U	17 U	22 U	123 J

Location	CPT-S03-01	M03-04	M03-04	M03-04	M03-04	M03-07	M03-07	M03-07	M03-08
Sample Code	280-S03-026	280-S03-027	280-S03-028	280-S03-030	280-S03-094	280-S03-106	280-S03-107	280-S03-108	280-S03-109
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	8/31/1994	11/6/1994	11/6/1994	11/6/1994	11/6/1994	11/20/1994	11/20/1994	11/20/1994	11/6/1994
Sampling Depth (feet bgs)	5 - 6	1 - 2	2.5 - 3.5	5 - 6	10 - 11	1 - 2	2.5 - 3.5	4.5 - 5.5	1 - 2
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte									
DIESEL RANGE ORGANICS	10 U	11 U	11 U	11 U	14 U	16 U	16 U	12 U	11 U
GASOLINE RANGE ORGANICS	1040 J	0.53 U	19700 J	90 J	0.72 U	0.79 U	0.81 UJ	0.6 U	0.55 U
JP5 RANGE ORGANICS	10 U	11 U	11 U	11 U	14 U	16 U	16 U	12 U	11 U
MOTOR OIL RANGE ORGANICS	67 J	21 U	21 U	23 U	380 J	3700 J	150 J	24 J	22 U

Notes:

MG/KG Milligrams per kilogram

TABLE D-15: SITE 3 TOTAL PETROLEUM HYDROCARBONS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	M03-08	M03-08	S03-DGS-DP01	S03-DGS-DP02	S03-DGS-DP03	S03-DGS-DP38	398-MW3
Sample Code	280-S03-110	280-S03-111	385-S03-001	385-S03-003	385-S03-005	385-S03-138	398-MW3
Investigation	FO 1994	FO 1994	DGS	DGS	DGS	DGS	TPH
Sampling Date	11/6/1994	11/6/1994	7/23/2001	7/23/2001	7/23/2001	2/8/2002	1/25/1995
Sampling Depth (feet bgs)	2.5 - 3.5	5 - 6	5 - 5.5	5.5 - 6	5 - 5.5	5.5 - 6	4 -
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte							
DIESEL RANGE ORGANICS	13 U	14 U	100	67	14	12 U	1.1 U
GASOLINE RANGE ORGANICS	0.67 U	0.68 U	2.9 J	1.3 J	8.3 J		1 U
JP5 RANGE ORGANICS	13 U	14 U				12 U	
MOTOR OIL RANGE ORGANICS	60 J	660 J	10 U	10 U	10 U	50	

Location	398-MW4	398-1-MOJ	398-2-MOJ	398-11-ERM	398-14-ERM	03GB017	03GB017
Sample Code	398-MW4	398-P1	398-P2	398-S11	398-S14	GPS03-017-1.0	GPS03-017-3.0
Investigation	TPH	TPH	TPH	TPH	TPH	FO 1994	FO 1994
Sampling Date	1/25/1995	9/4/1997	9/5/1997	1/11/1995	1/11/1995	8/16/1994	8/16/1994
Sampling Depth (feet bgs)	4 -	6 -	6 -	5 -	5 -	.5 - 1	2.5 - 3
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte							
DIESEL RANGE ORGANICS	1.1 U	45	28	10 U	10 U	54 U	10 U
GASOLINE RANGE ORGANICS	1 U	2800	2600	10 U	44	5.3 J	0.63 J
JP5 RANGE ORGANICS		10 U	10 U			54 U	10 U
MOTOR OIL RANGE ORGANICS						1660 J	29 J

Location	03GB017	MW97-1	MW97-1	MW97-1	MW97-1	MW97-1	MW97-2
Sample Code	GPS03-017-5.5	MW97-1 [1.5-2.0]	MW97-1 [10.5-11.0]	MW97-1 [14.0-14.5]	MW97-1 [3.0-3.5]	MW97-1 [7.0-7.5]	MW97-2 [1.0-1.5]
Investigation	FO 1994	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	8/16/1994	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	4.5 - 5.5	1.5 - 2	10.5 - 11	14 - 14.5	3 - 3.5	7 - 7.5	1 - 1.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte							
DIESEL RANGE ORGANICS	11 U						
GASOLINE RANGE ORGANICS	3950 J						
JP5 RANGE ORGANICS	11 U						
MOTOR OIL RANGE ORGANICS	86 J						
TRPH		1.8 U	2 U	4.9	1.8 U	129	19.3

Notes:

MG/KG Milligrams per kilgoram

TABLE D-15: SITE 3 TOTAL PETROLEUM HYDROCARBONS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-2	MW97-2	MW97-2	MW97-2	MW97-3	MW97-3	MW97-3
Sample Code	MW97-2 [11.0-11.5]	MW97-2 [14.0-14.5]	MW97-2 [3.5-4.0]	MW97-2 [7.0-7.5]	MW97-3 [0.5-1.0]	MW97-3 [10.5-11.0]	MW97-3 [14.0-14.5]
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	11 - 11.5	14 - 14.5	3.5 - 4	7 - 7.5	.5 - 1	10.5 - 11	14 - 14.5
Units	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Analyte							
TRPH	1.9 U	2 U	28.7	93.8	133	31.6	2 U

Location	MW97-3	MW97-3
Sample Code	MW97-3 [3.5-4.0]	MW97-3 [7.0-7.5]
Investigation	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	7/26/1990	7/26/1990
Sampling Depth (feet bgs)	3.5 - 4	7 - 7.5
Units	MG/KG	MG/KG
Analyte		
TRPH	25.8	5.2

Notes:

MG/KG Milligrams per kilogram

TABLE D-16: SITE 3 GENERAL CHEMICALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S03-DGS-DP06	S03-DGS-DP06	S03-DGS-DP06	S03-DGS-DP08	S03-DGS-DP08	S03-DGS-DP08	S03-DGS-DP09	S03-DGS-DP09	S03-DGS-DP09
Sample Code	385-S03-011	385-S03-012	385-S03-013	385-S03-019	385-S03-020	385-S03-021	385-S03-023	385-S03-024	385-S03-025
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001	6/18/2001
Sampling Depth (feet bgs)	.5 - 1	2.5 - 3	4.5 - 5	.5 - 1	2.5 - 3	4.5 - 5	.5 - 1	3.5 - 4	5.5 - 6
Analyte									
PERCENT MOISTURE	3.3	6	20.7	4.5	20.6	14.8	3.8	4.6	24.6

Location	S03-DGS-DP10	S03-DGS-DP10	S03-DGS-DP10	S03-DGS-DP11	S03-DGS-DP11	S03-DGS-DP11	S03-DGS-DP12	S03-DGS-DP12	S03-DGS-DP13
Sample Code	385-S03-027	385-S03-028	385-S03-029	385-S03-030	385-S03-031	385-S03-032	385-S03-033	385-S03-034	385-S03-037
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	6/18/2001	6/18/2001	6/18/2001	6/19/2001	6/19/2001	6/19/2001	6/19/2001	6/19/2001	6/19/2001
Sampling Depth (feet bgs)	.5 - 1	3.5 - 4	5.5 - 6	1 - 1.5	4 - 4.5	6 - 6.5	1 - 1.5	4 - 4.5	1 - 1.5
Analyte									
PERCENT MOISTURE	9	19.2	26	5.9	14	24.4	17.5	17.3	11.9

Location	S03-DGS-DP13	S03-DGS-DP13	S03-DGS-DP14	S03-DGS-DP14	S03-DGS-DP14	S03-DGS-DP15	S03-DGS-DP15	S03-DGS-DP15	S03-DGS-DP16
Sample Code	385-S03-038	385-S03-039	385-S03-069	385-S03-070	385-S03-071	385-S03-073	385-S03-074	385-S03-075	385-S03-076
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	6/19/2001	6/19/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/1/2001
Sampling Depth (feet bgs)	4 - 4.5	6 - 6.5	1 - 1.5	4 - 4.5	6 - 6.5	1 - 1.5	4 - 4.5	6 - 6.4	1 - 1.5
Analyte									
PERCENT MOISTURE	22.1	32.7	7.5	8	22.2	20.9	42.8	36.7	33.9

Location	S03-DGS-DP16	S03-DGS-DP16	S03-DGS-DP17	S03-DGS-DP17	S03-DGS-DP17	S03-DGS-DP18	S03-DGS-DP18	S03-DGS-DP19	S03-DGS-DP33
Sample Code	385-S03-077	385-S03-078	385-S03-079	385-S03-080	385-S03-081	385-S03-082	385-S03-083	385-S03-084	385-S03-112
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/2/2001	9/24/2001
Sampling Depth (feet bgs)	4 - 4.5	6 - 6.5	1 - 1.5	4 - 4.5	6 - 6.5	4 - 4.5	6 - 6.5	4 - 4.5	.5 - 1
Analyte									
PERCENT MOISTURE	33.5	29.5	33.6	37	32.1	31.1	34.5	11.7	8.5

Location	S03-DGS-DP33	S03-DGS-DP33	S03-DGS-DP31	S03-DGS-DP34	S03-DGS-DP34	S03-DGS-DP34	S03-DGS-DP32	S03-DGS-DP32	S03-DGS-DP36
Sample Code	385-S03-113	385-S03-114	385-S03-117	385-S03-119	385-S03-120	385-S03-121	385-S03-125	385-S03-126	385-S03-128
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	9/24/2001	9/24/2001	9/24/2001	9/24/2001	9/24/2001	9/24/2001	9/24/2001	9/24/2001	11/6/2001
Sampling Depth (feet bgs)	3.5 - 4	5.5 - 6	5.5 - 6	.5 - 1	3.5 - 4	5.5 - 6	3.5 - 4	5.5 - 6	6 - 6.5
Analyte									
PERCENT MOISTURE	45.9	37.2	20.9	10	18.9	34.6	24.9	36.4	20.4

TABLE D-16: SITE 3 GENERAL CHEMICALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S03-DGS-DP37	S03-DGS-DP38	S03-DGS-DP39	S03-DGS-DP38	CPT-S03-01	CPT-S03-01	CPT-S03-01
Sample Code	385-S03-130	385-S03-132	385-S03-134	385-S03-138	280-S03-024	280-S03-025	280-S03-026
Investigation	DGS	DGS	DGS	DGS	FO 1994	FO 1994	FO 1994
Sampling Date	11/6/2001	2/8/2002	2/8/2002	2/8/2002	8/31/1994	8/31/1994	8/31/1994
Sampling Depth (feet bgs)	6 - 6.5	6 - 6.5	6 - 6.5	5.5 - 6	0 - 1	2.5 - 3.5	5 - 6
Analyte							
PERCENT MOISTURE	40.5	16	40.3	17.5	8.1	10.8	4.5
PH					7.8	8.8	9.4

Location	M03-04	M03-04	M03-04	M03-04	M03-07	M03-07	M03-07
Sample Code	280-S03-027	280-S03-028	280-S03-030	280-S03-094	280-S03-106	280-S03-107	280-S03-108
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	11/6/1994	11/6/1994	11/6/1994	11/6/1994	11/20/1994	11/20/1994	11/20/1994
Sampling Depth (feet bgs)	1 - 2	2.5 - 3.5	5 - 6	10 - 11	1 - 2	2.5 - 3.5	4.5 - 5.5
Analyte							
PERCENT MOISTURE	6	7	13	31	37.2	37.8	16.6
PH	9.4	9.1	8.4	7.7	7.4	7.3	8.2
TOTAL ORGANIC CARBON, MG/KG						22500 J	

Location	M03-08	M03-08	M03-08	03GB017	03GB017	03GB017	MW97-1
Sample Code	280-S03-109	280-S03-110	280-S03-111	GPS03-017-1.0	GPS03-017-3.0	GPS03-017-5.5	MW97-1 [3.0-3.5]
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	PH 1&2A 1991
Sampling Date	11/6/1994	11/6/1994	11/6/1994	8/16/1994	8/16/1994	8/16/1994	7/26/1990
Sampling Depth (feet bgs)	1 - 2	2.5 - 3.5	5 - 6	.5 - 1	2.5 - 3	4.5 - 5.5	3 - 3.5
Analyte			27	7.9	3.9	5.9	
PERCENT MOISTURE	9	25	9	8.7	7.8	8.8	9
PH	8.3	9					

Notes:

MG/KG Milligrams per kilogram

TABLE D-16: SITE 3 GENERAL CHEMICALS IN SOIL

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-1	MW97-2	MW97-2	MW97-3	MW97-3	030-FLI-078	030-FLI-079
Sample Code	MW97-1 [4.0-4.5]	MW97-2 [3.5-4.0]	MW97-2 [4.0-4.5]	MW97-3 [3.5-4.0]	MW97-3 [4.0-4.5]	030-FLI-078	030-FLI-079
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	TPH	TPH
Sampling Date	7/26/1990	7/26/1990	8/27/1990	7/26/1990	7/26/1990	10/28/1998	10/29/1998
Sampling Depth (feet bgs)	4 - 4.5	3.5 - 4	4 - 4.5	3.5 - 4	4 - 4.5	0 - 4.5	0 - 5.5
Analyte							
CHLORIDE, MG/KG	29.2				14.8		
IGNITABILITY, BTU/LB	999 U		999 U		999 U		
NITRATE, MG/KG	0.12 U				2.24		
PERCENT MOISTURE						16.6	15.7
PH		7.2		7.5		8.25 J	6.97 J
PHOSPHORUS, MG/KG	675				922		
SULFATE, MG/KG	42.1				89.8		
TOTAL KJELDAHL NITROGEN, MG/KG	174		1400		196		
TOTAL ORGANIC CARBON, MG/KG	1090				1260		

Location	030-FLI-080	030-FLI-087	030-S07-068	030-S07-069	030-S07-071	097-004	097-011
Sample Code	030-FLI-080	030-FLI-087	030-S07-068	030-S07-069	030-S07-071	030-USTF-018	030-USTF-019
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH
Sampling Date	10/30/1998	11/2/1998	10/24/1998	10/27/1998	11/2/1998	9/1/1999	9/1/1999
Sampling Depth (feet bgs)	0 - 6	0 - 6.5	0 - 9.5	0 - 5	0 - 5.5	9 - 10	6 - 7
Analyte							
PERCENT MOISTURE	13.2	11	11.9	11.7	10.1	42.2	17.7
PH	7.42 J	7.9 J	8.14 J	8 J	8.36 J		

