

RECEIVED

99 FEB 15 PM 12:49

CALIFORNIA REGIONAL MILK  
QUALITY CONTROL BOARD  
LOS ANGELES REGION

**APPENDIX A**  
Database Description

DATABASE DESCRIPTION

for the

McGrath Lake

Prepared for:

Los Angeles Regional Water Control Board

By

San Jose State University Foundation,  
Moss Landing Marine Laboratories

## I. OVERVIEW OF THE MCGRATH LAKE SURVEY

Actual field and laboratory work is performed under contract by the San Jose State University Foundation-Moss Landing Marine Laboratories. Toxicity testing is performed at the California Department of Fish and Game (CDFG), Marine Pollution Studies Laboratory at Granite Canyon, south of Carmel. Collection activities are distributed by Russell Fairey of San Jose State University at the Moss Landing Marine Laboratories (MLML) in Moss Landing. Dr. John Oliver is subcontracted to perform the TOC and grain size analyses, as well as to perform the benthic community analyses. MLML also contracted Applied Marine Sciences in League City, Texas to perform TOC and grain size analyses. BC Laboratories in Bakersfield, California, are contracted to perform nutrient analyses. CDFG personnel perform the trace metals analyses at the trace metals facility at Moss Landing Marine Laboratories in Moss Landing. The synthetic organic pesticides, PAHs and PCBs are contracted by MLML to Battelle Laboratories in Duxbury, Massachusetts. MLML currently maintains the database for the RWQCB. Described below is a description of that database system.

## II. DESCRIPTION OF COMPUTER FILES

The sample collection/field information, chemical, and toxicity data are stored on hard copy, computer disks and on a 486DX PC at Moss Landing Marine Laboratories. Access is limited to Russell Fairey. Contact Russell Fairey at (408) 633-6035 for copies of data. The data are stored in a dBase 4 program and can be exported to a variety of formats. There are three backups of this database stored in two different laboratories. The data are entered into 1 of 5 files. MGRTHFLD.DBF file contains a collection of sampling data, such as station location, field sampling and field data for water quality. MGSEDCHM.DBF file contains a collection of chemical analyses data in sediments. MGRTHTOX.DBF file contains toxicity test data and associated water quality data. MGWTRCHM.DBF file contains a collection of chemical analyses in water. MGRTHBEN.XLS file contains a summary of benthic community analyses. This file is stored in Excel 5.0. A hardcopy printout of the dBase database structure is attached, showing precise characteristics of each field. The database description for this report comes from a larger set of files from the BPTCP data.

The MGRTHFLD.DBF file contains the following fields (the number at the start of each field is the field number):

1. STANUM. This numeric field is 7 characters wide with 1 decimal place and contains the CDFG station numbers that are used statewide. The format is YXXXX.Z where Y is the Regional Water Quality Control Board Region number and XXXX is the number that corresponds to a given location or site and Z is the number of the station within that site. An example is San Pablo Bay- Island #1, in San Francisco Bay, where the STANUM is 20007.0. The 2 indicates Region 2. The 0007 indicates it is Site 7 and the .0 is the replicate (if any) at the station within Site 7.
2. STATION. This character field is 30 characters wide and contains the exact name of the station.
3. IDORG. This numeric field is 8 characters wide and contains the unique i.d. organizational number for the sample. For each station collected on a unique date, an idorg sample number is assigned. This should be the field that links the collection, toxicity, chemical, and other databases.
4. DATE. This date field is 8 characters wide and is the date that each sample was collected in the field. It is listed as MM/DD/YY.
5. LEG. This numeric field is 6 characters wide with 1 decimal place, and is the leg number of the project in which the sample was collected.
6. LATITUDE. This character field is 12 characters wide and contains the latitude of the center of the station sampled. The format is a character field as follows: XX,YY,ZZ, where XX is in degrees, YY is in minutes, and ZZ is in seconds or hundreds.
7. LONGITUDE. This character field is 14 characters wide and contains the longitude of the center of the station sampled. The format is a character field as follows: XXX,YY,ZZ, where XXX is in degrees, YY is in minutes, and ZZ is in seconds or hundreds.
8. HUND\_SECS. This character field is 3 characters wide and contains the designation "h" if the latitude and longitude are given in degrees, minutes, hundredths of a minute. If differential accuracy was achieved with the GPS at the station the designation is given as "h/d". The designation "s" is given when latitude and longitude are given in degrees, minutes, seconds.
9. GISLAT. This numeric field is 12 characters wide with 8 decimal places and contains the latitude of the station sampled in Geographical Information System format. The format is a numeric field as follows: XX.YYYYYYYY, where XX is in degrees and YYYYYYYY is a decimal fraction of the preceding degree.
10. GISLONG. This numeric field is 14 characters wide with 8 decimal places and contains the longitude of the station sampled. The format is a character field as follows: XXXX.YYYYYYYY where XXXX is in degrees and YYYYYYYY is a decimal fraction of the preceding degree.
11. DEPTH. This character field is 4 characters wide and contains the depth at which the sediment sample was collected, in meters to the nearest one half meter.
12. CORE\_DEPTH. This character field contains the depth at which the core sample was taken.
13. SED\_TEXTUR. This character field contains the texture of the sample.

