FINAL REPORT OF UNDOCUMENTED FILL ASSESSMENT ACTIVITIES FUTURE LAKESIDE RIVERPARK HIGHWAY 67 AND WINTER GARDENS BOULEVARD LAKESIDE, CALIFORNIA

July 21, 2004

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A Report Prepared for:

Ms. Robin Rierdon
Lakeside Conservancy
11769 Waterhill Road
Lakeside, California 92040-2905

REPORT OF
UNDOCUMENTED FILL
ASSESSMENT ACTIVITIES
FUTURE LAKESIDE RIVERPARK
HIGHWAY 67 AND
WINTER GARDENS BOULEVARD
LAKESIDE, CALIFORNIA

Project No. 44102

Prepared by:

Melissa Valdovinos, EIT
Project Engineer

James R. Gingery, GE 2638
Project Engineer

Jacques P. Lord, CEG 2232
Environmental Department Manager

KLEINFELDER, INC.
5015 Shoreham Place
San Diego, California 92122
(858) 320-2000

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1.0 SITE INFORMATION

Name of Facility:	Future Lakeside Riverpark
Site Address:	Highway 67 & Winter Gardens Boulevard Lakeside, California 92040
Assessor's Parcel Number:	382-250-30 382-011-10 382-011-35
Property Owner:	Lakeside Conservancy
Contact Person:	Ms. Robin Rierdon Lakeside Conservancy 11769 Waterhill Road Lakeside, CA 92040-2905 (619) 443-4770
Consultant:	Kleinfelder, Inc. 5015 Shoreham Place San Diego, CA 92122 (858) 320-2000

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2.0 INTRODUCTION

Kleinfelder, Inc. (Kleinfelder) was contracted by the Lakeside Conservancy in a competitive bid process to perform an assessment of the undocumented fill at the three parcels (Site) located north of Highway 67 and Winter Gardens Boulevard in Lakeside, California. The assessment activities for the undocumented fill were conducted in general accordance with the *Proposal to Assess Undocumented Fill Areas*, dated April 1, 2004, prepared by Kleinfelder, Inc. Fieldwork was performed on May 17, 2004.

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3.0 BACKGROUND

The Site consists of three parcels that will be included in the proposed Lakeside Riverpark restoration project, located north of the intersection of Highway 67 and Winter Gardens Boulevard, in the Lakeside area of San Diego County, California (Figure 1). Adjacent properties include a golf course to the north, Channel Road to the east, a construction yard and Industry Road to the south, and undeveloped land to the west. The Site is an approximately 100-acre area formerly operated by the CalMat Company and/or Vulcan Materials for sand and gravel mining. Apparently mined areas of the Site were backfilled with both documented and undocumented fill materials, along with construction debris. Prior studies indicate that the fill averages 25 feet thick.

According to the Client, there is approximately 2 million cubic yards of undocumented fill material on the parcels owned by the Lakeside Conservancy. The Lakeside Conservancy would like to sell the fill material and have it removed from the parcels. Kleinfelder proposed an assessment program to provide fill documentation in order for the Lakeside Conservancy to have information for potential purchases of the fill.

On April 1, 2004, Kleinfelder submitted a proposal to perform an assessment of the undocumented fill with soil borings, and soil collected for analyses of Title 22 metals in general accordance with EPA Methods 6010B/7470 and total recoverable petroleum hydrocarbons (TRPH) in general accordance with EPA Method 418.1. Selected soil samples would be further analyzed for total petroleum hydrocarbons as gasoline and diesel (TPH-g and TPH-d) in general accordance with EPA Method 8015M, pesticides in general accordance with EPA Method 8081A, polychlorinated biphenyls (PCBs) in general accordance with EPA Method 8082, volatile organic compounds (VOCs) in general accordance EPA Method 8260B, and semi-volatile organic compounds (SVOCs) in general accordance with EPA Method 8270C. Additionally, soil samples would be collected for geotechnical analysis; sieve analysis to identify grain-size distribution and Atterberg limit tests to assess plasticity index and liquid limit.

On May 17, 2004, Kleinfelder mobilized to the site and advanced the soil borings and collected the soil samples for the analyses described above. This report presents the results, recommendations, and conclusions based on the activities described.

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4.0 FIELD INVESTIGATION

Using the map provided in the bid package, Kleinfelder applied the ELIPGRID program to calculate that 18 soil boring locations can be placed over the 100-acre Site with an approximate 400-foot triangular spacing. With 18 sampling locations there will be a 50% chance of hitting a 30-foot diameter area of "non-useable fill." The chances of missing a 30-foot diameter non-useable area go down as the number of sample locations goes up. Eighteen (18) locations were chosen as an effective balance between controlling cost and assessing the fill material. The depth of no more than 19.5 feet below the surface was chosen to avoid groundwater interference and County boring permit requirements. Even though groundwater is anticipated at 27 feet below grade, samples at 19.5 feet provide sufficient information to represent soils to 22.5 feet deep.

Kleinfelder advanced 18 soil borings to depths of five to 19.5 feet below ground surface (bgs) on May 17, 2004. The Site has been divided into three parcels. Figure 2 presents the three parcels on the Site and the approximate boring locations. Four borings (KB-15 through KB-19) were advanced in Parcel 1, three borings (KB-12 through KB-14) were advanced in Parcel 2, and eleven borings (KB-1 through KB11) were advanced in Parcel 3. Kleinfelder attempted to collect soil samples at approximately five-foot intervals in each boring. From the samples collected in each boring, two samples were typically submitted for geotechnical laboratory testing and one sample was submitted for environmental laboratory testing. However, due to conditions encountered in the field during drilling activities, this was not possible for every boring location. For refusals at a depth of 10 feet or less, the boring location was offset and attempted a second time. If refusal occurred again the boring was abandoned. Table 1 provides a summary of the samples collected for each boring location.

The borings were advanced using a truck-mounted drill rig with a hollow-stem auger. Soil samples were collected using a 2.5-inch outside diameter modified California drive sampler lined with brass sleeves. The sampler was generally driven 18 inches using a 140-pound hammer dropping a distance of 30 inches. Blow counts were recorded at 6-inch intervals.

Table 1
Soil Sampling Summary

Boring Number	Total Boring Depth (feet bgs)	Environmental Sample	First Geotechnical Sample	Second Geotechnical Sample
KB-1	19.5	KB-1@5'	KB-1@10'	KB-1@19'
KB-2	8	KB-2@5'	KB-2@5'	-
KB-3	19.5	KB-3@15'	KB-3@18'	-

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Table 1 (Continued)
Soil Sampling Summary

Boring Number	Total Boring Depth (feet bgs)	Environmental Sample	First Geotechnical Sample	Second Geotechnical Sample
KB-4	19.5	KB-4@10'	KB-4@5'	KB-4@15'
KB-5	19.5	KB-5@19'	KB-5@10'	KB-5@18'
KB-6	19.5	No recovery	No recovery	No recovery
KB-7	19.5	KB-7@10'	KB-7@5'	KB-7@15'
KB-8	12	KB-8@10'	KB-8@5'	No recovery
KB-9	19.5	KB-9@5'	KB-9@10'	KB-9@18'
KB-10	12	KB-10@5'	KB-10@10'	No recovery
KB-11	19.5	KB-11@15'	KB-11@10'	KB-11@18'
KB-12	18	KB-12@5'	KB-12@5'	KB-12@15'
KB-13	11	KB-13@5'	KB-13@10'	No recovery
KB-14	19.5	KB-14@10'	KB-14@5'	KB-14@15'
KB-15	15	KB-15@5'	KB-15@10'	No recovery
KB-16	11	No recovery	KB-16@5'	No recovery
KB-17	10	KB-17@5'	KB17@10'	No recovery
KB-18	5	No recovery	KB-18@5'	No recovery

bgs: below ground surface
No recovery : sample not collected; likely due to sampler being blocked by cobble or other solid object.

Environmental soil samples were submitted to EMAX Laboratories, Inc. in Torrance, California, a state-certified environmental chemistry laboratory, for analyses of Title 22 metals in general accordance with EPA Methods 6010B/7470 and TRPH in general accordance with EPA Method 418.1. Additionally, three soil samples with the highest detected TRPH concentrations reported were analyzed for TPH-g and TPH-d in general accordance with EPA Method 8015M, pesticides in general accordance with EPA Method 8081A, PCBs in general accordance with EPA Method 8082, VOCs in general accordance EPA Method 8260B, and SVOCs in general accordance with EPA Method 8270C.

Geotechnical soil samples submitted to the Kleinfelder materials testing laboratory in San Diego, California. Sieve analysis to identify grain-size distribution and Atterberg limit tests to assess plasticity index and liquid limit were performed.

Boring locations were surveyed in to the State 1982 Datum Plane using a high resolution Global Positioning System with accuracy to +/- 0.5 feet. Figure 2 presents the soil boring locations, designations, and survey data. Boring logs are included as Appendix A. Laboratory results and chain-of-custodies are included as Appendix B. Soil boring location survey data are included as Appendix C.

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5.0 INVESTIGATIVE RESULTS

5.1 SITE SUBSURFACE CONDITIONS

Soils encountered within the test borings consisted predominately of fill, however, alluvium was encountered in two of the 18 borings. Detailed descriptions of these materials are included in the boring logs (Appendix A), and generalized descriptions are provided below. Boring locations are shown on Figure 2. Groundwater was not encountered within the depths explored.

5.1.1 Fill

With the exception of Boring KB-1 and KB-14, fill was observed within all of the borings from the ground surface to the maximum depths explored of five to 19.5 feet below ground surface (bgs). Fill within Boring KB-1 and KB-14 extended from the ground surface to the top of an alluvium layer approximately 18 and 13 feet bgs, respectively. This material generally consisted of brown to very dark brown silty sand to poorly graded sand with gravel and occasional cobbles which varied from dry to damp at the deepest locations. Layers of gravel and cobbles, which sometimes resulted in auger refusal, were also observed within the borings. A layer of plastic silt (high clay content) with sand was observed in Boring KB-3 at a depth of approximately 18 feet bgs to the boring bottom at 19.5 feet bgs. Based on sampler penetration resistance, the insitu relative density of the fill generally ranged from loose to dense.

5.1.2 Alluvium

Alluvium was encountered from approximately 18 feet bgs to the bottom of the boring at 19.5 feet bgs in Boring KB-1, and from approximately 13 feet bgs to the bottom of the boring at 19 feet bgs in Boring KB-14. The alluvium consisted of well graded sand with gravel and silty sand that was medium dense and dry to wet at 19.5 feet in Area 2.

5.2 ENVIRONMENTAL LABORATORY TEST RESULTS

A total of 15 samples were collected and submitted for environmental analysis. Environmental samples were initially analyzed for Title 22 metals by EPA Methods 6010B/7470 and TRPH by EPA Method 418.1. The samples with the three highest reported concentrations of TRPH were further analyzed for TPH-g and TPH-d by EPA Method 8015 Modified, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, and PCBs by EPA Method 8082.

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Environmental samples were analyzed for Title 22 metals, which include: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. Table 2 summarizes the Title 22 metals analytical results.

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Table 2
Summary of Title 22 Metals Analytical Results
(mg/kg)

Boring	Sample Depth (ft bgs)	Area	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Th	V	Zi
KB-1	5'	3	<11.1	0.944J	113	0.199J	<1.11	20.8	7.63	16.5	1.96	<0.111	<5.54	6.86	<1.11	1.07J	<1.11	50	38.7
KB-2	5'	3	<11.9	3.44	60.3	0.27J	<1.19	10.5	5.01	15.6	10.9	<0.119	<5.97	5.17	<1.19	0.987J	<1.19	31	46.7
KB-3	15'	3	<11.4	0.87J	61.3	<1.14	<1.14	10.8	4.26	7.76	1.38	<0.114	<5.71	3.59	<1.14	0.836J	<1.14	27.6	21.5
KB-4	10'	3	<10.2	0.44J	42.5	<1.02	<1.02	7.16	2.94	8.67	0.65J	<0.102	<5.11	2.47	<1.02	<2.04	<1.02	20.3	16.8
KB-5	19'	3	<11.7	<1.17	181	0.209J	<1.17	21.3	**9.14**	18.4	2.05	<0.117	<5.85	**8.12**	<1.17	0.823J	<1.17	47.8	38.8
KB-6	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KB-7	10'	3	<10.2	<1.02	17.5	<1.02	<1.02	4.53	1.2J	6.65	0.42J	<0.102	<5.11	1.81J	<1.02	<2.04	<1.02	17.5	9.59
KB-8	10'	3	<10.9	1.3	64	<1.09	<1.09	9.25	4.41	10	8.24	<0.109	<5.46	5.17	<1.09	<2.19	<1.09	29	30.7
KB-9	5'	3	3.45J	2.04	202	0.217J	<1.27	**32.6**	12.5	22.3	3.99	<0.127	<6.33	12	<1.27	**1.84J**	<1.27	**80.1**	**68.4**
KB-10	5'	3	<10.4	0.478J	39.5	<1.04	<1.04	7.33	3.04	6.92	0.994J	<0.104	<5.2	2.88	<1.04	0.82J	<1.04	22.5	16
KB-11	15'	3	<10.3	<1.03	40.2	<1.03	<1.03	9.7	3.87	6.15	0.739J	<0.103	<5.14	3	<1.03	<2.06	<1.03	24.6	16.2
KB-12	5'	2	**3.92J**	4.47	83.5	0.229J	<1.1	10.8	4.97	**33.6**	11.8	<0.11	<5.52	6.52	<1.1	<2.21	<1.1	31.4	57.9
KB-13	5'	2	2.52J	4.71	**502**	**0.497J**	<1.18	22.6	4.1	8.51	5.37	<0.118	<5.89	7.46	<1.18	0.81J	<1.18	47	28.4
KB-14	10'	2	<11.5	3.42	78.2	0.236J	<1.15	10.6	6.91	11.2	8.51	<0.115	<5.73	4.32	<1.15	<2.29	<1.15	34.7	32.4
KB-15	5'	1	<11.7	7.85	108	0.352J	<1.17	10.3	5.03	8.74	**13**	<0.117	<5.85	4.51	<1.17	<2.34	<1.17	36.3	42.3
KB-16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KB-17	5'	1	<10.3	**7.91**	63.7	0.235J	<1.03	2.81	1.77J	5.7	4.42	<0.103	<5.17	7.33	**1.75**	<2.07	<1.03	12.8	30.6
KB-18	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

mg/kg: milligrams per kilogram
ft bgs: feet below ground surface
<: not detected above reporting limit
J: laboratory estimated concentration above method detection limit, but not above reporting limit
BOLD: maximum detected concentration

Sb: Antimony
As: Arsenic
Ba: Barium
Be: Beryllium
Cd: Cadmium
Cr: Chromium
Co: Cobalt
Cu: Copper
Pb: Lead
Hg: Mercury
Mo: Molybdenum
Ni: Nickel
Se: Selenium
Ag: Silver
Th: Thallium
V: Vanadium
Zi: Zinc

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Soil may be classified as hazardous if the soil concentration exceeds the total threshold limit concentration (TTLC) regulatory limits. Or, if the soil concentration is greater than 10 times (10x) the soluble threshold limit concentration (STLC), the soil may be classified as hazardous. However, the highest detected concentrations of metals reported are below the TTLC and 10 x STLC regulatory limits. The highest detected concentrations reported compared to the TTLC and 10 x STLC regulatory limits are presented in Table 3.

Table 3
Maximum Detected Metal Concentrations Versus
TTLC and STLC Regulatory Limits

Metal	Maximum Detected Concentration (mg/kg)	TTLC Regulatory Limit (mg/kg)	10 x STLC Regulatory Limit (mg/L)
Antimony	3.92 **J**	500	150
Arsenic	7.91	500	50
Barium	502	10,000	1,000
Beryllium	0.497 **J**	75	7.5
Cadmium	ND	100	10
Chromium	32.6	500	50
Cobalt	9.14	8,000	800
Copper	33.6	2,500	250
Lead	13	1,000	50
Mercury	ND	20	2
Molybdenum	ND	3,500	350
Nickel	8.12	2,000	200
Selenium	1.75	100	10
Silver	1.84 **J**	500	50
Thallium	ND	700	70
Vanadium	80.1	2,400	240
Zinc	68.4	5,000	2,500

TTLC: total threshold concentration limit
10 x STLC: ten times the soluble threshold limit concentration
mg/kg: milligrams per kilogram
mg/L: milligrams per liter
J: laboratory estimated concentration above method detection limit, but below reporting limit
ND: not detected in any samples collected

TRPH was detected in 9 of 15 samples with concentrations ranging from 7.1 milligrams per kilogram (mg/kg) to 24,000 mg/kg. The three highest reported concentrations of TRPH were from soil borings KB-8 (220 mg/kg), KB-12 (3,400 mg/kg), and KB-17 (24,000 mg/kg). Boring KB-8 is located in Area 3, boring KB-12 is located in Area 2, and boring KB-17 is located in Area 1. Table 4 summarizes the TRPH analytical results.

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Table 4
Summary of TRPH Analytical Results

Boring Number	Sample Name	Area	Sample Depth (feet bgs)	TRPH Concentration (mg/kg)
KB-1	KB-1@5'	3	5	<11.1
KB-2	KB-2@5'	3	5	93
KB-3	KB-3@15'	3	15	7.1 J
KB-4	KB-4@10'	3	10	<10.2
KB-5	KB-5@19'	3	19	<11.7
KB-6	-	3	-	-
KB-7	KB-7@10'	3	10	<10.2
KB-8	**KB-8@10'**	**3**	**10**	**220**
KB-9	KB-9@5'	3	5	<12.7
KB-10	KB-10@5'	3	5	8.6 J
KB-11	KB-11@15'	3	15	<10.3
KB-12	**KB-12@5'**	**2**	**5**	**3,400**
KB-13	KB-13@5'	2	5	190
KB-14	KB-14@10'	2	10	200
KB-15	KB-15@5'	1	5	86
KB-16	-	1	-	-
KB-17	**KB-17@5'**	**1**	**5**	**24,000**
KB-18	-	1	-	-

TRPH: total recoverable petroleum hydrocarbon
bgs: below ground surface
mg/kg: milligram per kilogram
<: not detected above reporting limit
-: no sample collected
J: laboratory estimated concentration above method detection limit, but less than reporting limit
BOLD: three highest reported concentrations

The samples with the three highest reported concentrations of TRPH were further analyzed for TPH-g and TPH-d, pesticides, PCBs, VOCs and SVOCs. Table 5 summarizes the results of the additional analyses.

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Table 5
Summary of Additional Analytical Results

EPA Analytical Test Method	Chemical Analysis	Constituent Detected	Sample Name		
			KB-8@10'	KB-12@5'	KB17@5'
EPA 418.1	TRPH	TRPH	**220 mg/kg**	**3,400 mg/kg**	**24,000 mg/kg**
EPA 8015M	TPH-d TPH-g	TPH-d	**260 mg/kg**	**3,100 mg/kg**	**5,100 mg/kg**
		TPH-g	<1.1 mg/kg	<1.1 mg/kg	**14 mg/kg**
EPA 8081A	Pesticides	alpha-BHC	<11 ug/kg	**3.6 ug/kg J**	<31 ug/kg
		beta-BHC	<11 ug/kg	**5.4 ug/kg J**	<31 ug/kg
		gamma-BHC	<11 ug/kg	**7 ug/kg J**	<31 ug/kg
		alpha-Chlordane	**4.9 ug/kg J**	**8.4 ug/kg J**	<31 ug/kg
		gamma-Chlordane	**5.1 ug/kg J**	**8.9 ug/kg J**	**4.7 ug/kg J**
		4,4'-DDD	<22 ug/kg	**5.8 ug/kg J**	<62 ug/kg
		4,4'-DDE	<22 ug/kg	**13 ug/kg J**	<62 ug/kg
		4,4'-DDT	<22 ug/kg	**11 ug/kg J**	<62 ug/kg
		Dieldrin	<22 ug/kg	**3.6 ug/kg J**	<62 ug/kg
		Endrin Aldehyde	<22 ug/kg	**11 ug/kg J**	<62 ug/kg
		Endrin Ketone	<22 ug/kg	**16 ug/kg J**	<62 ug/kg
		Methoxychlor	<110 ug/kg	**28 ug/kg J**	<310 ug/kg
EPA 8082	PCBs	NA	ND	ND	ND
EPA 8260B	VOCs	Acetone	<22 ug/kg	<22 ug/kg	**6.6 ug/kg J**
EPA 8270C	SVOCs	NA	ND	ND	ND

TRPH: total recoverable petroleum hydrocarbon
TPH-d: total petroleum hydrocarbon as diesel
TPH-g: total petroleum hydrocarbon as gasoline
PCB: polychlorinated biphenyl
VOC: volatile organic compound
SVOC: semivolatile organic compound
BHC: benzenehexachloride
DDD: dichlorodiphenyldichloroethane
DDE: dichlorodiphenyldichloroethylene
DDT: dichlorodiphenyltrichloroethane

mg/kg: milligrams per kilogram
ug/kg: micrograms per kilogram
NA: not applicable, no constituents detected
ND: not detected, no constituents detected
<: not detected above reporting limit
BOLD: constituent detected
J: laboratory estimated concentration greater than method detection limit, but less than reporting limit

Based on these results, there were no detectable concentrations of PCBs or SVOCs, but there were detectable concentrations of TPH-d, TPH-g, pesticides, and VOCs. The detectable concentrations of pesticides and VOCs are all below the applicable EPA Region 9 residential preliminary remediation goals (rPRGs).

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5.3 GEOTECHNICAL LABORATORY TEST RESULTS

A total of 25 samples were collected and submitted for grain size distribution and Atterberg limits testing. A summary of all of the test results is presented in Table D1 in Appendix D. Atterberg limit test results are presented on Figures D1 through D3. A compilation of all of the grain size distribution curves is shown on Figure D4, along with the mean (average) and mean plus/minus 1.5 times the standard of deviation of all of the results. Grain size distribution curves for individual samples are shown on Figures D5 through D29. The results of the laboratory testing were used to aid in evaluating soil classifications in accordance with the Unified Soil Classification System (ASTM D 2487).

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6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our subsurface investigation, geotechnical and environmental laboratory testing, and data analysis, we make following conclusions and recommendations.

- Kleinfelder applied the ELIPGRID program to calculate that 18 soil boring locations can be placed over the 120 acres that comprise the fill areas. Eighteen (18) locations were chosen as an effective balance between controlling cost and assessing the fill material. With 18 sampling locations there will be a 50% chance of hitting a 30-foot diameter area or layer of "non-useable fill."
- Soil may be classified as hazardous if the soil concentration for metals exceeds TTLC regulatory limits. Or, if the soil concentration is greater than 10x the soluble threshold limit concentration STLC, the soil may be classified as hazardous. The highest detected metal concentrations of metals reported are below the TTLC and 10 x STLC regulatory limits. Therefore, the risk of fill being designated hazardous due to metals is low.
- Based on laboratory results, there were no detectable concentrations of PCBs or SVOCs. There were detectable concentrations of TPH-d, TPH-g, pesticides, and VOCs. However, the detectable concentrations of pesticides and VOCs are below the EPA Region 9 rPRG values. Therefore, the risk of fill being designated hazardous due to organic compounds is low.
- Grain size distribution analyses and Atterberg limit tests were performed on select samples to aid in soil classification and to assess soil engineering properties. These results are presented in Appendix D. The geotechnical test results indicate that the soils are predominately granular, are relatively low in plasticity, and have a low potential for expansion upon wetting.
- From a geotechnical standpoint, it is our opinion that the material tested is generally suitable for a range of engineered fill applications. In Kleinfelder's experience, we have seen similar material used for the following typical applications:
  - Fill for embankments supporting roadways or buildings
  - Backfill for retaining walls
  - Backfill for utility trenches
  - Daily cover for landfills

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- The suitability of the material for a particular application or project should be determined by the party (or their consultant) that wishes to use the material, considering the boring logs, laboratory test results and report text descriptions/discussions presented herein. Depending upon the specific requirements of the proposed application or project, additional testing and/or evaluation of the material might be necessary.
- Based on observations within the boring performed for this study, isolated cobbles (material ranging in size from 3 to 12 inches in diameter) and beds of cobbles likely exist within the fill material at the site. The significant number of boring refusals is an indicator of cobble and/or concrete debris distrubution in the fill. Note that cobble-size materials are not shown on the grain size distribution tests since the they exceed the diameter of the sampler that was used. Cobbles exceeding 4 to 6 inches in diameter may need to be screened from material used as engineered fill, depending upon the requirements of the specific application.
- Without processing, the material tested does not meet gradation requirements for special construction materials such as aggregate base for roadways or sand/aggregate for Portland cement concrete as defined by the Caltrans Standard Specifications and the Greenbook Standard Specifications for Public Works Construction.

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7.0 LIMITATIONS

Kleinfelder has performed the services for this project in accordance with our contract with the Lakeside Conservancy and with the current practices in this geographic area for site assessment investigations. No guarantees are either expressed or implied. There is no investigation which is thorough enough to preclude the presence of materials at the site which presently, or in the future may be considered hazardous. Because regulatory evaluation criteria change, acceptable concentrations of contaminants present at the time of investigation may in the future become subject to different regulatory standards.

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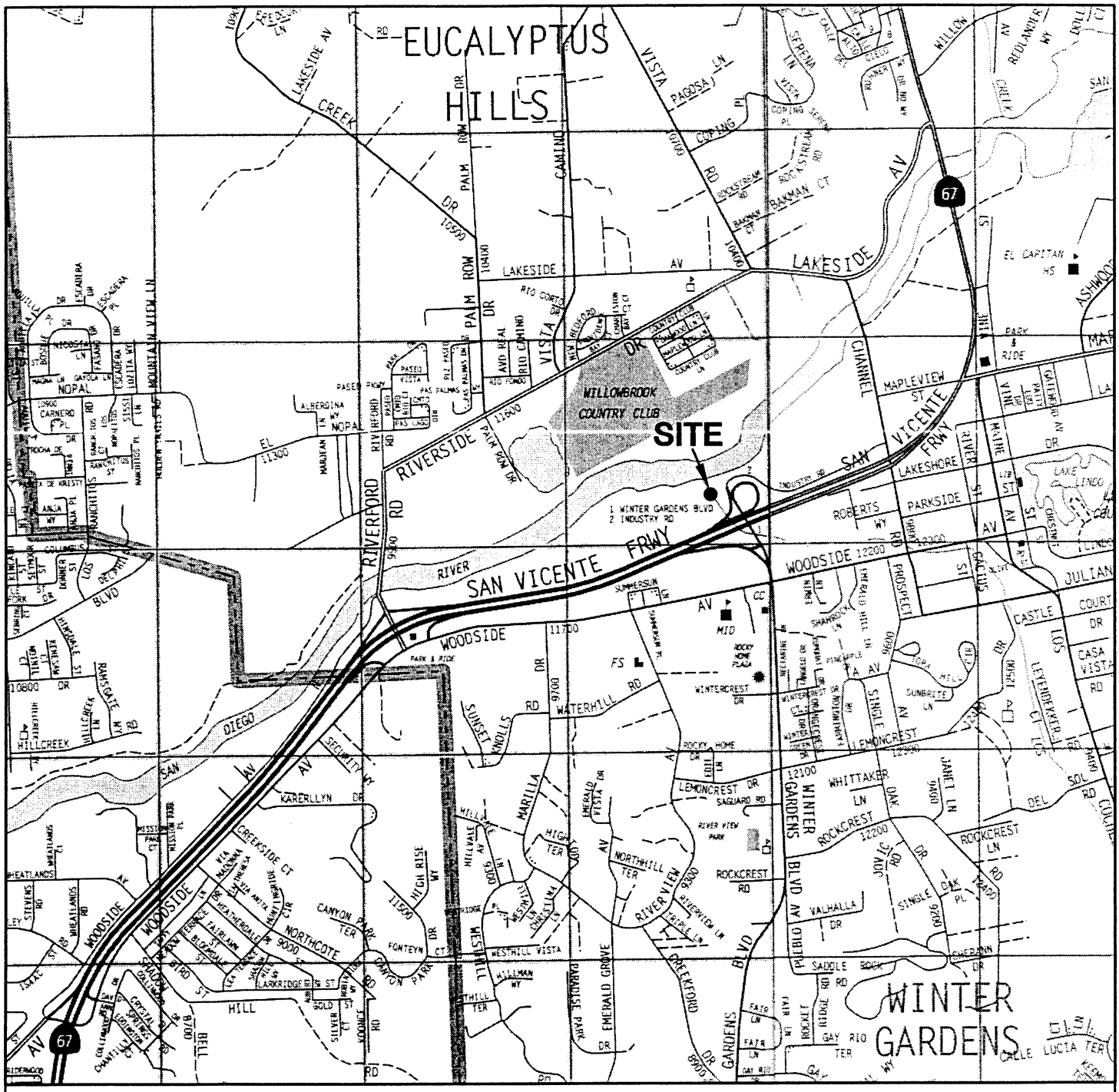
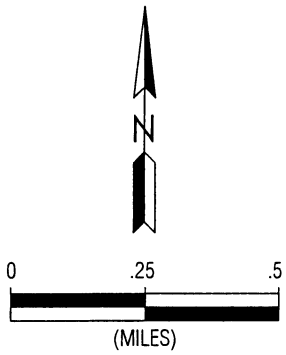
FIGURES





KLEINFELDER

5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: MV	FN: 44102VIC
PROJECT NO. 44102	DATE: 07/2004

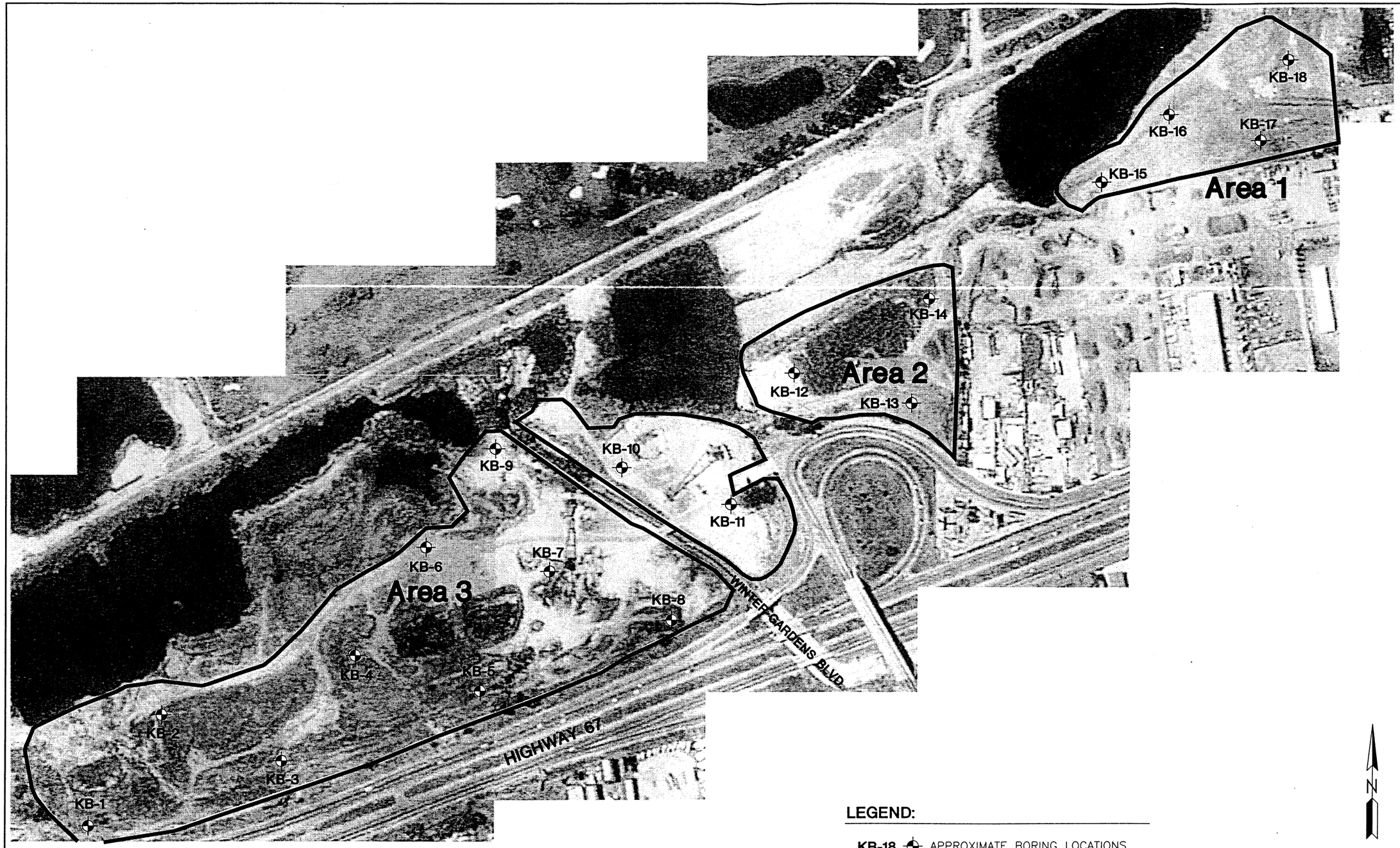
VICINITY MAP

LAKESIDE CONSERVANCY FILL

LAKESIDE, CALIFORNIA

FIGURE

1



LEGEND:

KB-18 APPROXIMATE BORING LOCATIONS

FILL AREA

N

0 25 50

APPROXIMATE GRAPHIC SCALE (FEET)

KLEINFELDER 5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	**SITE PLAN** **LAKESIDE CONSERVANCY FILL** **LAKESIDE, CALIFORNIA**	FIGURE **2**
CHECKED BY: MV / PROJECT NO. 44102	FN: 44102SITE / DATE: 07/2004	

APPENDIX A

Soil Boring Logs

APPENDIX A
BORING LOG LEGEND AND LOG OF BORINGS

The geotechnical test boring program for the proposed project consisted of the excavation and logging of 18 hollow-stem auger borings. The borings were advanced to depths ranging from 5 to 19.5 feet below existing grades. Figure 2 presents the approximate locations of the borings.