Location	097-006	097-001	097-002	097-003	097-007	097-008	097-009
Sample Code	030-USTF-020	030-USTF-021	030-USTF-022	030-USTF-023	030-USTF-024	030-USTF-025	030-USTF-026
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH
Sampling Date	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999	9/1/1999
Sampling Depth (feet bgs)	8 - 9	9 - 10	9 - 10	8 - 9	9 - 10	9 - 10	9 - 10
Analyte							
PERCENT MOISTURE	16.3	14.2	10.5	17.3	44.9	43.1	40.1

Notes:

BTU/LB British thermal units per pound

MG/KG Milligrams per kilogram

TABLE D-17: SITE 3 PESTICIDES AND PCBs IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California
(Page 1 of 1)

Location	M03-08A
Sample Code	280-S03-097
Investigation	FO 1994
Sampling Date	12/9/1994
Sampling Depth (feet bgs)	-
Units	UG/L
Analyte	
4,4'-DDD	0.1 UJ
4,4'-DDE	0.1 UJ
4,4'-DDT	0.1 UJ
ALDRIN	0.05 UJ
ALPHA-BHC	0.05 UJ
ALPHA-CHLORDANE	0.05 UJ
AROCLOR-1016	0.5 UJ
AROCLOR-1221	0.5 UJ
AROCLOR-1232	0.5 UJ
AROCLOR-1242	0.5 UJ
AROCLOR-1248	0.5 UJ
AROCLOR-1254	0.5 UJ
AROCLOR-1260	0.5 UJ
BETA-BHC	0.05 UJ
DELTA-BHC	0.05 UJ
DIELDRIN	0.1 UJ
ENDOSULFAN I	0.05 UJ
ENDOSULFAN II	0.1 UJ
ENDOSULFAN SULFATE	0.1 UJ
ENDRIN	0.1 UJ
ENDRIN ALDEHYDE	0.1 UJ
ENDRIN KETONE	0.1 UJ
GAMMA-BHC (LINDANE)	0.05 UJ
GAMMA-CHLORDANE	0.05 UJ
HEPTACHLOR	0.05 UJ
HEPTACHLOR EPOXIDE	0.01 UJ
METHOXYCHLOR	0.5 UJ
TOXAPHENE	3 UJ

Notes:
PCB Polychlorinated biphenyl
UG/L Micrograms per liter

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-1	MW97-1	MW97-1	MW97-1	MW97-2	MW97-2	MW97-2	MW97-2	MW97-3
Sample Code	280-S03-045	280-S03-047	280-S03-048	280-S03-049	280-S03-050	280-S03-051	280-S03-052	280-S03-053	280-S03-054
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	10/14/1994	2/7/1995	6/8/1995	7/31/1995	10/18/1994	2/8/1995	6/6/1995	8/1/1995	10/14/1994
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U
2,4,5-TRICHLOROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DINITROPHENOL	25 UJ	25 U	25 U	25 U	25 U	25 UJ	25 UJ	25 U	25 UJ
2,4-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-METHYLNAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-NITROANILINE	25 U	25 U	25 U	25 UJ	25 U	25 U	25 U	25 UJ	25 U
2-NITROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-NITROANILINE	25 U	25 U	25 U	25 U	25 UJ	25 U	25 U	25 U	25 U
4,6-DINITRO-2-METHYLPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	1 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
4-CHLOROANILINE	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYLPHENOL	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
4-NITROANILINE	25 U	25 U	25 U	25 U	25 UJ	25 U	25 U	25 UJ	25 U
4-NITROPHENOL	25 U	25 U	25 U	25 UJ	25 U	25 U	25 U	25 U	25 U
ACENAPHTHENE	10 U	10 U	0.9 J	1 J	10 U	10 U	10 U	10 U	10 U
ACENAPHTHYLENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(B)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(G,H,I)PERYLENE	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-1	MW97-1	MW97-1	MW97-1	MW97-2	MW97-2	MW97-2	MW97-2	MW97-3
Sample Code	280-S03-045	280-S03-047	280-S03-048	280-S03-049	280-S03-050	280-S03-051	280-S03-052	280-S03-053	280-S03-054
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	10/14/1994	2/7/1995	6/8/1995	7/31/1995	10/18/1994	2/8/1995	6/6/1995	8/1/1995	10/14/1994
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
BENZO(K)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZOIC ACID									
BENZYL ALCOHOL									
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	4 U	4 UJ	4 UJ	4 UJ	4 U	4 U	4 U	4 U	4 UJ
BUTYLBENZYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CARBAZOLE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CHRYSENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIBENZO(A,H)ANTHRACENE	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U
DIBENZOFURAN	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIETHYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIMETHYLPHTHALATE	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-BUTYLPHTHALATE	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U
DI-N-OCTYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
FLUORENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROBUTADIENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U
ISOPHORONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
NAPHTHALENE	10 U	10 U	2 J	1 J	10 U	10 U	10 U	10 U	10 U
NITROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U
N-NITROSODIPHENYLAMINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PENTACHLOROPHENOL	25 U	25 U	25 U	25 U	25 UJ	25 U	25 U	25 U	25 U
PHENANTHRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Notes:

UG/L Micrograms per liter

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-3	MW97-3	MW97-3	M03-04	M03-04	M03-04	M03-04	DHP-S03-04	M03-07
Sample Code	280-S03-055	280-S03-056	280-S03-058	280-S03-059	280-S03-060	280-S03-061	280-S03-062	280-S03-076	280-S03-095
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	2/7/1995	6/9/1995	8/2/1995	12/15/1994	2/7/1995	6/9/1995	8/4/1995	8/5/1994	12/15/1994
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	22 -	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U
1,2-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	53	43	10 UJ	10 U	39
2,4-DINITROPHENOL	25 U	25 U	25 UJ	25 U	25 U	25 U	25 UJ	25 U	25 U
2,4-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-METHYLNAPHTHALENE	10 U	10 U	10 U	10 U	10 U	5 J	4 J	10 U	10 U
2-METHYLPHENOL	10 U	10 U	10 U	10 U	25	220	58	10 U	19
2-NITROANILINE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 UJ	25 U
2-NITROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U
3,3'-DICHLOROBENZIDINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-NITROANILINE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4,6-DINITRO-2-METHYLPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U
4-CHLOROANILINE	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	38 J	39	10 U	6 J
4-NITROANILINE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 UJ	25 U
4-NITROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 UJ	25 U
ACENAPHTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACENAPHTHYLENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 J
BENZO(B)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(G,H,I)PERYLENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-3	MW97-3	MW97-3	M03-04	M03-04	M03-04	M03-04	DHP-S03-04	M03-07
Sample Code	280-S03-055	280-S03-056	280-S03-058	280-S03-059	280-S03-060	280-S03-061	280-S03-062	280-S03-076	280-S03-095
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	2/7/1995	6/9/1995	8/2/1995	12/15/1994	2/7/1995	6/9/1995	8/4/1995	8/5/1994	12/15/1994
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	22 -	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
BENZO(K)FLUORANTHENE	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
BENZOIC ACID									
BENZYL ALCOHOL									
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	4 UJ	4 UJ	4 U	4 UJ	40 UJ	62 UJ	54 UJ	4 UJ	26 UJ
BUTYLBENZYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U
CARBAZOLE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CHRYSENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIBENZO(A,H)ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIBENZOFURAN	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIETHYLPHTHALATE	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U
DIMETHYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-BUTYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U
DI-N-OCTYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 UJ	10 U
FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
FLUORENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROBUTADIENE	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	10 U	10 UJ	10 UJ	10 U	10 U	10 UJ	10 U	10 UJ	10 U
HEXACHLOROETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.6 J
ISOPHORONE	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U
NAPHTHALENE	10 U	10 U	10 U	10 U	0.6 J	6 J	16 J	10 U	10 U
NITROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PENTACHLOROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 UJ	1 J
PHENANTHRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PHENOL	10 U	10 U	10 U	10 U	320	710	85 J	10 U	180
PYRENE	10 U	10 U	10 U	10 U	1 J	0.7 J	0.8 J	10 U	1 J

Notes:

UG/L Micrograms per liter

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	M03-08A	D03-01	M03-07	M03-07	M03-07	M03-08A	M03-08A	M03-08A	MW97-1
Sample Code	280-S03-097	280-S03-098	280-S03-112	280-S03-113	280-S03-114	280-S03-118	280-S03-119	280-S03-120	385-S03-040
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	DGS
Sampling Date	12/9/1994	12/14/1994	2/8/1995	6/6/1995	8/2/1995	2/9/1995	6/6/1995	8/4/1995	6/28/2001
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DINITROPHENOL	25 UJ	25 U	25 UJ	25 UJ		25 U	25 UJ	25 UJ	25 UJ
2,4-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-METHYLNAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-NITROANILINE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-NITROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	12 U
3-NITROANILINE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4,6-DINITRO-2-METHYLPHENOL	25 U	25 U	25 U	25 U	25 UJ	25 U	25 U	25 U	25 UJ
4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROANILINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	19 U
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-NITROANILINE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-NITROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 UJ
ACENAPHTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACENAPHTHYLENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.7 U
BENZO(B)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(G,H,I)PERYLENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	M03-08A	D03-01	M03-07	M03-07	M03-07	M03-08A	M03-08A	M03-08A	MW97-1
Sample Code	280-S03-097	280-S03-098	280-S03-112	280-S03-113	280-S03-114	280-S03-118	280-S03-119	280-S03-120	385-S03-040
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	DGS
Sampling Date	12/9/1994	12/14/1994	2/8/1995	6/6/1995	8/2/1995	2/9/1995	6/6/1995	8/4/1995	6/28/2001
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
BENZO(K)FLUORANTHENE	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
BENZOIC ACID									
BENZYL ALCOHOL									
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	4 UJ	4 UJ	4 UJ	4 U	4 UJ	4 UJ	4 U	4 UJ	4 U
BUTYLBENZYLPHTHALATE	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
CARBAZOLE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	14 U
CHRYSENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIBENZO(A,H)ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U
DIBENZOFURAN	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIETHYLPHTHALATE	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIMETHYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-BUTYLPHTHALATE	10 U	10 U	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 U
DI-N-OCTYLPHTHALATE	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
FLUORENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROBUTADIENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	16 UJ
HEXACHLOROETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ISOPHORONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
NAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
NITROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	18 U
PENTACHLOROPHENOL	25 UJ	25 U	25 UJ	25 U	25 U	25 U	25 U	25 U	25 U
PHENANTHRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PYRENE	10 U	10 U	10 U	10 U	10 U	0.5 J	10 U	10 U	10 U

Notes:

UG/L Micrograms per liter

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-2	MW97-3	M03-04	M03-07	M03-08A	D03-01	398-MW3	398-MW4	MW97-1
Sample Code	385-S03-041	385-S03-042	385-S03-043	385-S03-046	385-S03-047	385-S03-048	385-S21-026	385-S21-027	MW97-1 [08/30/90]
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	PH 1&2A 1991
Sampling Date	6/28/2001	6/28/2001	6/27/2001	6/29/2001	6/28/2001	6/29/2001	6/26/2001	6/27/2001	8/30/1990
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U
1,3-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U
1,4-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2,4,5-TRICHLOROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	50 U
2,4,6-TRICHLOROPHENOL	10 U	10 U		10 U	10 U	10 U	10 U		10 U
2,4-DICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DINITROPHENOL	25 UJ	25 UJ	25 UJ	50 U	25 UJ	50 U	25 U	25 UJ	50 U
2,4-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-METHYLNAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-NITROANILINE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	50 U
2-NITROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	20 U
3-NITROANILINE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	50 U
4,6-DINITRO-2-METHYLPHENOL	25 UJ	25 UJ	25 UJ	25 U	25 UJ	25 U	25 U	25 UJ	50 U
4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROANILINE	19 U	19 U	19 U	17 U	19 U	17 U	19 U	19 U	10 U
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-NITROANILINE	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	50 U
4-NITROPHENOL	25 UJ	25 UJ	25 UJ	25 U	25 UJ	25 U	25 UJ	25 UJ	50 U
ACENAPHTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACENAPHTHYLENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)PYRENE	2.7 U	2.7 U	2.7 U	1.4 U	2.7 U	1.4 U	2.7 U	2.7 U	10 U
BENZO(B)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(G,H,I)PERYLENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-2	MW97-3	M03-04	M03-07	M03-08A	D03-01	398-MW3	398-MW4	MW97-1
Sample Code	385-S03-041	385-S03-042	385-S03-043	385-S03-046	385-S03-047	385-S03-048	385-S21-026	385-S21-027	MW97-1 [08/30/90]
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	PH 1&2A 1991
Sampling Date	6/28/2001	6/28/2001	6/27/2001	6/29/2001	6/28/2001	6/29/2001	6/26/2001	6/27/2001	8/30/1990
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
BENZO(K)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZOIC ACID									50 U
BENZYL ALCOHOL									10 U
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	10 U
BUTYLBENZYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CARBAZOLE	14 U	14 U	14 U	10 U	14 U	10 U	14 U	14 U	
CHRYSENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIBENZO(A,H)ANTHRACENE	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	10 U
DIBENZOFURAN	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIETHYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIMETHYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-BUTYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-OCTYLPHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
FLUORENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROBUTADIENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	16 UJ	16 UJ	16 U	11 U	16 UJ	11 U	16 UJ	16 U	10 U
HEXACHLOROETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ISOPHORONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
NAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
NITROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	18 U	18 U	18 U	10 U	18 U	10 U	18 U	18 U	10 U
PENTACHLOROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	50 U
PHENANTHRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Notes:

UG/L Micrograms per liter

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-2	MW97-3
Sample Code	MW97-2 [08/31/90]	MW97-3 [08/31/90]
Investigation	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	8/31/1990	10/18/1990
Sampling Depth (feet bgs)	-	-
Units	UG/L	UG/L
Analyte		
1,2,4-TRICHLOROBENZENE	10 U	10 U
1,2-DICHLOROBENZENE	10 U	10 U
1,3-DICHLOROBENZENE	10 U	10 U
1,4-DICHLOROBENZENE	10 U	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)		
2,4,5-TRICHLOROPHENOL	50 U	50 U
2,4,6-TRICHLOROPHENOL	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U
2,4-DINITROPHENOL	50 U	50 U
2,4-DINITROTOLUENE	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U
2-CHLOROPHENOL	10 U	10 U
2-METHYLNAPHTHALENE	10 U	10 U
2-METHYLPHENOL	10 U	10 U
2-NITROANILINE	50 U	50 U
2-NITROPHENOL	10 U	10 U
3,3'-DICHLOROBENZIDINE	20 U	20 U
3-NITROANILINE	50 U	50 U
4,6-DINITRO-2-METHYLPHENOL	50 U	50 U
4-BROMOPHENYL-PHENYLETHER	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U
4-CHLOROANILINE	10 U	10 U
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U
4-METHYLPHENOL	10 U	10 U
4-NITROANILINE	50 U	50 U
4-NITROPHENOL	50 U	50 U
ACENAPHTHENE	10 U	10 U
ACENAPHTHYLENE		
ANTHRACENE	10 U	10 U
BENZO(A)ANTHRACENE	10 U	10 U
BENZO(A)PYRENE	10 U	10 U
BENZO(B)FLUORANTHENE	10 U	10 U
BENZO(G,H,I)PERYLENE	10 U	10 U

TABLE D-18: SITE 3 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-2	MW97-3
Sample Code	MW97-2 [08/31/90]	MW97-3 [08/31/90]
Investigation	PH 1&2A 1991	PH 1&2A 1991
Sampling Date	8/31/1990	10/18/1990
Sampling Depth (feet bgs)	-	-
Units	UG/L	UG/L
Analyte		
BENZO(K)FLUORANTHENE	10 U	10 U
BENZOIC ACID	50 U	50 U
BENZYL ALCOHOL	10 U	10 U
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 U
BUTYLBENZYLPHTHALATE	10 U	10 U
CARBAZOLE		
CHRYSENE	10 U	10 U
DIBENZO(A,H)ANTHRACENE	10 U	10 U
DIBENZOFURAN	10 U	10 U
DIETHYLPHTHALATE	10 U	10 U
DIMETHYLPHTHALATE	10 U	10 U
DI-N-BUTYLPHTHALATE	10 U	10 U
DI-N-OCTYLPHTHALATE	10 U	10 U
FLUORANTHENE	10 U	10 U
FLUORENE	10 U	10 U
HEXACHLOROBENZENE	10 U	10 U
HEXACHLOROBUTADIENE	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	10 U	10 U
HEXACHLOROETHANE	10 U	10 U
INDENO(1,2,3-CD)PYRENE	10 U	10 U
ISOPHORONE	10 U	10 U
NAPHTHALENE	10 U	10 U
NITROBENZENE	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U
N-NITROSODIPHENYLAMINE	10 U	10 U
PENTACHLOROPHENOL	50 U	50 U
PHENANTHRENE	10 U	10 U
PHENOL	10 U	10 U
PYRENE	10 U	10 U

Notes:

UG/L Micrograms per liter

TABLE D-19: SITE 3 POLYNUCLEAR AROMATIC HYDROCARBONS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-1	MW97-2	MW97-3	M03-04	M03-07	M03-08A	D03-01	398-MW3	398-MW4
Sample Code	385-S03-040	385-S03-041	385-S03-042	385-S03-043	385-S03-046	385-S03-047	385-S03-048	385-S21-026	385-S21-027
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	6/28/2001	6/28/2001	6/28/2001	6/27/2001	6/29/2001	6/28/2001	6/29/2001	6/26/2001	6/27/2001
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
ACENAPHTHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACENAPHTHYLENE	2 U	2 U	2 U	2	2 U	2 U	2 U	2 U	2 U
ANTHRACENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BENZO(A)ANTHRACENE	0.1 J	0.2 U	0.1 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 J
BENZO(A)PYRENE	0.2 U	0.2 U	0.2 U	0.1 J	0.2 U	0.2 U	0.2 U	0.2 U	0.1 J
BENZO(B)FLUORANTHENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BENZO(G,H,I)PERYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BENZO(K)FLUORANTHENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHRYSENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
DIBENZO(A,H)ANTHRACENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
FLUORANTHENE	0.3	0.2 U	0.2 U	0.2 J	0.2 U	0.2 U	0.2 U	0.2 U	0.93
FLUORENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
INDENO(1,2,3-CD)PYRENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
PHENANTHRENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
PYRENE	0.42	0.2 J	0.2 U	0.4	0.2 U	0.3	0.2 U	0.2 U	0.4

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	CA03-02	398-MW3	398-MW4	030-FLI-509	097-010	097-004	097-005	097-006	097-001
Sample Code	030-CAP-008	030-CAP-033	030-CAP-034	030-FLI-509	030-USTF-017	030-USTF-028	030-USTF-029	030-USTF-030	030-USTF-031
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH	TPH
Sampling Date	4/26/2000	5/1/2000	5/1/2000	10/30/1998	9/2/1999	9/2/1999	9/2/1999	9/2/1999	9/1/1999
Sampling Depth (feet bgs)	3 - 8	-	-	4.5 - 5	10 -	10 -	10 -	10 -	10 -
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
1,1,1,2-TETRACHLOROETHANE					5 U	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROPROPENE					5 U	5 U	5 U	5 U	5 U
1,2,3-TRICHLOROBENZENE					5 U	5 U	5 U	5 U	5 U
1,2,3-TRICHLOROPROPANE					5 U	5 U	5 U	5 U	5 U
1,2,4-TRICHLOROBENZENE					5 U	5 U	5 U	5 U	5 U
1,2,4-TRIMETHYLBENZENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	3 J
1,2-DIBROMO-3-CHLOROPROPANE					5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROBENZENE					5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHENE (TOTAL)									
1,2-DICHLOROPROPANE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
1,3,5-TRIMETHYLBENZENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
1,3-DICHLOROBENZENE					5 U	5 U	5 U	5 U	5 U
1,3-DICHLOROPROPANE					5 U	5 U	5 U	5 U	5 U
1,4-DICHLOROBENZENE					5 U	5 U	5 U	5 U	5 U
2,2-DICHLOROPROPANE					5 U	5 U	5 U	5 U	5 U
2-BUTANONE					100 U	100 U	100 U	100 U	100 U
2-CHLOROTOLUENE					3 J	5 U	5 U	5 U	5 U
2-HEXANONE									
4-CHLOROTOLUENE					3 J	5 U	5 U	5 U	5 U
4-METHYL-2-PENTANONE					50 U	50 U	50 U	50 U	33 J
ACETONE					46 UJ	41 UJ	38 UJ	42 UJ	41 UJ
BENZENE	620	0.5 U	0.5 U	0.5 U	24	5 U	3 J	5 U	5 U
BROMOBENZENE					5 U	5 U	5 U	5 U	5 U
BROMOCHLOROMETHANE					5 U	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
BROMOFORM	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
BROMOMETHANE	10 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U
CARBON DISULFIDE					5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
CHLOROETHANE	50 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U
CHLOROFORM	10 U	1 U	1 U		5 U	5 U	5 U	5 U	3 J
CHLOROMETHANE	50 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U
CIS-1,2-DICHLOROETHENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
CIS-1,3-DICHLOROPROPENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
DIBROMOMETHANE					5 U	5 U	5 U	5 U	5 U
DICHLORODIFLUOROMETHANE					5 U	5 U	5 U	5 U	5 U
DIISOPROPYL ETHER									
ETHYL TERT-BUTYL ETHER									
ETHYLBENZENE	10 U	1 U	1 U	1.2	1 J	5 U	0.8 J	5 U	6
ETHYLENE DIBROMIDE					5 U	5 U	5 U	5 U	5 U
HEXACHLOROBUTADIENE					5 U	5 U	5 U	5 U	5 U
ISOPROPYLBENZENE					145	5 U	10	5 U	14
M,P-XYLENE		1 U	1 U						
METHYLENE CHLORIDE	50 U	2 U	2 U		2 J	6	6	4 J	5 U
METHYL-T-BUTYL ETHER	20 U	2 U	2 U	5 U	10 U	10 U	10 U	10 U	10 U
NAPHTHALENE					7	5 U	5 U	5 U	5 U
N-BUTYLBENZENE					6	5 U	5 U	5 U	5 U
N-PROPYLBENZENE					67	5 U	5 U	5 U	2 J
O-XYLENE		1 U	1 U						
P-ISOPROPYLTOLUENE					0.6 J	5 U	5 U	5 U	5 U
SEC-BUTYLBENZENE					7	5 U	5 U	5 U	5 U
STYRENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
TERT-AMYL METHYL ETHER									
TERT-BUTANOL									
TERT-BUTYLBENZENE					2 J	5 U	5 U	5 U	5 U
TETRACHLOROETHENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
TOLUENE	10 U	1 U	1 U	40.2	0.7 J	5 U	5	5 U	5 U
TRANS-1,2-DICHLOROETHENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
TRANS-1,3-DICHLOROPROPENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	10 U	1 U	1 U		5 U	5 U	5 U	5 U	5 U
TRICHLOROFLUOROMETHANE					5 U	5 U	5 U	5 U	5 U
VINYL CHLORIDE	5 U	0.5 U	0.5 U		5 U	5 U	5 U	5 U	1 J
XYLENE (TOTAL)	210			2.3	5 U	5 U	3 J	5 U	18

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California
(Page 2 of 32)

Location	097-002	097-003	097-007	097-008	097-009	393-002	393-003	M03-04
Sample Code	030-USTF-032	030-USTF-033	030-USTF-034	030-USTF-035	030-USTF-036	030-USTF-090	030-USTF-091	108-S03-001
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH	FO 1998
Sampling Date	9/2/1999	9/2/1999	9/2/1999	9/2/1999	9/2/1999	9/7/1999	9/7/1999	11/3/1997
Sampling Depth (feet bgs)	10 -	10 -	10 -	10 -	10 -	10 -	10 -	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
1,1-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
1,2,3-TRICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
1,2,3-TRICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
1,2,4-TRICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
1,2,4-TRIMETHYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
1,2-DIBROMO-3-CHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
1,2-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
1,3,5-TRIMETHYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
1,3-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
1,3-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
1,4-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
2,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
2-BUTANONE	100 U	100 U	100 U	100 U	100 U	100 U	100 U	5 U
2-CHLOROTOLUENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
2-HEXANONE								5 U
4-CHLOROTOLUENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
4-METHYL-2-PENTANONE	50 U	50 U	50 U	50 U	50 U	50 U	50 U	5 U
ACETONE	49 UJ	42 UJ	42 UJ	48 UJ	40 UJ	100 U	100 U	
BENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	760 J
BROMOBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
BROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
BROMOFORM	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
BROMOMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 UJ
CARBON DISULFIDE	5 U	5 U	0.3 J	5 U	5 U	5 U	5 U	1 U
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.5 U
CHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
CHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
CHLOROFORM	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
CHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
CIS-1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.5 U
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
DIBROMOMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
DICHLORODIFLUOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	5 U	5 U	5 U	5 U	0.7 J	5 U	5 U	460 J
ETHYLENE DIBROMIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
HEXACHLOROBUTADIENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
ISOPROPYLBENZENE	5 U	0.5 J	5 U	5 U	5 U	5 U	5 U	
M,P-XYLENE								
METHYLENE CHLORIDE	5	4 J	5	4 J	3 J	5 U	5 U	2 U
METHYL-T-BUTYL ETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
NAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
N-BUTYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
N-PROPYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
O-XYLENE								
P-ISOPROPYLTOLUENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
SEC-BUTYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
STYRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
TOLUENE	0.6 J	5 U	5 U	5 U	0.7 J	5 U	5 U	150 J
TRANS-1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.5 U
TRICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U
TRICHLOROFLUOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
VINYL CHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.5 U
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 J	5 U	5 U	190 J

Notes:
UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	M03-07	M03-04	M03-07	M03-04	M03-07	M03-04	M03-07	S04-4-3
Sample Code	108-S03-003	108-S03-004	108-S03-006	108-S03-007	108-S03-009	108-S03-010	108-S03-012	122-S04-035
Investigation	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998
Sampling Date	11/3/1997	2/10/1998	2/6/1998	5/11/1998	5/11/1998	8/4/1998	8/4/1998	1/26/1998
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	9.5 - 11.5
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
1,1,2-TRICHLOROETHANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
1,1-DICHLOROETHANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
1,1-DICHLOROETHENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	3.8
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE		10 U	1 U	1 U	1 U	25 U	1 U	
1,2-DICHLOROBENZENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
1,2-DICHLOROETHANE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	12 U	0.5 U	2.4
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE	5 U		5 U	5 U	5 U			
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE	5 U	50 U	5 U	5 U	5 U	120 UJ	5 UJ	
ACETONE				58 J				
BENZENE	0.5 U	740	0.5 U	820	0.5 U	650 J	0.5 U	0.5 U
BROMOBENZENE								
BROMOCHLOROMETHANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
BROMODICHLOROMETHANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
BROMOFORM	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
BROMOMETHANE	1 UJ	10 U	1 U	1 U	1 U	25 U	1 U	
CARBON DISULFIDE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
CARBON TETRACHLORIDE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	12 U	0.5 U	
CHLOROBENZENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
CHLOROETHANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	0.5 U
CHLOROFORM	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
CHLOROMETHANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
CIS-1,2-DICHLOROETHENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	4400
CIS-1,3-DICHLOROPROPENE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	12 U	0.5 U	
DIBROMOCHLOROMETHANE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	1 U	410	1 U	440	1 U	450	1 U	0.5 U
ETHYLENE DIBROMIDE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE	2 U	20 U	2 U	2 U	2 U	50 U	2 U	
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	0.5 U
TOLUENE	1 U	200	1 U	650	1 U	200	1 U	0.8
TRANS-1,2-DICHLOROETHENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	17
TRANS-1,3-DICHLOROPROPENE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	12 U	0.5 U	
TRICHLOROETHENE	1 U	10 U	1 U	1 U	1 U	25 U	1 U	20000
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	0.5 U	5 U	0.5 U	0.5 U	0.5 U	12 U	0.5 U	17
XYLENE (TOTAL)	1 U	300	1 U	1100	1 U	1200 J	1 U	0.8