14. ODOR\_SHEEN. This character field contains a description of odor or sheen of the sample, if any present.
15. TIME. This numeric field contains the time the sample was taken.
16. DO\_PPM\_S. This numeric field contains the dissolved oxygen concentration at the surface of the water column at a station. Results given in parts per million (ppm or mg/l).
17. DO\_PPM\_B. This numeric field contains the dissolved oxygen concentration at the bottom of the water column at a station. Results given in parts per million (ppm or mg/l).
18. COND\_MS\_S. This numeric field contains the conductivity at the surface of the water column at a station. Results given in millisiemens (mS/cm).
19. COND\_MS\_B. This numeric field contains the conductivity at the bottom of the water column at a station. Results given in millisiemens (mS/cm).
20. TURB\_NTU\_S. This numeric field contains the turbidity at the surface of the water column at a station. Results given in NTU.
21. TURB\_NTU\_B. This numeric field contains the turbidity at the bottom of the water column at a station. Results given in NTU.
22. PH\_S. This numeric field contains the pH at the surface of the water column at a station.
23. PH\_B. This numeric field contains the pH at the bottom of the water column at a station.
24. TEMP\_C\_S. This numeric field contains the temperature at the surface of the water column at a station. Results given in degree Celsius (°C).
25. TEMP\_C\_B. This numeric field contains the temperature at the bottom of the water column at a station. Results given in degree Celsius (°C).
26. DO\_SAT\_S. This numeric field contains the saturated dissolved oxygen concentration at the surface of the water column at a station. Results given in percent saturation.
27. DO\_SAT\_B. This numeric field contains the saturated dissolved oxygen concentration at the bottom of the water column at a station. Results given in percent saturation.
28. SALN\_PPT\_S. This numeric field contains the salinity concentration at the surface of the water column at a station. Results given in parts per thousand (‰).
29. SALN\_PPT\_B. This numeric field contains the salinity concentration at the bottom of the water column at a station. Results given in parts per thousand (‰).
30. NITRATE\_N\_N. This numeric field contains the nitrate concentration at a station. Results given in milligrams per liter (mg/l).
31. NITRITE. This numeric field contains the nitrite concentration at a station. Results given in milligrams per liter (mg/l).
32. PHOSPHATE. This numeric field contains the phosphate concentration at a station. Results given in milligrams per liter (mg/l)

The MGSEDCHM.DBF file contains the following fields (the number at the start of each field is the field number):

1. STANUM. This numeric field is 7 characters wide with 1 decimal place and contains the CDFG station numbers that are used statewide. The format is YXXXX.Z where Y is the Regional Water Quality Control Board Region number and XXXX is the number that corresponds to a given location or site and Z is the number of the station within that site. An example is San Pablo Bay- Island #1, in San Francisco Bay, where the STANUM is

20007.0. The 2 indicates Region 2. The 0007 indicates it is Site 7 and the .0 is the replicate (if any) at the station within Site 7.

2. STATION. This character field is 30 characters wide and contains the exact name of the station.
3. IDORG. This numeric field is 8 characters wide and contains the unique i.d. organizational number for the sample. For each station collected on a unique date, an idorg sample number is assigned. This should be the field that links the collection, toxicity, chemical, and other databases.
4. DATE. This date field is 8 characters wide and is the date that each sample was collected in the field. It is listed as MM/DD/YY.
5. LEG. This numeric field is 6 characters wide with 1 decimal place, and is the leg number of the project in which the sample was collected.
6. METADATA. This is a text index directing the user to tables or files of ancillary data pertinent to the associated data file. Character field, width 12.

TRACE METALS IN SEDIMENT are presented in fields 7 through 26. All sediment trace metal results are reported on a dry weight basis in parts per million (ppm).

- A. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed.
- B. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected.

Sediment trace metals are numeric fields of varying character width, and including the following elements, listed by field number, then field name as it appears in the database, then numeric character width and number of decimal places:

7. TMMOIST. 6.2
8. ALUMINUM. 9.2
9. ANTIMONY. 7.3
10. ARSENIC. 6.3
11. CADMIUM. 7.4
12. CHROMIUM. 8.3
13. COPPER. 7.2
14. IRON. 7.1
15. LEAD. 7.3
16. MANGANESE. 7.2
17. MERCURY. 7.4
18. NICKEL. 7.3
19. SILVER. 7.4
20. SELENIUM. 6.3
21. TIN. 8.4
22. ZINC. 9.4
23. ASBATCH. 5.1
24. SEBATCH. 5.1
25. TMBATCH. The Batch number that the sample was digested in, numeric field width of 5 with 2 decimal place.

26. TMDATAQC. Data qualifier codes are notations used by data reviewers to briefly describe, or qualify data and the systems producing data, numeric field width 3. Data qualifier codes are as follows:
- A. When the sample meets or exceeds the control criteria requirements, the value is reported as "-4".
  - B. When the sample has minor exceedences of control criteria but is generally usable for most assessments and reporting purposes, the value is reported as "-5". For samples coded "-5" it is recommended that if assessments are made that are especially sensitive or critical, the QA evaluations should be consulted before using the data.
  - C. When the QA samples has major exceedences of control criteria requirements and the data are not usable for most assessments and reporting purposes, the value is reported as "-6".
  - D. When the sample has minor exceedences of control criteria and is unlikely to affect assessments, the value is reported as "-3".