The Logs of Borings are presented as Figures KB-1 through KB-18. A USCS chart and a Boring Log Legend are presented as Figures A1 and A2, respectively. The Logs of Borings describe the earth materials encountered, samples obtained, and show field and laboratory tests performed. The logs also show the general location, boring number, drilling date, and the names of the logger and drilling subcontractor. The borings were logged by an engineer using the Unified Soil Classification System. The boundaries between soil types shown on the logs are approximate because the transition between different soil layers may be gradual. Bulk and intact samples of representative earth materials were obtained from the borings.

Soil samples were obtained from the borings using a modified California sampler (2.5-inch outer diameter, 1.9-inch inner diameter) generally driven 18 inches into undisturbed soil using a 140-pound hammer dropped 30 inches. The soil sampled by the California sampler was retained in 6-inch long brass tubes for laboratory testing. Blow counts recorded at the end of three consecutive 6-inch intervals for each sample are shown on the logs. Please note that the blow counts shown on the Log of Borings have not been adjusted for the effects of overburden pressure, input driving energy, rod length, sampler correction, or boring diameter correction.

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MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

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FN:
PROJECT NO.
DATE: 05/2004

SOIL CLASSIFICATION CHART

FIGURE
A1

LOG SYMBOLS:

BULK/BAG SAMPLE

MODIFIED CALIFORNIA SAMPLER
(2–1/2 inch outside diameter)

CALIFORNIA SAMPLER
(3 inch outside diameter)

STANDARD PENETRATION
SPLIT SPOON SAMPLER
(2 inch outside diameter)

NO SAMPLE RECOVERY

SHELBY TUBE

WATER LEVEL
(level after completion)

WATER LEVEL
(level where first encountered)

ABBREVIATIONS:

SA – (41%) SIEVE ANALYSIS (PERCENT PASSING #200 SIEVE)
WA – (38%) – ONE POINT GRAIN SIZE ANALYSIS (PERCENT PASSING #200 SIEVE)
PI – PLASTICITY INDEX
LL – LIQUID LIMIT
DS – DIRECT SHEAR TEST
'R' – R–VALUE TEST
CORR – CORROSIVITY TEST
EI – UBC EXPANSION INDEX
LC – LABORATORY COMPACTION TEST
M&D – MOISTURE & DENSITY
PP – POCKET PENETROMETER

GENERAL NOTES:

1. *Lines separating strata on the logs represent approximate boundaries only. Actual transitions may be gradual.*
2. *No warranty is provided as to the continuity of soil conditions between individual sample locations.*
3. *Logs represent general soil conditions observed at the point of exploration on the date indicated.*
4. *In general, Unified Soil Classification designations presented on the logs were evaluated by visual methods only. Therefore, actual designations (based on laboratory tests) may vary.*

CONSISTENCY CRITERIA BASED ON FIELD TESTS

RELATIVE DENSITY	SPT* (# blows/ft)	RELATIVE DENSITY (%)
Very Loose	<4	0 – 15
Loose	4 – 10	15 – 35
Medium Dense	10 – 30	35 – 65
Dense	30 – 50	65 – 85
Very Dense	>50	85 – 100

		TORVANE	POCKET** PENETROMETER
CONSISTENCY	SPT (# blows/ft)	UNDRAINED SHEAR STRENGTH (tsf)	UNCONFINED COMPRESSIVE STRENGTH
Very Soft	<2	<0.13	<0.25
Soft	2 – 4	0.13 – 0.25	0.25 – 0.5
Medium Stiff	4 – 8	0.25 – 0.5	0.5 – 1.0
Stiff	8 – 15	0.5 – 1.0	1.0 – 2.0
Very Stiff	15 – 30	1.0 – 2.0	2.0 – 4.0
Hard	>30	>2.0	>4

* NUMBER OF BLOWS OF 140 POUNDS HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1 3/8 INCH I.D.) SPLIT BARREL SAMPLER (ASTM–1386 STANDARD PENETRATION TEST)

** UNCONFINED COMPRESSIVE STRENGTH IN TONS/SQ. FT. READ FROM POCKET PENETROMETER

MOISTURE CONTENT

DESCRIPTION	FIELD TEST
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

CEMENTATION

DESCRIPTION	FIELD TEST
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

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CHECKED BY:
FN:

KEY TO LOGS

FIGURE
A2

PROJECT NO.: 44102	LOG OF BORING KB-1	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG #2232	▽ na / *na*	
			▼ na / *na*	

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM), dark brown (10YR 3/3), damp to moist, loose, fine to medium grained with trace gravel, 30% to 40% fines, no odor
5	7 10 7	■	KB-12.5'		0.0		@ 5' Same, medium dense
10	10 10 10	■			0.0		@ 10' Same as above, brown (10 YR 4/3), no odor
15	10 17 20	■			0.0		@ 15' Same as above, dense, fine sand, no odor
	5 8 12	■			0.0		**ALLUVIUM:**
20							@ 19' WELL GRADED SAND (SW), yellowish brown (10 YR 5/6), damp, medium dense, fine to coarse grained with trace gravel, <5% fines, no odor Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-1

PROJECT NO.: 44102	LOG OF BORING KB-2	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 8.0 ft

DATE						
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

MM #2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: POORLY GRADED SAND with SILT (SP-SM), dark brown (10 YR 4/2), damp to moist, loose, fine to coarse sand with some gravel, 5% to 10% fines, no odor
							@ 3' cobble
5	4 4 4		KB-2@5'		0.0		
							@ 8' refusal, move 5' offset and restart
							Refusal at 3'
							Bottom of boring 8 feet
							Boring backfilled with cuttings
10							
15							
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-2

PROJECT NO.: 44102	LOG OF BORING KB-3	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#1232 MJ

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: POORLY GRADED GRAVEL with SAND (GP), very dark brown (10 YR 2/2), loose, damp to moist, medium to coarse grained with >5% fines, no odor
5	13 4 10				0.0		
10	14 14 20				0.0		@ 10' SILTY SAND (SM), brown (10 YR 5/2), damp, medium dense, fine to medium grained, medium dense, >20% fines, no odor
15	9 9 17		KB-3@15'		0.0		@ 15' Same as above, decrease fines, increased sand, medium dense, <15% fines, no odor
	3 3 4				0.0		SILT with SAND (MH), brown (10 YR 5/2), damp, soft, no odor
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-3

PROJECT NO.: 44102	LOG OF BORING KB-4	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

AM #2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND with GRAVEL (SM), brown (10 YR 6/3), dry to damp, loose, fine to coarse grained with some gravel, 15% to 25%
5	31 21 24				0.0		@ 5' Same as above, dense
10	21 13 14		KB-4@10'		0.0		@ 10' Same as above, decrease gravel, increase sand, 15% to 25% fines, medium dense, no odor
15	4 27 17				0.0		@ 15' SILTY SAND (SM), (10 YR 4/6), damp to moist, dense, fine to medium grained with some lenses of fines, trace gravel, no odor
	13 11 17				0.0		@ 19 Same as above, medium dense
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

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5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-4

PROJECT NO.: 44102	LOG OF BORING KB-5	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: POORLY GRADED SAND with GRAVEL (SP), brown (10 YR 5/2), dry to damp, loose, fine to coarse grained sand with gravel and cobbles, <5% fines, some wood and roots, no odor
							@ 3' Gravel and cobbles?
5	12 19 32	■			0.0		@ 5' Same as above, dense
							@ 8' Gravel and cobbles?
10	5 9 12	■			0.0		@ 10' SILTY SAND (SM), dark brown (10 YR 2/2), damp to moist, medium dense, fine to coarse grained, 10% to 20% fines, no odor
15	8 8 8	■			0.0		@ 15' Same as above, no odor
	2 6 8	■	KB-5@19'		0.0		@ 19' Same as above, fine to medium grained, 40% to 50% fines, some iron oxide nodules, no odor
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

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SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-5

PROJECT NO.: 44102	LOG OF BORING KB-6	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE						GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
	STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter			▼ na / *na*	
	COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded				▽ na / *na*	
	BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG			▼ na / *na*	

#2232 JPL

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM) with gravel, dark brown (10 YR 3/2), damp to moist, fine to medium grained sand with gravel and cobbles, loose, >15% fines, no odor
							@ 3' Gravel and cobbles?
5	24 11 14	■			0.0		@ 5' Same as above, medium dense
10	4 12 12				N/A		@ 10' No recovery
							@ 13' Gravel and cobbles?
15	10 8 7	■			0.0		@ 15' Same as above, too little recovery for sample, gravel and cobbles?
	1 1 3				N/A		@ 19' No recovery, same as above (cuttings at 19')
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

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5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-6

PROJECT NO.: 44102	LOG OF BORING KB-7	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE						GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
	STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter			na / *na*	
	COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded				na / *na*	
	BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG			na / *na*	

#2232 gpj

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM), dark brown (10 YR 2/1), dry to damp, loose, fine to medium sand with trace gravel, >15% fines, no odor
5	5 7 9				0.0		SILTY SAND (SM), brown (10 YR 4/6), dry to damp, medium dense, fine to medium sand, 20%-30% fines, no odor
10	15 11 9		KB-7@10'		0.0		@ 10' Same as above, coarse sand, no odor
15	6 8 9				0.0		No recovery but likely same as above
	11 13 19				0.0		No recovery but likely same as above
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
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SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-7

PROJECT NO.: 44102	LOG OF BORING KB-8	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 12.0 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232 JL

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM), dark brown (10 YR 2/1), damp, fine to coarse grained with some gravel and cobbles, 30% to 40%
5	50/1"	■			0.0		@ 5' rock/cobble, break through with auger
10	10 7 7	■	KB-8@10'		0.0		@ 10' Same as above, decreased fines, medium dense
							Refusal at 12 feet Bottom of boring 12 feet Boring backfilled with cuttings
15							
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-8

PROJECT NO.: 44102	LOG OF BORING KB-9	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE						
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	na / *na*	
			na / *na*	

#2232 JJL

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM), dark brown (10 YR 3/3), damp to moist, loose, fine to medium grained, 20% to 30% fines, no odor
5	7 10 9		KB-9@5'		0.0		@ 5' Same as above, medium dense
10	30 34 20				0.0		@ 10' Same as above, dense, 30% to 40% fines, no odor
15	12 31 40				0.0		@ 15' Same as above, 20% to 30% fines, fine to medium grained sand, dense, no odor
	15 15 15				0.0		@ 19' Same as above, loose to medium dense
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-9

PROJECT NO.: 44102	LOG OF BORING KB-10	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 12.0 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM), brown (10 YR 4/3), dry to damp, loose, fine to coarse grained sand with some gravel, 20% to 30% fines, no odor
5	6 6 5	■	KB-10@5'		0.0		@ 5' Same as above
10	3 7 50/2"	■			0.0		@ 10' Same as above, damp to moist, some silt lenses, no odor
							Refusal at 12 feet
							Bottom of boring 12 feet
							Boring backfilled with cuttings
15							
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-10

PROJECT NO.: 44102	LOG OF BORING KB-11	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM), brown (10 YR 5/3), dry to damp, very loose to loose, very fine to medium grained sand, <15% fines, no odor
5	5 3 5				0.0		@ 5' SILTY SAND (SM), brownish gray (10 YR 6/2), dry to damp, loose, fine to coarse grained sand, 20% to 40% fines
10	9 11 12				0.0		@ 10' Same as above, some fine gravel, medium dense, no odor
15	5 8 8		KB-11@15'		0.0		@ 15' Same as above, no gravel, decrease in fines, medium dense, fine to medium grained sand, damp to moist, no odor
	7 8 7				0.0		@ 19' Same as above, moist, no odor, fine to coarse grained sand
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-11

PROJECT NO.: 44102	LOG OF BORING KB-12	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 18.0 ft

DATE					GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
	STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter		▼ na / *na*	
	COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt overgrown with weeds			▽ na / *na*	
	BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG		▼ na / *na*	

Qty #2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM), dark brown (10 YR 3/4), damp, loose to medium dense, fine to medium grained with gravel, 15% to 40% fines
5	14 50/4"	■	KB-12@5'		0.0		@ 6' Same as above, increase gravel and cobbles (asphalt?), medium dense to dense, no odor
10	50/5"				N/A		@ 10' No recovery
15	12 8 7				N/A		@ 15' No recovery, same as above (cuttings)
							@ 18' No recovery, sampling rod could not clear augers Bottom of boring 18 feet Boring backfilled with cuttings
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-12

PROJECT NO.: 44102	LOG OF BORING KB-13	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 11.0 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt overgrown with weeds		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232 9/7

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY GRAVEL (GM), dark gray (10 YR 3/1), damp, medium dense to dense, fine to medium sand, <15% fines, no odor
							@ 3' Gravelly
5	12 19 32		KB-13@5'		0.0		SILTY SAND (SM), dark gray (10 YR 3/1), damp, dense, fine to coarse sand, 20% to 30% fines, no odor
10	50/4"				0.0		@ 10' Same as above
							Refusal at 11 feet Bottom of boring 11 feet Boring backfilled with cuttings
15							
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-13

PROJECT NO.: 44102	LOG OF BORING KB-14	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE					GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
STARTED:	05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter		na / *na*	
COMPLETED:	05/17/2004	SURFACE CONDITIONS: Dirt			na / *na*	
BACKFILLED:	N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG		na / *na*	

OPL #2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM), dark brown (10 YR 3/3), dry to damp, loose to medium dense, fine to coarse grained sand with some gravel, 20% to 40% fines, no odor
5	24 13 10				0.0		@ 5' Same as above, medium dense
10	5 18 17		KB-14@10'		0.0		@ 10' Same as above with some cobbles, no odor
15	5 11 11				0.0		**ALLUVIUM:** @ 15' SILTY SAND (SM), olive (5 Y 3/2), moist to wet, medium dense, fine to medium sand, 10% to 20% fines, no odor
	3 3 4				0.0		@ 19' Same as above, loose
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-14

PROJECT NO.: 44102	LOG OF BORING KB-15	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: West of Channel at Mapleview, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 15.0 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt with construction debris		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2252 gp

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY GRAVEL (GM), dark brown (10 YR 3/2), damp, loose, fine sand with some cobble, <20% fines, no odor
5	1 4 8		KB-15@5'		0.0		@ 5' Same as above
10	50/5"				0.0		SILTY SAND (SM), dark brown (10 YR 3/2), damp, dense, fine to coarse sand, 29% fines, some gravel and cobbles, no odor
15	50/5"				N/A		@ 15' No recovery, same as above (cuttings) Refusal at 15 feet Bottom of boring 15 feet Boring backfilled with cuttings
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER

5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE

KB-15

PROJECT NO.: 44102	LOG OF BORING KB-16	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: West of Channel at Mapleview, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 11.0 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt with construction debris		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

QA/L #2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
					0.0		**FILL:** SILTY SAND (SM), dark brown (10 YR 3/2), dry to damp, medium dense to dense, with probable cobbles, fine to coarse sand, some gravel,10% to 20% fines, no odor (cuttings)
5	50/3"				N/A		@ 5' No recovery, same as above (cuttings)
10	50/3"				N/A		@ 10' No recovery, same as above (cuttings)
							Refusal at 11 feet Bottom of boring 11 feet Boring backfilled with cuttings
15							
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-16

PROJECT NO.: 44102	LOG OF BORING KB-17	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: West of Channel at Mapleview, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 10.0 ft

DATE						GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
	STARTED:	05/17/2004	DRILLING COMPANY:	Jet Drilling	BOREHOLE DIAMETER: 6" diameter	▼ na / *na*	
	COMPLETED:	05/17/2004	SURFACE CONDITIONS:	Dirt with construction debris		▽ na / *na*	
	BACKFILLED:	N/A	LOGGED BY:	W. Chiu	REVIEWED BY: J. Lord, CEG	▼ na / *na*	

#2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL: SILTY SAND (SM), dark brown (10 YR 2/2), damp, medium dense to dense, fine to coarse sand with some gravel, 10% to 25% fines, no odor
5	12 31 42		KB-17@5'		0.0		@ 5' Same as above
10	50/6"						@ 10' Same as above, increased gravel, no odor Refusal at 10 feet Bottom of boring 10 feet Boring backfilled with cuttings
15							
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-17

PROJECT NO.: 44102	LOG OF BORING KB-18	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: West of Channel at Mapleview, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 5.0 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt with construction debris		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

JK #2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	Type	ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
					0.0		**FILL:** SILTY SAND with GRAVEL (SM), dark gray (10 YR 3/1), damp, fine to coarse grained sand with probable cobbles, 10% to 25% fines, no odor
5							@ 5' cobbles No recovery, sampler could not clear auger Refusal at 5 feet Bottom of boring 5 feet Boring backfilled with cuttings
10							
15							
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-18

APPENDIX B

Laboratory Reports and Chain-Of-Custody Documents

TABLE OF CONTENTS

CLIENT: **KLEINFELDER**

PROJECT: **LAKESIDE CONSERVANCY FILL**

SDG: **04E159A**

SECTION		PAGE
Cover Letter, COC/Sample Receipt Form		1000 – 1004
GC/MS-VOA	SW 5030B/8260B	2000 – 2011
GC/MS-SVOA	SW 3550B/8270C	3000 – 3009
GC-VOA	METHOD 5030B/M8015	4000 – 4006
GC-SVOA	METHOD 3550B/M8015 SW3550B/8081A SW3550B/8082	5000 – 5009 5010 – 5019 5020 – 5029
HPLC	**	6000 –
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 06-10-2004
EMAX Batch No.: 04E159A

Attn: Jacques Lord

Kleinfelder
5015 Shoreham Place
San Diego CA 92122

Subject: Laboratory Report
Project: Lakeside Conservancy Fill

Enclosed is the Laboratory report for samples received on 05/19/04. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
KB-8@10'	E159-07	05/17/04	SOIL	TPH DIESEL
				TPH GASOLINE
				POLYCHLORINATED BIPHENYLS (PCBS)
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILE ORGANICS BY GCMS
				VOLATILE ORGANICS BY GC/MS
KB-12@5'	E159-11	05/17/04	SOIL	TPH DIESEL
				TPH GASOLINE
				POLYCHLORINATED BIPHENYLS (PCBS)
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILE ORGANICS BY GCMS
				VOLATILE ORGANICS BY GC/MS
KB-17@5'	E159-15	05/17/04	SOIL	TPH DIESEL
				TPH GASOLINE
				POLYCHLORINATED BIPHENYLS (PCBS)
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILE ORGANICS BY GCMS
				VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Y. Pang, Ph.D.
Laboratory Director

CHANGE ORDER FORM

SDG 04E159A TAT 14 days Project Code KL_0401

Requested by Jenny Date Requested 5/25/04 Due Date 6/8/04

Analytical Requirements				
AXO	EMAX Control Number	Sample Prep. Methods	Analytical Methods	Special Instructions
A	E159-07	3550B	8015M	Diesel
	E159-11	5030B	8015M	Gasoline
	cancel per client JT 5/25/04 ~~E159-12~~	3550B	8082	PCBs
	cancel per client JT 5/25/04 ~~E159-13~~	3550B	8081A	Pesticides
	E159-15	3550B	8270C	Semivolatiles
		5030B	8260	Volatiles

A-additional
X-cancelled
O-others (specify)

OPENED ADDITIONAL FOLDERS FOR: 8015-D; 8015-G; PCB's; PESTIC. 8270; 8260 ANALYSIS.

05.25.04.
S. S.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: (310) 618-8889 Fax #: (310) 618-0818
Email: info@emaxlabs.com

PO NUMBER: 44102 PW1
SAMPLE STORAGE: N/A B3
EMAX CONTROL NO. *: 04E159
PROJECT CODE: N/A

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL (PROJECT No. 44102)
COORDINATOR: JACQUES LORD
TEL: 858 320 2206 FAX: 858 320 2001 EMAIL: jlord@kleinfelder.com
SEND REPORT TO: JACQUES LORD
COMPANY: KLEINFELDER
ADDRESS: 5015 SHOREHAM PLACE, SAN DIEGO, CA 92122
EMAX PM:

MATRIX CODE	PRESERVATIVE CODE
DW= Drinking Water	IC=Ice
GW=Ground Water	HC=HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: Title 22 Metals (6010B/7470); TRPH (418.1)*; TPHg & TPHd (8015M)*; VOCs - Full Scan (8260B)*; SVOCs - Full Scan (8270C)*; Pesticides (8081A)*; PCBs (8082)*

TAT:
- ☐ Rush ____ hrs.
- ☐ Rush ____ days
- ☒ 7 days TRPH
- ☐ 14 days
- ☐ 21 days
- ☒ 30 days OTHERS
- ☐ ____ days
- ☐

	SAMPLE ID LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	SAMPLING DATE	SAMPLING TIME	CONTAINER NO.	CONTAINER SIZE	CONTAINER TYPE	MATRIX CODE	QC	PRESERVATIVE CODE IC	PRESERVATIVE CODE IC	COMMENTS
1	1	KB-1 @ 5'		5/17/04		2	2"x3"	BRASS SLEEVE	SS		X	X	* IF TRPH IS DETECTED ANALYZE SAMPLE FOR:
2	2	KB-2 @ 5'		↓		↓	↓	↓	↓		↓	↓	• TPHg & TPHd
3	3	KB-3 @ 15'											• VOCs
4	4	KB-4 @ 10'											• SVOCs
5	5	KB-5 @ 19'											• PESTICIDES
	6	~~KB-6~~ MT											• PCBs
6	7	KB-7 @ 10'											
7	8	KB-8 @ 10'											
8	9	KB-9 @ 5'											
9	10	KB-10 @ 5'		↓		↓	↓	↓	↓		↓	↓	

Instructions: SEND RESULTS TO JACQUES LORD

Cooler #	Temp. (°C)
1	3.5

Sample #s:

SAMPLER:

COURIER/AIRBILL: UPS

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	5/18/04	12:00	[signature]
	5/19/04	1000	

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

GRAPHICS EXPRESS (626) 330-8585

1002

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: (310) 618-8889 Fax #: (310) 618-0818
Email: info@emaxlabs.com

PO NUMBER: 44102 FWI
SAMPLE STORAGE: B3
EMAX CONTROL NO.* 04E159
PROJECT CODE:

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL (PROJECT No. 44102)
COORDINATOR: JACQUES LORD
TEL: 858 320 2206 FAX: 858 320 2001 EMAIL: jlord@kleinfelder.com
SEND REPORT TO: JACQUES LORD
COMPANY: KLEINFELDER
ADDRESS: 5015 SHOREHAM PLACE, SAN DIEGO, CA 92122
EMAX PM:

MATRIX CODE	PRESERVATIVE CODE
DW= Drinking Water	IC=Ice
GW=Ground Water	HC=HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/Sediment	ST=Na2S2O3
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H2SO4
O=	

ANALYSIS REQUIRED: Title 22 Metals (6010B/7470) | TRPH (418.1)* | TPHg & TPHd (8015M)* | VOCs - Full Scan (8260B)* | SVOCs - Full Scan (8270C)* | Pesticides (8081A)* | PCBs (8082)*

TAT:
- ☐ Rush ____ hrs.
- ☐ Rush ____ days
- ☒ 7 days TRPH
- ☐ 14 days
- ☐ 21 days
- ☒ 30 days OTHERS
- ☐ ____ days
- ☐

	LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	DATE	TIME	CONTAINER NO.	SIZE	TYPE	MATRIX CODE	QC	Title 22 Metals (6010B/7470) IC	TRPH (418.1)* IC	TPHg & TPHd (8015M)*	VOCs - Full Scan (8260B)*	SVOCs - Full Scan (8270C)*	Pesticides (8081A)*	PCBs (8082)*	COMMENTS
10	* 1	KB-11@15'		5/17/04		2	2"x3"	BRASS SLEEVE	SS		X	X						* TRPH is detected
11	* 2	KB-12@5'		↓		↓	↓	↓	↓		↓	↓						Analyze sample for:
12	* 3	KB-13@5'		↓		↓	↓	↓	↓		↓	↓						• TPHg & TPHd
13	* 4	KB-14@10'		↓		↓	↓	↓	↓		↓	↓						• VOCs
14	* 5	KB-15@5'		↓		↓	↓	↓	↓		↓	↓						• SVOCs
15	* 6	KB-17@5'		↓		↓	↓	↓	↓		↓	↓						• Pesticides
	* 7																	• PCBs
	* 8																	
	* 9																	
	* 0																	

Instructions

Cooler #	Temp. (°C)	Sample #s

SAMPLER

COURIER/AIRBILL

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	5/18/04	12:00	UPS
	5-19-04	1000	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

GRAPHICS EXPRESS (626) 330-8585

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 04E159A

2000

CASE NARRATIVE

CLIENT: **KLEINFELDER**

PROJECT: **LAKESIDE CONSERVANCY FILL**

SDG: **04E159A**

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Three (3) soil samples were received on 05/19/04 for Volatile Organic analysis by Method 5030B/8260B in accordance with USEPA SW846, 3RD ed.

1. Holding Time

   Analytical holding time was met.

2. Tuning and Calibration

   Tuning and calibration were carried out at 12-hour interval. All QC requirements were met.

3. Method Blank

   Method blanks were free of contamination at the reporting limit.

4. Surrogate Recovery

   Recoveries were within QC limit.

5. Lab Control Sample/Lab Control Sample Duplicate

   Recoveries were within QC limit.

6. Matrix Spike/Matrix Spike Duplicate

   No MS/MSD sample was designated in this SDG.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   The internal standards in E159-15 had low recoveries, sample was reanalyzed and the third IS was still out of QC. Only the reanalysis was reported.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : T-006

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	V006E15Q	1	NA	05/27/0408:59	05/27/0408:59	REW318	REW259	V006E15	Method Blank
LCS1S	V006E15L	1	NA	05/27/0407:03	05/27/0407:03	REW315	REW259	V006E15	Lab Control Sample (LCS)
LCD1S	V006E15C	1	NA	05/27/0407:42	05/27/0407:42	REW316	REW259	V006E15	LCS Duplicate
KB-8@10'	E159-07	1	8.5	05/27/0409:38	05/27/0409:38	REW319	REW259	V006E15	Field Sample
KB-12@5'	E159-11	1	9.4	05/27/0410:16	05/27/0410:16	REW320	REW259	V006E15	Field Sample
MBLK2S	V006E18Q	1	NA	05/29/0400:37	05/29/0400:37	REW359	REW259	V006E18	Method Blank
LCS2S	V006E18L	1	NA	05/28/0422:41	05/28/0422:41	REW356	REW259	V006E18	Lab Control Sample (LCS)
LCD2S	V006E18C	1	NA	05/28/0423:20	05/28/0423:20	REW357	REW259	V006E18	LCS Duplicate
KB-17@5'	E159-15R	1	3.3	05/29/0403:10	05/29/0403:10	REW363	REW259	V006E18	Field Sample

FN - Filename
% Moist - Percent Moisture

2002

SAMPLE RESULTS

© 2003

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 09:38
Sample ID:	KB-8@10'	Date Analyzed:	05/27/04 09:38
Lab Samp ID:	E159-07	Dilution Factor:	1
Lab File ID:	REW319	Matrix :	SOIL
Ext Btch ID:	VO06E15	% Moisture :	8.5
Calib. Ref.:	REW259	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.5	2.2
1,1,2,2-TETRACHLOROETHANE	ND	5.5	2.2
1,1,2-TRICHLOROETHANE	ND	5.5	2.2
1,1-DICHLOROETHANE	ND	5.5	2.2
1,1-DICHLOROETHENE	ND	5.5	2.2
1,2-DICHLOROETHANE	ND	5.5	2.2
1,2-DICHLOROPROPANE	ND	5.5	2.2
2-BUTANONE	ND	22	5.5
2-HEXANONE	ND	22	5.5
4-METHYL-2-PENTANONE	ND	22	5.5
ACETONE	ND	22	5.5
BENZENE	ND	5.5	2.2
BROMODICHLOROMETHANE	ND	5.5	2.2
BROMOFORM	ND	5.5	2.2
BROMOMETHANE	ND	11	3.3
CARBON DISULFIDE	ND	5.5	2.2
CARBON TETRACHLORIDE	ND	5.5	2.2
CHLOROBENZENE	ND	5.5	2.2
CHLOROETHANE	ND	11	3.3
CHLOROFORM	ND	5.5	2.2
CHLOROMETHANE	ND	11	5.5
CIS-1,2-DICHLOROETHENE	ND	5.5	2.2
CIS-1,3-DICHLOROPROPENE	ND	5.5	2.2
DIBROMOCHLOROMETHANE	ND	5.5	2.2
ETHYLBENZENE	ND	5.5	2.2
M/P-XYLENES	ND	11	3.3
MTBE	ND	5.5	2.2
METHYLENE CHLORIDE	ND	5.5	2.2
O-XYLENE	ND	5.5	2.2
STYRENE	ND	5.5	2.2
TETRACHLOROETHENE	ND	5.5	2.2
TOLUENE	ND	5.5	2.2
TRANS-1,2-DICHLOROETHENE	ND	5.5	2.2
TRANS-1,3-DICHLOROPROPENE	ND	5.5	2.2
TRICHLOROETHENE	ND	5.5	2.2
VINYL CHLORIDE	ND	5.5	2.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	103	54-154
4-BROMOFLUOROBENZENE	93	63-143
TOLUENE-D8	94	63-143

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 10:16
Sample ID:	KB-12@5'	Date Analyzed:	05/27/04 10:16
Lab Samp ID:	E159-11	Dilution Factor:	1
Lab File ID:	REW320	Matrix :	SOIL
Ext Btch ID:	V006E15	% Moisture :	9.4
Calib. Ref.:	REW259	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.5	2.2
1,1,2,2-TETRACHLOROETHANE	ND	5.5	2.2
1,1,2-TRICHLOROETHANE	ND	5.5	2.2
1,1-DICHLOROETHANE	ND	5.5	2.2
1,1-DICHLOROETHENE	ND	5.5	2.2
1,2-DICHLOROETHANE	ND	5.5	2.2
1,2-DICHLOROPROPANE	ND	5.5	2.2
2-BUTANONE	ND	22	5.5
2-HEXANONE	ND	22	5.5
4-METHYL-2-PENTANONE	ND	22	5.5
ACETONE	ND	22	5.5
BENZENE	ND	5.5	2.2
BROMODICHLOROMETHANE	ND	5.5	2.2
BROMOFORM	ND	5.5	2.2
BROMOMETHANE	ND	11	3.3
CARBON DISULFIDE	ND	5.5	2.2
CARBON TETRACHLORIDE	ND	5.5	2.2
CHLOROBENZENE	ND	5.5	2.2
CHLOROETHANE	ND	11	3.3
CHLOROFORM	ND	5.5	2.2
CHLOROMETHANE	ND	11	5.5
CIS-1,2-DICHLOROETHENE	ND	5.5	2.2
CIS-1,3-DICHLOROPROPENE	ND	5.5	2.2
DIBROMOCHLOROMETHANE	ND	5.5	2.2
ETHYLBENZENE	ND	5.5	2.2
M/P-XYLENES	ND	11	3.3
MTBE	ND	5.5	2.2
METHYLENE CHLORIDE	ND	5.5	2.2
O-XYLENE	ND	5.5	2.2
STYRENE	ND	5.5	2.2
TETRACHLOROETHENE	ND	5.5	2.2
TOLUENE	ND	5.5	2.2
TRANS-1,2-DICHLOROETHENE	ND	5.5	2.2
TRANS-1,3-DICHLOROPROPENE	ND	5.5	2.2
TRICHLOROETHENE	ND	5.5	2.2
VINYL CHLORIDE	ND	5.5	2.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	111	54-154
4-BROMOFLUOROBENZENE	107	63-143
TOLUENE-D8	91	63-143