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S04-4-3	S04-4-3	S04-5-3	S04-5-3	S04-4-3	S04-5-3	S04-5-3	S04-5-3
Sample Code	122-S04-036	122-S04-039	122-S04-041	122-S04-041b	122-S04-059	122-S04-062	122-S04-063	122-S04-065
Investigation	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998
Sampling Date	1/26/1998	1/26/1998	1/27/1998	1/27/1998	1/26/1998	1/27/1998	1/27/1998	1/28/1998
Sampling Depth (feet bgs)	11.5 - 13.5	30 - 35	15.5 - 20	15.5 - 20	5.5 - 7.5	9.5 - 11.5	11.5 - 13.5	20 - 25
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE			2 U					
1,1,2-TRICHLOROETHANE			2 U					
1,1-DICHLOROETHANE			2 U					
1,1-DICHLOROETHENE	4.6	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	17	0.7	2	1.8	0.9	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)			2 U					
1,2-DICHLOROPROPANE			2 U					
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE			2 U					
2-CHLOROTOLUENE								
2-HEXANONE			2 U					
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE			2 U					
ACETONE			2 UJ					
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	6.7	0.5 U	0.5 U	0.5 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE			2 U					
BROMOFORM			2 U					
BROMOMETHANE			2 U					
CARBON DISULFIDE			2 U					
CARBON TETRACHLORIDE			0.5 U					
CHLOROBENZENE			2 U					
CHLOROETHANE	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM			2 U					
CHLOROMETHANE			2 U					
CIS-1,2-DICHLOROETHENE	340	13		0.5 U	3.4	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE			0.5 U					
DIBROMOCHLOROMETHANE			2 U					
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	0.5 U	0.5 U	2 U	0.5 U	1.1	0.5 U	0.5 U	0.5 U
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE			2 U					
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE			2 U					
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	0.9	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOLUENE	0.7	0.5 U	2 J	1.6	3	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	3	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE			0.5 U					
TRICHLOROETHENE	11000	103	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	26	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
XYLENE (TOTAL)	0.9	0.5 U	2 J	1	4.7	0.5 U	0.5 U	0.5 U

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S04-5-3	S04-5-3	S04-5-3	S04-4-1	S04-4-1	S04-4-1	S04-4-2	S04-5-4
Sample Code	122-S04-066	122-S04-067	122-S04-068	122-S04-098	122-S04-099	122-S04-100	122-S04-104	122-S04-117
Investigation	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998
Sampling Date	1/28/1998	1/28/1998	1/28/1998	1/30/1998	1/30/1998	1/30/1998	2/2/1998	2/5/1998
Sampling Depth (feet bgs)	25 - 30	30 - 35	40 - 45	7.5 - 9.5	11.5 - 13.5	13.5 - 15.5	30 - 35	25 - 30
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE								
1,1-DICHLOROETHANE								
1,1-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE	0.5 U	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOLUENE	0.5 U	0.5 U	3.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
XYLENE (TOTAL)	0.5 U	0.5 U	1.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:
UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S04-5-4	S04-5-4	S04-4-3	S04-4-2	S04-4-2	S04-4-2	MW97-1	MW97-1
Sample Code	122-S04-118	122-S04-119	122-S04-129	122-S04-213	122-S04-214	122-S04-214b	280-S03-045	280-S03-047
Investigation	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1998	FO 1994	FO 1994
Sampling Date	2/5/1998	2/5/1998	2/11/1998	3/11/1998	3/12/1998	3/12/1998	10/14/1994	2/7/1995
Sampling Depth (feet bgs)	30 - 35	20 - 25	20 - 25	11.5 - 13.5	20 - 25	20 - 25	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE					2 U		1 U	1 U
1,1,2-TRICHLOROETHANE					2 U		1 U	1 U
1,1-DICHLOROETHANE					2 U		1 U	1 U
1,1-DICHLOROETHENE	0.5 U	0.5 U	4.3	0.5 U	2 U	0.5 U	1 UJ	1 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	0.5 U	0.5 U	14	0.5 U	0.5 U	0.5 U	1 UJ	0.5 U
1,2-DICHLOROETHENE (TOTAL)					2 U		1 U	1 U
1,2-DICHLOROPROPANE					2 U		1 U	1 U
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE					2 U			
2-CHLOROTOLUENE								
2-HEXANONE					2 U		2 UJ	2 U
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE					2 U		2 UJ	2 U
ACETONE					2 UJ		9 UJ	2 UJ
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE					2 U		1 U	1 U
BROMOFORM					2 U		1 UJ	1 U
BROMOMETHANE					2 U		2 U	2 U
CARBON DISULFIDE					2 UJ		1 U	1 U
CARBON TETRACHLORIDE					0.5 U		0.5 U	0.5 U
CHLOROBENZENE					2 U		1 U	1 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	2 U	2 U
CHLOROFORM					2 U		1 U	1 U
CHLOROMETHANE					2 U		2 UJ	2 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	380	0.5 U		0.5 U		
CIS-1,3-DICHLOROPROPENE					0.5 U		0.5 U	0.5 U
DIBROMOCHLOROMETHANE					2 U		1 U	1 U
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	1 U	1 U
ETHYLENE DIBROMIDE							1 U	0.02 U
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE					2 U		1 U	1 U
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE					2 U		1 U	1 U
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	1 UJ	1 U
TOLUENE	0.5 U	0.5 U	1.6	0.5 U	2 U	0.5 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	8	0.5 U		0.5 U		
TRANS-1,3-DICHLOROPROPENE					0.5 U		0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	2600	0.5 U	2 U	0.5 U	1 U	1 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	0.5 U	0.5 U	140	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
XYLENE (TOTAL)	0.5 U	0.5 U	0.5 U	1.5 U	2 U	1.5 U	1 U	1 U

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-1	MW97-1	MW97-2	MW97-2	MW97-2	MW97-2	MW97-3	MW97-3
Sample Code	280-S03-048	280-S03-049	280-S03-050	280-S03-051	280-S03-052	280-S03-053	280-S03-054	280-S03-055
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	6/8/1995	7/31/1995	10/18/1994	2/8/1995	6/6/1995	8/1/1995	10/14/1994	2/7/1995
Sampling Depth (feet bgs)	-	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	1 UJ	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U
1,1-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	0.5 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	1 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROPROPANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 U
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 U
ACETONE			12 UJ	27 J	14 UJ	5 UJ		
BENZENE	0.5 U	0.5 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U
BROMOMETHANE	1 U	1 U	2 U	2 U	1 U	1 U	2 U	2 U
CARBON DISULFIDE	1 UJ	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLOROFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 U
CIS-1,2-DICHLOROETHENE								
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DIBROMOCHLOROMETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ETHYLENE DIBROMIDE	0.02 U	0.02 U	1 U	0.02 U	0.02 U	0.02 U	1 U	0.02 U
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U
TOLUENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE								
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
XYLENE (TOTAL)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-3	MW97-3	M03-04	M03-04	M03-04	M03-04	DHP-S03-01	DHP-S03-02
Sample Code	280-S03-056	280-S03-058	280-S03-059	280-S03-060	280-S03-061	280-S03-062	280-S03-073	280-S03-074
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	6/9/1995	8/2/1995	12/15/1994	2/7/1995	6/9/1995	8/4/1995	9/6/1994	8/5/1994
Sampling Depth (feet bgs)	-	-	-	-	-	-	31.3 - 31.4	34 -
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
1,1-DICHLOROETHANE	1 UJ	1 U	1 U	1 U	25 UJ	25 U	1 U	1 U
1,1-DICHLOROETHENE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	12 U	12 U	0.6 UJ	0.5 U
1,2-DICHLOROETHENE (TOTAL)	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
1,2-DICHLOROPROPANE	1 U	1 U	1 UJ	1 U	25 U	25 U	1 U	1 U
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE			3 U				14 UJ	11 UJ
2-CHLOROTOLUENE								
2-HEXANONE	2 U	2 U	2 U	2 U	50 U	50 UJ	2 U	2 U
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE	2 U	2 U	2 U	2 U	50 U	50 UJ	2 U	2 U
ACETONE				33 J				
BENZENE	0.5 U	0.5 U	1 U	420	820	1100	1 U	1 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
BROMOFORM	1 U	1 U	1 U	1 U	25 U	25 UJ	1 U	1 U
BROMOMETHANE	1 U	1 U	2 U	2 U	25 U	25 U	2 U	2 U
CARBON DISULFIDE	1 UJ	1 U	1 U	1 U	25 UJ	25 U	1 U	1 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	12 U	12 U	0.5 U	0.5 U
CHLOROBENZENE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
CHLOROETHANE	2 U	2 U	2 U	2 U	50 UJ	50 U	2 U	2 U
CHLOROFORM	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
CHLOROMETHANE	2 U	2 U	2 U	2 U	50 UJ	50 U	2 UJ	2 U
CIS-1,2-DICHLOROETHENE								
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	12 U	12 U	0.5 U	0.5 U
DIBROMOCHLOROMETHANE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	1 U	1 U	1 U	48	290	170	1 U	1 U
ETHYLENE DIBROMIDE	0.02 U	0.02 U	1 U	0.02 U	0.02 U		1 U	1 U
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
TOLUENE	1 U	1 U	1 U	420	2100	2300	1 U	1 U
TRANS-1,2-DICHLOROETHENE								
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	12 U	12 UJ	0.5 U	0.5 U
TRICHLOROETHENE	1 U	1 U	1 U	1 U	25 U	25 U	1 U	1 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	12 U	12 U	0.5 UJ	0.5 U
XYLENE (TOTAL)	1 U	1 U	1 U	330	1500	1500	1 U	1 U

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	DHP-S03-04	DHP-S03-05	M03-07	M03-08A	D03-01	M03-07	M03-07	M03-07
Sample Code	280-S03-076	280-S03-077	280-S03-095	280-S03-097	280-S03-098	280-S03-112	280-S03-113	280-S03-114
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994
Sampling Date	8/5/1994	8/31/1994	12/15/1994	12/9/1994	12/14/1994	2/8/1995	6/6/1995	8/2/1995
Sampling Depth (feet bgs)	22 -	19 - 22	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	1 U	1 U	1 U	1 U		1 U	1 UJ	1 U
1,1-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	0.5 U	0.7 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)	1 U	1 U	1 U	1 U		1 U	1 U	1 U
1,2-DICHLOROPROPANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE	15 UJ	71 J	3 UJ					
2-CHLOROTOLUENE								
2-HEXANONE	2 U	2 U	2 U	2 UJ	2 U	2 U	2 U	2 U
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE	2 U	2 U	2 U	2 UJ	2 U	2 U	2 U	2 U
ACETONE		10 UJ						
BENZENE	1 U	1 U	36	1 U		1 U	0.5 U	0.5 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
CARBON DISULFIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLOROFORM	1 U	2	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	2 U	2 U	2 U	2 UJ	2 U	2 U	2 U	2 UJ
CIS-1,2-DICHLOROETHENE								
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DIBROMOCHLOROMETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	1 U	1 U	1 U	1 U	2	1 U	1 U	1 U
ETHYLENE DIBROMIDE	1 U	1 U	1 U	1 U	1 U	0.02 U	0.02 U	0.02 U
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	1 U	1 U	1 U	1 U	6	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE								
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
TRICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
XYLENE (TOTAL)	1 U	1 U	79	1 U	8	1 U	1 U	1 U

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	M03-08A	M03-08A	M03-08A	D03-01	D03-01	D03-01	S03-DGS-DP01	S03-DGS-DP02
Sample Code	280-S03-118	280-S03-119	280-S03-120	280-S03-121	280-S03-122	280-S03-123	385-S03-002	385-S03-004
Investigation	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	FO 1994	DGS	DGS
Sampling Date	2/9/1995	6/6/1995	8/4/1995	2/16/1995	6/8/1995	8/4/1995	7/23/2001	7/23/2001
Sampling Depth (feet bgs)	-	-	-	-	-	-	7 -	7 -
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE							1 U	1 U
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 U	1 U
1,1-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE							1 U	1 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
1,2-DICHLOROETHENE (TOTAL)	1 U	1 U	1 U	1 U	1 U	1 U		
1,2-DICHLOROPROPANE	1 U	1 U	1 U	1 U	1 U	1 U		
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE							1 U	1 U
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE							1 U	1 U
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE	2 U	2 U	2 UJ	2 U	2 U	2 UJ		
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE	2 U	2 U	2 UJ	2 U	2 U	2 UJ		
ACETONE								
BENZENE	1 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	1 U	1 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE	1 U	1 U	1 U	1 U	1 U	1 U		
BROMOFORM	1 U	1 U	1 UJ	1 U	1 U	1 UJ		
BROMOMETHANE	2 U	1 U	1 U	2 U	1 U	1 U		
CARBON DISULFIDE	1 U	1 UJ	1 U	1 U	1 UJ	1 U		
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		
CHLOROBENZENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
CHLOROFORM	1 U	1 U	1 U	1 U	1 U	1 U		
CHLOROMETHANE	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
CIS-1,2-DICHLOROETHENE							1 U	1 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		
DIBROMOCHLOROMETHANE	1 U	1 U	1 U	1 U	1 U	1 U		
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	1 U	1 U	1 U	1 U	1 U	1 U	1.1	1 U
ETHYLENE DIBROMIDE	0.02 U	0.02 U		0.02 U	0.02 U			
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE							2.4	2
METHYLENE CHLORIDE	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U
METHYL-T-BUTYL ETHER							1 U	1 U
NAPHTHALENE							1 U	1 U
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE							1 U	1 U
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE	1 U	1 U	1 U	1 U	1 U	1 U		
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	1 U	1 U	1 U	2	1 U	1 U	2.1	1.9
TRANS-1,2-DICHLOROETHENE							1 U	1 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ		
TRICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
XYLENE (TOTAL)	1 U	1 U	1 U	3	1 U	1 U		