SYNTHETIC ORGANICS are presented in fields 27 through 144. All synthetic organic results are reported on a dry weight basis in parts per billion (ppb or ng/g).

- A. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed.
- B. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected.

Synthetic organics are reported on a dry weight basis in parts per billion (ppb or ng/g) and are numeric fields of varying width, and include the following compounds, listed by field number, then field name as it appears in database (and followed by the compound name if not obvious), and then finally, the numeric character width and number of decimal places is given:

27. SOWEIGHT. This numeric field is 6 characters wide with 2 decimal places and contains the weight of the sample extracted for analysis.
28. SOMOIST. This numeric field is 6 characters wide with 2 decimal places and contains the percent moisture of the sample extracted.
29. ALDRIN. 9.3
30. CCHLOR. cis-Chlordane. 9.3
31. TCHLOR. trans-Chlordane. 9.3
32. ACDEN. alpha-Chlordene. 9.3
33. GCDEN. gamma-Chlordene. 9.3
34. CLPYR. Chlorpyrifos (Dursban). 8.2
35. DACTH. Dacthal. 9.3
36. OPDDD. o,p'-DDD. 8.2
37. PPDDD. p,p'-DDD. 9.3
38. OPDDE. o,p'-DDE. 8.2
39. PPDDE. p,p'-DDE. 8.2
40. PPDDMS. p,p'-DDMS. 8.2
41. PPDDMU. p,p'-DDMU. 8.2
42. OPDDT. o,p'-DDT. 8.2
43. PPDDT. p,p'-DDT. 8.2
44. DICLB. p,p'-Dichlorobenzophenone. 8.2

45. DIELDRIN. 9.3
46. ENDO\_I. Endosulfan I. 9.3
47. ENDO\_II. Endosulfan II. 8.2
48. ESO4. Endosulfan sulfate. 8.2
49. ENDRIN. 8.2
50. ETHION. 8.2
51. HCHA. alpha HCH 9.3
52. HCHB. beta HCH 8.2
53. HCHG. gamma HCH (Lindane) 9.3
54. HCHD. delta HCH 9.3
55. HEPTACHLOR. 9.3
56. HE. Heptachlor Epoxide. 9.3
57. HCB. Hexachlorobenzene. 9.3
58. METHOXY. Methoxychlor. 8.2
59. MIREX. 9.3
60. CNONA. cis-Nonachlor. 9.3
61. TNONA. trans-Nonachlor. 9.3
62. OXAD. Oxadiazon. 8.2
63. OCDAN. Oxychlorane. 9.3
64. TOXAPH. Toxaphene. 7.2
65. PESBATCH. The batch number that the sample was extracted in, character field width 11.
66. PCB5. 9.3
67. PCB8. 9.3
68. PCB15. 9.3
69. PCB18. 9.3
70. PCB27. 9.3
71. PCB28. 9.3
72. PCB29. 9.3
73. PCB31. 9.3
74. PCB44. 9.3
75. PCB49. 9.3
76. PCB52. 9.3
77. PCB66. 9.3
78. PCB70. 9.3
79. PCB74. 9.3
80. PCB87. 9.3
81. PCB95. 9.3
82. PCB97. 9.3
83. PCB99. 9.3
84. PCB101. 9.3
85. PCB105. 9.3
86. PCB110. 9.3
87. PCB118. 9.3
88. PCB128. 9.3
89. PCB132. 9.3



- 90. PCB137. 9.3
- 91. PCB138. 9.3
- 92. PCB149. 9.3
- 93. PCB151. 9.3
- 94. PCB153. 9.3
- 95. PCB156. 9.3
- 96. PCB157. 9.3
- 97. PCB158. 9.3
- 98. PCB170. 9.3
- 99. PCB174. 9.3
- 100. PCB177. 9.3
- 101. PCB180. 9.3
- 102. PCB183. 9.3
- 103. PCB187. 9.3
- 104. PCB189. 9.3
- 105. PCB194. 9.3
- 106. PCB195. 9.3
- 107. PCB201. 9.3
- 108. PCB203. 9.3
- 109. PCB206. 9.3
- 110. PCB209. 9.3
- 111. ARO1248. 9.3
- 112. ARO1254. 9.3
- 113. ARO1260. 9.3
- 114. ARO5460. 9.3
- 115. PCBBATCH. The batch number that the sample was extracted in, character field width 11.
- 116. ACY. Acenaphthylene. 8.2
- 117. ACE. Acenaphthene. 8.2
- 118. ANT. Anthracene. 8.2
- 119. BAA. Benz[a]anthracene. 8.2
- 120. BAP. Benzo[a]pyrene. 8.2
- 121. BBF. Benzo[b]fluoranthene. 8.2
- 122. BKF. Benzo[k]fluoranthene. 8.2
- 123. BGP. Benzo[ghi]perylene. 8.2
- 124. BEP. Benzo[e]pyrene. 8.2
- 125. BPH. Biphenyl. 8.2
- 126. CHR. Chrysene. 8.2
- 127. COR. Coronene. 8.2
- 128. DBA. Dibenz[a,h]anthracene. 8.2
- 129. DBT. Dibenzothiophene. 8.2
- 130. DMN. 2,6-Dimethylnaphthalene. 8.2
- 131. FLA. Fluoranthene. 8.2
- 132. FLU. Fluorene. 8.2
- 133. IND. Indeno[1,2,3-cd]pyrene. 8.2