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/29/04 03:10
Sample ID:	KB-17@5'	Date Analyzed:	05/29/04 03:10
Lab Samp ID:	E159-15R	Dilution Factor:	1
Lab File ID:	REW363	Matrix	: SOIL
Ext Btch ID:	V006E18	% Moisture	: 3.3
Calib. Ref.:	REW259	Instrument ID	: T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	2.1
1,1,2,2-TETRACHLOROETHANE	ND	5.2	2.1
1,1,2-TRICHLOROETHANE	ND	5.2	2.1
1,1-DICHLOROETHANE	ND	5.2	2.1
1,1-DICHLOROETHENE	ND	5.2	2.1
1,2-DICHLOROETHANE	ND	5.2	2.1
1,2-DICHLOROPROPANE	ND	5.2	2.1
2-BUTANONE	ND	21	5.2
2-HEXANONE	ND	21	5.2
4-METHYL-2-PENTANONE	ND	21	5.2
ACETONE	6.6J	21	5.2
BENZENE	ND	5.2	2.1
BROMODICHLOROMETHANE	ND	5.2	2.1
BROMOFORM	ND	5.2	2.1
BROMOMETHANE	ND	10	3.1
CARBON DISULFIDE	ND	5.2	2.1
CARBON TETRACHLORIDE	ND	5.2	2.1
CHLOROBENZENE	ND	5.2	2.1
CHLOROETHANE	ND	10	3.1
CHLOROFORM	ND	5.2	2.1
CHLOROMETHANE	ND	10	5.2
CIS-1,2-DICHLOROETHENE	ND	5.2	2.1
CIS-1,3-DICHLOROPROPENE	ND	5.2	2.1
DIBROMOCHLOROMETHANE	ND	5.2	2.1
ETHYLBENZENE	ND	5.2	2.1
M/P-XYLENES	ND	10	3.1
MTBE	ND	5.2	2.1
METHYLENE CHLORIDE	ND	5.2	2.1
O-XYLENE	ND	5.2	2.1
STYRENE	ND	5.2	2.1
TETRACHLOROETHENE	ND	5.2	2.1
TOLUENE	ND	5.2	2.1
TRANS-1,2-DICHLOROETHENE	ND	5.2	2.1
TRANS-1,3-DICHLOROPROPENE	ND	5.2	2.1
TRICHLOROETHENE	ND	5.2	2.1
VINYL CHLORIDE	ND	5.2	2.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	116	54-154
4-BROMOFLUOROBENZENE	115	63-143
TOLUENE-D8	100	63-143

QC SUMMARIES

2007

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/27/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 08:59
Sample ID:	MBLK1S	Date Analyzed:	05/27/04 08:59
Lab Samp ID:	V006E15Q	Dilution Factor:	1
Lab File ID:	REW318	Matrix :	SOIL
Ext Btch ID:	V006E15	% Moisture :	NA
Calib. Ref.:	REW259	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
2-BUTANONE	ND	20	5
2-HEXANONE	ND	20	5
4-METHYL-2-PENTANONE	ND	20	5
ACETONE	ND	20	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	10	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	10	3
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	10	5
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DIBROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
M/P-XYLENES	ND	10	3
MTBE	ND	5	2
METHYLENE CHLORIDE	ND	5	2
O-XYLENE	ND	5	2
STYRENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
VINYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	102	54-154
4-BROMOFLUOROBENZENE	89	63-143
TOLUENE-D8	88	63-143

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: SW 5030B/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	V006E15Q	V006E15L	V006E15C		
LAB FILE ID:	REW318	REW315	REW316		
DATE EXTRACTED:	05/27/0408:59	05/27/0407:03	05/27/0407:42	DATE COLLECTED:	NA
DATE ANALYZED:	05/27/0408:59	05/27/0407:03	05/27/0407:42	DATE RECEIVED:	05/27/04
PREP. BATCH:	V006E15	V006E15	V006E15		
CALIB. REF:	REW259	REW259	REW259		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	20	17.8	89	20	17.3	87	3	60-140	50
Benzene	ND	20	20.3	102	20	18.1	91	11	70-130	50
Chlorobenzene	ND	20	19.7	99	20	18.2	91	8	70-130	50
Toluene	ND	20	19.7	99	20	17.8	89	10	70-130	50
Trichloroethene	ND	20	20.1	101	20	17.8	89	12	70-130	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50	50.2	100	50	49	98	60-140
4-Bromofluorobenzene	50	47.1	94	50	42.9	86	70-130
Toluene-d8	50	45.5	91	50	44.4	89	70-130

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/29/04
Batch No.	: 04E159A	Date Extracted:	05/29/04 00:37
Sample ID	: MBLK2S	Date Analyzed:	05/29/04 00:37
Lab Samp ID	: V006E18Q	Dilution Factor:	1
Lab File ID	: REW359	Matrix	: SOIL
Ext Btch ID	: V006E18	% Moisture	: NA
Calib. Ref.	: REW259	Instrument ID	: T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
2-BUTANONE	ND	20	5
2-HEXANONE	ND	20	5
4-METHYL-2-PENTANONE	ND	20	5
ACETONE	ND	20	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	10	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	10	3
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	10	5
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DIBROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
M/P-XYLENES	ND	10	3
MTBE	ND	5	2
METHYLENE CHLORIDE	ND	5	2
O-XYLENE	ND	5	2
STYRENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
VINYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	104	54-154
4-BROMOFLUOROBENZENE	93	63-143
TOLUENE-D8	88	63-143

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: SW 5030B/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2S				
LAB SAMP ID:	V006E18Q	V006E18L	V006E18C		
LAB FILE ID:	REW359	REW356	REW357		
DATE EXTRACTED:	05/29/0400:37	05/28/0422:41	05/28/0423:20	DATE COLLECTED:	NA
DATE ANALYZED:	05/29/0400:37	05/28/0422:41	05/28/0423:20	DATE RECEIVED:	05/28/04
PREP. BATCH:	V006E18	V006E18	V006E18		
CALIB. REF:	REW259	REW259	REW259		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	20	17.8	89	20	19.1	95	7	60-140	50
Benzene	ND	20	17.9	89	20	19.6	98	9	70-130	50
Chlorobenzene	ND	20	18.6	93	20	19.5	98	5	70-130	50
Toluene	ND	20	17.9	90	20	19.5	98	9	70-130	50
Trichloroethene	ND	20	18.4	92	20	19.6	98	6	70-130	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50	52.9	106	50	50.4	101	60-140
4-Bromofluorobenzene	50	46.9	94	50	44.8	90	70-130
Toluene-d8	50	45	90	50	46.1	92	70-130

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

SDG#: 04E159A

CASE NARRATIVE

CLIENT: **KLEINFELDER**

PROJECT: **LAKESIDE CONSERVANCY FILL**

SDG: **04E159A**

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Three (3) soil samples were received on 05/19/04 for Semi Volatile Organic analysis by Method 3550B/8270C in accordance with USEPA SW846, 3rd ed.

1. Holding Time

   Analytical holding time was met.

2. Tuning and Calibration

   Tuning and calibration were carried out at 12-hour interval. All QC requirements were met.

3. Method Blank

   Method blank was free of contamination at the reporting limit.

4. Surrogate Recovery

   Recoveries were within QC limit.

5. Lab Control Sample/Lab Control Sample Duplicate

   Recoveries were within QC limit.

6. Matrix Spike/Matrix Spike Duplicate

   No MS/MSD sample was designated in this SDG.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Extracts were cleaned up by GPC prior to analysis.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : T-041

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	SVE031SB	1	NA	05/28/0416:24	05/27/0414:45	REH147	RDH021	SVE031S	Method Blank
LCS1S	SVE031SL	1	NA	05/28/0416:58	05/27/0414:45	REH148	RDH021	SVE031S	Lab Control Sample (LCS)
LCD1S	SVE031SC	1	NA	05/28/0417:33	05/27/0414:45	REH149	RDH021	SVE031S	LCS Duplicate
KB-8@10'	E159-07	2	8.5	06/01/0420:28	05/27/0414:45	RFH011	RDH021	SVE031S	Field Sample
KB-12@5'	E159-11	2	9.4	06/01/0421:02	05/27/0414:45	RFH012	RDH021	SVE031S	Field Sample
KB-17@5'	E159-15	2	3.3	06/01/0421:37	05/27/0414:45	RFH013	RDH021	SVE031S	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

lient	: KLEINFELDER	Date Collected:	05/17/04
roject	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
atch No.	: 04E159A	Date Extracted:	05/27/04 14:45
Sample ID:	KB-8@10'	Date Analyzed:	06/01/04 20:28
Lab Samp ID:	E159-07	Dilution Factor:	2
ab File ID:	RFH011	Matrix	: SOIL
xt Btch ID:	SVE031S	% Moisture	: 8.5
alib. Ref.:	RDH021	Instrument ID	: T-041

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
,2,4-TRICHLOROBENZENE	ND	720	370
,2-DICHLOROBENZENE	ND	720	370
1,3-DICHLOROBENZENE	ND	720	370
1,4-DICHLOROBENZENE	ND	720	370
2,4,5-TRICHLOROPHENOL	ND	720	370
,4,6-TRICHLOROPHENOL	ND	720	370
,4-DICHLOROPHENOL	ND	720	370
,4-DIMETHYLPHENOL	ND	720	370
2,4-DINITROPHENOL	ND	1400	370
2,4-DINITROTOLUENE	ND	720	370
2,6-DINITROTOLUENE	ND	720	370
-CHLORONAPHTHALENE	ND	720	370
-CHLOROPHENOL	ND	720	370
-METHYLNAPHTHALENE	ND	720	370
2-METHYLPHENOL	ND	720	370
2-NITROANILINE	ND	1400	370
2-NITROPHENOL	ND	720	370
,3'-DICHLOROBENZIDINE	ND	1400	370
-NITROANILINE	ND	1400	370
,6-DINITRO-2-METHYLPHENOL	ND	1400	370
4-BROMOPHENYL-PHENYL ETHER	ND	720	370
4-CHLORO-3-METHYLPHENOL	ND	720	370
4-CHLOROANILINE	ND	720	370
-CHLOROPHENYL-PHENYL ETHER	ND	720	370
-METHYLPHENOL (1)	ND	720	370
-NITROANILINE	ND	720	370
-NITROPHENOL	ND	1400	370
ACENAPHTHENE	ND	720	370
ACENAPHTHYLENE	ND	720	370
NTHRACENE	ND	720	370
ENZO(A)ANTHRACENE	ND	720	370
ENZO(A)PYRENE	ND	720	370
ENZO(B)FLUORANTHENE	ND	720	370
BENZO(K)FLUORANTHENE	ND	720	370
BENZO(G,H,I)PERYLENE	ND	720	370
IS(2-CHLOROETHOXY)METHANE	ND	720	370
IS(2-CHLOROETHYL)ETHER	ND	720	370
IS(2-CHLOROISOPROPYL)ETHER	ND	720	370
IS(2-ETHYLHEXYL)PHTHALATE	ND	720	370
BUTYLBENZYLPHTHALATE	ND	720	370
CHRYSENE	ND	720	370
I-N-BUTYLPHTHALATE	ND	720	370
I-N-OCTYLPHTHALATE	ND	720	370
IBENZO(A,H)ANTHRACENE	ND	720	370
IBENZOFURAN	ND	720	370
DIETHYLPHTHALATE	ND	720	370
DIMETHYLPHTHALATE	ND	720	370
FLUORANTHENE	ND	720	370
LUORENE	ND	720	370
EXACHLOROBENZENE	ND	720	370
EXACHLOROBUTADIENE	ND	720	370
HEXACHLOROCYCLOPENTADIENE	ND	720	370
HEXACHLOROETHANE	ND	720	370
NDENO(1,2,3-CD)PYRENE	ND	720	370
SOPHORONE	ND	720	370
-NITROSO-DI-N-PROPYLAMINE	ND	720	370
-NITROSODIPHENYLAMINE (2)	ND	720	370
NAPHTHALENE	ND	720	370
NITROBENZENE	ND	720	370
PENTACHLOROPHENOL	ND	1400	370
HENANTHRENE	ND	720	370
HENOL	ND	720	370
YRENE	ND	720	370

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
,4,6-TRIBROMOPHENOL	65	36-143
-FLUOROBIPHENYL	51	36-143
-FLUOROPHENOL	44	36-143
NITROBENZENE-D5	54	36-143
PHENOL-D5	54	36-143
TERPHENYL-D14	67	45-143

L: Reporting Limit
1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 14:45
Sample ID:	KB-12@5'	Date Analyzed:	06/01/04 21:02
Lab Samp ID:	E159-11	Dilution Factor:	2
Lab File ID:	RFH012	Matrix	: SOIL
Ext Btch ID:	SVE031S	% Moisture	: 9.4
Calib. Ref.:	RDH021	Instrument ID	: T-041

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	730	370
1,2-DICHLOROBENZENE	ND	730	370
1,3-DICHLOROBENZENE	ND	730	370
1,4-DICHLOROBENZENE	ND	730	370
2,4,5-TRICHLOROPHENOL	ND	730	370
2,4,6-TRICHLOROPHENOL	ND	730	370
2,4-DICHLOROPHENOL	ND	730	370
2,4-DIMETHYLPHENOL	ND	730	370
2,4-DINITROPHENOL	ND	1500	370
2,4-DINITROTOLUENE	ND	730	370
2,6-DINITROTOLUENE	ND	730	370
2-CHLORONAPHTHALENE	ND	730	370
2-CHLOROPHENOL	ND	730	370
2-METHYLNAPHTHALENE	ND	730	370
2-METHYLPHENOL	ND	730	370
2-NITROANILINE	ND	1500	370
2-NITROPHENOL	ND	730	370
3,3'-DICHLOROBENZIDINE	ND	1500	370
3-NITROANILINE	ND	1500	370
4,6-DINITRO-2-METHYLPHENOL	ND	1500	370
4-BROMOPHENYL-PHENYL ETHER	ND	730	370
4-CHLORO-3-METHYLPHENOL	ND	730	370
4-CHLOROANILINE	ND	730	370
4-CHLOROPHENYL-PHENYL ETHER	ND	730	370
4-METHYLPHENOL (1)	ND	730	370
4-NITROANILINE	ND	730	370
4-NITROPHENOL	ND	1500	370
ACENAPHTHENE	ND	730	370
ACENAPHTHYLENE	ND	730	370
ANTHRACENE	ND	730	370
BENZO(A)ANTHRACENE	ND	730	370
BENZO(A)PYRENE	ND	730	370
BENZO(B)FLUORANTHENE	ND	730	370
BENZO(K)FLUORANTHENE	ND	730	370
BENZO(G,H,I)PERYLENE	ND	730	370
BIS(2-CHLOROETHOXY)METHANE	ND	730	370
BIS(2-CHLOROETHYL)ETHER	ND	730	370
BIS(2-CHLOROISOPROPYL)ETHER	ND	730	370
BIS(2-ETHYLHEXYL)PHTHALATE	ND	730	370
BUTYLBENZYLPHTHALATE	ND	730	370
CHRYSENE	ND	730	370
DI-N-BUTYLPHTHALATE	ND	730	370
DI-N-OCTYLPHTHALATE	ND	730	370
DIBENZO(A,H)ANTHRACENE	ND	730	370
DIBENZOFURAN	ND	730	370
DIETHYLPHTHALATE	ND	730	370
DIMETHYLPHTHALATE	ND	730	370
FLUORANTHENE	ND	730	370
FLUORENE	ND	730	370
HEXACHLOROBENZENE	ND	730	370
HEXACHLOROBUTADIENE	ND	730	370
HEXACHLOROCYCLOPENTADIENE	ND	730	370
HEXACHLOROETHANE	ND	730	380
INDENO(1,2,3-CD)PYRENE	ND	730	370
ISOPHORONE	ND	730	370
N-NITROSO-DI-N-PROPYLAMINE	ND	730	370
N-NITROSODIPHENYLAMINE (2)	ND	730	370
NAPHTHALENE	ND	730	370
NITROBENZENE	ND	730	370
PENTACHLOROPHENOL	ND	1500	370
PHENANTHRENE	ND	730	370
PHENOL	ND	730	370
PYRENE	ND	730	370

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	86	36-143
2-FLUOROBIPHENYL	73	36-143
2-FLUOROPHENOL	67	36-143
NITROBENZENE-D5	79	36-143
PHENOL-D5	79	36-143
TERPHENYL-D14	98	45-143

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 14:45
Sample ID:	KB-17@5'	Date Analyzed:	06/01/04 21:37
Lab Samp ID:	E159-15	Dilution Factor:	2
Lab File ID:	RFH013	Matrix	: SOIL
Ext Btch ID:	SVE031S	% Moisture	: 3.3
Calib. Ref.:	RDH021	Instrument ID	: T-041

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	680	350
1,2-DICHLOROBENZENE	ND	680	350
1,3-DICHLOROBENZENE	ND	680	350
1,4-DICHLOROBENZENE	ND	680	350
2,4,5-TRICHLOROPHENOL	ND	680	350
2,4,6-TRICHLOROPHENOL	ND	680	350
2,4-DICHLOROPHENOL	ND	680	350
2,4-DIMETHYLPHENOL	ND	680	350
2,4-DINITROPHENOL	ND	1400	350
2,4-DINITROTOLUENE	ND	680	350
2,6-DINITROTOLUENE	ND	680	350
2-CHLORONAPHTHALENE	ND	680	350
2-CHLOROPHENOL	ND	680	350
2-METHYLNAPHTHALENE	ND	680	350
2-METHYLPHENOL	ND	680	350
2-NITROANILINE	ND	1400	350
2-NITROPHENOL	ND	680	350
3,3'-DICHLOROBENZIDINE	ND	1400	350
3-NITROANILINE	ND	1400	350
4,6-DINITRO-2-METHYLPHENOL	ND	1400	350
4-BROMOPHENYL-PHENYL ETHER	ND	680	350
4-CHLORO-3-METHYLPHENOL	ND	680	350
4-CHLOROANILINE	ND	680	350
4-CHLOROPHENYL-PHENYL ETHER	ND	680	350
4-METHYLPHENOL (1)	ND	680	350
4-NITROANILINE	ND	680	350
4-NITROPHENOL	ND	1400	350
ACENAPHTHENE	ND	680	350
ACENAPHTHYLENE	ND	680	350
ANTHRACENE	ND	680	350
BENZO(A)ANTHRACENE	ND	680	350
BENZO(A)PYRENE	ND	680	350
BENZO(B)FLUORANTHENE	ND	680	350
BENZO(K)FLUORANTHENE	ND	680	350
BENZO(G,H,I)PERYLENE	ND	680	350
BIS(2-CHLOROETHOXY)METHANE	ND	680	350
BIS(2-CHLOROETHYL)ETHER	ND	680	350
BIS(2-CHLOROISOPROPYL)ETHER	ND	680	350
BIS(2-ETHYLHEXYL)PHTHALATE	ND	680	350
BUTYLBENZYLPHTHALATE	ND	680	350
CHRYSENE	ND	680	350
DI-N-BUTYLPHTHALATE	ND	680	350
DI-N-OCTYLPHTHALATE	ND	680	350
DIBENZO(A,H)ANTHRACENE	ND	680	350
DIBENZOFURAN	ND	680	350
DIETHYLPHTHALATE	ND	680	350
DIMETHYLPHTHALATE	ND	680	350
FLUORANTHENE	ND	680	350
FLUORENE	ND	680	350
HEXACHLOROBENZENE	ND	680	350
HEXACHLOROBUTADIENE	ND	680	350
HEXACHLOROCYCLOPENTADIENE	ND	680	350
HEXACHLOROETHANE	ND	680	350
INDENO(1,2,3-CD)PYRENE	ND	680	350
ISOPHORONE	ND	680	350
N-NITROSO-DI-N-PROPYLAMINE	ND	680	350
N-NITROSODIPHENYLAMINE (2)	ND	680	350
NAPHTHALENE	ND	680	350
NITROBENZENE	ND	680	350
PENTACHLOROPHENOL	ND	1400	350
PHENANTHRENE	ND	680	350
PHENOL	ND	680	350
PYRENE	ND	680	350

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	77	36-143
2-FLUOROBIPHENYL	83	36-143
2-FLUOROPHENOL	69	36-143
NITROBENZENE-D5	85	36-143
PHENOL-D5	82	36-143
TERPHENYL-D14	100	45-143

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

QC SUMMARIES

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

lient	: KLEINFELDER	Date Collected:	NA
roject	: LAKESIDE CONSERVANCY FILL	Date Received:	05/27/04
atch No.	: 04E159A	Date Extracted:	05/27/04 14:45
Sample ID:	MBLK1S	Date Analyzed:	05/28/04 16:24
ab Samp ID:	SVE031SB	Dilution Factor:	1
ab File ID:	REH147	Matrix	: SOIL
xt Btch ID:	SVE031S	% Moisture	: NA
alib. Ref.:	RDH021	Instrument ID	: T-041

ARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
,2,4-TRICHLOROBENZENE	ND	330	170
,2-DICHLOROBENZENE	ND	330	170
1,3-DICHLOROBENZENE	ND	330	170
1,4-DICHLOROBENZENE	ND	330	170
,4,5-TRICHLOROPHENOL	ND	330	170
,4,6-TRICHLOROPHENOL	ND	330	170
,4-DICHLOROPHENOL	ND	330	170
,4-DIMETHYLPHENOL	ND	330	170
2,4-DINITROPHENOL	ND	660	170
2,4-DINITROTOLUENE	ND	330	170
2,6-DINITROTOLUENE	ND	330	170
-CHLORONAPHTHALENE	ND	330	170
-CHLOROPHENOL	ND	330	170
-METHYLNAPHTHALENE	ND	330	170
2-METHYLPHENOL	ND	330	170
2-NITROANILINE	ND	660	170
2-NITROPHENOL	ND	330	170
,3'-DICHLOROBENZIDINE	ND	660	170
-NITROANILINE	ND	660	170
,6-DINITRO-2-METHYLPHENOL	ND	660	170
4-BROMOPHENYL-PHENYL ETHER	ND	330	170
4-CHLORO-3-METHYLPHENOL	ND	330	170
4-CHLOROANILINE	ND	330	170
-CHLOROPHENYL-PHENYL ETHER	ND	330	170
-METHYLPHENOL (1)	ND	330	170
-NITROANILINE	ND	330	170
4-NITROPHENOL	ND	660	170
ACENAPHTHENE	ND	330	170
ACENAPHTHYLENE	ND	330	170
NTHRACENE	ND	330	170
ENZO(A)ANTHRACENE	ND	330	170
ENZO(A)PYRENE	ND	330	170
BENZO(B)FLUORANTHENE	ND	330	170
BENZO(K)FLUORANTHENE	ND	330	170
BENZO(G,H,I)PERYLENE	ND	330	170
IS(2-CHLOROETHOXY)METHANE	ND	330	170
IS(2-CHLOROETHYL)ETHER	ND	330	170
IS(2-CHLOROISOPROPYL)ETHER	ND	330	170
IS(2-ETHYLHEXYL)PHTHALATE	ND	330	170
BUTYLBENZYLPHTHALATE	ND	330	170
CHRYSENE	ND	330	170
I-N-BUTYLPHTHALATE	ND	330	170
I-N-OCTYLPHTHALATE	ND	330	170
IBENZO(A,H)ANTHRACENE	ND	330	170
IBENZOFURAN	ND	330	170
DIETHYLPHTHALATE	ND	330	170
DIMETHYLPHTHALATE	ND	330	170
LUORANTHENE	ND	330	170
LUORENE	ND	330	170
EXACHLOROBENZENE	ND	330	170
EXACHLOROBUTADIENE	ND	330	170
HEXACHLOROCYCLOPENTADIENE	ND	330	170
HEXACHLOROETHANE	ND	330	170
NDENO(1,2,3-CD)PYRENE	ND	330	170
SOPHORONE	ND	330	170
-NITROSO-DI-N-PROPYLAMINE	ND	330	170
-NITROSODIPHENYLAMINE (2)	ND	330	170
NAPHTHALENE	ND	330	170
NITROBENZENE	ND	330	170
PENTACHLOROPHENOL	ND	660	170
HENANTHRENE	ND	330	170
HENOL	ND	330	170
YRENE	ND	330	170

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
,4,6-TRIBROMOPHENOL	72	36-143
-FLUOROBIPHENYL	60	36-143
-FLUOROPHENOL	62	36-143
NITROBENZENE-D5	72	36-143
PHENOL-D5	69	36-143
TERPHENYL-D14	73	45-143

L: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
ROJECT: LAKESIDE CONSERVANCY FILL
ATCH NO.: 04E159A
ETHOD: SW 3550B/8270C

MATRIX:	SOIL			% MOISTURE:	NA
ILUTION FACTOR:	1	1	1		
AMPLE ID:	MBLK1S				
AB SAMP ID:	SVE031SB	SVE031SL	SVE031SC		
LAB FILE ID:	REH147	REH148	REH149		
DATE EXTRACTED:	05/27/0414:45	05/27/0414:45	05/27/0414:45	DATE COLLECTED:	NA
DATE ANALYZED:	05/28/0416:24	05/28/0416:58	05/28/0417:33	DATE RECEIVED:	05/27/04
REP. BATCH:	SVE031S	SVE031S	SVE031S		
ALIB. REF:	RDH021	RDH021	RDH021		

ACCESSION:

ARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
,2,4-Trichlorobenzene	ND	2670	2000	75	2670	1780	67	11	40-130	50
1,4-Dichlorobenzene	ND	2670	1930	72	2670	1780	67	9	30-130	50
2,4-Dinitrotoluene	ND	2670	2670	100	2670	2270	85	16	40-130	50
2-Chlorophenol	ND	2670	2100	79	2670	1920	72	9	40-130	50
-Chloro-3-Methylphenol	ND	2670	2420	91	2670	2150	81	12	40-130	50
-Nitrophenol	ND	2670	1820	68	2670	1520	57	18	25-130	50
cenaphthene	ND	2670	2120	79	2670	1930	72	9	40-130	50
n-Nitroso-di-n-propylamine	ND	2670	2870	108	2670	2630	99	9	40-130	50
Pentachlorophenol	ND	2670	2050	77	2670	1780	67	14	30-130	50
Phenol	ND	2670	2070	78	2670	1900	71	8	40-130	50
yrene	ND	2670	2220	83	2670	1960	74	13	40-130	50

URROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
,4,6-Tribromophenol	5000	4260	85	5000	4190	84	40-130
-Fluorobiphenyl	3330	2270	68	3330	2380	72	40-130
2-Fluorophenol	5000	3450	69	5000	3750	75	40-130
Nitrobenzene-d5	3330	2720	82	3330	2910	88	40-130
henol-d5	5000	3770	75	5000	3970	79	40-130
erphenyl-d14	3330	2620	79	3330	2600	78	50-130

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS
BY PURGE AND TRAP

SDG#: 04E159A

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159A

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Three (3) soil samples were received on 05/19/04 for Total Petroleum Hydrocarbons by Purge and Trap analysis by Method 5030B/M8015 in accordance with SW846, 3rd edition.

1. Holding Time

Analytical holding time was met.

2. Calibration

Initial calibration was seven points. %RSD was within 20%. Continuing calibrations were carried out every 12 hours and at the end of the analysis sequence. All recoveries were within 85-115%.

3. Method Blank

Method blank was free of contamination at the reporting limit.

4. Surrogate Recovery

All recoveries were within QC limits.

5. Lab Control Sample/Lab Control Sample Duplicate

All recoveries were within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

No sample was spiked.

7. Sample Analysis

Sample was analyzed according to the prescribed QC procedures. All criteria were met. Results were quantified as Gasoline, in full range. Sample E159-15 displayed heavier hydrocarbons.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : GCT039

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	SOIL Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	VM39E33B	1	NA	05/26/0416:48	05/26/0416:48	EE26003A	EE26002A	VM39E33	Method Blank
LCS1S	VM39E33L	1	NA	05/26/0417:23	05/26/0417:23	EE26004A	EE26002A	VM39E33	Lab Control Sample (LCS)
LCD1S	VM39E33C	1	NA	05/26/0417:57	05/26/0417:57	EE26005A	EE26002A	VM39E33	LCS Duplicate
KB-8@10'	E159-07	1	8.5	05/27/0411:29	05/27/0411:29	EE26019A	EE26018A	VM39E33	Field Sample
KB-12@5'	E159-11	1	9.4	05/27/0412:04	05/27/0412:04	EE26020A	EE26018A	VM39E33	Field Sample
KB-17@5'	E159-15	1	3.3	05/27/0412:38	05/27/0412:38	EE26021A	EE26018A	VM39E33	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL
Batch No. : 04E159A

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VM39E33B	ND	82	1	NA	1	.5	05/26/0416:48	05/26/0416:48	EE26003A	EE26002A	VM39E33	NA	05/26/04
LCS1S	VM39E33L	25.4	93	1	NA	1	.5	05/26/0417:23	05/26/0417:23	EE26004A	EE26002A	VM39E33	NA	05/26/04
LCD1S	VM39E33C	25.2	110	1	NA	1	.5	05/26/0417:57	05/26/0417:57	EE26005A	EE26002A	VM39E33	NA	05/26/04
KB-8@10'	E159-07	ND	78	1	8.5	1.1	.55	05/27/0411:29	05/27/0411:29	EE26019A	EE26018A	VM39E33	05/17/04	05/19/04
KB-12@5'	E159-11	ND	79	1	9.4	1.1	.55	05/27/0412:04	05/27/0412:04	EE26020A	EE26018A	VM39E33	05/17/04	05/19/04
KB-17@5'	E159-15	14	76	1	3.3	1	.52	05/27/0412:38	05/27/0412:38	EE26021A	EE26018A	VM39E33	05/17/04	05/19/04

RL : Reporting Limit

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

LIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
ETHOD: METHOD 5030B/M8015

MATRIX:	SOIL			% MOISTURE:	NA
ILUTION FACTOR:	1	1	1		
AMPLE ID:	MBLK1S				
AB SAMP ID:	VM39E33B	VM39E33L	VM39E33C		
LAB FILE ID:	EE26003A	EE26004A	EE26005A		
ATE EXTRACTED:	05/26/0416:48	05/26/0417:23	05/26/0417:57	DATE COLLECTED:	NA
ATE ANALYZED:	05/26/0416:48	05/26/0417:23	05/26/0417:57	DATE RECEIVED:	05/26/04
REP. BATCH:	VM39E33	VM39E33	VM39E33		
CALIB. REF:	EE26002A	EE26002A	EE26002A		

CCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
asoline	ND	25	25.4	102	25	25.2	101	1	70-140	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
romofluorobenzene	2	1.86	93	2	2.2	110	70-150

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 04E159A

CASE NARRATIVE

CLIENT: **KLEINFELDER**

PROJECT: **LAKESIDE CONSERVANCY FILL**

SDG: **04E159A**

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Three (3) soil samples were received on 05/19/04 for Total Petroleum Hydrocarbons by Extraction analysis by Method 3550B/M8015 in accordance with SW846 3RD Edition.

1. Holding Time

Analytical holding time was met. Extraction was performed and completed on 05/27/04.

2. Calibration

Initial calibration was seven points for Diesel. %RSDs were within 20%. Continuing calibrations were carried out at 12-hour intervals and all recoveries were within 85-115%.

3. Method Blank

Method blank was free of contamination at the reporting limit.

4. Surrogate Recovery

Recoveries in samples E159-11 and -15 could not be evaluated due to dilution. All other recoveries were within QC limits.

5. Lab Control Sample/Lab Control Sample Duplicate

All recoveries were within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

No sample was spiked.

7. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met. Quantitation was done as a full pattern using Diesel(TOTAL) calibration factor. All samples displayed heavier hydrocarbon patterns. Samples could only be analyzed at a dilution due to dark coloration of the sample extract.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : GCT043

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSE026SB	1	NA	05/27/0417:47	05/27/0411:15	DE27013A	DE27011A	DSE026S	Method Blank
LCS1S	DSE026SL	1	NA	05/27/0418:26	05/27/0411:15	DE27014A	DE27011A	DSE026S	Lab Control Sample (LCS)
LCD1S	DSE026SC	1	NA	05/27/0419:05	05/27/0411:15	DE27015A	DE27011A	DSE026S	LCS Duplicate
KB-8@10'	E159-07J	2	8.5	05/28/0411:48	05/27/0411:15	DE28004A	DE28003A	DSE026S	Diluted Sample
KB-12@5'	E159-11I	50	9.4	05/27/0422:18	05/27/0411:15	DE27020A	DE27011A	DSE026S	Diluted Sample
KB-17@5'	E159-15T	100	3.3	05/27/0421:00	05/27/0411:15	DE27018A	DE27011A	DSE026S	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 11:15
Sample ID	: KB-8@10'	Date Analyzed:	05/28/04 11:48
Lab Samp ID	: E159-07J	Dilution Factor:	2
Lab File ID	: DE28004A	Matrix	: SOIL
Ext Btch ID	: DSE026S	% Moisture	: 8.5
Calib. Ref.	: DE28003A	Instrument ID	: GCT043

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	260	22	11

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	106	54-165
HEXACOSANE	107	54-176

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 11:15
Sample ID	: KB-12@5'	Date Analyzed:	05/27/04 22:18
Lab Samp ID	: E159-11I	Dilution Factor:	50
Lab File ID	: DE27020A	Matrix	: SOIL
Ext Btch ID	: DSE026S	% Moisture	: 9.4
Calib. Ref.	: DE27011A	Instrument ID	: GCT043

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	3100	550	280

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	DO	54-165
HEXACOSANE	DO	54-176

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane
DO : Diluted out

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

,lient	: KLEINFELDER	Date Collected:	05/17/04
'roject	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
'atch No.	: 04E159A	Date Extracted:	05/27/04 11:15
ample ID:	KB-17@5'	Date Analyzed:	05/27/04 21:00
ab Samp ID:	E159-15T	Dilution Factor:	100
.ab File ID:	DE27018A	Matrix :	SOIL
:xt Btch ID:	DSE026S	% Moisture :	3.3
alib. Ref.:	DE27011A	Instrument ID :	GCT043

ARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
)IESEL	5100	1000	520

JRROGATE PARAMETERS	% RECOVERY	QC LIMIT
,ROMOBENZENE	DO	54-165
HEXACOSANE	DO	54-176

- : Reporting Limit
JRR1 : Bromobenzene
SURR2 : Hexacosane
)O : Diluted out

QC SUMMARIES

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/27/04
atch No.	: 04E159A	Date Extracted:	05/27/04 11:15
ample ID:	MBLK1S	Date Analyzed:	05/27/04 17:47
Lab Samp ID:	DSE026SB	Dilution Factor:	1
Lab File ID:	DE27013A	Matrix :	SOIL
xt Btch ID:	DSE026S	% Moisture :	NA
alib. Ref.:	DE27011A	Instrument ID :	GCT043

ARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
IESEL	ND	10	5

URROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	101	54-165
HEXACOSANE	98	54-176

L : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

:LIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: METHOD 3550B/M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSE026SB	DSE026SL	DSE026SC		
LAB FILE ID:	DE27013A	DE27014A	DE27015A		
DATE EXTRACTED:	05/27/0411:15	05/27/0411:15	05/27/0411:15	DATE COLLECTED:	NA
DATE ANALYZED:	05/27/0417:47	05/27/0418:26	05/27/0419:05	DATE RECEIVED:	05/27/04
PREP. BATCH:	DSE026S	DSE026S	DSE026S		
CALIB. REF:	DE27011A	DE27011A	DE27011A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Diesel	ND	500	501	100	500	483	97	4	60-150	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	110	110	100	117	117	60-150
Hexacosane	25	23.9	96	25	25.8	103	60-160

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

SW3550B/8081A
PESTICIDES

SDG#: 04E159A

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159A

SW3550B/8081A
PESTICIDES

Three (3) soil samples were received on 05/19/04 for Pesticides analysis by Method 3550B/8081A in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd ed.

1. Holding Time

   Analytical holding time was met.

2. Instrument Performance and Calibration

   Initial calibration was at five-point for Pesticides, all RSDs were within 20%. All continue calibrations were analyzed at 12-hour interval and mean recoveries were within 85-115%. Endrin and DDT breakdown were within QC limits.

3. Method Blank

   Method blank was free of contamination at the reporting limit.

4. Surrogate Recovery

   Recoveries were within QC limit.

5. Lab Control Sample/Lab Control Sample Duplicate

   All recoveries were within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

   No MS/MSD sample was designated in this SDG.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Extracts were diluted prior to analysis due to high TPH content. Results were reported from column A and B was for confirmation.

LAB CHRONICLE
PESTICIDES

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : GCT008

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	CPE025SB	1	NA	05/28/0405:10	05/27/0413:40	SE26085A	SE26076A	CPE025S	Method Blank
LCS1S	CPE025SL	1	NA	05/28/0405:36	05/27/0413:40	SE26086A	SE26076A	CPE025S	Lab Control Sample (LCS)
LCD1S	CPE025SC	1	NA	05/28/0406:01	05/27/0413:40	SE26087A	SE26076A	CPE025S	LCS Duplicate
KB-8@10'	E159-07	5	8.5	05/28/0409:48	05/27/0413:40	SE26096A	SE26076A	CPE025S	Field Sample
KB-12@5'	E159-11	5	9.4	05/28/0410:13	05/27/0413:40	SE26097A	SE26076A	CPE025S	Field Sample
KB-17@5'	E159-15	15	3.3	05/28/0410:39	05/27/0413:40	SE26098A	SE26076A	CPE025S	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

SW3550B/8081A
PESTICIDES

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 13:40
Sample ID:	KB-8@10'	Date Analyzed:	05/28/04 09:48
Lab Samp ID:	E159-07	Dilution Factor:	5
Lab File ID:	SE26096A	Matrix :	SOIL
Ext Btch ID:	CPE025S	% Moisture :	8.5
Calib. Ref.:	SE26076A	Instrument ID :	GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
ALPHA-BHC	(ND)|ND	11	1.1|1.1
GAMMA-BHC (LINDANE)	(ND)|ND	11	1.1|1.1
BETA-BHC	(ND)|ND	11	1.1|1.1
HEPTACHLOR	(ND)|ND	11	5.5|5.5
DELTA-BHC	(ND)|ND	11	1.1|1.1
ALDRIN	(ND)|ND	11	2.7|2.7
HEPTACHLOR EPOXIDE	(ND)|2.4J	11	1.1|1.1
GAMMA-CHLORDANE	(12)|5.1J	11	1.1|1.1
ALPHA-CHLORDANE	(11)|4.9J	11	1.1|1.1
ENDOSULFAN I	(ND)|ND	11	5.5|5.5
4,4'-DDE	(ND)|ND	22	5.5|5.5
DIELDRIN	(ND)|ND	22	2.7|2.7
ENDRIN	(ND)|ND	22	5.5|5.5
4,4'-DDD	(ND)|ND	22	5.5|5.5
ENDOSULFAN II	(ND)|ND	22	2.7|2.7
4,4'-DDT	(ND)|ND	22	5.5|5.5
ENDRIN ALDEHYDE	(ND)|ND	22	2.7|2.7
ENDOSULFAN SULFATE	(ND)|ND	22	2.7|2.7
ENDRIN KETONE	(ND)|ND	22	5.5|5.5
METHOXYCHLOR	(ND)|ND	110	22|22
TOXAPHENE	(ND)|ND	550	44|44

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(104)|99	45-143
DECACHLOROBIPHENYL	(66)|54	45-165

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

SW3550B/8081A
PESTICIDES

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
atch No.	: 04E159A	Date Extracted:	05/27/04 13:40
ample ID:	KB-12@5'	Date Analyzed:	05/28/04 10:13
Lab Samp ID:	E159-11	Dilution Factor:	5
ab File ID:	SE26097A	Matrix	: SOIL
xt Btch ID:	CPE025S	% Moisture	: 9.4
alib. Ref.:	SE26076A	Instrument ID	: GCT008

ARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
LPHA-BHC	(13)|3.6J	11	1.1|1.1
AMMA-BHC (LINDANE)	(ND)|7J	11	1.1|1.1
ETA-BHC	5.4J|(ND)	11	1.1|1.1
HEPTACHLOR	(ND)|ND	11	5.5|5.5
ELTA-BHC	(ND)|ND	11	1.1|1.1
LDRIN	(ND)|ND	11	2.8|2.8
EPTACHLOR EPOXIDE	(ND)|ND	11	1.1|1.1
GAMMA-CHLORDANE	(14)|8.9J	11	1.1|1.1
LPHA-CHLORDANE	(21)|8.4J	11	1.1|1.1
NDOSULFAN I	(ND)|ND	11	5.5|5.5
,4'-DDE	(10J)|13J	22	5.5|5.5
DIELDRIN	(ND)|3.6J	22	2.8|2.8
NDRIN	(ND)|ND	22	5.5|5.5
,4'-DDD	5.8J|(ND)	22	5.5|5.5
NDOSULFAN II	(ND)|ND	22	2.8|2.8
4,4'-DDT	(6.4J)|11J	22	5.5|5.5
NDRIN ALDEHYDE	11J|(ND)	22	2.8|2.8
NDOSULFAN SULFATE	(ND)|ND	22	2.8|2.8
NDRIN KETONE	16J|(ND)	22	5.5|5.5
METHOXYCHLOR	(ND)|28J	110	22|22
OXAPHENE	(ND)|ND	550	44|44

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
ETRACHLORO-M-XYLENE	(111)|97	45-143
ECACHLOROBIPHENYL	(59)|51	45-165

RL : Reporting limit
eft of | is related to first column ; Right of | related to second column
inal result indicated by ( )

SW3550B/8081A
PESTICIDES

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
atch No.	: 04E159A	Date Extracted:	05/27/04 13:40
ample ID:	KB-17@5'	Date Analyzed:	05/28/04 10:39
Lab Samp ID:	E159-15	Dilution Factor:	15
ab File ID:	SE26098A	Matrix :	SOIL
xt Btch ID:	CPE025S	% Moisture :	3.3
alib. Ref.:	SE26076A	Instrument ID :	GCT008

ARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
LPHA-BHC	(ND)|ND	31	3.1|3.1
AMMA-BHC (LINDANE)	(ND)|ND	31	3.1|3.1
ETA-BHC	(ND)|ND	31	3.1|3.1
HEPTACHLOR	(ND)|ND	31	16|16
ELTA-BHC	(ND)|ND	31	3.1|3.1
LDRIN	(ND)|ND	31	7.8|7.8
EPTACHLOR EPOXIDE	(ND)|ND	31	3.1|3.1
GAMMA-CHLORDANE	4.7J|(ND)	31	3.1|3.1
LPHA-CHLORDANE	(ND)|ND	31	3.1|3.1
NDOSULFAN I	(ND)|ND	31	16|16
,4'-DDE	(ND)|ND	62	16|16
DIELDRIN	(ND)|ND	62	7.8|7.8
NDRIN	(ND)|ND	62	16|16
,4'-DDD	(ND)|ND	62	16|16
ENDOSULFAN II	(ND)|ND	62	7.8|7.8
4,4'-DDT	(ND)|ND	62	16|16
NDRIN ALDEHYDE	(ND)|ND	62	7.8|7.8
NDOSULFAN SULFATE	(ND)|ND	62	7.8|7.8
ENDRIN KETONE	(ND)|ND	62	16|16
METHOXYCHLOR	(ND)|ND	310	62|62
OXAPHENE	(ND)|ND	1600	120|120

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
ETRACHLORO-M-XYLENE	(97)|102	45-143
ECACHLOROBIPHENYL	(93)|46	45-165

RL : Reporting limit
eft of | is related to first column ; Right of | related to second column
inal result indicated by ( )

QC SUMMARIES

SW3550B/8081A
PESTICIDES

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/27/04
atch No.	: 04E159A	Date Extracted:	05/27/04 13:40
ample ID	: MBLK1S	Date Analyzed:	05/28/04 05:10
Lab Samp ID	: CPE025SB	Dilution Factor:	1
ab File ID	: SE26085A	Matrix :	SOIL
xt Btch ID	: CPE025S	% Moisture :	NA
alib. Ref.	: SE26076A	Instrument ID :	GCT008

ARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
LPHA-BHC	(ND)|ND	2	.2|.2
AMMA-BHC (LINDANE)	(ND)|ND	2	.2|.2
ETA-BHC	(ND)|ND	2	.2|.2
HEPTACHLOR	(ND)|ND	2	1|1
ELTA-BHC	(ND)|ND	2	.2|.2
LDRIN	(ND)|ND	2	.5|.5
EPTACHLOR EPOXIDE	(ND)|ND	2	.2|.2
GAMMA-CHLORDANE	(ND)|ND	2	.2|.2
LPHA-CHLORDANE	(ND)|ND	2	.2|.2
NDOSULFAN I	(ND)|ND	2	1|1
,4'-DDE	(ND)|ND	4	1|1
DIELDRIN	(ND)|ND	4	.5|.5
NDRIN	(ND)|ND	4	1|1
,4'-DDD	(ND)|ND	4	1|1
NDOSULFAN II	(ND)|ND	4	.5|.5
4,4'-DDT	(ND)|ND	4	1|1
NDRIN ALDEHYDE	(ND)|ND	4	.5|.5
NDOSULFAN SULFATE	(ND)|ND	4	.5|.5
NDRIN KETONE	(ND)|ND	4	1|1
METHOXYCHLOR	(ND)|ND	20	4|4
OXAPHENE	(ND)|ND	100	8|8

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
ETRACHLORO-M-XYLENE	(97)|90	45-143
ECACHLOROBIPHENYL	(63)|56	45-165

RL : Reporting limit
eft of | is related to first column ; Right of | related to second column
inal result indicated by ( )

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: SW3550B/8081A

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	CPE025SB	CPE025SL	CPE025SC		
LAB FILE ID:	SE26085A	SE26086A	SE26087A		
DATE EXTRACTED:	05/27/0413:40	05/27/0413:40	05/27/0413:40	DATE COLLECTED:	NA
DATE ANALYZED:	05/28/0405:10	05/28/0405:36	05/28/0406:01	DATE RECEIVED:	05/27/04
PREP. BATCH:	CPE025S	CPE025S	CPE025S		
CALIB. REF:	SE26076A	SE26076A	SE26076A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
gamma-BHC (Lindane)	(ND) | ND	6.67	(5.5) | 5.39	(82) | 81	6.67	(6.06) | 5.98	(91) | 90	(10) | 10	60-130	50
Heptachlor	(ND) | ND	6.67	(4.78) | 4.87	(72) | 73	6.67	(5.23) | 5.3	(78) | 79	(9) | 8	50-150	50
Aldrin	(ND) | ND	6.67	(5.41) | 5.65	(81) | 85	6.67	(5.79) | 5.82	(87) | 87	(7) | 3	60-140	50
Dieldrin	(ND) | ND	13.3	(12.2) | 11.8	(92) | 89	13.3	(13.7) | 13.3	(103) | 100	(12) | 12	70-130	50
Endrin	(ND) | ND	13.3	(12.7) | 12.2	(95) | 92	13.3	(14.2) | 13.6	(107) | 102	(11) | 11	60-140	50
4,4'-DDT	(ND) | ND	13.3	(11.8) | 11.3	(89) | 85	13.3	(13.5) | 12.9	(101) | 97	(13) | 13	40-160	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	13.3	(12.8) | 12	(96) | 90	13.3	(12.4) | 11.6	(93) | 87	50-130
Decachlorobiphenyl	13.3	(8.33) | 7.16	(62) | 54	13.3	(8.51) | 6.97	(64) | 52	50-150

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

SW3550B/8082
PCBs

SDG#: 04E159A

CASE NARRATIVE

CLIENT: **KLEINFELDER**

PROJECT: **LAKESIDE CONSERVANCY FILL**

SDG: **04E159A**

SW3550B/8082
PCBs

Three (3) soil samples were received on 05/19/04 for PCBs analysis by Method 3550B/8082 in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd ed.

1. Holding Time

   Analytical holding time was met.

2. Instrument Performance and Calibration

   Initial calibration was five-point for PCB-1016 and PCB-1260, all RSDs were within 20%. All continue calibrations were analyzed at 12 hour interval and all recoveries were within 85-115%.

3. Method Blank

   Method blank was free of contamination at the reporting limit.

4. Surrogate Recovery

   Recoveries were within QC limit.

5. Lab Control Sample/Lab Control Sample Duplicate

   All recoveries were within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

   No MS/MSD sample was designated in this SDG.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Extracts were clean up by acid and further diluted 5x prior to analysis due to high TPH content.

LAB CHRONICLE
PCBs

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : GCT008

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	CPE025SB	1	NA	05/28/0405:10	05/27/0413:40	SE26085A	SE26079A	CPE025S	Method Blank
LCS1S	60E025SL	1	NA	05/28/0406:26	05/27/0413:40	SE26088A	SE26079A	CPE025S	Lab Control Sample (LCS)
LCD1S	60E025SC	1	NA	05/28/0406:51	05/27/0413:40	SE26089A	SE26079A	CPE025S	LCS Duplicate
KB-8@10'	E159-07	5	8.5	05/28/0407:17	05/27/0413:40	SE26090A	SE26079A	CPE025S	Field Sample
KB-12@5'	E159-11	5	9.4	05/28/0407:42	05/27/0413:40	SE26091A	SE26079A	CPE025S	Field Sample
KB-17@5'	E159-15	5	3.3	05/28/0408:07	05/27/0413:40	SE26092A	SE26079A	CPE025S	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

SW3550B/8082
PCBs

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 13:40
Sample ID:	KB-8@10'	Date Analyzed:	05/28/04 07:17
Lab Samp ID:	E159-07	Dilution Factor:	5
Lab File ID:	SE26090A	Matrix :	SOIL
Ext Btch ID:	CPE025S	% Moisture :	8.5
Calib. Ref.:	SE26079A	Instrument ID :	GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND)|ND	270	91|91
PCB-1221	(ND)|ND	270	91|91
PCB-1232	(ND)|ND	270	91|91
PCB-1242	(ND)|ND	270	91|91
PCB-1248	(ND)|ND	270	91|91
PCB-1254	(ND)|ND	270	91|91
PCB-1260	(ND)|ND	270	91|91

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(95)|140	45-154
DECACHLOROBIPHENYL	(70)|62	45-154

RL: Reporting Limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

SW3550B/8082
PCBs

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 13:40
Sample ID	: KB-12@5'	Date Analyzed:	05/28/04 07:42
Lab Samp ID	: E159-11	Dilution Factor:	5
Lab File ID	: SE26091A	Matrix :	SOIL
Ext Btch ID	: CPE025S	% Moisture :	9.4
Calib. Ref.	: SE26079A	Instrument ID :	GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND)|ND	280	92|92
PCB-1221	(ND)|ND	280	92|92
PCB-1232	(ND)|ND	280	92|92
PCB-1242	(ND)|ND	280	92|92
PCB-1248	(ND)|ND	280	92|92
PCB-1254	(ND)|ND	280	92|92
PCB-1260	(ND)|ND	280	92|92

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(94)|91	45-154
DECACHLOROBIPHENYL	(65)|59	45-154

RL: Reporting Limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

SW3550B/8082
PCBs

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 13:40
Sample ID	: KB-17@5'	Date Analyzed:	05/28/04 08:07
Lab Samp ID	: E159-15	Dilution Factor:	5
Lab File ID	: SE26092A	Matrix :	SOIL
Ext Btch ID	: CPE025S	% Moisture :	3.3
Calib. Ref.	: SE26079A	Instrument ID :	GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND)|ND	260	86|86
CB-1221	(ND)|ND	260	86|86
CB-1232	(ND)|ND	260	86|86
PCB-1242	(ND)|ND	260	86|86
PCB-1248	(ND)|ND	260	86|86
CB-1254	(ND)|ND	260	86|86
CB-1260	(ND)|ND	260	86|86

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
ETRACHLORO-M-XYLENE	(99)|97	45-154
DECACHLOROBIPHENYL	(67)|61	45-154

L: Reporting Limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

QC SUMMARIES

SW3550B/8082
PCBs

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/27/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 13:40
Sample ID:	MBLK1S	Date Analyzed:	05/28/04 05:10
Lab Samp ID:	CPE025SB	Dilution Factor:	1
Lab File ID:	SE26085A	Matrix :	SOIL
Ext Btch ID:	CPE025S	% Moisture :	NA
Calib. Ref.:	SE26079A	Instrument ID :	GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND)|ND	50	17|17
PCB-1221	(ND)|ND	50	17|17
PCB-1232	(ND)|ND	50	17|17
PCB-1242	(ND)|ND	50	17|17
PCB-1248	(ND)|ND	50	17|17
PCB-1254	(ND)|ND	50	17|17
PCB-1260	(ND)|ND	50	17|17

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(89)|84	45-154
DECACHLOROBIPHENYL	(68)|68	45-154

RL: Reporting Limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: SW3550B/8082

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	CPE025SB	60E025SL	60E025SC		
LAB FILE ID:	SE26085A	SE26088A	SE26089A		
DATE EXTRACTED:	05/27/0413:40	05/27/0413:40	05/27/0413:40	DATE COLLECTED:	NA
DATE ANALYZED:	05/28/0405:10	05/28/0406:26	05/28/0406:51	DATE RECEIVED:	05/27/04
PREP. BATCH:	CPE025S	CPE025S	CPE025S		
CALIB. REF:	SE26079A	SE26079A	SE26079A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
PCB-1016	(ND) | ND	167	(165) | 150	(99) | 90	167	(170) | 154	(102) | 92	(3) | 3	50-130	50
PCB-1260	(ND) | ND	167	(199) | 186	(119) | 112	167	(201) | 188	(121) | 113	(1) | 1	60-150	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	13.3	(13) | 12	(97) | 90	13.3	(12.8) | 11.9	(96) | 90	50-140
Decachlorobiphenyl	13.3	(10) | 8.54	(75) | 64	13.3	(9.97) | 8.53	(75) | 64	50-140

TABLE OF CONTENTS

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159

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GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
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HPLC	**	6000 –
METALS	METHOD 3050B/6010B METHOD 7471A	7000 – 7043 7044 – 7050
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 06-14-2004
EMAX Batch No.: 04E159

Attn: Jacques Lord

Kleinfelder
5015 Shoreham Place
San Diego CA 92122

Subject: Laboratory Report
Project: Lakeside Conservancy Fill

Enclosed is the Laboratory report for samples received on 05/19/04. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
KB-1@5'	E159-01	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-2@5'	E159-02	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-3@15'	E159-03	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-4@10'	E159-04	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-5@19'	E159-05	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-7@10'	E159-06	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-8@10'	E159-07	05/17/04	SOIL	METALS BY ICP

Sample ID	Control #	Col Date	Matrix	Analysis
				MERCURY TPH RECOVERABLE
KB-9@5'	E159-08	05/17/04	SOIL	METALS BY ICP MERCURY TPH RECOVERABLE
KB-10@5'	E159-09	05/17/04	SOIL	METALS BY ICP MERCURY TPH RECOVERABLE
KB-11@15'	E159-10	05/17/04	SOIL	METALS BY ICP MERCURY TPH RECOVERABLE
KB-12@5'	E159-11	05/17/04	SOIL	METALS BY ICP MERCURY TPH RECOVERABLE
KB-13@5'	E159-12	05/17/04	SOIL	METALS BY ICP MERCURY TPH RECOVERABLE
KB-14@10'	E159-13	05/17/04	SOIL	METALS BY ICP MERCURY TPH RECOVERABLE
KB-15@5'	E159-14	05/17/04	SOIL	METALS BY ICP MERCURY TPH RECOVERABLE
KB-17@5'	E159-15	05/17/04	SOIL	METALS BY ICP MERCURY TPH RECOVERABLE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Y. Pang, Ph.D.
Laboratory Director

EMAX LABORATORIES, INC. 1835 W. 205th Street, Torrance, CA 90501 Tel: (310) 618-8889 Fax: (310) 618-0818

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: (310) 618-8889 Fax #: (310) 618-0818
Email: info@emaxlabs.com

PO NUMBER: 44102 PW1
SAMPLE STORAGE: N/A B3
EMAX CONTROL NO. *: 04E159
PROJECT CODE: N/A

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL (PROJECT No. 44102)
COORDINATOR: JACQUES LORD
TEL: 858 320 2206 FAX: 858 320 2001 EMAIL: jlord@kleinfelder.com
SEND REPORT TO: JACQUES LORD
COMPANY: KLEINFELDER
ADDRESS: 5015 SHOREHAM PLACE, SAN DIEGO, CA 92122
EMAX PM:

MATRIX CODE	PRESERVATIVE CODE
DW= Drinking Water	IC=Ice
GW=Ground Water	HC=HCl
WW=Waste Water	HN=HN03
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/Sediment	ST=Na2S203
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

TAT:
- ☐ Rush _____hrs.
- ☐ Rush _____days
- ☒ 7 days TRPH
- ☐ 14 days
- ☐ 21 days
- ☒ 30 days OTHERS
- ☐ _____days
- ☐

	SAMPLE ID LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	SAMPLING DATE	SAMPLING TIME	CONTAINER NO.	CONTAINER SIZE	CONTAINER TYPE	MATRIX CODE	QC	Title 22 Metals (6010B/7470) PRESERVATIVE CODE IC	TRPH (418.1)* PRESERVATIVE CODE IC	TPHg & TPHd (8015M)*	VOCs - Full Scan (8260B)*	SVOCs - Full Scan (8270C)*	Pesticides (8081A)*	PCBs (8082)*	COMMENTS
1	* 1	KB-1 @ 5'		5/17/04		2	2"x3"	BRASS SLEEVE	SS		X	X						* IF TRPH IS DETECTED
2	* 2	KB-2 @ 5'		↓		↓	↓	↓	↓		↓	↓						ANALYZE SAMPLE FOR:
3	* 3	KB-3 @ 15'																• TPHg & TPHd
4	* 4	KB-4 @ 10'																• VOCs
5	* 5	KB-5 @ 19'																• SVOCs
	* 6	~~KB-6~~ PL																• PESTICIDES
6	* 7	KB-7 @ 10'																• PCBs
7	* 8	KB-8 @ 10'																
8	* 9	KB-9 @ 5'																
9	* 10	KB-10 @ 5'		↓		↓	↓	↓	↓		↓	↓						

Instructions: SEND RESULTS TO JACQUES LORD

Cooler #	Temp. (°C)	Sample #s
1	3.5	

SAMPLER

COURIER/AIRBILL: UPS

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	5/18/04	12:00	[signature]
	5/19/04	1000	

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

GRAPHICS EXPRESS (626) 330-8585

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: (310) 618-8889 Fax #: (310) 618-0818
Email: info@emaxlabs.com

PO NUMBER: 44102 PW1
SAMPLE STORAGE: B3
EMAX CONTROL NO. * 04E159
PROJECT CODE:

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL (PROJECT No. 44102)
COORDINATOR: JACQUES LORD
TEL: 858 320 2206 FAX: 858 320 2001 EMAIL: jlord@kleinfelder.com
SEND REPORT TO: JACQUES LORD
COMPANY: KLEINFELDER
ADDRESS: 5015 SHOREHAM PLACE, SAN DIEGO, CA 92122
EMAX PM:

MATRIX CODE	PRESERVATIVE CODE
DW= Drinking Water	IC=Ice
GW=Ground Water	HC=HCl
WW=Waste Water	HN=HN03
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/Sediment	ST=Na2S203
WP=Wipes PP=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
O=	

ANALYSIS REQUIRED: Title 22 Metals (6010B/7470) | TRPH (418.1)* | TPHg & TPHd (8015M)* | VOCs - Full Scan (8260B)* | SVOCs - Full Scan (8270C)* | Pesticides (8081A)* | PCBs (8082)*

TAT:
- ☐ Rush _____hrs.
- ☐ Rush _____days
- ☒ 7 days TRPH
- ☐ 14 days
- ☐ 21 days
- ☒ 30 days OTHERS
- ☐ _____days
- ☐

	SAMPLE ID LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	SAMPLING DATE	SAMPLING TIME	CONTAINER NO.	CONTAINER SIZE	CONTAINER TYPE	MATRIX CODE	QC	PRESERVATIVE CODE IC	PRESERVATIVE CODE IC						COMMENTS
10	* 1	KB-11@15'		5/17/04		2	2"ϕ x 3"	BRASS SLEEVE	SS		X	X						* TRPH IS DETECTED
11	* 2	KB-12@5'		↓		↓	↓	↓	↓		↓	↓						ANALYZE SAMPLE FOR:
12	* 3	KB-13@5'																· TPHg & TPHd
13	* 4	KB-14@10'																· VOCs
14	* 5	KB-15@5'																· SVOCs
15	* 6	KB-17@5'																· PESTICIDES
	* 7																	· PCBs
	* 8																	
	* 9																	
	* 0																	

Instructions

Cooler #	Temp. (°C)	Sample #s

SAMPLER

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	5/18/04	12:00	UPS
	5-19-04	1000	[signature]

COURIER/AIRBILL

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

GRAPHICS EXPRESS (626) 330-8585

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN	04 E159
☐ EMAX Courier		Recepient	J- LUNA
☐ Client Delivery		Date	5-19-04
☑ Third Party UPS	12 5R8 V69019164 3714	Time	1000

COC Inspection

☑ Client Name	☐ Sampler Name	* ☑ Sampling Date/Time/Location
☑ Address	☐ Courier Signature/Dat	☑ Analysis Required
☑ Client PM/FC	☑ TAT	☑ Matrix
☑ Tel #/Fax #	☑ Sample ID	☐ Preservative (if any)
Safety Issues ☑ None	☐ High Concentrations expected	☐ Superfund Site Samples
Comments: ☐ Rad Screening Required		

* NO COLLECTION TIME

Packaging Inspection

Container	☑ Cooler	☐ Box	☐	☐
Condition	☑ Custody Seal	☑ Intact	☐ Damaged	☐
Packaging	☑ Bubble Pack	☐ Styrofoam	☑ Sufficient	☑ plastic bag
Temperatures	☑ Cooler 1 3-5°C	☑ Cooler 2 ____	☐ Cooler 3 ____	☐ Cooler 4 ____
	☐ Cooler 5 ____	☐ Cooler 6 ____	☐ Cooler 7 ____	☐ Cooler 8 ____
	☐ Cooler 9 ____	☐ Cooler 10 ____	☐ Cooler 11 ____	☐ Cooler 12 ____

Comments:

LSCID	Client ID	Discrepancy	Corrective Action
E159-01		COLLECTION TIME ON LABEL	Login using time indicated on the sample label.
THRU 15		READS:	
		0815, 0855, 0920, 0950,	
		1150, 1215, 1355, 1240,	
		1420, 1450, 1530, 1615,	
		1700, 1800, 1915	

LSCID : Lab Sample Container ID

REVIEWS

Sample Labeling [signature] Date 5-19-04

SRF [signature] Date 5/18/04

PM [signature] Date 5/19/04

UPS CampusShip: View/Print Label

1. **Print the label(s):** Select Print from the File menu in this browser window to pri labels displayed below.

2. **Fold the printed label at the dotted line.** Place the label in a UPS Shipping Po you do not have a pouch, affix the folded label using clear plastic shipping tape ov entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers without a Daily Pickup
   - Schedule a same day or future day Pickup to have a UPS driver pickup all of Internet Shipping packages.
   - Hand the package to any UPS driver in your area.
   - Take your package to The UPS Store™, Customer Center or Authorized Ship Outlet.
   - Drop off your Air Shipments including Worldwide Express SM at one of our 50,000 UPS Drop-Off locations.

   Customers with a Daily Pickup
   - Your driver will pickup your shipment(s) as usual.

Time Collected _____ Sample No. _____

FOLD HERE

WAYNE CHIU
858-320-2000
SAN DIEGO OPERATIONS
5015 SHOREHAM PLACE
SAN DIEGO CA 92122

56 LBS 1 OF 1

SHIP TO:
JIM CARTER
310-618-8889
E MAX LABORATORIES INC
1835 W. 205TH STREET
TORRANCE CA 90501-1510

CA 908 9-70

UPS NEXT DAY AIR 1

TRACKING #: 1Z 5R8 V69 01 9164 3714

BILLING: P/P 04E159 5-19-04 1000

Project No./Task: 44102.PW1

CS 6.1.10.0 W98E60 27.0A 01/2004

TM

1005

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

SDG#: 04E159

CASE NARRATIVE

CLIENT: **KLEINFELDER**

PROJECT: **LAKESIDE CONSERVANCY FILL**

SDG: **04E159**

METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Fifteen (15) soil samples were received on 05/19/04 for Total Recoverable Petroleum Hydrocarbons analysis by Method 418.1 in accordance with "Methods for Chemical Analysis of Water and Wastewater", EPA 600/4-79-020 (1983).

1. Holding Time

   Analysis met holding time criteria.

2. Method Blank

   Method blank was free of contamination at the reporting limit.

3. Lab Control Sample/Lab Control Sample Duplicate

   Lab control results were within QC limit.

4. Matrix Spike/Matrix Spike Duplicate

   Sample E159-04 was spiked. Recoveries were within QC limit.

5. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL
Batch No. : 04E159

Matrix : SOIL
Instrument ID : I61

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	TRE002SB	ND	1	NA	10	5	05/20/0412:10	05/19/0417:00	TRE002S-03	TRE002S-02	TRE002S	NA	05/19/04
LCS1S	TRE002SL	155	1	NA	10	5	05/20/0412:15	05/19/0417:00	TRE002S-04	TRE002S-02	TRE002S	NA	05/19/04
LCD1S	TRE002SC	153	1	NA	10	5	05/20/0412:20	05/19/0417:00	TRE002S-05	TRE002S-02	TRE002S	NA	05/19/04
KB-1@5'	E159-01	ND	1	9.7	11.1	5.54	05/20/0412:30	05/19/0417:00	TRE002S-07	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-2@5'	E159-02	93	1	16.2	11.9	5.97	05/20/0412:35	05/19/0417:00	TRE002S-08	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-3@15'	E159-03	7.1J	1	12.4	11.4	5.71	05/20/0412:40	05/19/0417:00	TRE002S-09	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-4@10'	E159-04	ND	1	2.1	10.2	5.11	05/20/0412:45	05/19/0417:00	TRE002S-10	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-4@10'MS	E159-04M	153	1	2.1	10.2	5.11	05/20/0412:50	05/19/0417:00	TRE002S-11	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-4@10'MSD	E159-04S	158	1	2.1	10.2	5.11	05/20/0412:55	05/19/0417:00	TRE002S-12	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-5@19'	E159-05	ND	1	14.5	11.7	5.85	05/20/0413:10	05/19/0417:00	TRE002S-15	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-7@10'	E159-06	ND	1	2.2	10.2	5.11	05/20/0413:15	05/19/0417:00	TRE002S-16	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-8@10'	E159-07	220	1	8.5	10.9	5.46	05/20/0413:20	05/19/0417:00	TRE002S-17	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-9@5'	E159-08	ND	1	21.0	12.7	6.33	05/20/0413:25	05/19/0417:00	TRE002S-18	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-10@5'	E159-09	8.6J	1	3.8	10.4	5.2	05/20/0413:30	05/19/0417:00	TRE002S-19	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-11@15'	E159-10	ND	1	2.8	10.3	5.14	05/20/0413:35	05/19/0417:00	TRE002S-20	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-12@5'	E159-11	3400	100	9.4	1100	552	05/20/0413:40	05/19/0417:00	TRE002S-21	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-13@5'	E159-12	190	1	15.1	11.8	5.89	05/20/0413:45	05/19/0417:00	TRE002S-22	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-14@10'	E159-13	200	1	12.8	11.5	5.73	05/20/0413:50	05/19/0417:00	TRE002S-23	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-15@5'	E159-14	86	1	14.5	11.7	5.85	05/20/0413:55	05/19/0417:00	TRE002S-24	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-17@5'	E159-15	24000	100	3.3	1030	517	05/20/0414:10	05/19/0417:00	TRE002S-27	TRE002S-26	TRE002S	05/17/04	05/19/04

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
METHOD: METHOD 418.1
MATRIX: SOIL
% MOISTURE: NA

BATCH NO.: 04E159
SAMPLE ID: LCS1S/LCD1S
CONTROL NO.: TRE002SL/C

DATE RECEIVED: 05/19/04
DATE EXTRACTED: 05/19/04 17:00
DATE ANALYZED: 05/20/04 12:15/12:20

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
TRPH	ND	150	155	103	150	153	102	1	80-120	20

5003

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
METHOD: METHOD 418.1
MATRIX: SOIL
% MOISTURE: 2.1

BATCH NO.: 04E159
SAMPLE ID: KB-4@10'MS/MSD
CONTROL NO.: E159-04M/S

DATE RECEIVED: 05/19/04
DATE EXTRACTED: 05/19/04 17:00
DATE ANALYZED: 05/20/04 12:50/12:55

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
TRPH	ND	153	153	100	153	158	103	3	75-125	20

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

METALS / MERCURY

SDG#: 04E159

7000

CASE NARRATIVE

CLIENT: **KLEINFELDER**

PROJECT: **LAKESIDE CONSERVANCY FILL**

SDG: **04E159**

METHOD 3050B/6010B
METALS BY ICP

Fifteen (15) soil samples were received on 05/19/04 for Metals analysis by Method 3050B/6010B in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd edition.

1. Holding Time

   Analysis met holding time criteria.

2. Method Blank

   Method blank was free of contamination at the reporting limit.

3. Lab Control Sample/Lab Control Sample Duplicate

   Lab control results were within QC limit.

4. Serial Dilution / Post-Analytical Spike

   Sample E159-01 was analyzed for serial dilution and post-analytical spike. All QC requirements were met.

5. Matrix Spike/Matrix Spike Duplicate

   Sample E159-01 was spiked. All recoveries were within QC limit except Antimony in both MS/MSD was out of the limit.

6. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met except as aforementioned.

LAB CHRONICLE
METALS BY ICP

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159
Instrument ID : T-I07

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IPE048SB	1	NA	06/03/0403:18	05/20/0408:35	I07F009010	I07F009008	IPE048S	Method Blank
LCS1S	IPE048SL	1	NA	06/03/0403:22	05/20/0408:35	I07F009011	I07F009008	IPE048S	Lab Control Sample (LCS)
LCD1S	IPE048SC	1	NA	06/03/0403:27	05/20/0408:35	I07F009012	I07F009008	IPE048S	LCS Duplicate
KB-1@5'AS	E159-01A	1	9.7	06/03/0403:31	05/20/0408:35	I07F009013	I07F009008	IPE048S	Analytical Spike Sample
KB-1@5'MS	E159-01M	1	9.7	06/03/0403:35	05/20/0408:35	I07F009014	I07F009008	IPE048S	Matrix Spike Sample (MS)
KB-1@5'MSD	E159-01S	1	9.7	06/03/0403:39	05/20/0408:35	I07F009015	I07F009008	IPE048S	MS Duplicate (MSD)
KB-1@5'	E159-01	1	9.7	06/03/0403:45	05/20/0408:35	I07F009016	I07F009008	IPE048S	Field Sample
KB-1@5'DL	E159-01T	5	9.7	06/03/0403:50	05/20/0408:35	I07F009017	I07F009008	IPE048S	Diluted Sample
KB-2@5'	E159-02	1	16.2	06/03/0403:54	05/20/0408:35	I07F009018	I07F009008	IPE048S	Field Sample
KB-3@15'	E159-03	1	12.4	06/03/0403:58	05/20/0408:35	I07F009019	I07F009008	IPE048S	Field Sample
KB-4@10'	E159-04	1	2.1	06/03/0404:11	05/20/0408:35	I07F009022	I07F009020	IPE048S	Field Sample
KB-5@19'	E159-05	1	14.5	06/03/0404:15	05/20/0408:35	I07F009023	I07F009020	IPE048S	Field Sample
KB-7@10'	E159-06	1	2.2	06/03/0404:19	05/20/0408:35	I07F009024	I07F009020	IPE048S	Field Sample
KB-8@10'	E159-07	1	8.5	06/03/0404:24	05/20/0408:35	I07F009025	I07F009020	IPE048S	Field Sample
KB-9@5'	E159-08	1	21.0	06/03/0404:28	05/20/0408:35	I07F009026	I07F009020	IPE048S	Field Sample
KB-10@5'	E159-09	1	3.8	06/03/0404:32	05/20/0408:35	I07F009027	I07F009020	IPE048S	Field Sample
KB-11@15'	E159-10	1	2.8	06/03/0404:36	05/20/0408:35	I07F009028	I07F009020	IPE048S	Field Sample
KB-12@5'	E159-11	1	9.4	06/03/0404:41	05/20/0408:35	I07F009029	I07F009020	IPE048S	Field Sample
KB-13@5'	E159-12	1	15.1	06/03/0404:45	05/20/0408:35	I07F009030	I07F009020	IPE048S	Field Sample
KB-14@10'	E159-13	1	12.8	06/03/0404:49	05/20/0408:35	I07F009031	I07F009020	IPE048S	Field Sample
KB-15@5'	E159-14	1	14.5	06/03/0412:52	05/20/0408:35	I07F011031	I07F011021	IPE048S	Field Sample
KB-17@5'	E159-15	1	3.3	06/03/0412:57	05/20/0408:35	I07F011032	I07F011021	IPE048S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
METALS BY TRACE ICP

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159
Instrument ID : T-I31

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IPE048SB	1	NA	06/02/0405:11	05/20/0408:35	I31F007010	I31F007008	IPE048S	Method Blank
LCS1S	IPE048SL	1	NA	06/02/0405:16	05/20/0408:35	I31F007011	I31F007008	IPE048S	Lab Control Sample (LCS)
LCD1S	IPE048SC	1	NA	06/02/0405:22	05/20/0408:35	I31F007012	I31F007008	IPE048S	LCS Duplicate
KB-1@5'AS	E159-01A	1	9.7	06/02/0405:27	05/20/0408:35	I31F007013	I31F007008	IPE048S	Analytical Spike Sample
KB-1@5'MS	E159-01M	1	9.7	06/02/0405:32	05/20/0408:35	I31F007014	I31F007008	IPE048S	Matrix Spike Sample (MS)
KB-1@5'MSD	E159-01S	1	9.7	06/02/0405:38	05/20/0408:35	I31F007015	I31F007008	IPE048S	MS Duplicate (MSD)
KB-1@5'	E159-01	1	9.7	06/02/0405:45	05/20/0408:35	I31F007016	I31F007008	IPE048S	Field Sample
KB-1@5'DL	E159-01T	5	9.7	06/02/0405:51	05/20/0408:35	I31F007017	I31F007008	IPE048S	Diluted Sample
KB-2@5'	E159-02	1	16.2	06/02/0405:56	05/20/0408:35	I31F007018	I31F007008	IPE048S	Field Sample
KB-3@15'	E159-03	1	12.4	06/02/0406:02	05/20/0408:35	I31F007019	I31F007008	IPE048S	Field Sample
KB-4@10'	E159-04	1	2.1	06/02/0406:22	05/20/0408:35	I31F007022	I31F007020	IPE048S	Field Sample
KB-5@19'	E159-05	1	14.5	06/02/0406:28	05/20/0408:35	I31F007023	I31F007020	IPE048S	Field Sample
KB-7@10'	E159-06	1	2.2	06/02/0406:33	05/20/0408:35	I31F007024	I31F007020	IPE048S	Field Sample
KB-8@10'	E159-07	1	8.5	06/02/0406:39	05/20/0408:35	I31F007025	I31F007020	IPE048S	Field Sample
KB-9@5'	E159-08	1	21.0	06/02/0406:44	05/20/0408:35	I31F007026	I31F007020	IPE048S	Field Sample
KB-10@5'	E159-09	1	3.8	06/02/0406:49	05/20/0408:35	I31F007027	I31F007020	IPE048S	Field Sample
KB-11@15'	E159-10	1	2.8	06/02/0406:55	05/20/0408:35	I31F007028	I31F007020	IPE048S	Field Sample
KB-12@5'	E159-11	1	9.4	06/02/0407:00	05/20/0408:35	I31F007029	I31F007020	IPE048S	Field Sample
KB-13@5'	E159-12	1	15.1	06/02/0407:06	05/20/0408:35	I31F007030	I31F007020	IPE048S	Field Sample
KB-14@10'	E159-13	1	12.8	06/02/0407:11	05/20/0408:35	I31F007031	I31F007020	IPE048S	Field Sample
KB-15@5'	E159-14	1	14.5	06/02/0407:34	05/20/0408:35	I31F007034	I31F007032	IPE048S	Field Sample
KB-17@5'	E159-15	1	3.3	06/02/0407:39	05/20/0408:35	I31F007035	I31F007032	IPE048S	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-1@5'	Date Analyzed:	06/03/04 03:45
Lab Samp ID:	E159-01	Dilution Factor:	1
Lab File ID:	I07F009016	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	9.7
Calib. Ref.:	I07F009008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.1	2.21
Barium	113	1.11	.166
Beryllium	.199J	1.11	.166
Cadmium	ND	1.11	.554
Chromium	20.8	2.21	.664
Cobalt	7.63	2.21	.831
Copper	16.5	2.21	.554
Molybdenum	ND	5.54	.831
Nickel	6.86	2.21	.609
Silver	1.09J	2.21	.698
Vanadium	50	2.21	.554
Zinc	38.7	1.11	.332

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-1@5'	Date Analyzed:	06/02/04 05:45
Lab Samp ID:	E159-01	Dilution Factor:	1
Lab File ID:	I31F007016	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	9.7
Calib. Ref.:	I31F007008	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	.944J	1.11	.443
Lead	1.96	1.11	.221
Selenium	ND	1.11	.554
Thallium	ND	1.11	.554

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-2@5'	Date Analyzed:	06/03/04 03:54
Lab Samp ID:	E159-02	Dilution Factor:	1
Lab File ID:	I07F009018	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	16.2
Calib. Ref.:	I07F009008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.9	2.39
Barium	60.3	1.19	.179
Beryllium	.27J	1.19	.179
Cadmium	ND	1.19	.597
Chromium	10.5	2.39	.716
Cobalt	5.01	2.39	.895
Copper	15.6	2.39	.597
Molybdenum	ND	5.97	.895
Nickel	5.17	2.39	.656
Silver	.987J	2.39	.752
Vanadium	31	2.39	.597
Zinc	46.7	1.19	.358

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-2@5'	Date Analyzed:	06/02/04 05:56
Lab Samp ID:	E159-02	Dilution Factor:	1
Lab File ID:	I31F007018	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	16.2
Calib. Ref.:	I31F007008	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	3.44	1.19	.477
Lead	10.9	1.19	.239
Selenium	ND	1.19	.597
Thallium	ND	1.19	.597

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-3@15'	Date Analyzed:	06/03/04 03:58
Lab Samp ID:	E159-03	Dilution Factor:	1
Lab File ID:	I07F009019	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	12.4
Calib. Ref.:	I07F009008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.4	2.28
Barium	61.3	1.14	.171
Beryllium	ND	1.14	.171
Cadmium	ND	1.14	.571
Chromium	10.8	2.28	.685
Cobalt	4.26	2.28	.856
Copper	7.76	2.28	.571
Molybdenum	ND	5.71	.856
Nickel	3.59	2.28	.628
Silver	.836J	2.28	.719
Vanadium	27.6	2.28	.571
Zinc	21.5	1.14	.342

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-3@15'	Date Analyzed:	06/02/04 06:02
Lab Samp ID:	E159-03	Dilution Factor:	1
Lab File ID:	I31F007019	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	12.4
Calib. Ref.:	I31F007008	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	.87J	1.14	.457
Lead	1.38	1.14	.228
Selenium	ND	1.14	.571
Thallium	ND	1.14	.571

METHOD 3050B/6010B
METALS BY ICP

ɔlient	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
ᐧDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-4@10'	Date Analyzed:	06/03/04 04:11
ɹab Samp ID:	E159-04	Dilution Factor:	1
Lab File ID:	I07F009022	Matrix :	SOIL
Fxt Btch ID:	IPE048S	% Moisture :	2.1
alib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

ARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ʌntimony	ND	10.2	2.04
Barium	42.5	1.02	.153
ᐧeryllium	ND	1.02	.153
admium	ND	1.02	.511
ɹhromium	7.16	2.04	.613
Cobalt	2.94	2.04	.766
Copper	8.67	2.04	.511
olybdenum	ND	5.11	.766
ickel	2.47	2.04	.562
Silver	ND	2.04	.644
Vanadium	20.3	2.04	.511
inc	16.8	1.02	.306

METHOD 3050B/6010B
METALS BY TRACE ICP

..lient	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-4@10'	Date Analyzed:	06/02/04 06:22
ab Samp ID:	E159-04	Dilution Factor:	1
Lab File ID:	I31F007022	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.1
alib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
..rsenic	.44J	1.02	.409
Lead	.65J	1.02	.204
Selenium	ND	1.02	.511
hallium	ND	1.02	.511

METHOD 3050B/6010B
METALS BY ICP

·lient	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
ᶜDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-5@19'	Date Analyzed:	06/03/04 04:15
ab Samp ID:	E159-05	Dilution Factor:	1
Lab File ID:	I07F009023	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	14.5
alib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

ᶜARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
,ntimony	ND	11.7	2.34
Barium	181	1.17	.175
ᴿeryllium	.209J	1.17	.175
admium	ND	1.17	.585
hromium	21.3	2.34	.702
Cobalt	9.14	2.34	.877
Copper	18.4	2.34	.585
olybdenum	ND	5.85	.877
ickel	8.12	2.34	.643
ᵢilver	.823J	2.34	.737
Vanadium	47.8	2.34	.585
ᵀinc	38.8	1.17	.351

METHOD 3050B/6010B
METALS BY TRACE ICP

lient	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-5@19'	Date Analyzed:	06/02/04 06:28
ab Samp ID:	E159-05	Dilution Factor:	1
Lab File ID:	I31F007023	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	14.5
alib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

ARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
rsenic	ND	1.17	.468
Lead	2.05	1.17	.234
Selenium	ND	1.17	.585
hallium	ND	1.17	.585

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-7@10'	Date Analyzed:	06/03/04 04:19
Lab Samp ID:	E159-06	Dilution Factor:	1
Lab File ID:	I07F009024	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.2
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.2	2.04
Barium	17.5	1.02	.153
Beryllium	ND	1.02	.153
Cadmium	ND	1.02	.511
Chromium	4.53	2.04	.613
Cobalt	1.2J	2.04	.767
Copper	6.65	2.04	.511
Molybdenum	ND	5.11	.767
Nickel	1.81J	2.04	.562
Silver	ND	2.04	.644
Vanadium	17.5	2.04	.511
Zinc	9.59	1.02	.307

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-7@10'	Date Analyzed:	06/02/04 06:33
Lab Samp ID:	E159-06	Dilution Factor:	1
Lab File ID:	I31F007024	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.2
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1.02	.409
Lead	.42J	1.02	.204
Selenium	ND	1.02	.511
Thallium	ND	1.02	.511

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-8@10'	Date Analyzed:	06/03/04 04:24
Lab Samp ID:	E159-07	Dilution Factor:	1
Lab File ID:	I07F009025	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	8.5
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.9	2.19
Barium	64	1.09	.164
Beryllium	ND	1.09	.164
Cadmium	ND	1.09	.546
Chromium	9.25	2.19	.656
Cobalt	4.41	2.19	.82
Copper	10	2.19	.546
Molybdenum	ND	5.46	.82
Nickel	5.17	2.19	.601
Silver	ND	2.19	.689
Vanadium	29	2.19	.546
Zinc	30.7	1.09	.328

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-8@10'	Date Analyzed:	06/02/04 06:39
Lab Samp ID:	E159-07	Dilution Factor:	1
Lab File ID:	I31F007025	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	8.5
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.3	1.09	.437
Lead	8.24	1.09	.219
Selenium	ND	1.09	.546
Thallium	ND	1.09	.546

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-9@5'	Date Analyzed:	06/03/04 04:28
Lab Samp ID:	E159-08	Dilution Factor:	1
Lab File ID:	I07F009026	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	21.0
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	3.45J	12.7	2.53
Barium	202	1.27	.19
Beryllium	.217J	1.27	.19
Cadmium	ND	1.27	.633
Chromium	32.6	2.53	.759
Cobalt	12.5	2.53	.949
Copper	22.3	2.53	.633
Molybdenum	ND	6.33	.949
Nickel	12	2.53	.696
Silver	1.84J	2.53	.797
Vanadium	80.1	2.53	.633
Zinc	68.4	1.27	.38

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-9@5'	Date Analyzed:	06/02/04 06:44
Lab Samp ID:	E159-08	Dilution Factor:	1
Lab File ID:	I31F007026	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	21.0
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.04	1.27	.506
Lead	3.99	1.27	.253
Selenium	ND	1.27	.633
Thallium	ND	1.27	.633

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-10@5'	Date Analyzed:	06/03/04 04:32
Lab Samp ID:	E159-09	Dilution Factor:	1
Lab File ID:	I07F009027	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	3.8
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.4	2.08
Barium	39.5	1.04	.156
Beryllium	ND	1.04	.156
Cadmium	ND	1.04	.52
Chromium	7.33	2.08	.624
Cobalt	3.04	2.08	.78
Copper	6.92	2.08	.52
Molybdenum	ND	5.2	.78
Nickel	2.88	2.08	.572
Silver	.82J	2.08	.655
Vanadium	22.5	2.08	.52
Zinc	16	1.04	.312

METHOD 3050B/6010B
METALS BY TRACE ICP

ɔlient	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-10@5'	Date Analyzed:	06/02/04 06:49
ab Samp ID:	E159-09	Dilution Factor:	1
Lab File ID:	I31F007027	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	3.8
alib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

ARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
,,rsenic	.478J	1.04	.416
Lead	.994J	1.04	.208
Selenium	ND	1.04	.52
hallium	ND	1.04	.52

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-11@15'	Date Analyzed:	06/03/04 04:36
Lab Samp ID:	E159-10	Dilution Factor:	1
Lab File ID:	I07F009028	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.8
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.3	2.06
Barium	40.2	1.03	.154
Beryllium	ND	1.03	.154
Cadmium	ND	1.03	.514
Chromium	9.7	2.06	.617
Cobalt	3.87	2.06	.772
Copper	6.15	2.06	.514
Molybdenum	ND	5.14	.772
Nickel	3	2.06	.566
Silver	ND	2.06	.648
Vanadium	24.6	2.06	.514
Zinc	16.2	1.03	.309

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-11@15'	Date Analyzed:	06/02/04 06:55
Lab Samp ID:	E159-10	Dilution Factor:	1
Lab File ID:	I31F007028	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.8
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1.03	.412
Lead	.739J	1.03	.206
Selenium	ND	1.03	.514
Thallium	ND	1.03	.514

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-12@5'	Date Analyzed:	06/03/04 04:41
Lab Samp ID:	E159-11	Dilution Factor:	1
Lab File ID:	I07F009029	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	9.4
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	3.92J	11	2.21
Barium	83.5	1.1	.166
Beryllium	.229J	1.1	.166
Cadmium	ND	1.1	.552
Chromium	10.8	2.21	.662
Cobalt	4.97	2.21	.828
Copper	33.6	2.21	.552
Molybdenum	ND	5.52	.828
Nickel	6.52	2.21	.607
Silver	ND	2.21	.695
Vanadium	31.4	2.21	.552
Zinc	57.9	1.1	.331

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-12@5'	Date Analyzed:	06/02/04 07:00
Lab Samp ID:	E159-11	Dilution Factor:	1
Lab File ID:	I31F007029	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	9.4
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	4.47	1.1	.442
Lead	11.8	1.1	.221
Selenium	ND	1.1	.552
Thallium	ND	1.1	.552

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-13@5'	Date Analyzed:	06/03/04 04:45
Lab Samp ID:	E159-12	Dilution Factor:	1
Lab File ID:	I07F009030	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	15.1
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	2.52J	11.8	2.36
Barium	502	1.18	.177
Beryllium	.497J	1.18	.177
Cadmium	ND	1.18	.589
Chromium	22.6	2.36	.707
Cobalt	4.1	2.36	.883
Copper	8.51	2.36	.589
Molybdenum	ND	5.89	.883
Nickel	7.46	2.36	.648
Silver	.81J	2.36	.742
Vanadium	47	2.36	.589
Zinc	28.4	1.18	.353

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID	: KB-13@5'	Date Analyzed:	06/02/04 07:06
Lab Samp ID	: E159-12	Dilution Factor:	1
Lab File ID	: I31F007030	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	15.1
Calib. Ref.	: I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	4.71	1.18	.471
Lead	5.37	1.18	.236
Selenium	ND	1.18	.589
Thallium	ND	1.18	.589

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-14@10'	Date Analyzed:	06/03/04 04:49
Lab Samp ID:	E159-13	Dilution Factor:	1
Lab File ID:	I07F009031	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	12.8
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.5	2.29
Barium	78.2	1.15	.172
Beryllium	.236J	1.15	.172
Cadmium	ND	1.15	.573
Chromium	10.6	2.29	.688
Cobalt	6.91	2.29	.86
Copper	11.2	2.29	.573
Molybdenum	ND	5.73	.86
Nickel	4.32	2.29	.631
Silver	ND	2.29	.722
Vanadium	34.7	2.29	.573
Zinc	32.4	1.15	.344

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-14@10'	Date Analyzed:	06/02/04 07:11
Lab Samp ID:	E159-13	Dilution Factor:	1
Lab File ID:	I31F007031	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	12.8
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	3.42	1.15	.459
Lead	8.51	1.15	.229
Selenium	ND	1.15	.573
Thallium	ND	1.15	.573

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-15@5'	Date Analyzed:	06/03/04 12:52
Lab Samp ID:	E159-14	Dilution Factor:	1
Lab File ID:	I07F011031	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	14.5
Calib. Ref.:	I07F011021	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.7	2.34
Barium	108	1.17	.175
Beryllium	.352J	1.17	.175
Cadmium	ND	1.17	.585
Chromium	10.3	2.34	.702
Cobalt	5.03	2.34	.877
Copper	8.74	2.34	.585
Molybdenum	ND	5.85	.877
Nickel	4.51	2.34	.643
Silver	ND	2.34	.737
Vanadium	36.3	2.34	.585
Zinc	42.3	1.17	.351

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-15@5'	Date Analyzed:	06/02/04 07:34
Lab Samp ID:	E159-14	Dilution Factor:	1
Lab File ID:	I31F007034	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	14.5
Calib. Ref.:	I31F007032	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	7.85	1.17	.468
Lead	13	1.17	.234
Selenium	ND	1.17	.585
Thallium	ND	1.17	.585

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-17@5'	Date Analyzed:	06/03/04 12:57
Lab Samp ID:	E159-15	Dilution Factor:	1
Lab File ID:	I07F011032	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	3.3
Calib. Ref.:	I07F011021	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.3	2.07
Barium	63.7	1.03	.155
Beryllium	.235J	1.03	.155
Cadmium	ND	1.03	.517
Chromium	2.81	2.07	.62
Cobalt	1.77J	2.07	.776
Copper	5.7	2.07	.517
Molybdenum	ND	5.17	.776
Nickel	7.33	2.07	.569
Silver	ND	2.07	.651
Vanadium	12.8	2.07	.517
Zinc	30.6	1.03	.31

METHOD 3050B/6010B
METALS BY TRACE ICP

lient	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-17@5'	Date Analyzed:	06/02/04 07:39
ab Samp ID:	E159-15	Dilution Factor:	1
Lab File ID:	I31F007035	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	3.3
alib. Ref.:	I31F007032	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
rsenic	7.91	1.03	.414
Lead	4.42	1.03	.207
Selenium	1.75	1.03	.517
allium	ND	1.03	.517

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/20/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID	: MBLK1S	Date Analyzed:	06/03/04 03:18
Lab Samp ID	: IPE048SB	Dilution Factor:	1
Lab File ID	: I07F009010	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	NA
Calib. Ref.	: I07F009008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10	2
Barium	ND	1	.15
Beryllium	ND	1	.15
Cadmium	ND	1	.5
Chromium	ND	2	.6
Cobalt	ND	2	.75
Copper	ND	2	.5
Molybdenum	ND	5	.75
Nickel	ND	2	.55
Silver	ND	2	.63
Vanadium	ND	2	.5
Zinc	ND	1	.3

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPE048SB	IPE048SL	IPE048SC		
LAB FILE ID:	I07F009010	I07F009011	I07F009012		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	NA
DATIME ANALYZD:	06/03/0403:18	06/03/0403:22	06/03/0403:27	DATE RECEIVED:	05/20/04
PREP. BATCH:	IPE048S	IPE048S	IPE048S		
CALIB. REF:	I07F009008	I07F009008	I07F009008		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Antimony	ND	500	422	84	500	420	84	0	80-120	20
Barium	ND	100	86.6	87	100	86.4	86	0	80-120	20
Beryllium	ND	100	91.3	91	100	91.2	91	0	80-120	20
Cadmium	ND	100	88.8	89	100	88.6	89	0	80-120	20
Chromium	ND	100	90.6	91	100	90.3	90	0	80-120	20
Cobalt	ND	100	84.9	85	100	85.2	85	0	80-120	20
Copper	ND	100	85.8	86	100	85.9	86	0	80-120	20
Molybdenum	ND	100	88.3	88	100	87.9	88	0	80-120	20
Nickel	ND	100	86.9	87	100	86.7	87	0	80-120	20
Silver	ND	100	88.4	88	100	88.4	88	0	80-120	20
Vanadium	ND	100	90.9	91	100	91.1	91	0	80-120	20
Zinc	ND	100	89	89	100	88.9	89	0	80-120	20

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/20/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	MBLK1S	Date Analyzed:	06/02/04 05:11
Lab Samp ID:	IPE048SB	Dilution Factor:	1
Lab File ID:	I31F007010	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	NA
Calib. Ref.:	I31F007008	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1	.4
Lead	ND	1	.2
Selenium	ND	1	.5
Thallium	ND	1	.5

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPE048SB	IPE048SL	IPE048SC		
LAB FILE ID:	I31F007010	I31F007011	I31F007012		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	NA
DATIME ANALYZD:	06/02/0405:11	06/02/0405:16	06/02/0405:22	DATE RECEIVED:	05/20/04
PREP. BATCH:	IPE048S	IPE048S	IPE048S		
CALIB. REF:	I31F007008	I31F007008	I31F007008		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	100	89.6	90	100	90.2	90	1	80-120	20
Lead	ND	100	88.6	89	100	89.6	90	1	80-120	20
Selenium	ND	100	83.9	84	100	84.3	84	0	80-120	20
Thallium	ND	100	88.9	89	100	89.6	90	1	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	9.7
DILTN FACTR:	1	1	1		
SAMPLE ID:	KB-1@5'				
CONTROL NO.:	E159-01	E159-01M	E159-01S		
LAB FILE ID:	I07F009016	I07F009014	I07F009015		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/03/0403:45	06/03/0403:35	06/03/0403:39	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S	IPE048S		
CALIB. REF:	I07F009008	I07F009008	I07F009008		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Antimony	ND	554	246	44*	554	241	44*	2	75-125	20
Barium	113	111	207	84	111	206	83	1	75-125	20
Beryllium	.199J	111	98.4	89	111	97.5	88	1	75-125	20
Cadmium	ND	111	95.7	86	111	95.6	86	0	75-125	20
Chromium	20.8	111	117	87	111	117	87	0	75-125	20
Cobalt	7.63	111	97.1	81	111	96.9	81	0	75-125	20
Copper	16.5	111	110	85	111	110	85	0	75-125	20
Molybdenum	ND	111	89.2	81	111	88.7	80	0	75-125	20
Nickel	6.86	111	99.3	83	111	98.1	82	1	75-125	20
Silver	1.09J	111	96.9	86	111	96.8	86	0	75-125	20
Vanadium	50	111	146	86	111	145	86	0	75-125	20
Zinc	38.7	111	135	87	111	134	86	1	75-125	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	9.7
DILTN FACTR:	1	1	1		
SAMPLE ID:	KB-1@5'				
CONTROL NO.:	E159-01	E159-01M	E159-01S		
LAB FILE ID:	I31F007016	I31F007014	I31F007015		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/02/0405:45	06/02/0405:32	06/02/0405:38	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S	IPE048S		
CALIB. REF:	I31F007008	I31F007008	I31F007008		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	.944J	111	93.7	84	111	93.4	83	0	75-125	20
Lead	1.96	111	94.3	83	111	93.7	83	1	75-125	20
Selenium	ND	111	87	79	111	85.8	77	1	75-125	20
Thallium	ND	111	91.1	82	111	90.8	82	0	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	9.7
DILUTION FACTOR:	1	5		
SAMPLE ID:	KB-1@5'	KB-1@5'DL		
EMAX SAMP ID:	E159-01	E159-01T		
LAB FILE ID:	I07F009016	I07F009017		
DATE EXTRACTED:	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATE ANALYZED:	06/03/0403:45	06/03/0403:50	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S		
CALIB. REF:	I07F009008	I07F009008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Antimony	ND	ND	0	10
Barium	113	110	3	10
Beryllium	.199J	ND	NA	10
Cadmium	ND	ND	0	10
Chromium	20.8	21.5	4	10
Cobalt	7.63	8.25J	NA	10
Copper	16.5	18.2	11*	10
Molybdenum	ND	ND	0	10
Nickel	6.86	8.48J	NA	10
Silver	1.09J	ND	NA	10
Vanadium	50	51.1	2	10
Zinc	38.7	40.7	5	10

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	9.7
DILUTION FACTOR:	1	5		
SAMPLE ID:	KB-1@5'	KB-1@5'DL		
EMAX SAMP ID:	E159-01	E159-01T		
LAB FILE ID:	I31F007016	I31F007017		
DATE EXTRACTED:	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATE ANALYZED:	06/02/0405:45	06/02/0405:51	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S		
CALIB. REF:	I31F007008	I31F007008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Arsenic	.944J	2.3J	NA	10
Lead	1.96	2.12J	NA	10
Selenium	ND	ND	0	10
Thallium	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	9.7
DILTN FACTR:	1	1		
SAMPLE ID:	KB-1@5'			
CONTROL NO.:	E159-01	E159-01A		
LAB FILE ID:	I07F009016	I07F009013		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/03/0403:45	06/03/0403:31	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S		
CALIB. REF:	I07F009008	I07F009008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Antimony	ND	554	466	84	75-125
Barium	113	111	205	83	75-125
Beryllium	.199J	111	101	91	75-125
Cadmium	ND	111	99.3	90	75-125
Chromium	20.8	111	121	90	75-125
Cobalt	7.63	111	101	84	75-125
Copper	16.5	111	112	86	75-125
Molybdenum	ND	111	96.8	87	75-125
Nickel	6.86	111	102	86	75-125
Silver	1.09J	111	99.7	89	75-125
Vanadium	50	111	148	89	75-125
Zinc	38.7	111	135	87	75-125

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	9.7
DILTN FACTR:	1	1		
SAMPLE ID:	KB-1@5'			
CONTROL NO.:	E159-01	E159-01A		
LAB FILE ID:	I31F007016	I31F007013		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/02/0405:45	06/02/0405:27	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S		
CALIB. REF:	I31F007008	I31F007008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Arsenic	.944J	111	99.6	89	75-125
Lead	1.96	111	98	87	75-125
Selenium	ND	111	92.3	83	75-125
Thallium	ND	111	95.4	86	75-125

CASE NARRATIVE

CLIENT: **KLEINFELDER**

PROJECT: **LAKESIDE CONSERVANCY FILL**

SDG: **04E159**

METHOD 7471A
MERCURY BY COLD VAPOR

Fifteen (15) soil samples were received on 05/19/04 for Mercury analysis by Method 7471A in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd edition.