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S03-DGS-DP03	MW97-1	MW97-2	MW97-3	M03-04	M03-07	M03-08A	D03-01
Sample Code	385-S03-006	385-S03-040	385-S03-041	385-S03-042	385-S03-043	385-S03-046	385-S03-047	385-S03-048
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	7/23/2001	6/28/2001	6/28/2001	6/28/2001	6/27/2001	6/29/2001	6/28/2001	6/29/2001
Sampling Depth (feet bgs)	5 -	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE	1 U							
1,1,1-TRICHLOROETHANE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
1,1,2,2-TETRACHLOROETHANE	1 U	5 U	5 U	1 U	10 UJ	1 U	5 U	1 U
1,1,2-TRICHLOROETHANE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
1,1-DICHLOROETHANE	1 U	3 U	3 U	0.5 U	5 UJ	0.5 U	2 J	0.5 U
1,1-DICHLOROETHENE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
1,2-DICHLOROETHANE	1 U	3 U	3 U	0.5 U	5 UJ	0.5 U	3 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)		10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
1,2-DICHLOROPROPANE		10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
2,2-DICHLOROPROPANE								
2-BUTANONE		12 UJ	12 UJ	2 UJ	20 UJ	3 UJ	10 UJ	2 UJ
2-CHLOROTOLUENE								
2-HEXANONE		10 UJ	10 UJ	2 UJ	20 UJ	2 UJ	3 UJ	2 UJ
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE		10 UJ	10 UJ	2 UJ	20 UJ	2 UJ	10 UJ	2 UJ
ACETONE		16 UJ	16 UJ	3 UJ	32 UJ	8 UJ	16 UJ	7 UJ
BENZENE	260	3 U	3 U	0.5 U	480 J	0.5 U	3 U	0.5 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE		10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
BROMOFORM		10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
BROMOMETHANE		10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
CARBON DISULFIDE		10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
CARBON TETRACHLORIDE		3 U	3 U	0.5 U	5 UJ	0.5 U	3 U	0.5 U
CHLOROBENZENE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
CHLOROETHANE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
CHLOROFORM		10 UJ	10 UJ	2 UJ	20 UJ	2 U	10 U	2 U
CHLOROMETHANE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
CIS-1,2-DICHLOROETHENE	1 U							
CIS-1,3-DICHLOROPROPENE		3 U	3 U	0.5 U	5 UJ	0.5 U	3 U	0.5 U
DIBROMOCHLOROMETHANE		10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	16	10 U	10 U	2 U	110 J	2 U	10 U	2 U
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE	34							
METHYLENE CHLORIDE	1 U	10 UJ	10 UJ	2 UJ	20 UJ	2 U	10 UJ	2 U
METHYL-T-BUTYL ETHER	1 U	25 U	25 U	5 U	50 UJ	5 U	25 U	5 U
NAPHTHALENE	1 U							
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE	11							
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE		10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
TOLUENE	170	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
TRANS-1,2-DICHLOROETHENE	1 U							
TRANS-1,3-DICHLOROPROPENE		3 U	3 U	0.5 U	5 UJ	0.5 U	3 U	0.5 U
TRICHLOROETHENE	1 U	10 U	10 U	2 U	20 UJ	2 U	10 U	2 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	1 U	3 U	3 U	0.5 U	5 UJ	0.5 U	3 U	0.5 U
XYLENE (TOTAL)		10 U	10 U	2 U	320 J	2 U	10 U	2 U

Notes:
UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S03-DGS-DP20	S03-DGS-DP03	S03-DGS-DP20	S03-DGS-DP21	S03-DGS-DP21	S03-DGS-DP22	S03-DGS-DP22	S03-DGS-DP23
Sample Code	385-S03-087	385-S03-088	385-S03-089	385-S03-090	385-S03-091	385-S03-092	385-S03-093	385-S03-094
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	8/9/2001	8/9/2001	8/17/2001	8/17/2001	8/17/2001	8/17/2001	8/17/2001	8/20/2001
Sampling Depth (feet bgs)	5 -	10 -	10 - 12	5 - 7	10 - 12	5 - 7	10 - 12	5 - 7
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	8
1,1-DICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
1,1-DICHLOROETHENE	1 U	1 U	1	1 U	1 U	200 U	1 U	1 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
1,2-DICHLOROETHANE	1 U	1 U	11	1.8	1 U	200 U	1 U	18
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE	1400	680	760	42	1 U	4600	70 J	3200
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE	1.2	1 U	1 U	1 U	1 U	200 U	1 UJ	1 U
CHLOROETHANE	1 U	1 U	1 U	1.6	1 U	200 U	1 U	1 U
CHLOROFORM								
CHLOROMETHANE	13	3.9	5.3	1 U	1 U	200 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	22	1 U	2.5	1 U	1 U	200 U	1 U	1.5
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	72	1.9	1.9	120	1 U	2400	1.9 J	27
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE	1 U	4.2	2.7	380	3.7	9600	6.3 J	25
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
METHYL-T-BUTYL ETHER	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
NAPHTHALENE	3.3	1 U	6.8	1.9	1 U	200 U	1.3	5.3
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE	1 U	2.1	1 U	110	1.2	2200	3.1	2.6
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
TOLUENE	3.2	12	1 U	2.5	2.3	200 U	2.1 J	3.9
TRANS-1,2-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	200 U	1 U	1 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	1.7	1 U	1 U	1 U	1 U	200 U	1 U	1 U
XYLENE (TOTAL)								

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S03-DGS-DP23	S03-DGS-DP24	S03-DGS-DP24	S03-DGS-DP25	S03-DGS-DP25	S03-DGS-DP26	S03-DGS-DP26	S03-DGS-DP28
Sample Code	385-S03-095	385-S03-096	385-S03-097	385-S03-098	385-S03-099	385-S03-100	385-S03-101	385-S03-109
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	DGS
Sampling Date	8/20/2001	8/23/2001	8/23/2001	8/23/2001	8/23/2001	8/28/2001	8/28/2001	9/10/2001
Sampling Depth (feet bgs)	10 - 12	5 - 7	12 - 14	5 - 7	12 - 14	8 -	14 -	5 -
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 U
1,1-DICHLOROETHANE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	0.5 U
1,1-DICHLOROETHENE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 UJ
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 U
1,2-DICHLOROETHANE	1.4	1 U	1 U	200 U	1 U	1 U	1 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)								2 U
1,2-DICHLOROPROPANE								2 U
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 U
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 U
2,2-DICHLOROPROPANE								
2-BUTANONE								3 UJ
2-CHLOROTOLUENE								
2-HEXANONE								2 UJ
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								2 UJ
ACETONE								7 UJ
BENZENE	37	10	1 U	550	9.3	41	1 U	0.5 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								2 U
BROMOFORM								2 U
BROMOMETHANE								2 U
CARBON DISULFIDE								2 UJ
CARBON TETRACHLORIDE								0.5 U
CHLOROBENZENE	1 U	1 U	1 U	560	1 U	1 U	1 U	2 U
CHLOROETHANE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 U
CHLOROFORM								2 U
CHLOROMETHANE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 U
CIS-1,2-DICHLOROETHENE	100	1 U	1 U	200 U	1 U	1 U	1 U	
CIS-1,3-DICHLOROPROPENE								0.5 U
DIBROMOCHLOROMETHANE								2 U
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	1.2	1.7	1 U	390	2	1.1	1 U	1 J
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE	2.6	2.7	1.4	1200	7.7	1 U	1 U	
METHYLENE CHLORIDE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 UJ
METHYL-T-BUTYL ETHER	1 U	1 U	1 U	200 U	1 U	1 U	1 U	5 U
NAPHTHALENE	1 U	7.4	1 U	200 U	1 U	1 U	1 U	
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE	1 U	1.1	1 U	200 U	1 U	1 U	1 U	
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								2 U
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 U
TOLUENE	2.2	3.5	3.1	200 U	3	2.2	1 U	2 J
TRANS-1,2-DICHLOROETHENE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	
TRANS-1,3-DICHLOROPROPENE								0.5 U
TRICHLOROETHENE	1 U	1 U	1 U	200 U	1 U	1 U	1 U	2 U
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	4	1 U	1 U	200 U	1 U	1 U	1 U	0.5 U
XYLENE (TOTAL)								1 J

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	S03-DGS-DP29	S03-DGS-DP30	S04-DGS-DP50	S04-DGS-DP50	S04-DGS-DP50	398-MW3	398-MW4	398-MW3
Sample Code	385-S03-110	385-S03-111	385-S04-283	385-S04-284	385-S04-285	385-S21-026	385-S21-027	398-MW3
Investigation	DGS	DGS	DGS	DGS	DGS	DGS	DGS	TPH
Sampling Date	9/10/2001	9/10/2001	10/16/2001	10/16/2001	10/16/2001	6/26/2001	6/27/2001	2/9/1995
Sampling Depth (feet bgs)	5 - 7	5 - 7	20 - 22	35 - 37	48 - 50	-	-	3.3 - 13.3
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,1,2-TRICHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
1,1-DICHLOROETHENE	2 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	
1,2-DICHLOROETHENE (TOTAL)	0.8 J	2 U	2 U	2 U	2 U	2 U	2 U	
1,2-DICHLOROPROPANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE	2 U	2 U	2 U	2 UJ	2 UJ	2 U	2 U	
2,2-DICHLOROPROPANE								
2-BUTANONE	0.7 UJ	2 UJ	2 U	3 UJ	5 UJ	2 UJ	2 UJ	
2-CHLOROTOLUENE								
2-HEXANONE	2 UJ	2 UJ	2 U	2 U	2 U	2 UJ	2 UJ	
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE	2 UJ	2 UJ	2 U	2 U	2 U	2 UJ	2 UJ	
ACETONE	3 UJ	3 UJ	6 UJ	20 UJ	19 UJ	3 UJ	3 UJ	
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	10 U
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
BROMOFORM	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
BROMOMETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
CARBON DISULFIDE	2 UJ	2 UJ	2 U	2 U	0.9 J	2 U	2 U	
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	
CHLOROBENZENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
CHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
CHLOROFORM	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
CHLOROMETHANE	2 U	2 U	2 UJ	2 UJ	2 UJ	2 U	2 U	
CIS-1,2-DICHLOROETHENE								
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
DIBROMOCHLOROMETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE	2 U	3	2 U	2 U	2 U	2 U	0.5 J	10 U
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE	2 UJ	2 U	2 UJ	2 U	2 U	2 U	2 UJ	
METHYL-T-BUTYL ETHER	5 U	5 U	0.5 J	5 U	5 U	5 U	5 U	
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
TOLUENE	1 J	1 J	2 U	2 U	2 U	2 U	2 U	10 U
TRANS-1,2-DICHLOROETHENE								
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
TRICHLOROETHENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
TRICHLOROFLUOROMETHANE								
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
XYLENE (TOTAL)	0.6 J	1 J	2 U	2 U	2 U	2 U	2 U	10 U