- 134. MNP1. 1-Methylnaphthalene. 8.2
- 135. MNP2. 2-Methylnaphthalene. 8.2
- 136. MPH1. 1-Methylphenanthrene. 8.2
- 137. NPH. Naphthalene. 8.2
- 138. PHN. Phenanthrene. 8.2
- 139. PER. Perylene. 8.2
- 140. PYR. Pyrene. 8.2
- 141. TMN. 2,3,5-Trimethylnaphthalene. 8.2
- 142. TRY. Triphenylene 8.2
- 143. PAHBATCH. The batch number that the sample was extracted in, character field width 11.
- 144. SODATAQA. Data qualifier codes are notations used by data reviewers to briefly describe, or qualify data and the systems producing data, numeric field width 3. Data qualifier codes are as follows:
  - A. When the sample meets or exceeds the control criteria requirements, the value is reported as "-4".
  - B. When the sample has minor exceedences of control criteria but is generally usable for most assessments and reporting purposes, the value is reported as "-5". For samples coded "-5" it is recommended that if assessments are made that are especially sensitive or critical, the QA evaluations should be consulted before using the data.
  - C. When QA samples have major exceedences of control criteria requirements and the data are not usable for most assessments and reporting purposes, the value is reported as "-6".
  - D. When the sample has minor exceedences of control criteria and is unlikely to affect assessments, the value is reported as "-3".

SEDIMENT PARTICULATE SIZE ANALYSES DATA are presented in fields 145-148. The grain size results are reported as follows:

- A. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed.
  - B. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected.
- 145. COARSE SAND. Sediment grain size greater than 0.500 mm ( $\phi = 1.0$ ) for each station, reported as a fractional percentage of the total sample wet weight. Numeric field, width 5 with 2 decimal places.
  - 146. FINE SAND. Sediment grain size less than 0.500 mm and greater than 0.063 mm ( $\phi > 1.0$  and  $\phi \leq 4.0$ ) for each station, reported as a fractional percentage of the total sample wet weight. Numeric field, width 5 with 2 decimal places.
  - 147. SILT. Sediment grain size less than 0.063 and greater than 0.031 mm ( $\phi > 4.0$  and  $\phi \leq 5.0$ ) for each station, reported as a fractional percentage of the total sample wet weight. Numeric field, width 5 with 2 decimal places. Also, sediment grain size less than 0.031 and greater than 0.004 mm ( $\phi > 5.0$  and  $\phi \leq 8.0$ ) for each station, reported as a fractional percentage of the total sample wet weight. Numeric field, width 5 with 2 decimal places.
  - 148. CLAY. Sediment grain size less than 0.004 mm ( $\phi > 8.0$ ) for each station, reported as a fractional percentage of the total sample wet weight. Numeric field, width 5 with 2 decimal places.

SEDIMENT TOTAL ORGANIC CARBON (TOC) and TOTAL ORGANIC NITROGEN (TON) ANALYSES DATA. Field 149-150 presents the levels of total organic carbon and total organic nitrogen detected in the sediment samples at each station. All TOC and TON results are reported as percent of dry weight.

149. TOC. Total Organic Carbon (TOC) levels (percent of dry weight) in sediment, for each station. Numeric field, width 6 and 2 decimal places.
  - A. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed.
  - B. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected.
150. TON. Total Organic Nitrogen (TON) levels (percent of dry weight) in sediment, for each station.
  - A. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed.
  - B. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected.

The WATRMG.DBF file contains the same fields as MG WTRCHM.DBF file with the exception of the units which are presented in ug/L or parts per billion for trace metals, and ng/L or parts per trillion for organics.

DISSOLVED ORGANIC CARBON (DOC) ANALYSES DATA. Field 1 presents the levels of dissolved organic carbon ( $\mu\text{M}$ ) detected in water or for each station.

1. DOC. Dissolved Organic Carbon (DOC) levels ( $\mu\text{M}$ ) in water, for each station. Numeric field, width 6.
  - A. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed.
  - B. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected.

The MGRTHTOX.DBF file is the toxicity data file which contains the following fields (the number at the start of each field is the field number):

1. STANUM. This numeric field is 7 characters wide with 1 decimal place and contains the CDFG station numbers that are used statewide. The format is YXXXX.Z where Y is the Regional Water Quality Control Board Region number and XXXX is the number that corresponds to a given location or site and Z is the number of the station within that site. An example is Southwest Slip in Los Angeles Harbor where the STANUM is 40001.1. The 4 indicates Region 4. The 0001 indicates that it is Site #1 and the .1 is the replicate station within Site #1. A site with a .0 designation indicates this is the only station at the site.
2. STATION. This character field is 30 characters wide and contains the exact name of the station.