1. Holding Time

   Analysis met holding time criteria.

2. Method Blank

   Method blank was free of contamination at the reporting limit.

3. Lab Control Sample/Lab Control Sample Duplicate

   Lab control results were within QC limit.

4. Serial Dilution / Post-Analytical Spike

   Sample E159-01 was analyzed for serial dilution and post-analytical spike. All QC requirements were met.

5. Matrix Spike/Matrix Spike Duplicate

   Sample E159-09 was spiked. All recoveries were within QC limit.

6. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159
Instrument ID : TI047

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	HGF002SB	1	NA	06/02/0410:25	06/01/0417:30	M47F002010	M47F002008	HGF002S	Method Blank
LCS1S	HGF002SL	1	NA	06/02/0410:27	06/01/0417:30	M47F002011	M47F002008	HGF002S	Lab Control Sample (LCS)
LCD1S	HGF002SC	1	NA	06/02/0410:30	06/01/0417:30	M47F002012	M47F002008	HGF002S	LCS Duplicate
KB-1@5'AS	E159-01A	1	9.7	06/02/0410:32	06/01/0417:30	M47F002013	M47F002008	HGF002S	Analytical Spike Sample
KB-1@5'	E159-01	1	9.7	06/02/0410:34	06/01/0417:30	M47F002014	M47F002008	HGF002S	Field Sample
KB-1@5'DL	E159-01T	5	9.7	06/02/0410:36	06/01/0417:30	M47F002015	M47F002008	HGF002S	Diluted Sample
KB-2@5'	E159-02	1	16.2	06/02/0410:38	06/01/0417:30	M47F002016	M47F002008	HGF002S	Field Sample
KB-3@15'	E159-03	1	12.4	06/02/0410:41	06/01/0417:30	M47F002017	M47F002008	HGF002S	Field Sample
KB-4@10'	E159-04	1	2.1	06/02/0410:43	06/01/0417:30	M47F002018	M47F002008	HGF002S	Field Sample
KB-5@19'	E159-05	1	14.5	06/02/0410:45	06/01/0417:30	M47F002019	M47F002008	HGF002S	Field Sample
KB-7@10'	E159-06	1	2.2	06/02/0410:51	06/01/0417:30	M47F002022	M47F002020	HGF002S	Field Sample
KB-8@10'	E159-07	1	8.5	06/02/0410:53	06/01/0417:30	M47F002023	M47F002020	HGF002S	Field Sample
KB-9@5'	E159-08	1	21.0	06/02/0410:56	06/01/0417:30	M47F002024	M47F002020	HGF002S	Field Sample
KB-10@5'	E159-09	1	3.8	06/02/0410:58	06/01/0417:30	M47F002025	M47F002020	HGF002S	Field Sample
KB-10@5'MS	E159-09M	1	3.8	06/02/0411:00	06/01/0417:30	M47F002026	M47F002020	HGF002S	Matrix Spike Sample (MS)
KB-10@5'MSD	E159-09S	1	3.8	06/02/0411:02	06/01/0417:30	M47F002027	M47F002020	HGF002S	MS Duplicate (MSD)
KB-11@15'	E159-10	1	2.8	06/02/0411:04	06/01/0417:30	M47F002028	M47F002020	HGF002S	Field Sample
KB-12@5'	E159-11	1	9.4	06/02/0411:06	06/01/0417:30	M47F002029	M47F002020	HGF002S	Field Sample
KB-13@5'	E159-12	1	15.1	06/02/0411:09	06/01/0417:30	M47F002030	M47F002020	HGF002S	Field Sample
KB-14@10'	E159-13	1	12.8	06/02/0411:11	06/01/0417:30	M47F002031	M47F002020	HGF002S	Field Sample
KB-15@5'	E159-14	1	14.5	06/02/0411:17	06/01/0417:30	M47F002034	M47F002032	HGF002S	Field Sample
KB-17@5'	E159-15	1	3.3	06/02/0411:20	06/01/0417:30	M47F002035	M47F002032	HGF002S	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 7471A
MERCURY BY COLD VAPOR

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL
Batch No. : 04E159

Matrix : SOIL
Instrument ID : TI047

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HGF002SB	ND	1	NA	.1	.033	06/02/0410:25	06/01/0417:30	M47F002010	M47F002008	HGF002S	NA	06/01/04
LCS1S	HGF002SL	.872	1	NA	.1	.033	06/02/0410:27	06/01/0417:30	M47F002011	M47F002008	HGF002S	NA	06/01/04
LCD1S	HGF002SC	.875	1	NA	.1	.033	06/02/0410:30	06/01/0417:30	M47F002012	M47F002008	HGF002S	NA	06/01/04
KB-1@5'AS	E159-01A	.397	1	9.7	.111	.0365	06/02/0410:32	06/01/0417:30	M47F002013	M47F002008	HGF002S	05/17/04	05/19/04
KB-1@5'	E159-01	ND	1	9.7	.111	.0365	06/02/0410:34	06/01/0417:30	M47F002014	M47F002008	HGF002S	05/17/04	05/19/04
KB-1@5'DL	E159-01T	ND	5	9.7	.554	.183	06/02/0410:36	06/01/0417:30	M47F002015	M47F002008	HGF002S	05/17/04	05/19/04
KB-2@5'	E159-02	ND	1	16.2	.119	.0394	06/02/0410:38	06/01/0417:30	M47F002016	M47F002008	HGF002S	05/17/04	05/19/04
KB-3@15'	E159-03	ND	1	12.4	.114	.0377	06/02/0410:41	06/01/0417:30	M47F002017	M47F002008	HGF002S	05/17/04	05/19/04
KB-4@10'	E159-04	ND	1	2.1	.102	.0337	06/02/0410:43	06/01/0417:30	M47F002018	M47F002008	HGF002S	05/17/04	05/19/04
KB-5@19'	E159-05	ND	1	14.5	.117	.0386	06/02/0410:45	06/01/0417:30	M47F002019	M47F002008	HGF002S	05/17/04	05/19/04
KB-7@10'	E159-06	ND	1	2.2	.102	.0337	06/02/0410:51	06/01/0417:30	M47F002022	M47F002020	HGF002S	05/17/04	05/19/04
KB-8@10'	E159-07	ND	1	8.5	.109	.0361	06/02/0410:53	06/01/0417:30	M47F002023	M47F002020	HGF002S	05/17/04	05/19/04
KB-9@5'	E159-08	ND	1	21.0	.127	.0418	06/02/0410:56	06/01/0417:30	M47F002024	M47F002020	HGF002S	05/17/04	05/19/04
KB-10@5'	E159-09	ND	1	3.8	.104	.0343	06/02/0410:58	06/01/0417:30	M47F002025	M47F002020	HGF002S	05/17/04	05/19/04
KB-10@5'MS	E159-09M	.88	1	3.8	.104	.0343	06/02/0411:00	06/01/0417:30	M47F002026	M47F002020	HGF002S	05/17/04	05/19/04
KB-10@5'MSD	E159-09S	.892	1	3.8	.104	.0343	06/02/0411:02	06/01/0417:30	M47F002027	M47F002020	HGF002S	05/17/04	05/19/04
KB-11@15'	E159-10	ND	1	2.8	.103	.034	06/02/0411:04	06/01/0417:30	M47F002028	M47F002020	HGF002S	05/17/04	05/19/04
KB-12@5'	E159-11	ND	1	9.4	.11	.0364	06/02/0411:06	06/01/0417:30	M47F002029	M47F002020	HGF002S	05/17/04	05/19/04
KB-13@5'	E159-12	ND	1	15.1	.118	.0389	06/02/0411:09	06/01/0417:30	M47F002030	M47F002020	HGF002S	05/17/04	05/19/04
KB-14@10'	E159-13	ND	1	12.8	.115	.0378	06/02/0411:11	06/01/0417:30	M47F002031	M47F002020	HGF002S	05/17/04	05/19/04
KB-15@5'	E159-14	ND	1	14.5	.117	.0386	06/02/0411:17	06/01/0417:30	M47F002034	M47F002032	HGF002S	05/17/04	05/19/04
KB-17@5'	E159-15	ND	1	3.3	.103	.0341	06/02/0411:20	06/01/0417:30	M47F002035	M47F002032	HGF002S	05/17/04	05/19/04

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	KB-17@5'				
CONTROL NO.:	HGF002SB	HGF002SL	HGF002SC		
LAB FILE ID:	M47F002010	M47F002011	M47F002012		
DATIME EXTRCTD:	06/01/0417:30	06/01/0417:30	06/01/0417:30	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/02/0411:20	06/02/0411:20	06/02/0411:20	DATE RECEIVED:	05/19/04
PREP. BATCH:	HGF002S	HGF002S	HGF002S		
CALIB. REF:	M47F002032	M47F002032	M47F002032		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	.833	.872	105	.833	.875	105	0	80-120	20

7047

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	3.8
DILTN FACTR:	1	1	1		
SAMPLE ID:	KB-17@5'				
CONTROL NO.:	E159-09	E159-09M	E159-09S		
LAB FILE ID:	M47F002025	M47F002026	M47F002027		
DATIME EXTRCTD:	06/01/0417:30	06/01/0417:30	06/01/0417:30	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/02/0411:20	06/02/0411:20	06/02/0411:20	DATE RECEIVED:	05/19/04
PREP. BATCH:	HGF002S	HGF002S	HGF002S		
CALIB. REF:	M47F002032	M47F002032	M47F002032		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	.866	.88	102	.866	.892	103	0	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159
METHOD: METHOD 7471A

==========

MATRIX:	SOIL		% MOISTURE:	9.7
DILUTION FACTOR:	1	5		
SAMPLE ID:	KB-1@5'	KB-1@5'DL		
EMAX SAMP ID:	E159-01	E159-01T		
LAB FILE ID:	M47F002014	M47F002015		
DATE EXTRACTED:	06/01/0417:30	06/01/0417:30	DATE COLLECTED:	05/17/04
DATE ANALYZED:	06/02/0410:34	06/02/0410:36	DATE RECEIVED:	05/19/04
PREP. BATCH:	HGF002S	HGF002S		
CALIB. REF:	M47F002008	M47F002008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Mercury	ND	ND	0	10

7049

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 7471A

==========

MATRIX:	SOIL		% MOISTURE:	9.7
DILTN FACTR:	1	1		
SAMPLE ID:	KB-17@5'			
CONTROL NO.:	E159-01	E159-01A		
LAB FILE ID:	M47F002014	M47F002013		
DATIME EXTRCTD:	06/01/0417:30	06/01/0417:30	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/02/0411:20	06/02/0411:20	DATE RECEIVED:	05/19/04
PREP. BATCH:	HGF002S	HGF002S		
CALIB. REF:	M47F002032	M47F002032		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Mercury	ND	.369	.397	108	85-115

7050

APPENDIX C

Soil Boring Survey Data

Appendix
Boring Location Easting and Northings

Boring	Northing	Easting
KB-1	32.856815	-116.937184
KB-2	32.857689	-116.936643
KB-3	32.857298	-116.935801
KB-4	32.858081	-116.935259
KB-5	32.857668	-116.934307
KB-6	32.858749	-116.934697
KB-7	32.858405	-116.933938
KB-8	32.857903	-116.932685
KB-9	32.859235	-116.934061
KB-10	32.859305	-116.933053
KB-11	32.858707	-116.932047
KB-12	32.859183	-116.932249
KB-13	32.859413	-116.931409
KB-14	32.860632	-116.931059
KB-15	32.861942	-116.929591
KB-16	32.862792	-116.928927
KB-17	32.862239	-116.927826
KB-18	32.863251	-116.927601

APPENDIX D

Geotechnical Laboratory Test Results

APPENDIX D
LABORATORY DATA

GENERAL

Laboratory tests were performed on selected, representative samples as an aid in classifying the soils and to evaluate soil engineering properties. A description of the laboratory testing program is presented below.

ATTERBERG LIMITS

Atterberg limits tests were performed on 25 soil samples obtained from the field investigation. The tests were performed in general accordance with ASTM D 4318. The results of these tests are presented in Table D1 and on Figures D1 through D3.

GRADATION ANALYSIS

A total of 25 grain size distribution analyses were performed on samples of the material encountered at the site to evaluate the gradation characteristics of the soil and to aid in classification. The tests were performed in general accordance with ASTM Test Method D 422. Results of these tests are presented in Table D1 and on Figures D4 through D29.

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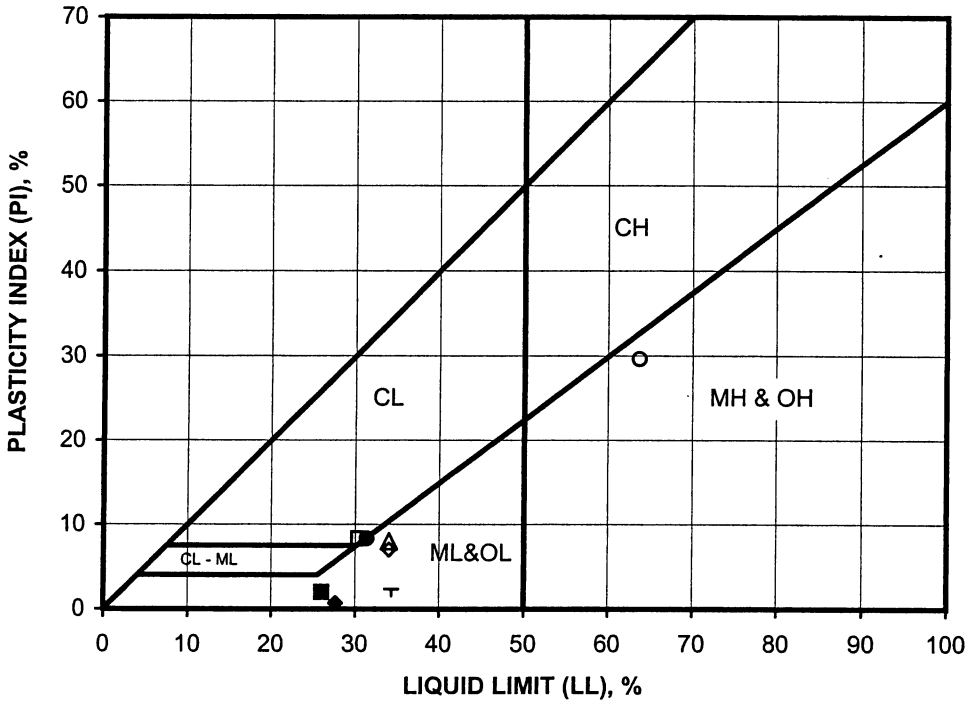
SYMBOL	SAMPLE NAME	DEPTH (ft)	LL (%)	PL (%)	PI (%)	USCS CLASSIFICATION (Minus No. 40 Sieve Fraction)	USCS (Entire Sample)
●	KB-1	10	31	23	8	ML	SM
■	KB-1	19	26	24	2	ML	SM
◆	KB-2	5	28	27	1	ML	SM
○	KB-3	18	64	34	30	MH	MH
□	KB-4	15	30	22	8	CL	SM
△	KB-4	5	34	26	8	ML	SM
+	KB-5	10	34	32	2	ML	SM
◇	KB-5	18	34	27	7	ML	SM

Sample processed per client request.
NP - Indicates non-plastic



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318-98

KLEINFELDER
An employee owned company

CHECKED BY: LAB	FN: LAB
PROJECT NO.: 44102	5.25.04

ATTERBERG LIMITS TEST RESULTS

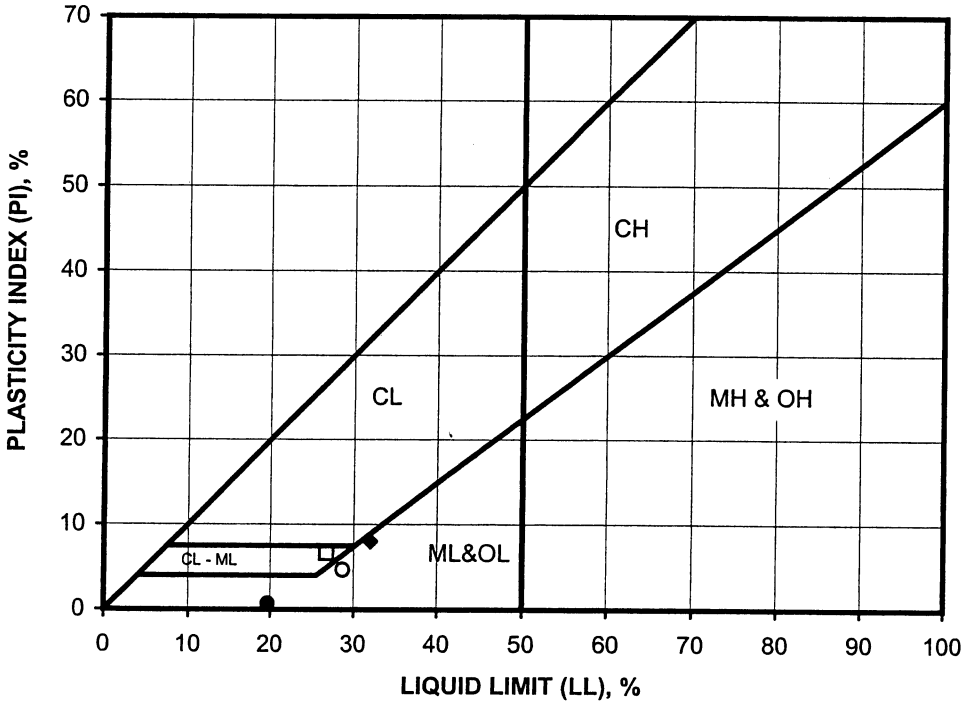
Lakeside Conservancy Fill

FIGURE

D1

SYMBOL	SAMPLE NAME	DEPTH (ft)	LL (%)	PL (%)	PI (%)	USCS CLASSIFICATION (Minus No. 40 Sieve Fraction)	USCS (Entire Sample)
●	KB-10	10	20	19	1	ML	SM
■	KB-7	5			NP	SM	SM
◆	KB-8	5	32	24	8	ML	SM
○	KB-9	10	29	24	5	ML	SM
□	KB-9	18	27	20	7	CL-ML	SM
△	KB-7	15			NP	SM	SM
+	KB-11	18			NP	SM	SM
◇	KB-11	10			NP	SM	SM

Sample processed per client request.
NP - Indicates non-plastic



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318-98

KLEINFELDER
An employee owned company

CHECKED BY: LAB	FN: LAB
PROJECT NO.: 44102	5.25.04

ATTERBERG LIMITS TEST RESULTS

Lakeside Conservancy Fill

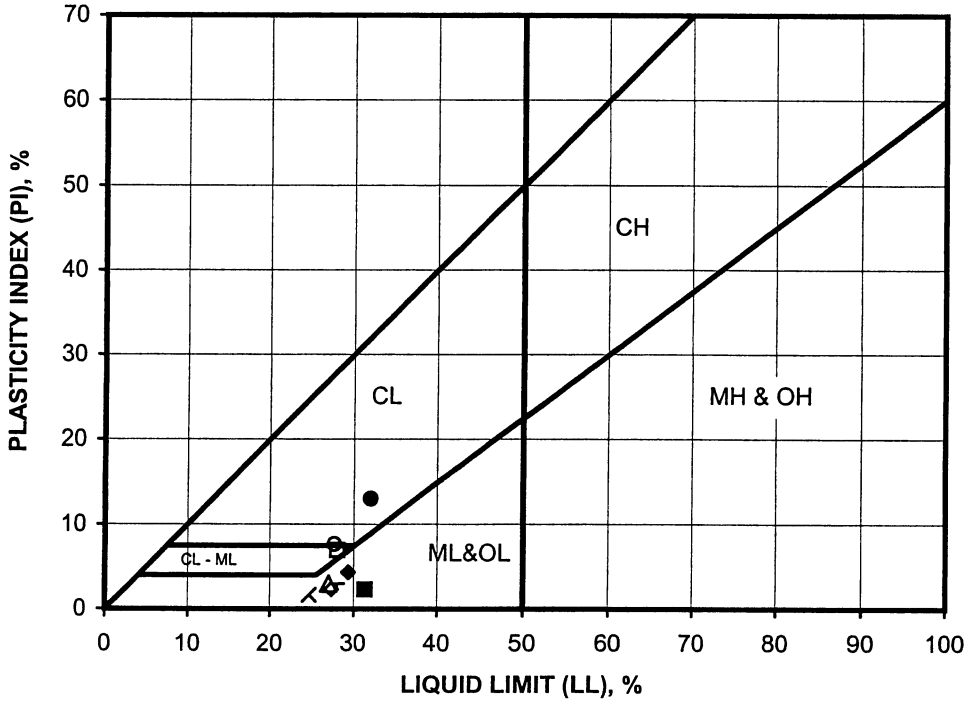
FIGURE

D2

D02 atterberg KB-07 to -11 .xls

SYMBOL	SAMPLE NAME	DEPTH (ft)	LL (%)	PL (%)	PI (%)	USCS CLASSIFICATION (Minus No. 40 Sieve Fraction)	USCS (Entire Sample)
●	KB-12	5	32	19	13	CL	SM
■	KB-12	15	31	29	2	ML	SM
◆	KB-13	10	29	25	4	ML	SM
○	KB-14	5	28	20	8	CL-ML	SM
□	KB-14	15	28	21	7	CL-ML	SM
△	KB-15	10	27	24	3	ML	SM
+	KB-16	5	28	25	3	ML	SM
◇	KB-17	10	27	25	2	ML	SM
X	KB-18	5	25	23	2	ML	SM

Sample processed per client request.
NP - Indicates non-plastic



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318-98

KLEINFELDER
An employee owned company

CHECKED BY: LAB	FN: LAB
PROJECT NO.: 44102	5.25.04

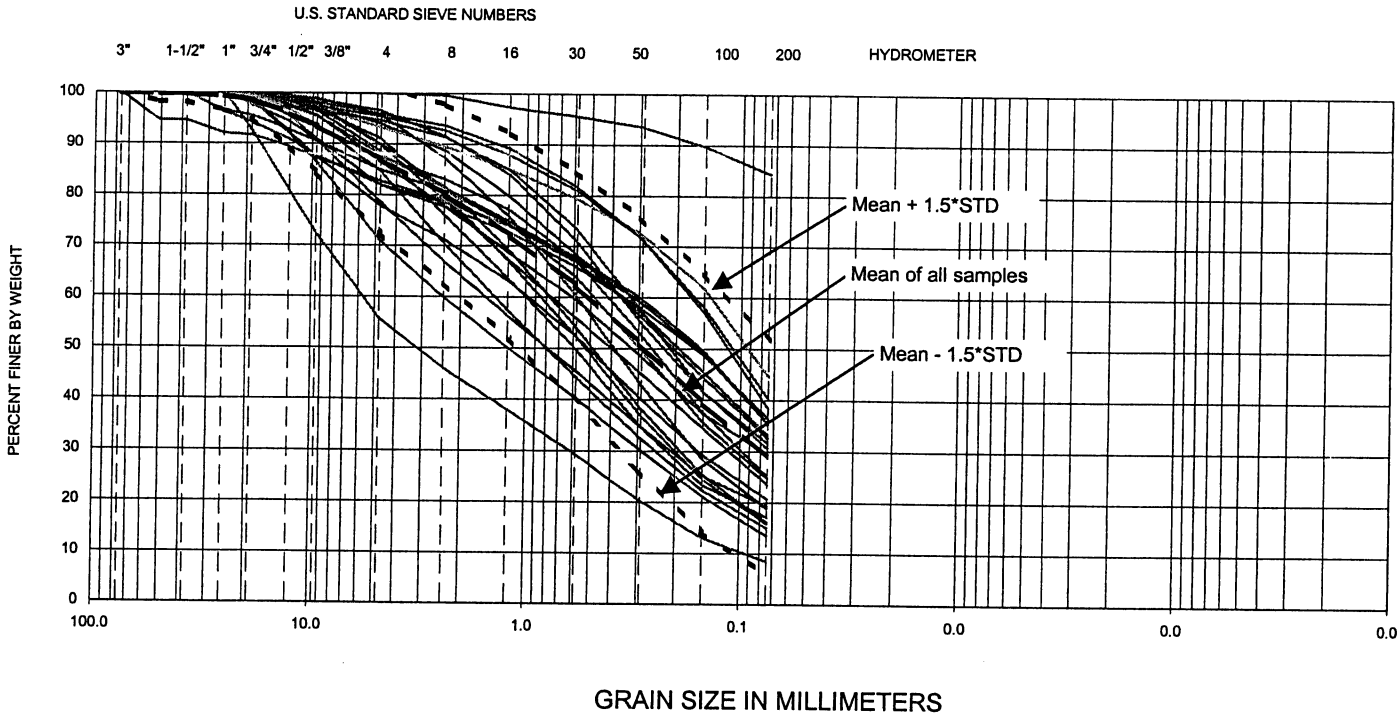
ATTERBERG LIMITS TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D3

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



Note:
STD = standard deviation

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

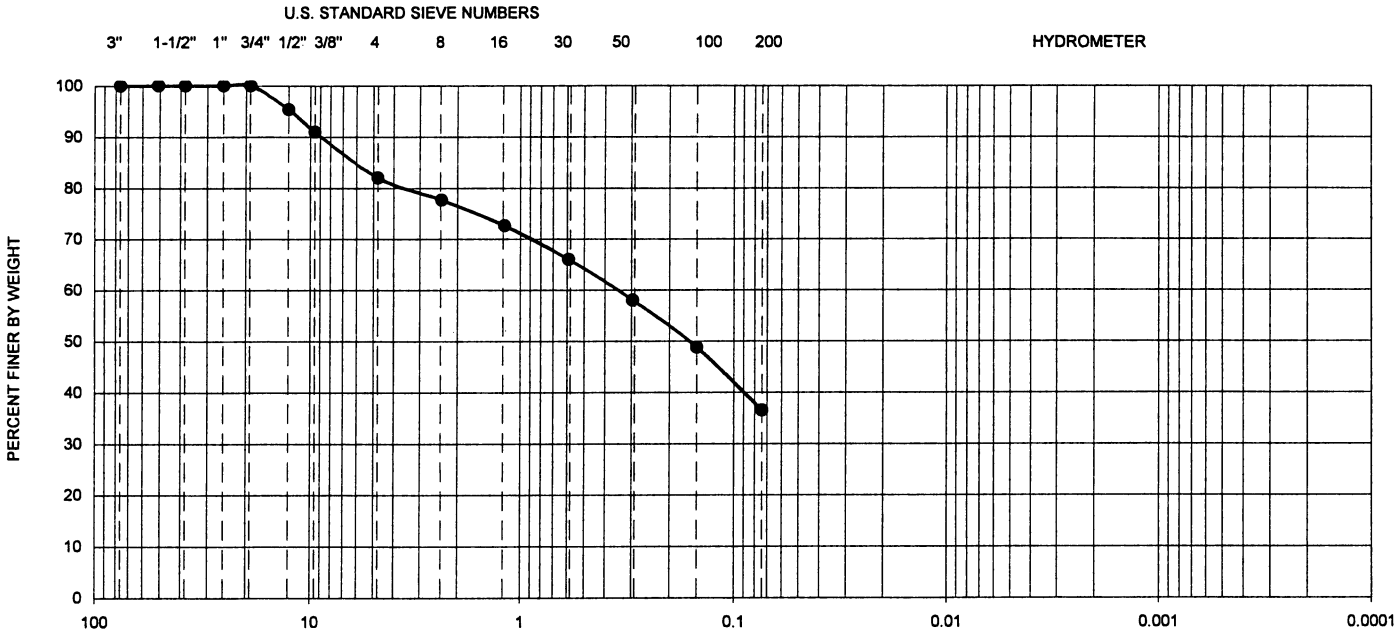
CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS
ALL SAMPLES SHOWN
Lakeside Conservancy Fill

FIGURE
D4

D04 All Sieve.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-1@10'	36	SM

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KLEINFELDER
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CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

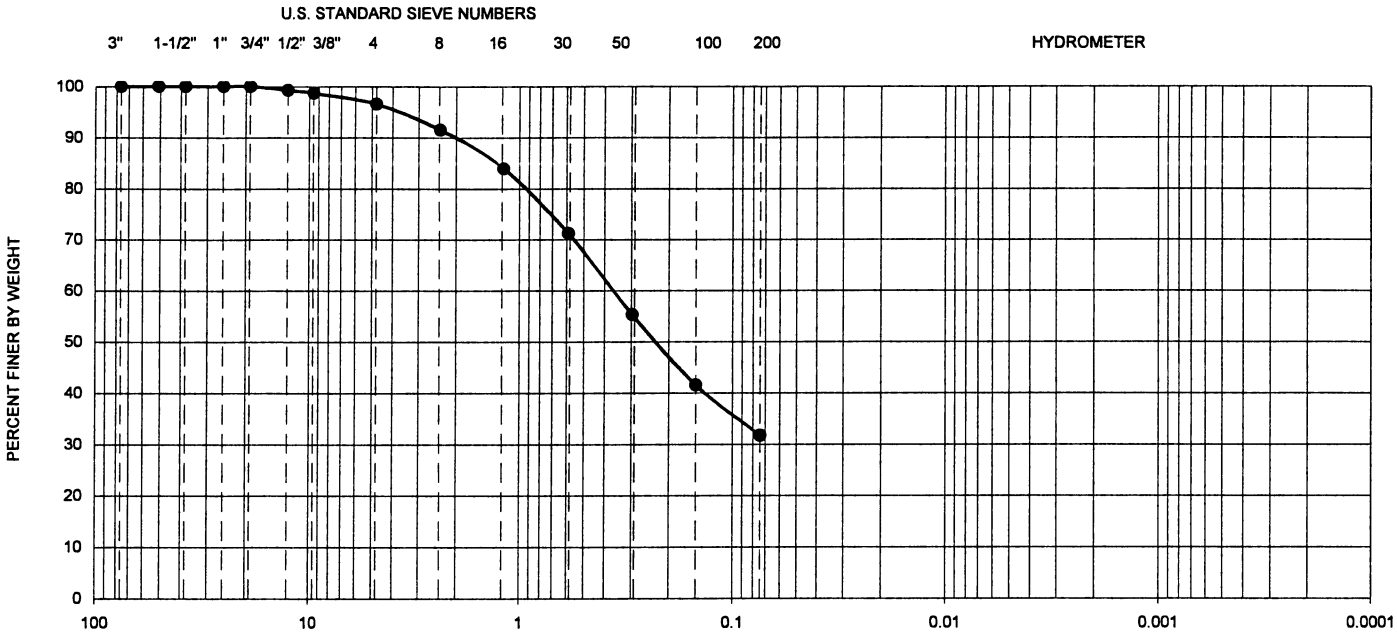
Lakeside Conservancy Fill

FIGURE

D5

D05 KB-01@10 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-1@19	32	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