Notes:
UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	398-MW3	398-MW3	398-MW3	398-MW3	398-MW4	398-MW4	398-MW4	398-MW4
Sample Code	398-MW3	398-MW3	398-MW3	398-MW3	398-MW4-A1078	398-MW4-A1296	398-MW4-A1579	398-MW4
Investigation	TPH	TPH	TPH	TPH	GWM 2003	GWM 2003	GWM 2003	TPH
Sampling Date	9/28/1998	4/6/1999	12/17/1997	3/17/1998	6/20/2002	9/6/2002	12/10/2002	2/9/1995
Sampling Depth (feet bgs)	3.3 - 13.3	3.3 - 13.3	3.3 - 13.3	3.3 - 13.3	-	-	-	2.9 - 12.9
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE					0.5 U	0.5 U	0.5 UJ	
1,1,1-TRICHLOROETHANE					0.5 U	0.5 U	0.5 U	
1,1,2,2-TETRACHLOROETHANE					0.5 U	0.5 U	0.5 U	
1,1,2-TRICHLOROETHANE					0.5 U	0.5 U	0.5 U	
1,1-DICHLOROETHANE					0.5 U	0.5 U	0.5 U	
1,1-DICHLOROETHENE					0.5 U	0.5 U	0.5 U	
1,1-DICHLOROPROPENE					0.5 U	0.5 U	0.5 UJ	
1,2,3-TRICHLOROBENZENE					0.5 U	0.5 U	0.5 U	
1,2,3-TRICHLOROPROPANE					0.5 U	0.5 U	0.5 U	
1,2,4-TRICHLOROBENZENE					0.5 U	0.5 U	0.5 UJ	
1,2,4-TRIMETHYLBENZENE					0.5 U	0.2 J	0.5 U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5 U	0.5 U	0.5 U	
1,2-DICHLOROBENZENE					0.5 U	0.5 U	0.5 U	
1,2-DICHLOROETHANE					0.5 U	0.5 U	0.5 U	
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE					0.5 U	0.5 U	0.5 U	
1,3,5-TRIMETHYLBENZENE					0.6 U	0.5 J	0.2	
1,3-DICHLOROBENZENE					0.5 U	0.5 U	0.5 U	
1,3-DICHLOROPROPANE					0.5 U	0.5 U	0.5 U	
1,4-DICHLOROBENZENE					0.5 U	0.5 U	0.5 U	
2,2-DICHLOROPROPANE					0.5 U	0.5 U	0.5 UJ	
2-BUTANONE					10 U	10 U	10 U	
2-CHLOROTOLUENE					0.5 U	0.5 U	0.5 U	
2-HEXANONE					10 U	10 U	10 U	
4-CHLOROTOLUENE					0.5 U	0.5 U	0.5 U	
4-METHYL-2-PENTANONE					10 U	10 U	10 U	
ACETONE					10 U	1.4 U	10 U	
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	1.8	1.8	2.8	6
BROMOBENZENE					0.5 U	0.5 U	0.5 U	
BROMOCHLOROMETHANE					0.5 U	0.5 U	0.5 U	
BROMODICHLOROMETHANE					0.5 U	0.5 U	0.5 U	
BROMOFORM					1 U	1 U	1 UJ	
BROMOMETHANE					1 U	1 U	1 U	
CARBON DISULFIDE					0.5 U	0.5 U	0.2	
CARBON TETRACHLORIDE					0.5 U	0.5 U	0.5 UJ	
CHLOROBENZENE					0.5 U	0.5 U	0.5 U	
CHLOROETHANE					1 U	1 U	1 U	
CHLOROFORM					0.5 U	0.5 U	0.5 U	
CHLOROMETHANE					1 U	1 U	1 U	
CIS-1,2-DICHLOROETHENE					0.5 U	0.5 U	0.5 U	
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE					0.5 U	0.5 U	0.5 U	
DIBROMOMETHANE					0.5 U	0.5 U	0.5 U	
DICHLORODIFLUOROMETHANE					1 U	1 U	1 U	
DIISOPROPYL ETHER					0.5 U	0.5 U	0.5 U	
ETHYL TERT-BUTYL ETHER					0.5 U	0.5 U	0.5 U	
ETHYLBENZENE	0.5 U	0.5 U	2.4	0.5 U	3.4	4.7	2.5	10 U
ETHYLENE DIBROMIDE					0.5 U	0.5 U	0.5 U	
HEXACHLOROBUTADIENE					0.5 U	0.5 U	0.5 UJ	
ISOPROPYLBENZENE					0.5 J	0.5 U	1.2	
M,P-XYLENE					0.5 U	0.5 U	0.5 U	
METHYLENE CHLORIDE					5 U	5 U	5 U	
METHYL-T-BUTYL ETHER	2.5 U	2.5 U	2.5 U	2.5 U	0.5 U	0.5 U	0.5 U	
NAPHTHALENE					2 U	2 U	2 U	
N-BUTYLBENZENE					0.5 U	0.6	0.4 U	
N-PROPYLBENZENE					1.5	3.4	3.3	
O-XYLENE					0.5 U	0.5 U	0.5 U	
P-ISOPROPYLTOLUENE					0.5 U	0.5 U	0.5 U	
SEC-BUTYLBENZENE					0.1 J	0.5 U	0.3	
STYRENE					0.5 U	0.5 U	0.5 U	
TERT-AMYL METHYL ETHER					0.5 U	0.5 U	0.5 U	
TERT-BUTANOL					20 U	14 J	28	
TERT-BUTYLBENZENE					0.5 U	0.5 U	0.5 UJ	
TETRACHLOROETHENE					0.5 U	0.5 U	0.5 UJ	
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U
TRANS-1,2-DICHLOROETHENE					0.5 U	0.5 U	0.5 U	
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE					0.5 U	0.5 U	0.2	
TRICHLOROFLUOROMETHANE					1 U	1 U	1 U	
VINYL CHLORIDE					0.5 U	0.5 U	0.5 U	
XYLENE (TOTAL)	0.5 U	0.5 U	2.7	0.5 U				11

Notes:
UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	398-MW4	398-MW4	398-MW4	398-MW4	398-2-MOJ	398-11-ERM	398-13-ERM
Sample Code	398-MW4	398-MW4	398-MW4	398-MW4	398-P2W	398-W11	398-W13
Investigation	TPH	TPH	TPH	TPH	TPH	TPH	TPH
Sampling Date	12/18/1997	3/17/1998	9/28/1998	4/6/1999	9/5/1997	1/16/1995	1/16/1995
Sampling Depth (feet bgs)	2.9 - 12.9	2.9 - 12.9	2.9 - 12.9	2.9 - 12.9	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte							
1,1,1,2-TETRACHLOROETHANE							
1,1,1-TRICHLOROETHANE							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,1-DICHLOROPROPENE							
1,2,3-TRICHLOROBENZENE							
1,2,3-TRICHLOROPROPANE							
1,2,4-TRICHLOROBENZENE							
1,2,4-TRIMETHYLBENZENE							
1,2-DIBROMO-3-CHLOROPROPANE							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROETHENE (TOTAL)							
1,2-DICHLOROPROPANE							
1,3,5-TRIMETHYLBENZENE							
1,3-DICHLOROBENZENE							
1,3-DICHLOROPROPANE							
1,4-DICHLOROBENZENE							
2,2-DICHLOROPROPANE							
2-BUTANONE							
2-CHLOROTOLUENE							
2-HEXANONE							
4-CHLOROTOLUENE							
4-METHYL-2-PENTANONE							
ACETONE							
BENZENE	4.3	82	27	1.2	580	0.5 U	0.5 U
BROMOBENZENE							
BROMOCHLOROMETHANE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYL TERT-BUTYL ETHER							
ETHYLBENZENE	5.1	99	10	0.5 U	350	221.4	0.5 U
ETHYLENE DIBROMIDE							
HEXACHLOROBUTADIENE							
ISOPROPYLBENZENE							
M,P-XYLENE							
METHYLENE CHLORIDE							
METHYL-T-BUTYL ETHER	3	2.5 U	43	2.5 U	120 U		
NAPHTHALENE							
N-BUTYLBENZENE							
N-PROPYLBENZENE							
O-XYLENE							
P-ISOPROPYLTOLUENE							
SEC-BUTYLBENZENE							
STYRENE							
TERT-AMYL METHYL ETHER							
TERT-BUTANOL							
TERT-BUTYLBENZENE							
TETRACHLOROETHENE							
TOLUENE	0.5 U	53	0.5 U	0.5 U	12 U	33.3	0.5 U
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHENE							
TRICHLOROFLUOROMETHANE							
VINYL CHLORIDE							
XYLENE (TOTAL)	2.2	110	8.6	0.5 U	860	864.9	1.5 U

Notes:
UG/L *Micrograms per liter*

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	398-14-ERM	398-15-ERM	398-16-ERM	398-17-ERM	398-18-ERM	4-1-ADD1	4-1-ADD1	4-1-ADD1	4-1-ADD1
Sample Code	398-W14	398-W15	398-W16	398-W17	398-W18	4-1-ADD1-10	4-1-ADD1-15	4-1-ADD1-19	4-1-ADD1-25
Investigation	TPH	TPH	TPH	TPH	TPH	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	1/16/1995	1/16/1995	1/16/1995	1/16/1995	1/16/1995	10/29/2001	10/29/2001	10/29/2001	10/29/2001
Sampling Depth (feet bgs)	-	-	-	-	-	6 - 10	12 - 15	16 - 19	21 - 25
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte									
1,1,1,2-TETRACHLOROETHANE									
1,1,1-TRICHLOROETHANE						250 U	1000 U	500 U	250 U
1,1,2,2-TETRACHLOROETHANE									
1,1,2-TRICHLOROETHANE						250 U	1000 U	500 U	250 U
1,1-DICHLOROETHANE						250 U	1000 U	500 U	250 U
1,1-DICHLOROETHENE						250 U	1000 U	500 U	250 U
1,1-DICHLOROPROPENE									
1,2,3-TRICHLOROBENZENE									
1,2,3-TRICHLOROPROPANE									
1,2,4-TRICHLOROBENZENE									
1,2,4-TRIMETHYLBENZENE									
1,2-DIBROMO-3-CHLOROPROPANE									
1,2-DICHLOROBENZENE									
1,2-DICHLOROETHANE						250 U	1000 U	500 U	250 U
1,2-DICHLOROETHENE (TOTAL)									
1,2-DICHLOROPROPANE									
1,3,5-TRIMETHYLBENZENE									
1,3-DICHLOROBENZENE									
1,3-DICHLOROPROPANE									
1,4-DICHLOROBENZENE									
2,2-DICHLOROPROPANE									
2-BUTANONE									
2-CHLOROTOLUENE									
2-HEXANONE									
4-CHLOROTOLUENE									
4-METHYL-2-PENTANONE									
ACETONE									
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				
BROMOBENZENE									
BROMOCHLOROMETHANE									
BROMODICHLOROMETHANE									
BROMOFORM									
BROMOMETHANE									
CARBON DISULFIDE									
CARBON TETRACHLORIDE									
CHLOROBENZENE									
CHLOROETHANE									
CHLOROFORM									
CHLOROMETHANE									
CIS-1,2-DICHLOROETHENE						250 U	1000 U	500 U	250 U
CIS-1,3-DICHLOROPROPENE									
DIBROMOCHLOROMETHANE									
DIBROMOMETHANE									
DICHLORODIFLUOROMETHANE									
DIISOPROPYL ETHER									
ETHYL TERT-BUTYL ETHER									
ETHYLBENZENE	1498	0.5 U	0.5 U	0.5 U	0.5 U				
ETHYLENE DIBROMIDE									
HEXACHLOROBUTADIENE									
ISOPROPYLBENZENE									
M,P-XYLENE									
METHYLENE CHLORIDE									
METHYL-T-BUTYL ETHER									
NAPHTHALENE									
N-BUTYLBENZENE									
N-PROPYLBENZENE									
O-XYLENE									
P-ISOPROPYLTOLUENE									
SEC-BUTYLBENZENE									
STYRENE									
TERT-AMYL METHYL ETHER									
TERT-BUTANOL									
TERT-BUTYLBENZENE									
TETRACHLOROETHENE						250 U	1000 U	500 U	250 U
TOLUENE	23	0.5 U	0.5 U	0.5 U	0.5 U				
TRANS-1,2-DICHLOROETHENE						250 U	1000 U	500 U	250 U
TRANS-1,3-DICHLOROPROPENE									
TRICHLOROETHENE						250 U	16000	9400	4400
TRICHLOROFLUOROMETHANE									
VINYL ACETATE									
VINYL CHLORIDE						250 U	1000 U	500 U	250 U
XYLENE (TOTAL)	4459	1.5 U	1.5 U	1.9	1.5 U				

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD1	4-1-ADD1	4-1-ADD2	4-1-ADD2	4-1-ADD2	4-1-ADD2	4-1-ADD2	4-1-ADD2
Sample Code	4-1-ADD1-30	4-1-ADD1-34	4-1-ADD2-10	4-1-ADD2-14	4-1-ADD2-19	4-1-ADD2-25	4-1-ADD2-30	4-1-ADD2-34
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	10/29/2001	10/29/2001	10/22/2001	10/22/2001	10/22/2001	10/22/2001	10/22/2001	10/22/2001
Sampling Depth (feet bgs)	27 - 30	31 - 34	6 - 10	11 - 14	16 - 19	21 - 25	27 - 30	31 - 34
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	250 U	250 U	770	5700	250	460	250 U	250 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	950	770	280	12000	6200	4800	2300	640
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
XYLENE (TOTAL)								

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD2	4-1-ADD2	4-1-ADD3	4-1-ADD3	4-1-ADD3	4-1-ADD3	4-1-ADD3	4-1-ADD3
Sample Code	4-1-ADD2-39	4-1-ADD2-45	4-1-ADD3-10	4-1-ADD3-15	4-1-ADD3-19	4-1-ADD3-25	4-1-ADD3-30	4-1-ADD3-34
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	10/22/2001	10/22/2001	10/29/2001	10/29/2001	10/29/2001	10/29/2001	10/29/2001	10/29/2001
Sampling Depth (feet bgs)	36 - 39	41 - 45	6 - 10	12 - 15	16 - 19	21 - 25	27 - 30	31 - 34
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	250 U	250 U	510	800	250 U	250 U	250 U	250 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	400	250 U	250 U	10000	9000	4600	4700	520
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	250 U	500 U	250 U	250 U	250 U	250 U
XYLENE (TOTAL)								

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD3	4-1-ADD37	4-1-ADD37	4-1-ADD37	4-1-ADD37	4-1-ADD37	4-1-ADD4	4-1-ADD4
Sample Code	4-1-ADD3-45	4-1-ADD37-09	4-1-ADD37-15	4-1-ADD37-20	4-1-ADD37-25	4-1-ADD37-31	4-1-ADD4-10	4-1-ADD4-15
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	10/29/2001	12/7/2001	12/7/2001	12/7/2001	12/7/2001	12/7/2001	11/13/2001	11/13/2001
Sampling Depth (feet bgs)	41 - 45	6 - 9	11 - 15	17 - 20	22 - 25	27 - 31	6 - 10	12 - 15
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	570	1800
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	9200
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
XYLENE (TOTAL)								

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD4	4-1-ADD4	4-1-ADD4	4-1-ADD4	4-1-ADD4	4-1-ADD5	4-1-ADD5	4-1-ADD5
Sample Code	4-1-ADD4-19	4-1-ADD4-25	4-1-ADD4-30	4-1-ADD4-34	4-1-ADD4-40	4-1-ADD5-10	4-1-ADD5-15	4-1-ADD5-20
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	11/13/2001	11/13/2001	11/13/2001	12/7/2001	12/7/2001	10/23/2001	10/23/2001	10/23/2001
Sampling Depth (feet bgs)	16 - 19	21 - 25	27 - 30	31 - 34	36 - 40	6 - 10	12 - 15	17 - 20
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	1000 U	1000 U	250 U	250 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	1000 U	1000 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	1000 U	1000 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	1000 U	1000 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	1000 U	1000 U	250 U	250 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	990	1000 U	1000 U	250 U	250 U	250 U	330	730
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	1000 U	1000 U	250 U	250 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	1000 U	1000 U	250 U	250 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	6300	28000	27000	4800	260	250 U	2200	8000
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	1000 U	1000 U	250 U	250 U	250 U	250 U	250
XYLENE (TOTAL)								

Notes:

UG/L *Micrograms per liter*

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD5	4-1-ADD5	4-1-ADD53	4-1-ADD53	4-1-ADD53	4-1-ADD53	4-1-ADD53	4-1-ADD53
Sample Code	4-1-ADD5-25	4-1-ADD5-30	4-1-ADD53-10	4-1-ADD53-15	4-1-ADD53-19	4-1-ADD53-24	4-1-ADD53-30	4-1-ADD53-35
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	10/23/2001	10/23/2001	12/5/2001	12/5/2001	12/5/2001	12/5/2001	12/5/2001	12/5/2001
Sampling Depth (feet bgs)	22 - 25	27 - 30	6 - 10	12 - 15	16 - 19	21 - 24	27 - 30	31 - 35
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	470	250 U	250 U	220	550	550	250 U	250 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	8400	7600	250 U	12000	9100	7400	7900	1400
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	250 U	250 U	500 U	250 U	250 U	250 U
XYLENE (TOTAL)								

Notes:
UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD53	4-1-ADD5	4-1-ADD5	4-1-ADD54	4-1-ADD54	4-1-ADD54	4-1-ADD54	4-1-ADD5
Sample Code	4-1-ADD53-40	4-1-ADD5-35	4-1-ADD5-40	4-1-ADD54-09	4-1-ADD54-15	4-1-ADD54-19	4-1-ADD54-25	4-1-ADD5-45
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	12/5/2001	10/23/2001	10/23/2001	12/6/2001	12/6/2001	12/6/2001	12/6/2001	10/23/2001
Sampling Depth (feet bgs)	37 - 40	31 - 35	36 - 40	6 - 9	12 - 15	16 - 19	21 - 25	41 - 45
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	590	250 U	250 U	250 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	250 U	250 U	250 U	250 U	500	250 U	250 U	250 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	250 U	1700	250 U	250 U	8000	8500	6400	250 U
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
XYLENE (TOTAL)								

Notes:
UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD55	4-1-ADD55	4-1-ADD56	4-1-ADD56	4-1-ADD56	4-1-ADD56	4-1-ADD6	4-1-ADD6
Sample Code	4-1-ADD55-10	4-1-ADD55-25	4-1-ADD56-09	4-1-ADD56-15	4-1-ADD56-19	4-1-ADD56-24	4-1-ADD6-10	4-1-ADD6-15
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	12/6/2001	12/6/2001	12/5/2001	12/5/2001	12/5/2001	12/5/2001	11/15/2001	11/15/2001
Sampling Depth (feet bgs)	6 - 10	21 - 25	6 - 9	12 - 15	16 - 19	21 - 24	6 - 10	12 - 15
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	250 U	500 U	500 U	250 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	250 U	500 U	500 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	250 U	500 U	500 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	250 U	500 U	500 U	250 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	250 U	500 U	500 U	250 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	250 U	250 U	500 U	500 U	250 U	250 U	250 U	1400
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	250 U	500 U	500 U	250 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	250 U	500 U	500 U	250 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	250 U	2300	500 U	7500	8800	1600	250 U	1100
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	500 U	500 U	250 U	250 U	250 U	250 U
XYLENE (TOTAL)								

Notes:
UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD6	4-1-ADD62	4-1-ADD62	4-1-ADD62	4-1-ADD62	4-1-ADD62	4-1-ADD6	4-1-ADD6
Sample Code	4-1-ADD6-20	4-1-ADD62-10	4-1-ADD62-15	4-1-ADD62-19	4-1-ADD62-24.5	4-1-ADD62-30	4-1-ADD6-25	4-1-ADD6-30
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	11/15/2001	12/27/2001	12/27/2001	12/27/2001	12/27/2001	12/27/2001	11/15/2001	11/15/2001
Sampling Depth (feet bgs)	17 - 20	6 - 10	11 - 15	16 - 19	21 - 24.5	27 - 30	22 - 25	27 - 30
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U		250 U	1000 U	1000 U	1000 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	250 U	250 U	1000 U	1000 U	1000 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	250 U	250 U	1000 U	1000 U	1000 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	250 U	250 U	1000 U	1000 U	1000 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	250 U	250 U	1000 U	1000 U	1000 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	250 U	250 U	1500	1200	1000 U	1000 U	250 U	250 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	250 U	250 U	1000 U	1000 U	1000 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	250 U	250 U	1000 U	1000 U	1000 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	660	250 U	6300	21000	20000	21000	4800	1800
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	250 U	1000 U	1000 U	1000 U	250 U	250 U
XYLENE (TOTAL)								

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD63	4-1-ADD63	4-1-ADD63	4-1-ADD63	4-1-ADD63	4-1-ADD63	4-1-ADD6	4-1-ADD6
Sample Code	4-1-ADD63-09	4-1-ADD63-15	4-1-ADD63-19	4-1-ADD63-24	4-1-ADD63-29	4-1-ADD63-34.5	4-1-ADD6-35	4-1-ADD6-40
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	1/15/2002	1/15/2002	1/15/2002	1/15/2002	1/16/2002	1/16/2002	11/15/2001	11/15/2001
Sampling Depth (feet bgs)	6 - 9	11 - 15	16 - 19	21 - 24	26 - 29	31 - 34.5	31 - 35	36 - 40
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	1000 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	1000 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	1000 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	1000 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	1000 U	250 U	250 U	250 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	250 U	940	250 U	250 U	250 U	250 U	250 U	250 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	1000 U	250 U	250 U	250 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	1000 U	250 U	250 U	250 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	250 U	18000	5400	11000	9200	580	250 U	250 U
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	1000 U	250 U	250 U	250 U	250 U	250 U	250 U
XYLENE (TOTAL)								

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD7	4-1-ADD71	4-1-ADD71	4-1-ADD71	4-1-ADD71	4-1-ADD71	4-1-ADD71	4-1-ADD7
Sample Code	4-1-ADD7-10	4-1-ADD71-10.5	4-1-ADD71-15	4-1-ADD71-19	4-1-ADD71-24	4-1-ADD71-30	4-1-ADD71-36	4-1-ADD7-15
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	10/22/2001	12/26/2001	12/26/2001	12/26/2001	12/26/2001	12/26/2001	12/26/2001	10/22/2001
Sampling Depth (feet bgs)	6 - 10	7 - 10.5	12 - 15	16 - 19	21 - 24	27 - 30	33 - 36	11 - 15
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	250 U	1000 U	250 U	500 U	250 U	250 U	500 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	250 U	1000 U	250 U	500 U	250 U	250 U	500 U
1,1-DICHLOROETHANE	250 U	250 U	1000 U	250 U	500 U	250 U	250 U	500 U
1,1-DICHLOROETHENE	250 U	250 U	1000 U	250 U	500 U	250 U	250 U	500 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	250 U	1000 U	250 U	500 U	250 U	250 U	500 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	250 U	250 U	560	1100	240	250 U	250 U	500 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	250 U	1000 U	250 U	500 U	250 U	250 U	500 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	250 U	1000 U	250 U	500 U	250 U	250 U	500 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	250 U	250 U	18000	13000	8500	2700	1400	10000
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	1000 U	250 U	500 U	250 U	250 U	500 U
XYLENE (TOTAL)								

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD7	4-1-ADD7	4-1-ADD7	4-1-ADD7	4-1-ADD80	4-1-ADD80	4-1-ADD80	4-1-ADD81
Sample Code	4-1-ADD7-19	4-1-ADD7-24	4-1-ADD7-29	4-1-ADD7-39	4-1-ADD80-17	4-1-ADD80-21	4-1-ADD80-9	4-1-ADD81-17
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	10/22/2001	10/22/2001	10/22/2001	10/22/2001	1/9/2002	1/9/2002	1/9/2002	1/7/2002
Sampling Depth (feet bgs)	16 - 19	21 - 24	26 - 29	36 - 39	13.5 - 17	18 - 21	6 - 9	13.5 - 17
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	630	500 U	250 U	250 U	250 U	250 U	250 U	250 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	500 U	250 U	250 U	250 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	8700	9900	6400	780	250 U	250 U	250 U	250 U
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	240	500 U	250 U	250 U	250 U	250 U	250 U	250 U
XYLENE (TOTAL)								

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD81	4-1-ADD81	4-1-ADD81	4-1-ADD82	4-1-ADD82	4-1-ADD82	4-1-ADD82	4-1-ADD85
Sample Code	4-1-ADD81-21	4-1-ADD81-24	4-1-ADD81-9	4-1-ADD82-17	4-1-ADD82-21	4-1-ADD82-24	4-1-ADD82-9	4-1-ADD85-10.5
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5
Sampling Date	1/7/2002	1/7/2002	1/7/2002	1/9/2002	1/9/2002	1/9/2002	1/9/2002	1/10/2002
Sampling Depth (feet bgs)	18 - 21	21 - 24	6 - 9	13.5 - 17	18 - 21	21 - 24	6 - 9	7 - 10.5
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE								
1,1,1-TRICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1,2,2-TETRACHLOROETHANE								
1,1,2-TRICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,1-DICHLOROPROPENE								
1,2,3-TRICHLOROBENZENE								
1,2,3-TRICHLOROPROPANE								
1,2,4-TRICHLOROBENZENE								
1,2,4-TRIMETHYLBENZENE								
1,2-DIBROMO-3-CHLOROPROPANE								
1,2-DICHLOROBENZENE								
1,2-DICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
1,2-DICHLOROETHENE (TOTAL)								
1,2-DICHLOROPROPANE								
1,3,5-TRIMETHYLBENZENE								
1,3-DICHLOROBENZENE								
1,3-DICHLOROPROPANE								
1,4-DICHLOROBENZENE								
2,2-DICHLOROPROPANE								
2-BUTANONE								
2-CHLOROTOLUENE								
2-HEXANONE								
4-CHLOROTOLUENE								
4-METHYL-2-PENTANONE								
ACETONE								
BENZENE								
BROMOBENZENE								
BROMOCHLOROMETHANE								
BROMODICHLOROMETHANE								
BROMOFORM								
BROMOMETHANE								
CARBON DISULFIDE								
CARBON TETRACHLORIDE								
CHLOROBENZENE								
CHLOROETHANE								
CHLOROFORM								
CHLOROMETHANE								
CIS-1,2-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
CIS-1,3-DICHLOROPROPENE								
DIBROMOCHLOROMETHANE								
DIBROMOMETHANE								
DICHLORODIFLUOROMETHANE								
DIISOPROPYL ETHER								
ETHYL TERT-BUTYL ETHER								
ETHYLBENZENE								
ETHYLENE DIBROMIDE								
HEXACHLOROBUTADIENE								
ISOPROPYLBENZENE								
M,P-XYLENE								
METHYLENE CHLORIDE								
METHYL-T-BUTYL ETHER								
NAPHTHALENE								
N-BUTYLBENZENE								
N-PROPYLBENZENE								
O-XYLENE								
P-ISOPROPYLTOLUENE								
SEC-BUTYLBENZENE								
STYRENE								
TERT-AMYL METHYL ETHER								
TERT-BUTANOL								
TERT-BUTYLBENZENE								
TETRACHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
TOLUENE								
TRANS-1,2-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
TRANS-1,3-DICHLOROPROPENE								
TRICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
TRICHLOROFLUOROMETHANE								
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
XYLENE (TOTAL)								