3. IDORG. This numeric field is 8 characters wide and contains the unique i.d. organizational number for the sample. For each station collected on a unique date, an idorg sample number is assigned. This should be the field that links the collection, toxicity, chemical, and other databases.
4. DATE. This date field is 8 characters wide and is the date that each sample was collected in the field. It is listed as MM/DD/YY.
5. LEG. This numeric field is 6 characters wide and is the leg number of the project in which the sample was collected.
6. TYPE. This character field is 7 characters wide and describes whether the sample was a field sample, replicate or control.

AMPHIPOD SURVIVAL TOXICITY TEST DATA. The following are descriptions of the field headings for the amphipod *Eohaustorius estuarius* (EE) toxicity test using homogenized sediment samples; presented in fields 7 through 18.

7. EE\_MN. Station mean percent survival. Numeric field, width 6 and 2 decimal places.
8. EE\_SD. Station standard deviation of percent survival. Numeric field, width 6 and 2 decimal places.
9. EE\_SG. Station statistical significance, representing the significance of the statistical test between the home sediment and the sample. A single \* represents significance at the .05 level, and double \*\* represents significance at the .01 level. ns = not statistically significant. Character field, width 5.
10. EE\_TOX. Sample is considered toxic and denoted with a "T" if: 1) Sample mean is significantly different from control mean when compared using a t-test ( $\alpha = 0.05$ ). 2) If sample mean as a percent of the control mean is less than 75% of the control (MSD as a percent of the control). "NT" signifies non-toxic. Character field, width 3.
11. EE\_BATCH. The batch number that the sample were run in, character width 10.
12. EEQC. Data qualifier codes are notations used by data reviewers to briefly describe, or qualify data and the systems producing data, numeric width 4. Data qualifier codes are as follows:
  - A. When the sample meets or exceeds the control criteria requirements, the value is reported as "-4".
  - B. When the sample has minor exceedences of control criteria but is generally usable for most assessments and reporting purposes, the value is reported as "-5". For samples coded "-5" it is recommended that if assessments are made that are especially sensitive or critical, the QA evaluations should be consulted before using the data.
  - C. When the QA sample has major exceedences of control criteria requirements and the data are not usable for most assessments and reporting purposes, the value is reported as "-6".
  - D. When the sample has minor exceedences of control criteria and is unlikely to affect assessments, the value is reported as "-3".
13. EE\_OTNH3. Total ammonia concentration (ppm in water) in overlying water (water above bedded sediment) for each station analyzed using amphipod toxicity tests. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected. Numeric field, width 7 and 3 decimal places.

14. EE\_OUNH3. Unionized ammonia concentration (ppm in water) in overlying water (water above bedded sediment) for each station analyzed using amphipod toxicity tests. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected. Numeric field, width 7 and 3 decimal places.
15. EE\_OH2S. Hydrogen sulfide concentration (ppm in water) in overlying water (water above bedded sediment) for each station analyzed using amphipod toxicity tests. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected. Numeric field, width 7 and 4 decimal places.
16. EE\_ITNH3. Total ammonia concentration (ppm in water) in interstitial water (water within bedded sediment) for each station analyzed using amphipod toxicity tests. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected. Numeric field, width 7 and 3 decimal places.
17. EE\_IUNH3. Unionized ammonia concentration (ppm in water) interstitial water (water within bedded sediment) for each station analyzed using amphipod toxicity tests. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected. Numeric field, width 7 and 3 decimal places.
18. EE\_IH2S. Hydrogen sulfide concentration (ppm in water) in interstitial water (water within bedded sediment) for each station analyzed using amphipod toxicity tests. When the value is missing or not analyzed, the value is reported as "-9.0" = not analyzed. When the value is less than the detection limit of the analytical test, the value is reported as "-8.0" = not detected. Numeric field, width 7 and 4 decimal places.

The following are descriptions of the field headings for the mysid (*Neomysis mercedes*) survival tests for subsurface water (NM); presented in fields 19 through 27.

19. NM\_MN. Station mean percent *Neomysis* survival in 100% subsurface water. Numeric field, width 6.
20. NM\_SD. Station standard deviation of percent survival in 100% subsurface water. Numeric field, width 6.
21. NM\_SG. Station statistical significance, representing the significance of the statistical test between the home sediment and the sample. A single \* represents significance at the .05 level, and double \*\* represents significance at the .01 level. ns = not statistically significant. Character field, width 5.
22. NM\_TOX. Sample is considered toxic and denoted with a "T" if: 1) Sample mean is significantly different from control mean when compared using a t-test ( $\alpha = 0.05$ ). 2) If sample mean as a percent of the control mean is less than 80% of the control. "NT" signifies non-toxic. Character field, width 3.
23. NM\_BATCH. The batch number that the samples were analyzed in, character width 10.
24. NMQC. Data qualifier codes are notations used by data reviewers to briefly describe, or qualify data and the systems producing data, numeric field width 4. Data qualifier codes are as follows:

- A. When the sample meets or exceeds the control criteria requirements, the value is reported as "-4".
  - B. When the sample has minor exceedences of control criteria but is generally usable for most assessments and reporting purposes, the value is reported as "-5". For samples coded "-5" it is recommended that if assessments are made that are especially sensitive or critical, the QA evaluations should be consulted before using the data.
  - C. When the QA sample has major exceedences of control criteria requirements and the data are not usable for most assessments and reporting purposes, the value is reported as "-6".
  - D. When the sample has minor exceedences of control criteria and is unlikely to affect assessments, the value is reported as "-3".
25. NM\_OTNH3. Total ammonia concentration (ppm in water) in subsurface water samples. When the value is missing or not analyzed, the value is reported as "-9" = not analyzed. When the value is less than the detection limit of the analytical test, the value is reported as "-8" = not detected. Numeric field, width 7 and 3 decimal places.
  26. NM\_OUNH3. Unionized ammonia concentration (ppm in water) in subsurface water samples. When the value is missing or not analyzed, the value is reported as "-9" = not analyzed. When the value is less than the detection limit of the analytical test, the value is reported as "-8" = not detected. Numeric field, width 7 and 3 decimal places.
  27. NM\_OH2S. Hydrogen sulfide concentration (ppm in water) in subsurface water samples. When the value is missing or not analyzed, the value is reported as "-9" = not analyzed. When the value is less than the detection limit of the analytical test, the value is reported as "-8" = not detected. Numeric field, width 7 and 4 decimal places.

The MGRTHBEN.XLS file contains the following fields (the number at the start of each field is the field number):

1. STANUM. This field contains the CDFG station numbers that are used statewide. The format is YXXXX.Z where Y is the Regional Water Quality Control Board Region number and XXXX is the number that corresponds to a given location or site and Z is the number of the station within that site. An example is San Pablo Bay- Island #1, in San Francisco Bay, where the STANUM is 20007.0. The 2 indicates Region 2. The 0007 indicates it is Site 7 and the .0 is the replicate (if any) at the station within Site 7.
2. STATION. This field contains the exact name of the station.
3. IDORG. This field contains the unique i.d. organizational number for the sample. For each station collected on a unique date, an idorg sample number is assigned. This should be the field that links the collection, toxicity, chemical, and other databases.
4. DATE. This field is the date that each sample was collected in the field. It is listed as MM/DD/YY.
5. LEG. This field is the leg number of the project in which the sample was collected.
6. TAXA. This field contains the different taxa found at a station.
7. GROUP. This field contains the different groups/or higher taxa found at a station.
8. # OF SPECIES. This field contains the number of species found at a station.
9. # OF INDIVIDUALS. This field contains the number of individuals found at a station.
10. TOTAL SPECIES. This field contains the total number of species found at a station.

11. **TOTAL OLIGOCHAETES.** This field contains the total number of species and individuals in the Class Oligochaeta.
12. **TOTAL INSECTS.** This field contains the total number of species and individuals in the Class Insecta.
13. **TOTAL CRUSTACEANS.** This field contains the total number of species and individuals in the Subphylum Crustacea found at a station.