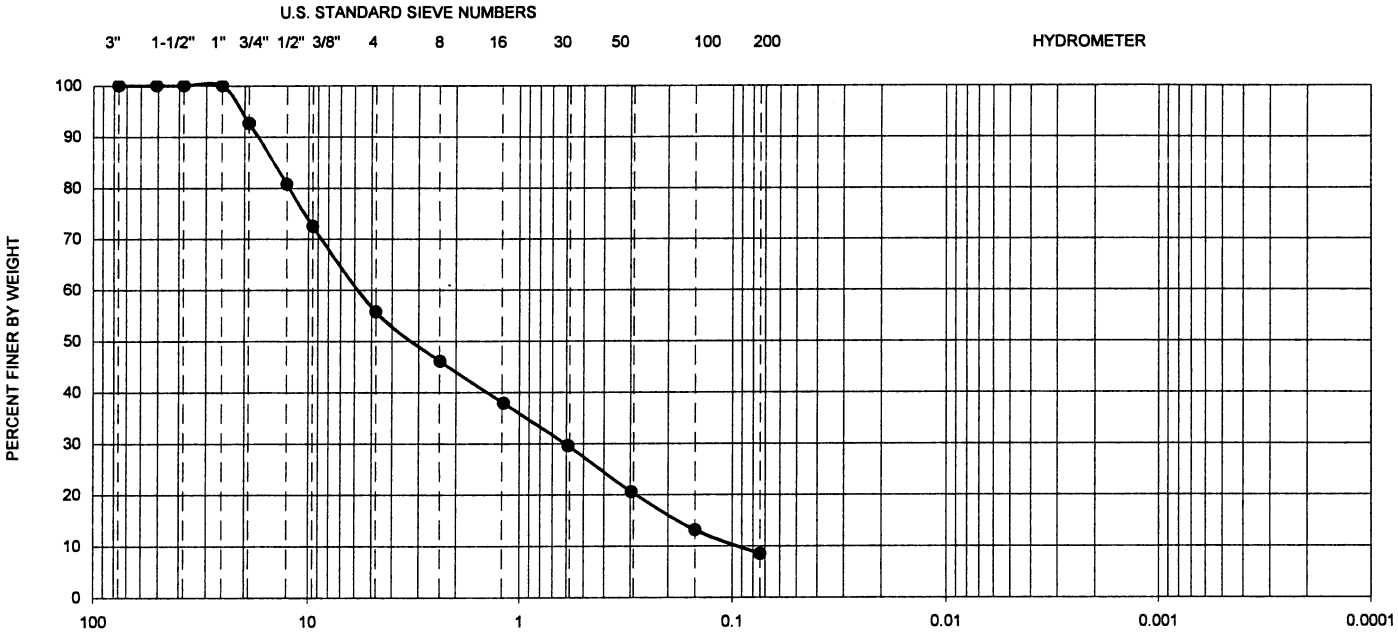
Lakeside Conservancy Fill

FIGURE

D6

D06 KB-01@19 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-2@5	8	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

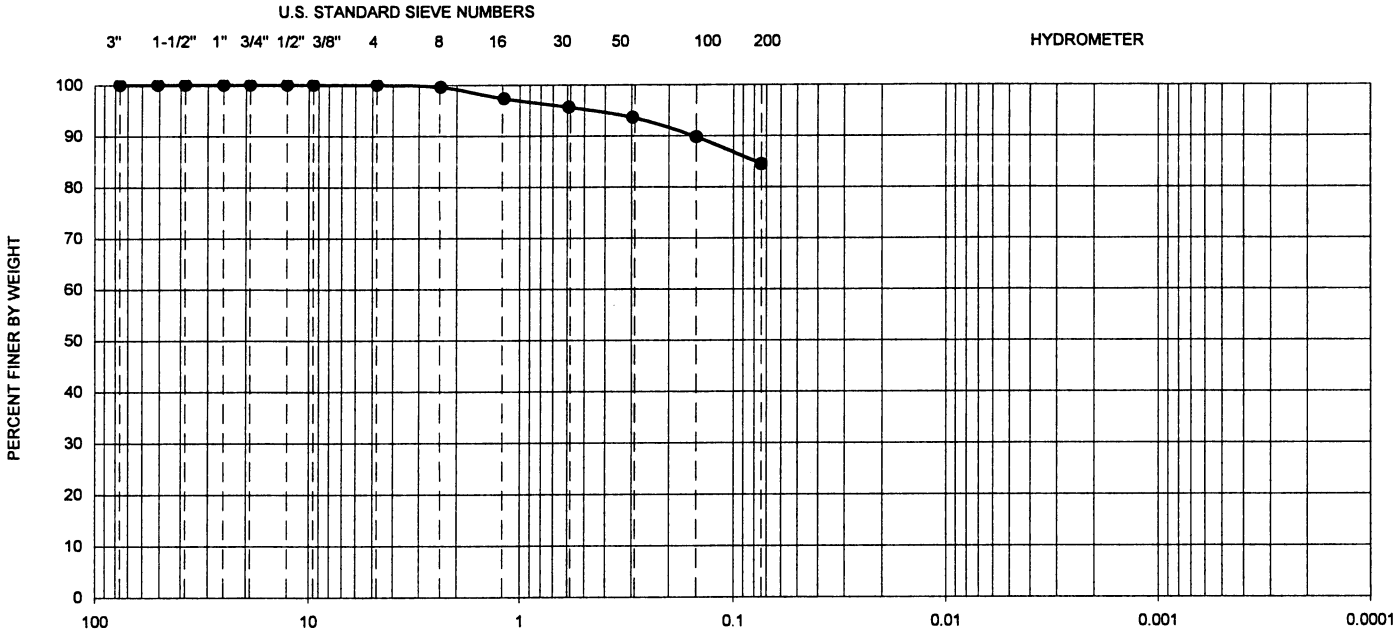
Lakeside Conservancy Fill

FIGURE

D7

D07 KB-02@5 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-3@18	84	MH

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

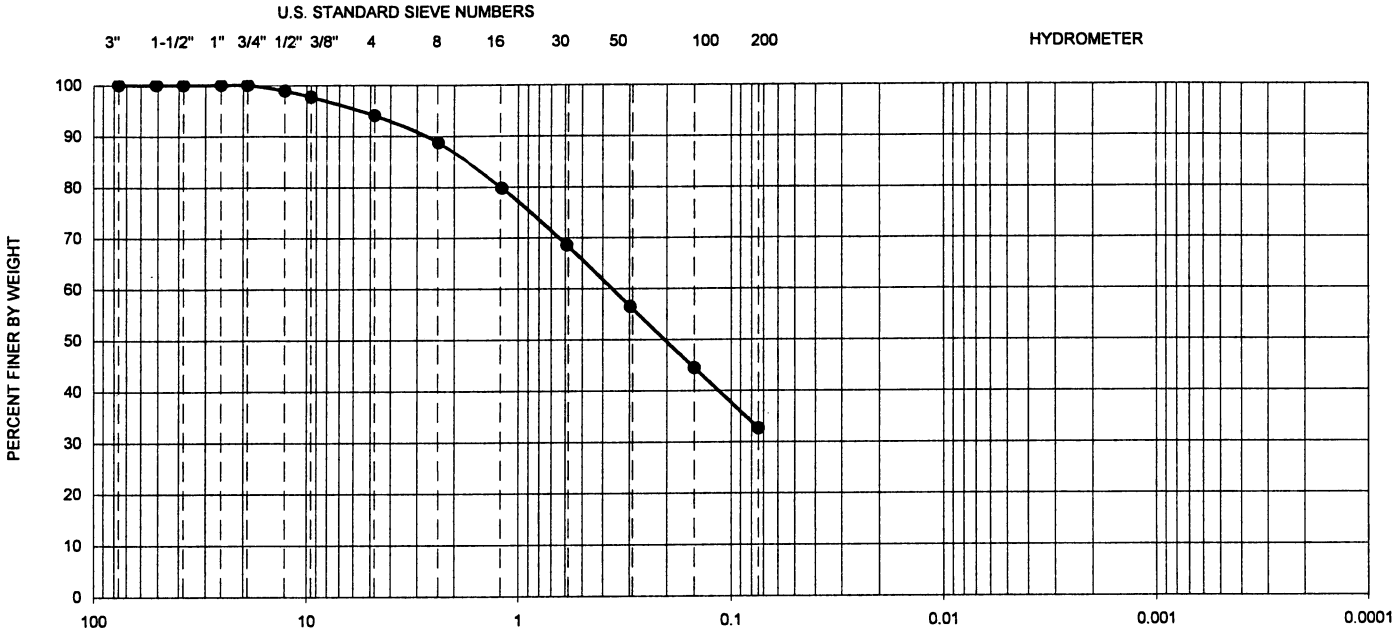
Lakeside Conservancy Fill

FIGURE

D8

D08 KB-03@18 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-4@15	33	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

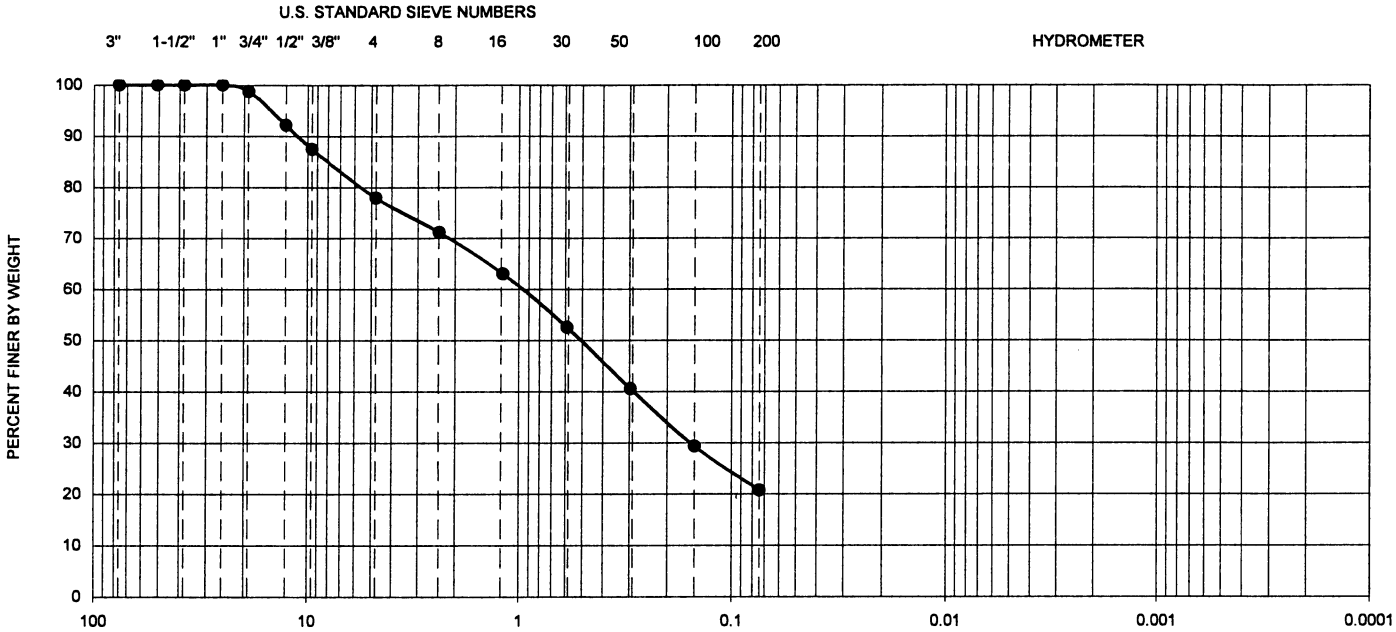
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D9

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-4@5	21	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

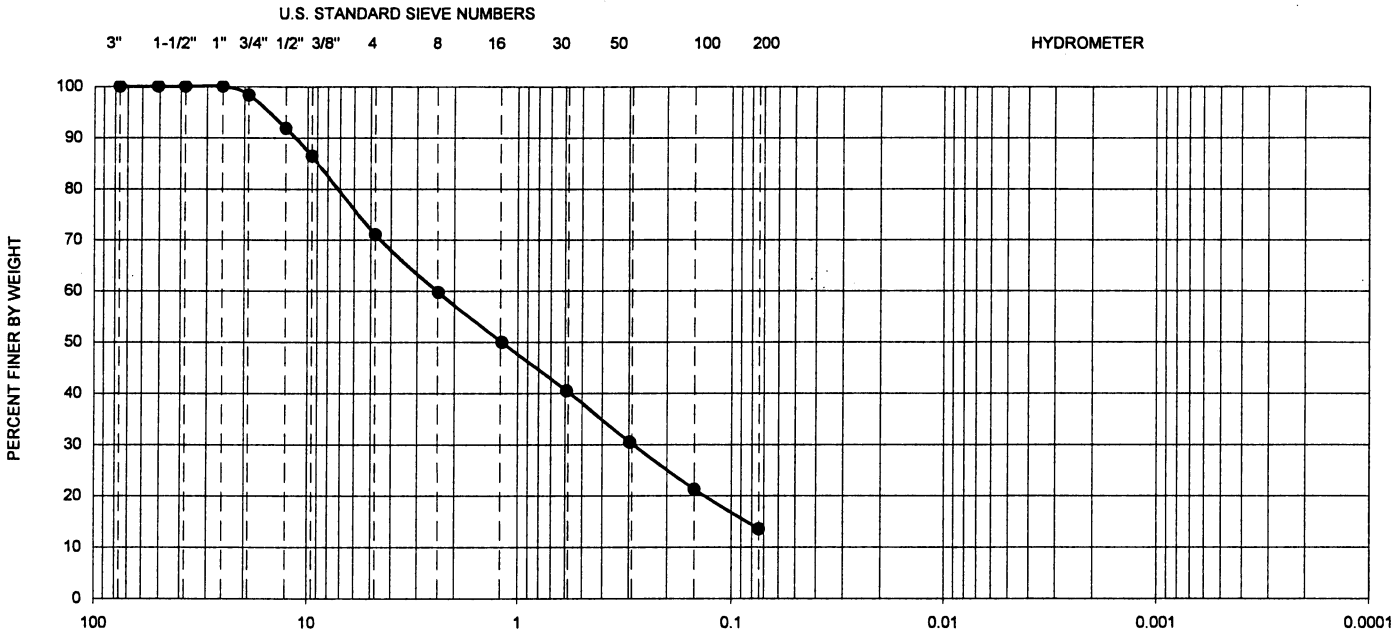
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D10

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-5@10'	13	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

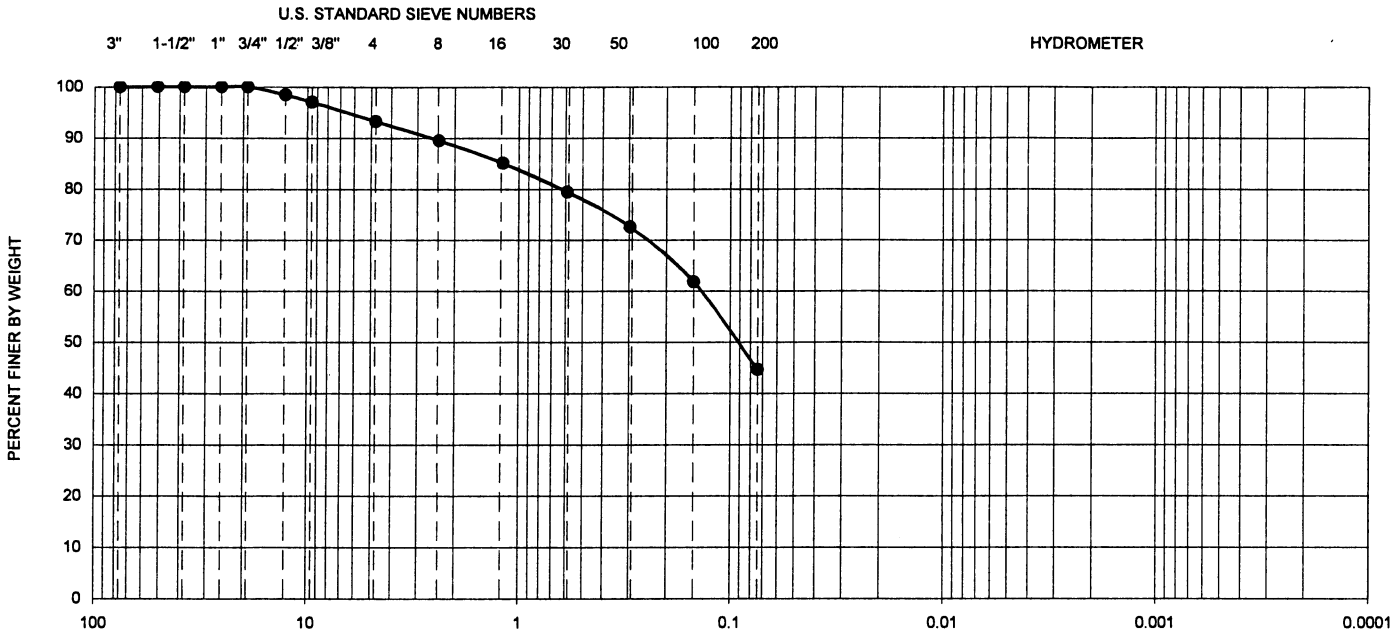
Lakeside Conservancy Fill

FIGURE

D11

D11 KB-05@10 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-5@18'	45	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

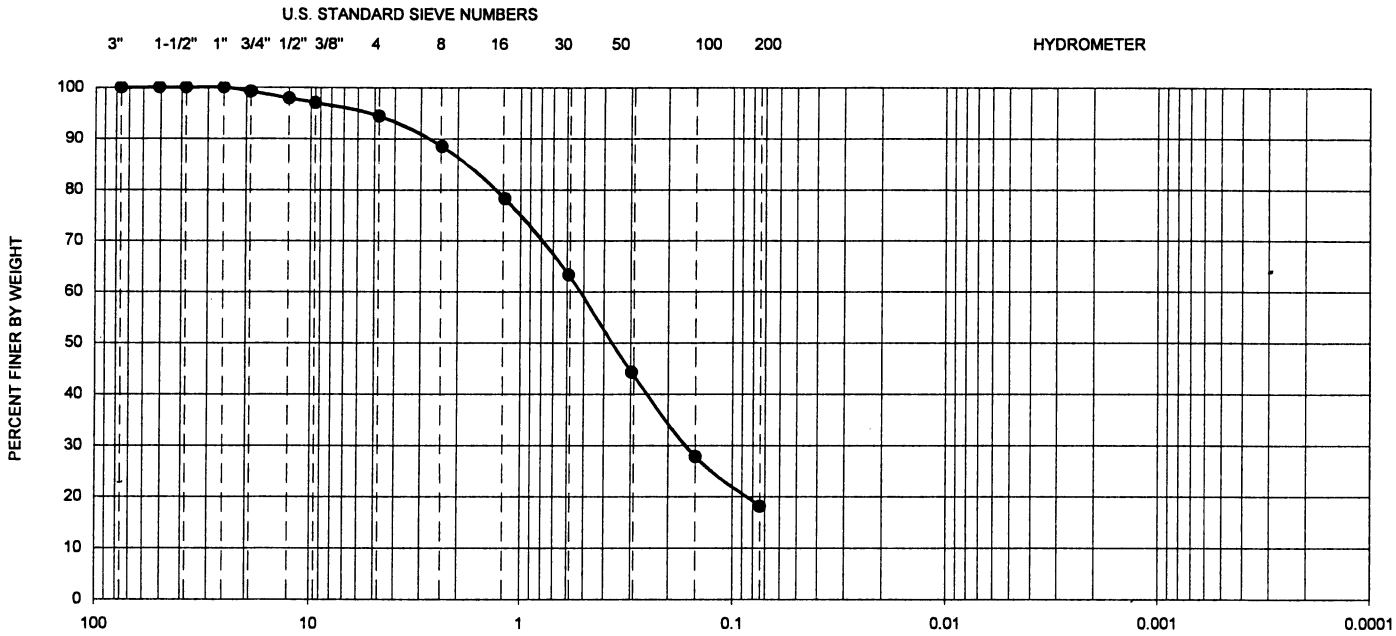
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D12

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-7@15'	18	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

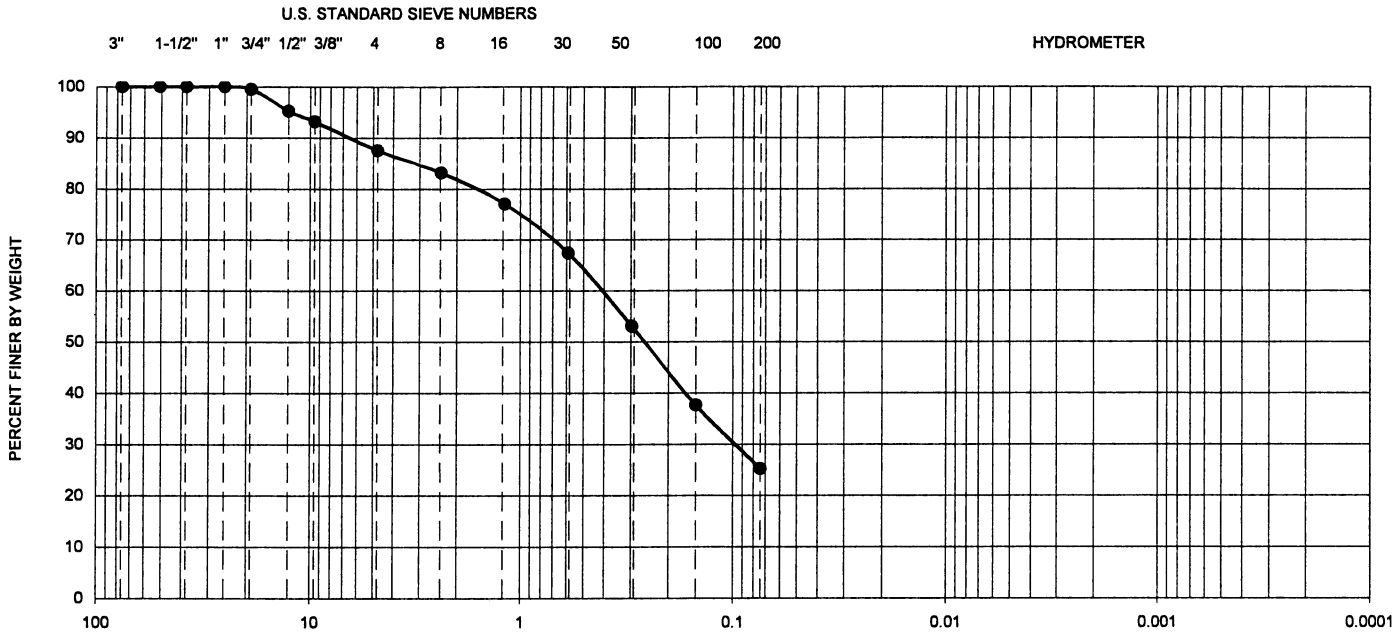
Lakeside Conservancy Fill

FIGURE

D13

D13 KB-07@15 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-7@5'	25	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

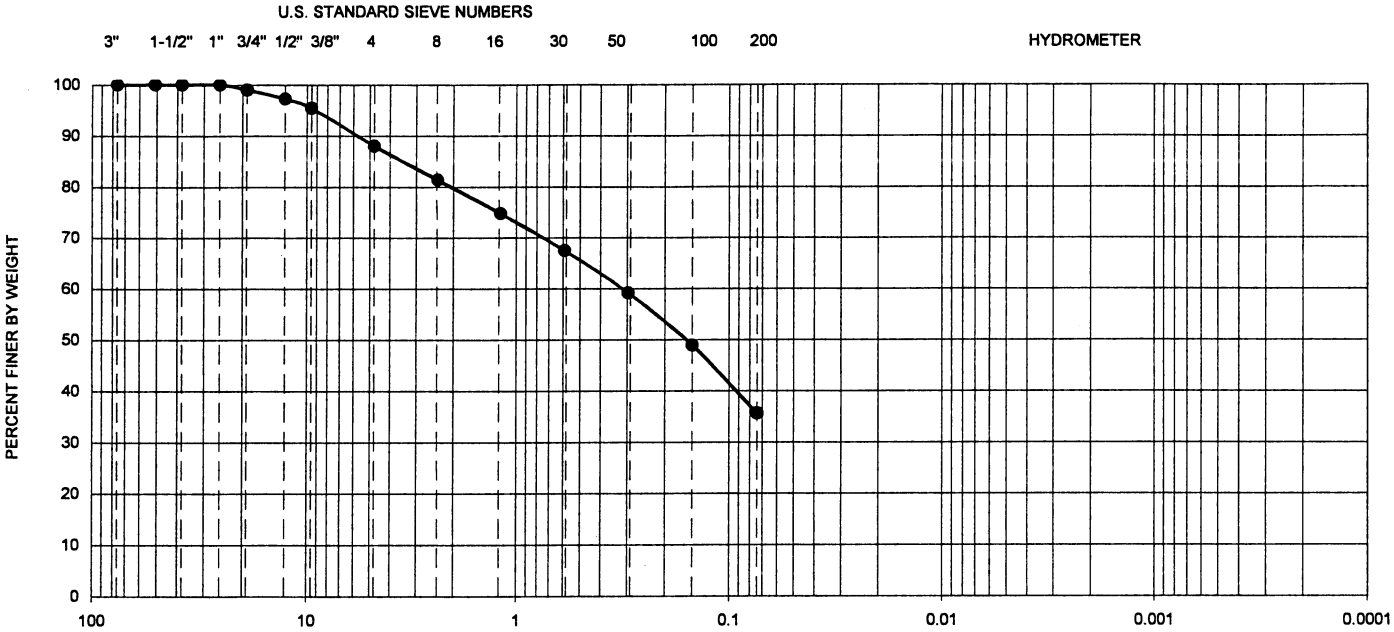
Lakeside Conservancy Fill

FIGURE

D14

D14 KB-07@5 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-8@5'	36	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

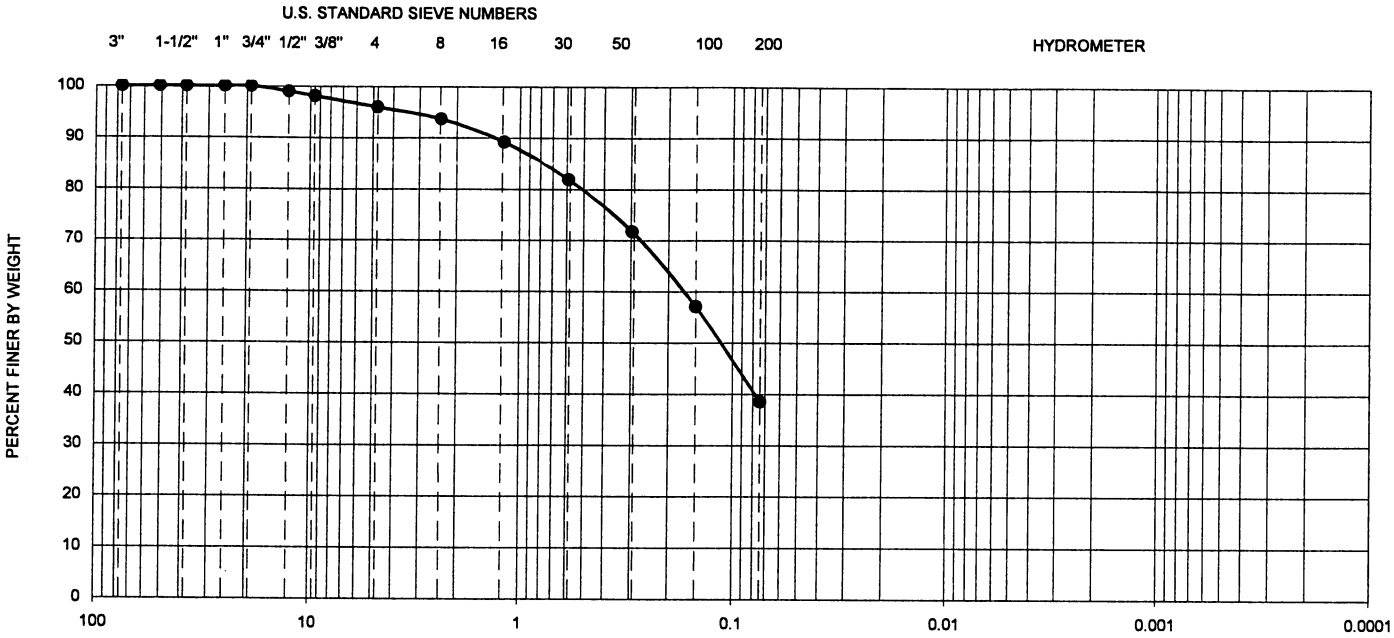
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D15

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-9@10'	38	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

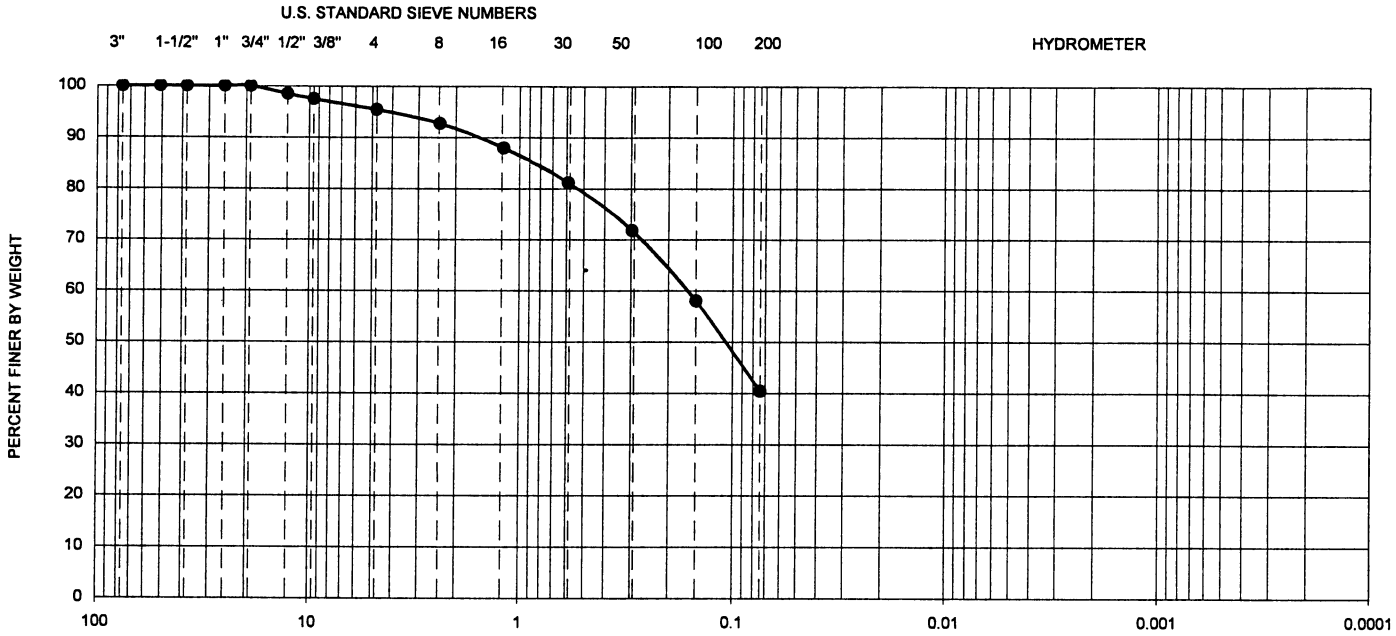
Lakeside Conservancy Fill

FIGURE

D16

D16 KB-09@10 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-9@18'	40	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

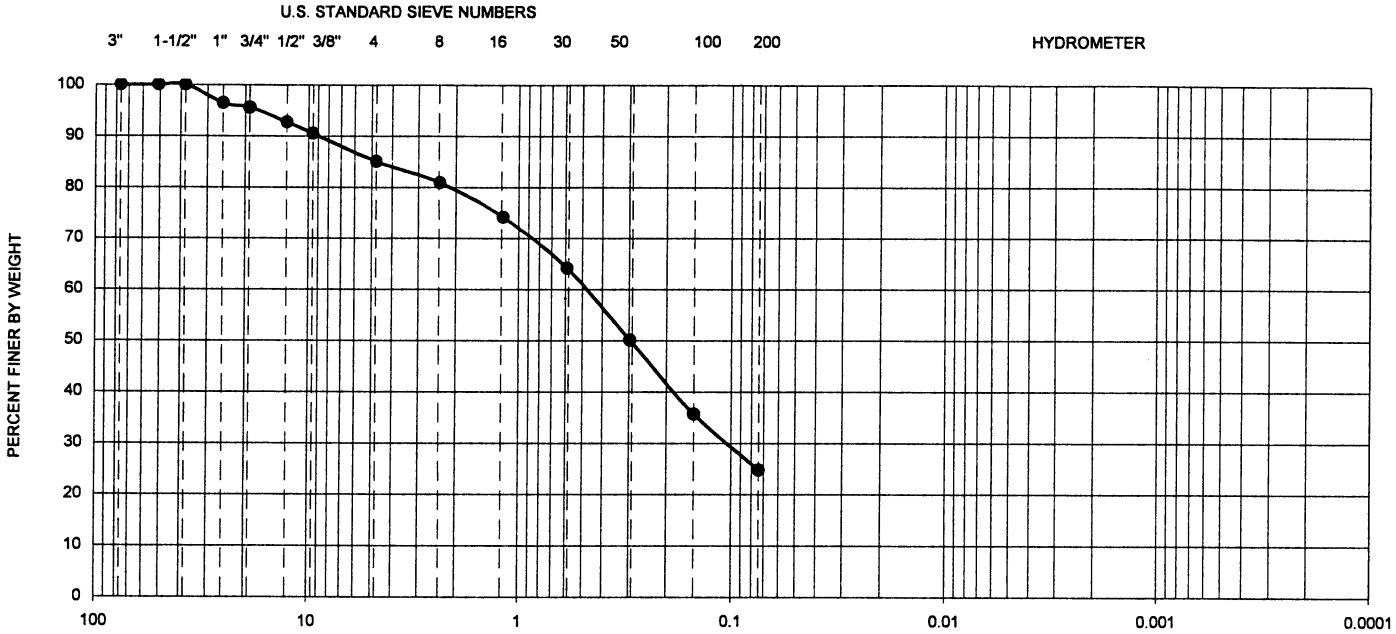
Lakeside Conservancy Fill

FIGURE

D17

D17 KB-09@18 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-10@10'	25	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