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	4-1-ADD85	4-1-ADD85	4-1-ADD85	4-1-ADD85	4-1-ADD85	D03-01	D03-01	03GB002
Sample Code	4-1-ADD85-15	4-1-ADD85-19	4-1-ADD85-25	4-1-ADD85-30	4-1-ADD85-36	D03-01-A1080	D03-01-A1581	GPW03-002
Investigation	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	DNAPL RA 4&5	GWM 2003	GWM 2003	FO 1994
Sampling Date	1/10/2002	1/10/2002	1/10/2002	1/10/2002	1/10/2002	7/3/2002	12/10/2002	8/11/1994
Sampling Depth (feet bgs)	12 - 15	16 - 19	21 - 25	27 - 30	33 - 36	-	-	5 - 6
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE						0.5 U	0.5 U	
1,1,1-TRICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	0.5 U	0.5 U	1 U
1,1,2,2-TETRACHLOROETHANE						0.5 U	0.5 U	1 U
1,1,2-TRICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	0.5 U	0.5 U	1 U
1,1-DICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	0.5 U	0.5 U	1 U
1,1-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	0.5 U	0.5 U	1 U
1,1-DICHLOROPROPENE						0.5 U	0.5 U	
1,2,3-TRICHLOROBENZENE						0.5 U	0.5 U	
1,2,3-TRICHLOROPROPANE						0.5 U	0.5 U	
1,2,4-TRICHLOROBENZENE						0.5 U	0.5 U	
1,2,4-TRIMETHYLBENZENE						0.5 U	0.5 U	
1,2-DIBROMO-3-CHLOROPROPANE						0.5 U	0.5 U	
1,2-DICHLOROBENZENE						0.5 U	0.5 U	
1,2-DICHLOROETHANE	250 U	250 U	250 U	250 U	250 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)								0.9 J
1,2-DICHLOROPROPANE						0.5 U	0.5 U	1 U
1,3,5-TRIMETHYLBENZENE						0.5 U	0.5 U	
1,3-DICHLOROBENZENE						0.5 U	0.5 U	
1,3-DICHLOROPROPANE						0.5 U	0.5 U	
1,4-DICHLOROBENZENE						0.5 U	0.5 U	
2,2-DICHLOROPROPANE						0.5 U	0.5 U	
2-BUTANONE						10 U	10 UJ	
2-CHLOROTOLUENE						0.5 U	0.5 U	
2-HEXANONE						10 U	10 U	2 U
4-CHLOROTOLUENE						0.5 U	0.5 U	
4-METHYL-2-PENTANONE						10 U	10 U	2 U
ACETONE						10 U	10 UJ	30 UJ
BENZENE						0.5 U	0.5 U	1 U
BROMOBENZENE						0.5 U	0.5 U	
BROMOCHLOROMETHANE						0.5 U	0.5 U	
BROMODICHLOROMETHANE						0.5 U	0.5 U	1 U
BROMOFORM						1 U	1 U	1 U
BROMOMETHANE						1 U	1 U	2 U
CARBON DISULFIDE						0.5 U	0.5 U	2
CARBON TETRACHLORIDE						0.5 U	0.5 U	0.5 U
CHLOROBENZENE						0.5 U	0.5 U	1 U
CHLOROETHANE						1 U	1 U	2 U
CHLOROFORM						0.5 U	0.5 U	1 U
CHLOROMETHANE						1 U	1 U	2 U
CIS-1,2-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	0.5 U	0.5 U	
CIS-1,3-DICHLOROPROPENE								0.5 U
DIBROMOCHLOROMETHANE						0.5 U	0.5 U	1 U
DIBROMOMETHANE						0.5 U	0.5 U	
DICHLORODIFLUOROMETHANE						1 U	1 U	
DIISOPROPYL ETHER						0.5 U	0.5 U	
ETHYL TERT-BUTYL ETHER						0.5 U	0.5 U	
ETHYLBENZENE						0.5 U	0.5 U	1 U
ETHYLENE DIBROMIDE						0.5 U	0.5 U	
HEXACHLOROBUTADIENE						0.5 U	0.5 U	
ISOPROPYLBENZENE						0.5 U	0.5 U	
M,P-XYLENE						0.5 U	0.5 U	
METHYLENE CHLORIDE						0.2 U	5 UJ	1 U
METHYL-T-BUTYL ETHER						0.2 U	0.5 U	
NAPHTHALENE						2 U	2 U	
N-BUTYLBENZENE						0.5 U	0.5 U	
N-PROPYLBENZENE						0.5 U	0.5 U	
O-XYLENE						0.5 U	0.5 U	
P-ISOPROPYLTOLUENE						0.5 U	0.5 U	
SEC-BUTYLBENZENE						0.5 U	0.5 U	
STYRENE						0.5 U	0.5 U	1 U
TERT-AMYL METHYL ETHER						0.5 U	0.5 U	
TERT-BUTANOL						20 UJ	10 U	
TERT-BUTYLBENZENE						0.5 U	0.5 U	
TETRACHLOROETHENE	250 U	250 U	250 U	250 U	250 U	0.5 U	0.5 U	1 U
TOLUENE						0.5 U	0.5 U	1 U
TRANS-1,2-DICHLOROETHENE	250 U	250 U	250 U	250 U	250 U	0.5 U	0.5 U	
TRANS-1,3-DICHLOROPROPENE								0.5 U
TRICHLOROETHENE	1200	250 U	2100	250 U	250 U	0.5 U	0.5 U	1
TRICHLOROFLUOROMETHANE						1 U	1 U	
VINYL ACETATE								
VINYL CHLORIDE	250 U	250 U	250 U	250 U	250 U	0.5 U	0.5 U	0.5 U
XYLENE (TOTAL)								1 U

Notes:

UG/L Micrograms per liter

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	03GB017	M03-04	M03-04	M03-04	M03-07	M03-07	M03-09	M03-09
Sample Code	GPW03-170	M03-04-A1086	M03-04-A1298	M03-04-A1587	M03-07-A1090	M03-07-A1591	M03-09-A1301	M03-09-A1733
Investigation	FO 1994	GWM 2003	GWM 2003	GWM 2003	GWM 2003	GWM 2003	GWM 2003	GWM 2003
Sampling Date	8/16/1994	6/20/2002	9/6/2002	12/10/2002	6/21/2002	12/11/2002	9/6/2002	12/13/2002
Sampling Depth (feet bgs)	5 - 6	-	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte								
1,1,1,2-TETRACHLOROETHANE		1.7 U	1.7 U	1 UJ	0.5 U	0.5 U	1.7 U	0.5 U
1,1,1-TRICHLOROETHANE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,1,2-TRICHLOROETHANE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,1-DICHLOROETHANE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,1-DICHLOROETHENE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,1-DICHLOROPROPENE		1.7 U	1.7 U	1 UJ	0.5 U	0.5 U	1.7 U	0.5 U
1,2,3-TRICHLOROBENZENE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,2,3-TRICHLOROPROPANE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,2,4-TRICHLOROBENZENE		1.7 U	1.7 U	1 UJ	0.5 U	0.5 U	1.7 U	0.5 UJ
1,2,4-TRIMETHYLBENZENE		46	19	4.6	0.5 U	0.5 U	0.6 J	0.2
1,2-DIBROMO-3-CHLOROPROPANE		1.7 U	1.7 U	1 U	0.5 UJ	0.5 U	1.7 U	0.5 U
1,2-DICHLOROBENZENE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)	1 U							
1,2-DICHLOROPROPANE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,3,5-TRIMETHYLBENZENE		20	10	2.4	0.4 U	0.5 U	1.7 U	0.5 U
1,3-DICHLOROBENZENE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,3-DICHLOROPROPANE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
1,4-DICHLOROBENZENE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
2,2-DICHLOROPROPANE		1.7 U	1.7 U	1 UJ	0.5 U	0.5 UJ	1.7 U	0.5 UJ
2-BUTANONE		8.6 J	33 U	20 U	10 UJ	10 UJ	33 U	10 UJ
2-CHLOROTOLUENE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
2-HEXANONE	2 U	33 U	33 U	20 U	10 UJ	10 U	33 U	10 U
4-CHLOROTOLUENE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
4-METHYL-2-PENTANONE	2 U	29 J	23 J	9.1	10 UJ	10 U	33 U	10 U
ACETONE	15 UJ	27 J	14 J	6.2	2.2 UJ	0.8 UJ	600 J	490 J
BENZENE	6	440	550	290	0.5 U	0.5 U	0.6 J	0.9
BROMOBENZENE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
BROMOCHLOROMETHANE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
BROMODICHLOROMETHANE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
BROMOFORM	1 U	3.3 U	3.3 U	2 UJ	1 UJ	1 U	3.3 U	1 U
BROMOMETHANE	2 U	3.3 U	3.3 U	2 U	1 U	1 U	3.3 U	1 U
CARBON DISULFIDE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.2 J	0.7
CARBON TETRACHLORIDE	0.5 U	1.7 U	1.7 U	1 UJ	0.5 U	0.5 U	1.7 U	0.5 U
CHLOROBENZENE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
CHLOROETHANE	2 U	3.3 U	3.3 U	2 U	1 U	1 U	3.3 U	1 U
CHLOROFORM	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
CHLOROMETHANE	2 U	3.3 U	3.3 U	2 U	1 U	1 U	3.3 U	1 U
CIS-1,2-DICHLOROETHENE		1.7 U	0.3 J	1 U	0.5 U	0.5 U	1.7 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U							
DIBROMOCHLOROMETHANE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
DIBROMOMETHANE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
DICHLORODIFLUOROMETHANE		3.3 U	3.3 U	2 U	1 U	1 UJ	3.3 U	1 UJ
DIISOPROPYL ETHER		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
ETHYL TERT-BUTYL ETHER		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
ETHYLBENZENE	3	150	77	15	0.2 U	0.5 U	0.8 J	1.7
ETHYLENE DIBROMIDE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
HEXACHLOROBUTADIENE		1.7 U	1.7 U	1 UJ	0.5 U	0.5 U	1.7 U	0.5 UJ
ISOPROPYLBENZENE		5.5	2.4	2.4	0.5 U	0.5 U	1.7 U	0.5 U
M,P-XYLENE		470	51	17	0.5 U	0.5 U	1.2 J	2.6
METHYLENE CHLORIDE	1 U	1 U	17 U	1.3 U	5 U	5 U	0.8 U	0.4 UJ
METHYL-T-BUTYL ETHER		1.7 U	1.7 U	1 U	0.1 J	0.5 U	0.5 U	0.5 U
NAPHTHALENE		3.5 J	5.6 J	4.3	2 U	2 U	3.7 J	1.6
N-BUTYLBENZENE		1.2 J	2.4	1 U	0.5 U	0.5 U	1.7 U	0.5 U
N-PROPYLBENZENE		12	18	4.1	0.5 U	0.5 U	1.7 U	0.5 U
O-XYLENE		22	2.7	1.4	0.5 U	0.5 U	0.4 J	1.1
P-ISOPROPYLTOLUENE		1.7 U	0.8 J	1 U	0.5 U	0.5 U	1.7 U	0.5 U
SEC-BUTYLBENZENE		1.7 U	1.7 U	0.5	0.5 U	0.5 U	1.7 U	0.5 U
STYRENE	1 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
TERT-AMYL METHYL ETHER		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
TERT-BUTANOL		340	500	450	20 U	10 U	67 U	5.8
TERT-BUTYLBENZENE		1.7 U	1.7 U	1 UJ	0.5 U	0.5 U	1.7 U	0.5 U
TETRACHLOROETHENE	1 U	1.7 U	1.7 U	1.2 J	0.5 U	0.5 UJ	1.7 U	0.5 UJ
TOLUENE	21	11	1.2 J	0.6	1	0.2	1.7 U	0.5 U
TRANS-1,2-DICHLOROETHENE		1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U							
TRICHLOROETHENE	1 U	1.7 U	1.7 U	1	0.5 U	0.5 U	1.7 U	0.5 U
TRICHLOROFLUOROMETHANE		3.3 U	3.3 U	2 U	1 U	1 U	3.3 U	1 U
VINYL ACETATE								
VINYL CHLORIDE	0.5 U	1.7 U	1.7 U	1 U	0.5 U	0.5 U	1.7 U	0.5 U
XYLENE (TOTAL)	13							

Notes:
UG/L Micrograms per liter

Continue

TABLE D-20: SITE 3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

Remedial Investigation Report for OU-2B, Alameda Point, Alameda, California

Location	MW97-1	MW97-2	MW97-3	MW97-3	MW97-3	MW97-3
Sample Code	MW97-1 [08/30/90]	MW97-2 [08/31/90]	MW97-3 [08/31/90]	MW97-3-A1099	MW97-3-A1313	MW97-3-A1600
Investigation	PH 1&2A 1991	PH 1&2A 1991	PH 1&2A 1991	GWM 2003	GWM 2003	GWM 2003
Sampling Date	8/30/1990	8/31/1990	10/18/1990	7/3/2002	9/6/2002	12/10/2002
Sampling Depth (feet bgs)	-	-	-	-	-	-
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Analyte						
1,1,1,2-TETRACHLOROETHANE				0.5 U	0.5 U	0.5 UJ
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROPROPENE				0.5 U	0.5 U	0.5 UJ
1,2,3-TRICHLOROBENZENE				0.5 U	0.5 U	0.5 U
1,2,3-TRICHLOROPROPANE				0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE				0.5 U	0.5 U	0.5 UJ
1,2,4-TRIMETHYLBENZENE				0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE				0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE				0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHENE (TOTAL)	5 U	5 U	5 U			
1,2-DICHLOROPROPANE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
1,3,5-TRIMETHYLBENZENE				0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE				0.5 U	0.5 U	0.5 U
1,3-DICHLOROPROPANE				0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE				0.5 U	0.5 U	0.5 U
2,2-DICHLOROPROPANE				0.5 U	0.5 U	0.5 UJ
2-BUTANONE	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROTOLUENE				0.5 U	0.5 U	0.5 U
2-HEXANONE	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROTOLUENE				0.5 U	0.5 U	0.5 U
4-METHYL-2-PENTANONE	10 U	10 U	10 U	10 U	10 U	10 U
ACETONE	10 U	10 U	10 U	10 U	1.1 U	0.6 U
BENZENE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
BROMOBENZENE				0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE				0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	5 U	5 U	5 U	1 U	1 U	1 UJ
BROMOMETHANE	10 U	10 U	10 U	1 U	1 U	1 U
CARBON DISULFIDE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 UJ
CHLOROBENZENE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	10 U	10 U	10 U	1 U	1 U	1 U
CHLOROFORM	5 U	5 U	5 U	0.5 U	0.1 J	0.5 U
CHLOROMETHANE	10 U	10 U	10 U	1 U	1 U	1 U
CIS-1,2-DICHLOROETHENE				0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U			
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
DIBROMOMETHANE				0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE				1 U	1 U	1 U
DIISOPROPYL ETHER				0.5 U	0.5 U	0.5 U
ETHYL TERT-BUTYL ETHER				0.5 U	0.5 U	0.5 U
ETHYLBENZENE	5 U	5 U	5 U	0.5 U	0.5 J	0.5 U
ETHYLENE DIBROMIDE				0.5 U	0.5 U	0.5 U
HEXACHLOROBUTADIENE				0.5 U	0.5 U	0.5 UJ
ISOPROPYLBENZENE				0.5 U	0.5 U	0.5 U
M,P-XYLENE				0.5 U	1.7	0.5 U
METHYLENE CHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U
METHYL-T-BUTYL ETHER				0.5 U	0.1 U	0.5 U
NAPHTHALENE				2 U	2 U	2 U
N-BUTYLBENZENE				0.5 U	0.5 U	0.5 U
N-PROPYLBENZENE				0.5 U	0.5 U	0.5 U
O-XYLENE				0.5 U	0.6	0.5 U
P-ISOPROPYLTOLUENE				0.5 U	0.5 U	0.5 U
SEC-BUTYLBENZENE				0.5 U	0.5 U	0.5 U
STYRENE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
TERT-AMYL METHYL ETHER				0.5 U	0.5 U	0.5 U
TERT-BUTANOL				20 UJ	20 U	10 U
TERT-BUTYLBENZENE				0.5 U	0.5 U	0.5 UJ
TETRACHLOROETHENE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 UJ
TOLUENE	5 U	5 U	5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE				0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U			
TRICHLOROETHENE	5 U	5 U	5 U	0.5 U	0.5 U	0.4
TRICHLOROFLUOROMETHANE				1 U	1 U	1 U
VINYL ACETATE	5 U	5 U	5 U			
VINYL CHLORIDE	10 U	10 U	10 U	0.5 U	0.5 U	0.5 U
XYLENE (TOTAL)	5 U	5 U	5 U			

Notes:

UG/L Micrograms per liter