## **APPENDIX B**

### **Sampling Data**



**SECTION I**

**Station Location Data**

McGrath Lake Station Location Data

STANUM	STATION	IDORG	DATE	LEG	LATITUDE	LONGITUDE	HUND	SECS	GISLAT	GISLONG
45011.0	MCGRATH LAKE ESTUARY-N1S1	1824	7/9/98	MG1	34,12,903N	119,15,265W	h		34.21505000	119.25441667
45012.0	MCGRATH LAKE ESTUARY-N1S2	1825	7/9/98	MG1	34,12,914N	119,15,278W	h		34.21523333	119.25463333
45013.0	MCGRATH LAKE ESTUARY-N1S3	1826	7/9/98	MG1	34,12,897N	119,15,290W	h		34.21495000	119.25483333
45014.0	MCGRATH LAKE ESTUARY-N1S4	1827	7/9/98	MG1	34,12,909N	119,15,300W	h		34.21515000	119.25500000
45015.0	MCGRATH LAKE ESTUARY-N1S5	1828	7/9/98	MG1	34,12,911N	119,15,290W	h		34.21518333	119.25483333
45021.0	MCGRATH LAKE ESTUARY-N2S1	1829	7/9/98	MG1	34,12,829N	119,15,262W	h		34.21381667	119.25436667
45022.0	MCGRATH LAKE ESTUARY-N2S2	1830	7/9/98	MG1	34,12,857N	119,15,295W	h		34.21428333	119.25491667
45023.0	MCGRATH LAKE ESTUARY-N2S3	1831	7/9/98	MG1	34,12,855N	119,15,301W	h		34.21425000	119.25503333
45024.0	MCGRATH LAKE ESTUARY-N2S4	1832	7/9/98	MG1	34,12,852N	119,15,302W	h		34.21420000	119.25503333
45025.0	MCGRATH LAKE ESTUARY-N2S5	1833	7/9/98	MG1	34,12,860N	119,15,300W	h		34.21433333	119.25500000
45031.0	MCGRATH LAKE ESTUARY-N3S1	1834	7/9/98	MG1	34,12,834N	119,15,288W	h		34.21390000	119.25480000
45032.0	MCGRATH LAKE ESTUARY-N3S2	1835	7/9/98	MG1	34,12,816N	119,15,264W	h		34.21360000	119.25440000
45033.0	MCGRATH LAKE ESTUARY-N3S3	1836	7/9/98	MG1	34,12,820N	119,15,287W	h		34.21366667	119.25478333
45034.0	MCGRATH LAKE ESTUARY-N3S4	1837	7/9/98	MG1	34,12,823N	119,15,285W	h		34.21371667	119.25475000
45035.0	MCGRATH LAKE ESTUARY-N3S5	1838	7/9/98	MG1	34,12,819N	119,15,318W	h		34.21365000	119.25530000
45041.0	MCGRATH LAKE ESTUARY-M4S1	1839	7/9/98	MG1	34,12,785N	119,15,241W	h		34.21308333	119.25401667
45042.0	MCGRATH LAKE ESTUARY-M4S2	1840	7/9/98	MG1	34,12,769N	119,15,270W	h		34.21281667	119.25450000
45043.0	MCGRATH LAKE ESTUARY-M4S3	1841	7/9/98	MG1	34,12,753N	119,15,285W	h		34.21255000	119.25475000
45044.0	MCGRATH LAKE ESTUARY-M4S4	1842	7/9/98	MG1	34,12,768N	119,15,306W	h		34.21280000	119.25510000
45045.0	MCGRATH LAKE ESTUARY-M4S5	1843	7/9/98	MG1	34,12,748N	119,15,316W	h		34.21246667	119.25526667
45051.0	MCGRATH LAKE ESTUARY-M5S1	1844	7/9/98	MG1	34,12,735N	119,15,255W	h		34.21225000	119.25425000
45052.0	MCGRATH LAKE ESTUARY-M5S2	1845	7/9/98	MG1	34,12,722N	119,15,267W	h		34.21203333	119.25445000
45053.0	MCGRATH LAKE ESTUARY-M5S3	1846	7/9/98	MG1	34,12,742N	119,15,265W	h		34.21236667	119.25441667
45054.0	MCGRATH LAKE ESTUARY-M5S4	1847	7/9/98	MG1	34,12,731N	119,15,277W	h		34.21218333	119.25461667
45055.0	MCGRATH LAKE ESTUARY-M5S5	1848	7/9/98	MG1	34,12,724N	119,15,291W	h		34.21206667	119.25485000
45061.0	MCGRATH LAKE ESTUARY-M6S1	1849	7/9/98	MG1	34,12,681N	119,15,233W	h		34.21135000	119.25388333
45062.0	MCGRATH LAKE ESTUARY-M6S2	1850	7/9/98	MG1	34,12,700N	119,15,275W	h		34.21166667	119.25458333
45063.0	MCGRATH LAKE ESTUARY-M6S3	1851	7/9/98	MG1	34,12,711N	119,15,251W	h		34.21185000	119.25418333
45064.0	MCGRATH LAKE ESTUARY-M6S4	1852	7/9/98	MG1	34,12,686N	119,15,281W	h		34.21143333	119.25468333
45065.0	MCGRATH LAKE ESTUARY-M6S5	1853	7/9/98	MG1	34,12,712N	119,15,267W	h		34.21186667	119.25445000
45071.0	MCGRATH LAKE ESTUARY-M7S1	1854	7/9/98	MG1	34,12,681N	119,15,251W	h		34.21135000	119.25418333
45072.0	MCGRATH LAKE ESTUARY-M7S2	1855	7/9/98	MG1	34,12,689N	119,15,288W	h		34.21148333	119.25480000
45073.0	MCGRATH LAKE ESTUARY-M7S3	1856	7/9/98	MG1	34,12,680N	119,15,280W	h		34.21133333	119.25466667
45074.0	MCGRATH LAKE ESTUARY-M7S4	1857	7/9/98	MG1	34,12,668N	119,15,254W	h		34.21113333	119.25423333
45075.0	MCGRATH LAKE ESTUARY-M7S5	1858	7/9/98	MG1	34,12,706N	119,15,307W	h		34.21176667	119.25511667
45081.0	MCGRATH LAKE ESTUARY-S8S1	1859	7/9/98	MG1	34,12,673N	119,15,214W	h		34.21121667	119.25356667
45082.0	MCGRATH LAKE ESTUARY-S8S2	1860	7/9/98	MG1	34,12,664N	119,15,224W	h		34.21106667	119.25373333
45083.0	MCGRATH LAKE ESTUARY-S8S3	1861	7/9/98	MG1	34,12,695N	119,15,259W	h		34.21158333	119.25431667
45084.0	MCGRATH LAKE ESTUARY-S8S4	1862	7/9/98	MG1	34,12,656N	119,15,274W	h		34.21093333	119.25456667
45085.0	MCGRATH LAKE ESTUARY-S8S5	1863	7/9/98	MG1	34,12,611N	119,15,287W	h		34.21018333	119.25478333
45091.0	MCGRATH LAKE ESTUARY-S9S1	1864	7/8/98	MG1	34,12,641N	119,15,213W	h		34.21068333	119.25355000