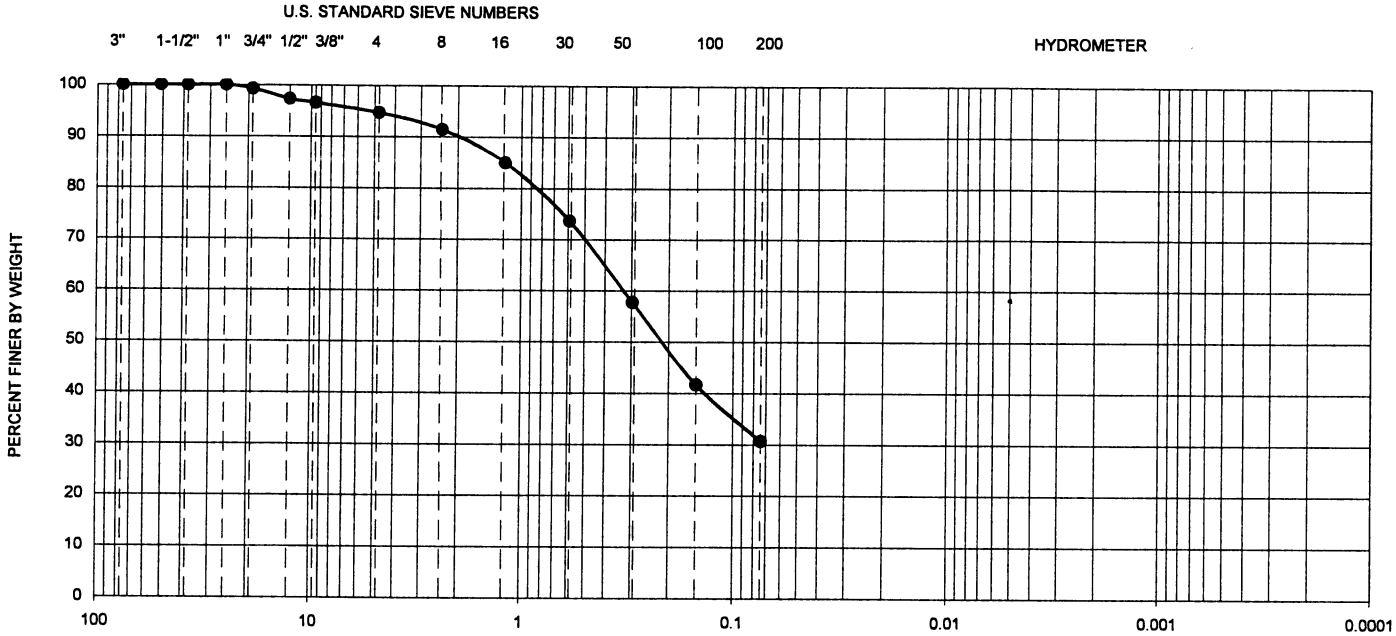
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D18

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-11@10'	31	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

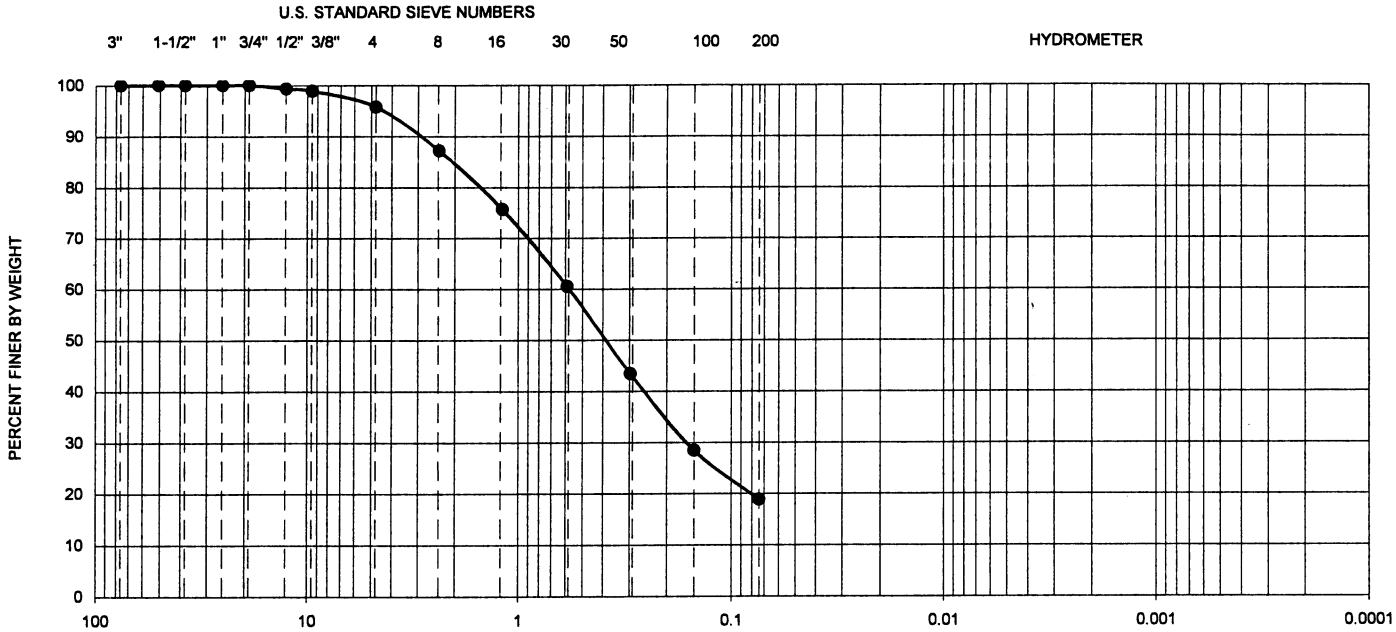
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D19

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-11@18'	19	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

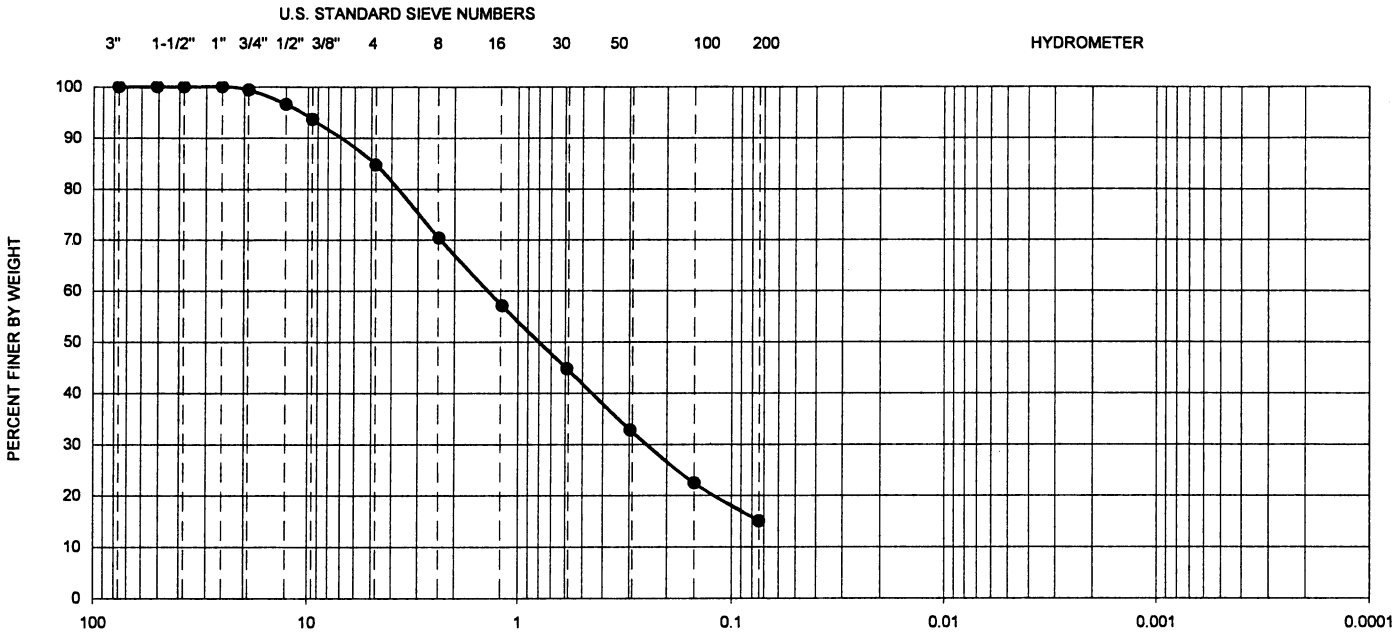
Lakeside Conservancy Fill

FIGURE

D20

D20 KB-11@18 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-12@15'	15	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

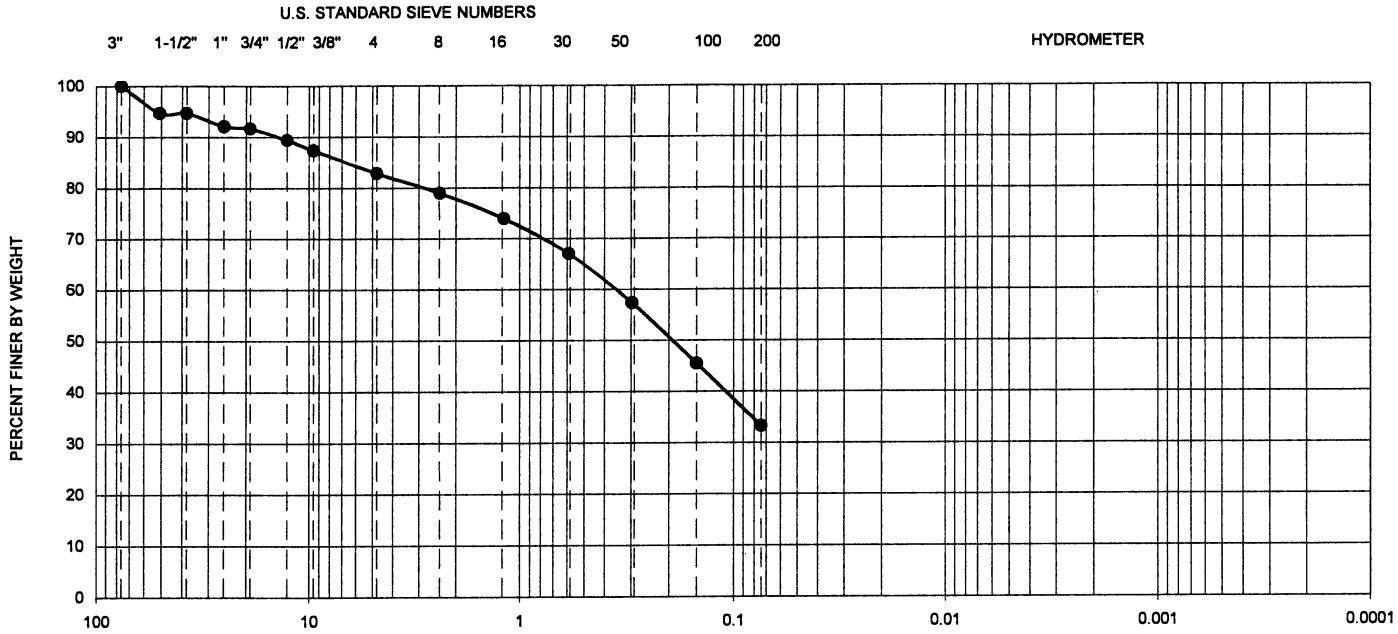
Lakeside Conservancy Fill

FIGURE

D21

D21 KB-12@15 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-12@5'	33	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

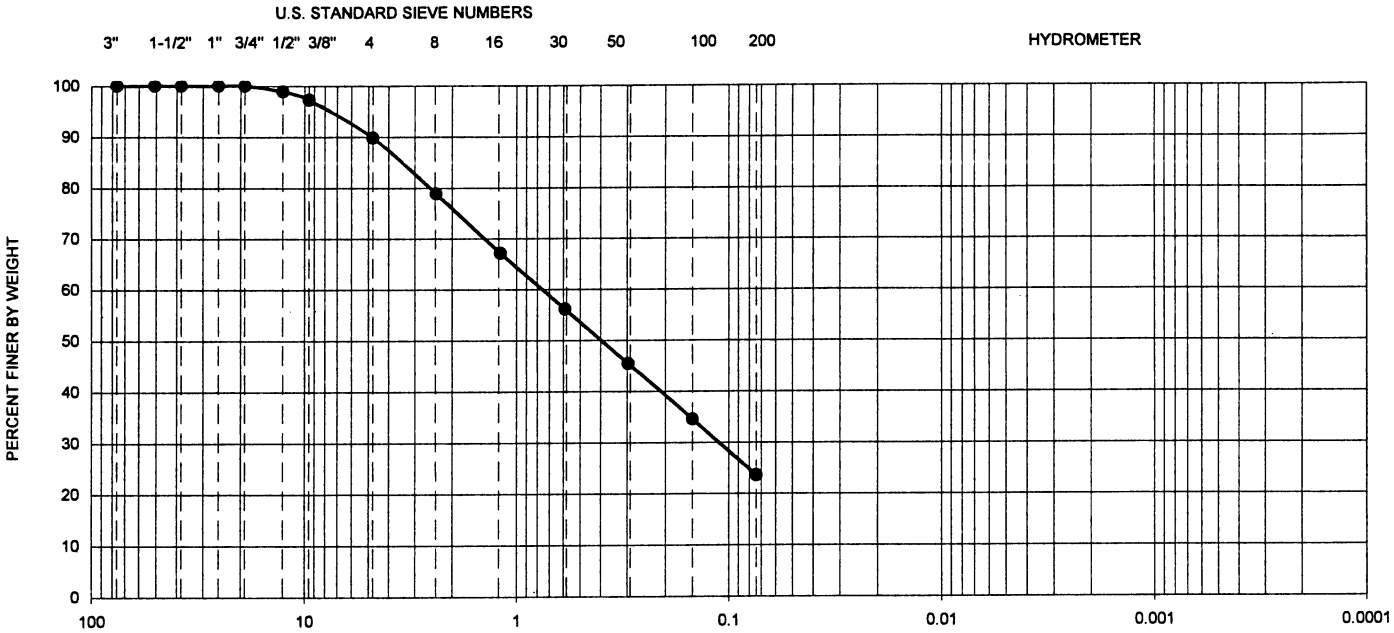
Lakeside Conservancy Fill

FIGURE

D22

D22 KB-12@5 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-13@10'	24	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

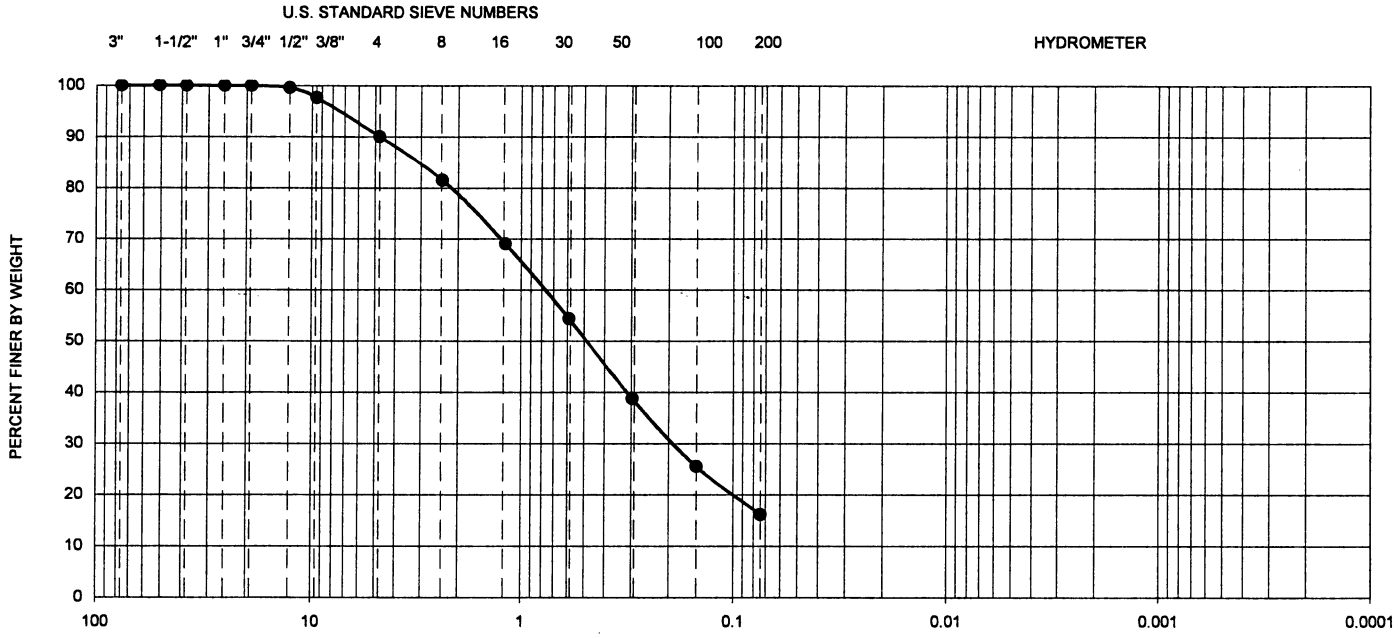
Lakeside Conservancy Fill

FIGURE

D23

D23 KB-13@10 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-14@15'	16	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

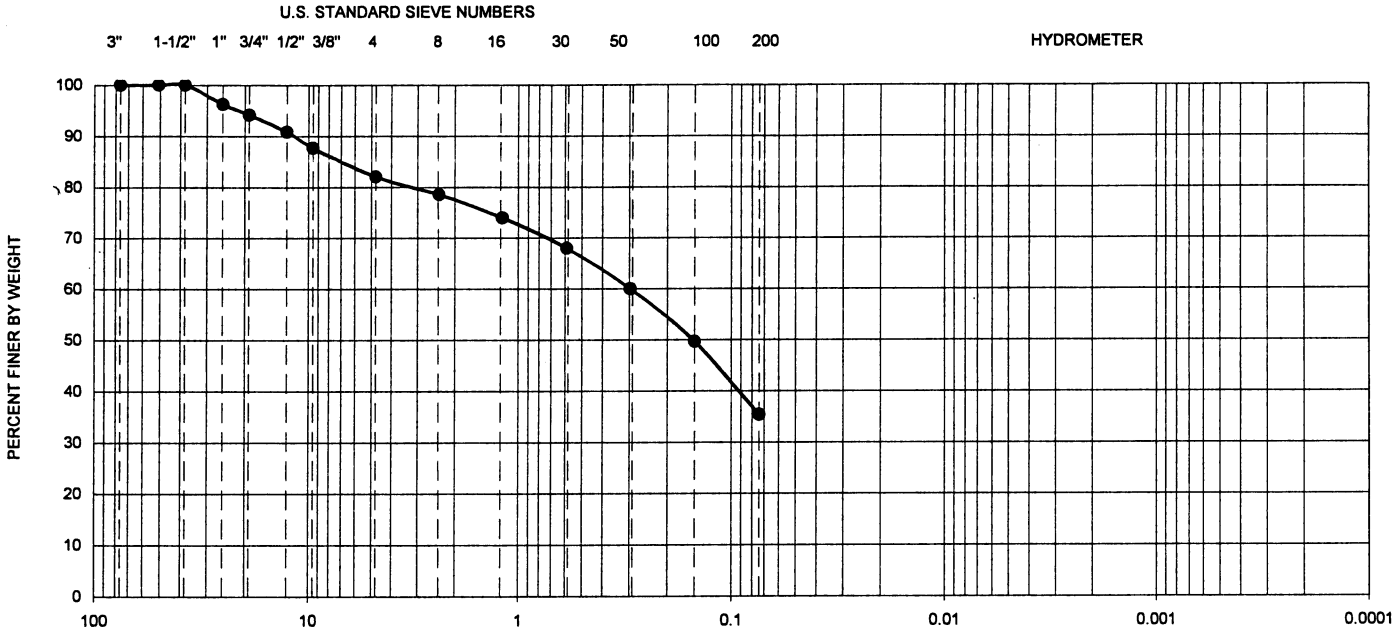
Lakeside Conservancy Fill

FIGURE

D24

D24 KB-14@15 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-14@5'	35	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

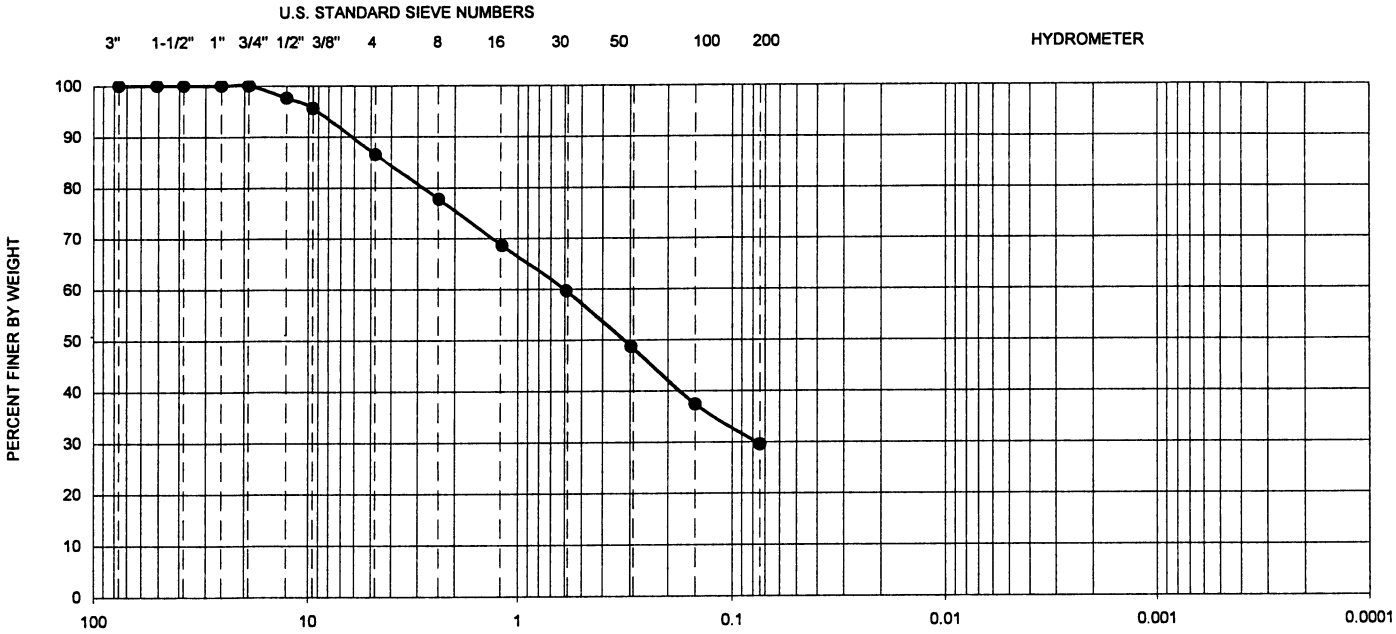
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D25

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-15@10'	29	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

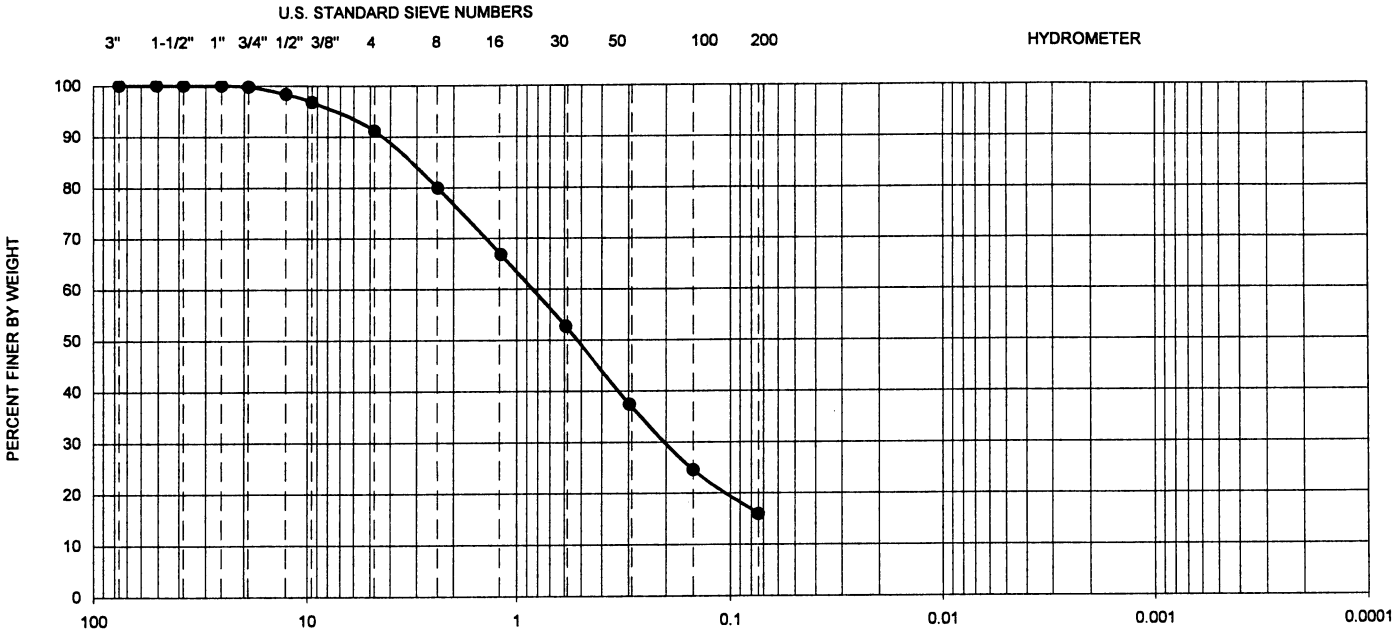
Lakeside Conservancy Fill

FIGURE

D26

D26 KB-15@10 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-16@5'	16	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

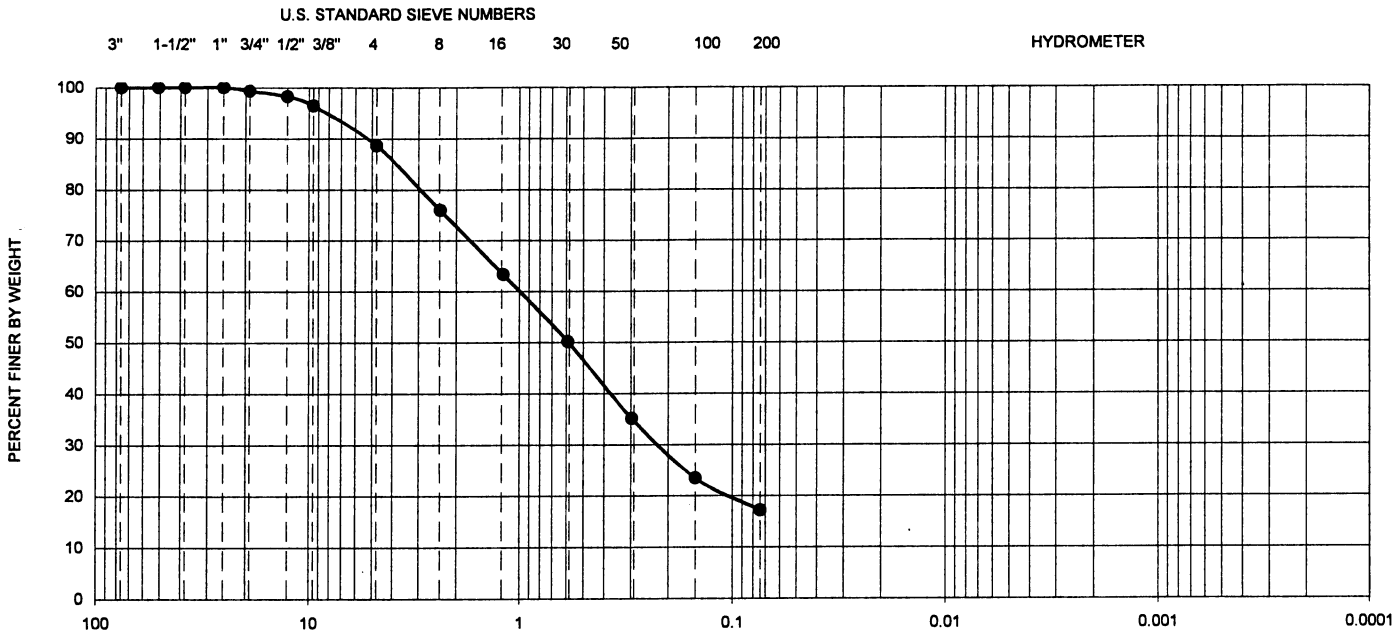
Lakeside Conservancy Fill

FIGURE

D27

D27 KB-16@5 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-17@10'	17	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

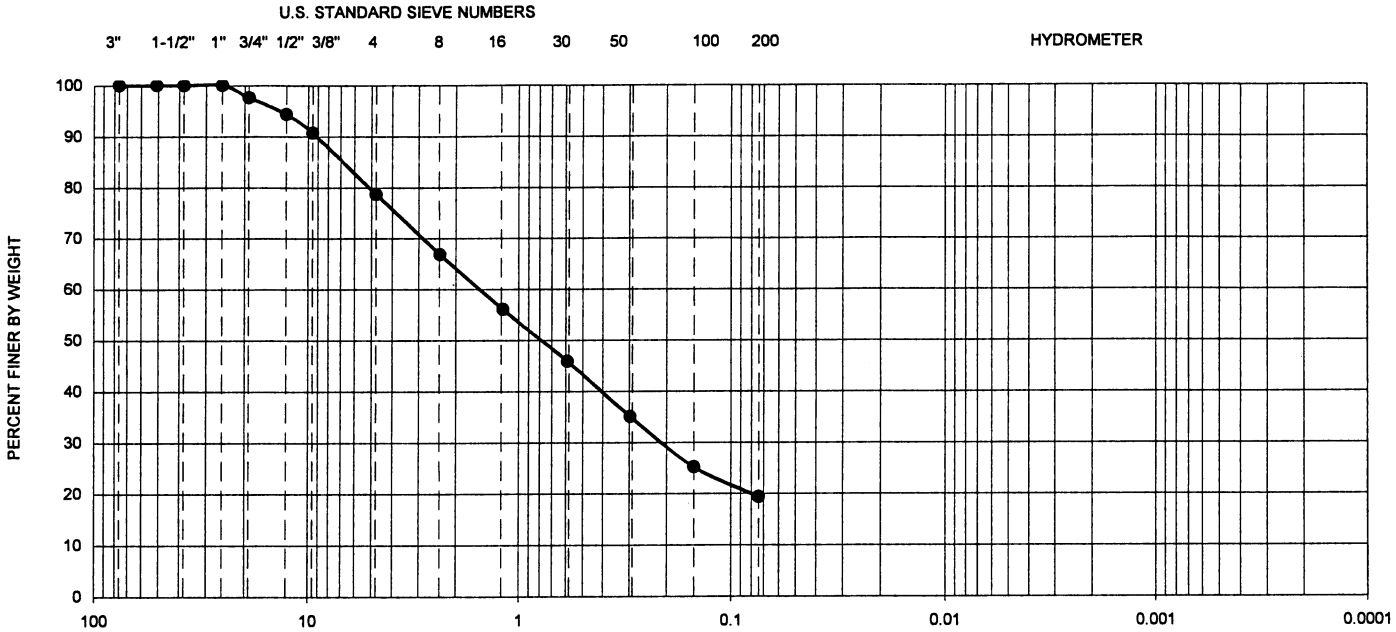
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D28

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-18@5'	19	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D29