McGrath Lake Station Location Data

STANUM	STATION	IDORG	DATE	LEG	LATITUDE	LONGITUDE	HUND	SECS	GISLAT	GISLONG
45092.0	MCGRATH LAKE ESTUARY-S9S2	1865	7/8/98	MG1	34,12,646N	119,15,226W	h		34.21076667	119.25376667
45093.0	MCGRATH LAKE ESTUARY-S9S3	1866	7/8/98	MG1	34,12,622N	119,15,238W	h		34.21036667	119.25396667
45094.0	MCGRATH LAKE ESTUARY-S9S4	1867	7/8/98	MG1	34,12,636N	119,15,239W	h		34.21060000	119.25398333
45095.0	MCGRATH LAKE ESTUARY-S9S5	1868	7/8/98	MG1	34,12,660N	119,15,257W	h		34.21100000	119.25428333
45101.0	MCGRATH LAKE ESTUARY-S10S1	1869	7/8/98	MG1	34,12,598N	119,15,190W	h		34.20996667	119.25316667
45102.0	MCGRATH LAKE ESTUARY-S10S2	1870	7/8/98	MG1	34,12,600N	119,15,201W	h		34.21000000	119.25335000
45103.0	MCGRATH LAKE ESTUARY-S10S3	1871	7/8/98	MG1	34,12,602N	119,15,194W	h		34.21003333	119.25323333
45104.0	MCGRATH LAKE ESTUARY-S10S4	1872	7/8/98	MG1	34,12,625N	119,15,224W	h		34.21041667	119.25373333
45105.0	MCGRATH LAKE ESTUARY-S10S5	1873	7/8/98	MG1	34,12,617N	119,15,236W	h		34.21028333	119.25393333
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1874	7/10/98	MG1	34,13,272N	119,15,296W	h		34.22120000	119.25493333
45002.0	MCGRATH LAKE ESTUARY-AG DRAIN	1875	7/10/98	MG1	34,13,146N	119,15,290W	h		34.21909200	119.25483800
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1876	7/9/98	MG1	34,13,004N	119,15,925W	h		34.21673333	119.26541667
45004.0	MCGRATH LAKE ESTUARY-OCEAN BER	1877	7/10/98	MG1	34,12,578N	119,15,248W	h		34.20963333	119.25413333
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	34,12,905N	119,15,304W	h/d		34.21508330	119.25506670
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	34,12,905N	119,15,304W	h/d		34.21508330	119.25506670
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	34,12,905N	119,15,304W	h/d		34.21508330	119.25506670
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	34,12,905N	119,15,304W	h/d		34.21508330	119.25506670
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	34,12,859N	119,15,310W	h/d		34.21431670	119.25516670
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	34,12,859N	119,15,310W	h/d		34.21431670	119.25516670
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	34,12,859N	119,15,310W	h/d		34.21431670	119.25516670
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	34,12,859N	119,15,310W	h/d		34.21431670	119.25516670
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	34,12,824N	119,15,303W	h/d		34.21373330	119.25505000
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	34,12,824N	119,15,303W	h/d		34.21373330	119.25505000
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	34,12,824N	119,15,303W	h/d		34.21373330	119.25505000
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	34,12,765N	119,15,283W	h/d		34.21275000	119.25471670
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	34,12,731N	119,15,284W	h/d		34.21218330	119.25473330
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	34,12,731N	119,15,284W	h/d		34.21218330	119.25473330
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	34,12,731N	119,15,284W	h/d		34.21218330	119.25473330
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	34,12,708N	119,15,272W	h/d		34.21180000	119.25453330
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	34,12,686N	119,15,268W	h/d		34.21143330	119.25446670
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	34,12,686N	119,15,268W	h/d		34.21143330	119.25446670
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	34,12,686N	119,15,268W	h/d		34.21143330	119.25446670
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	34,12,656N	119,15,262W	h/d		34.21093330	119.25436670
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	34,12,637N	119,15,212W	h/d		34.21061670	119.25353330
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	34,12,637N	119,15,212W	h/d		34.21061670	119.25353330
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	34,12,637N	119,15,212W	h/d		34.21061670	119.25353330
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	34,12,595N	119,15,208W	h/d		34.20991670	119.25346670
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	34,12,595N	119,15,208W	h/d		34.20991670	119.25346670
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	34,12,997N	119,15,274W	h/d		34.21661660	119.25456660
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	34,13,262N	119,15,288W	h/d		34.22103330	119.25480000

**SECTION II**

**Field Sampling Data**

McGrath Lake Field Sampling Data

STANUM	STATION	IDORG	DATE	LEG	DEPTH	CORE	DEPTH	SED TEXTUR	ODOR SHEEN
45011.0	MCGRATH LAKE ESTUARY-N1S1	1824	7/9/98	MG1	0.3 m	-9		THICK OXIC LAYER	
45012.0	MCGRATH LAKE ESTUARY-N1S2	1825	7/9/98	MG1	0.3 m	-9		THICK OXIC LAYER	
45013.0	MCGRATH LAKE ESTUARY-N1S3	1826	7/9/98	MG1	0.3 m	-9		THICK OXIC LAYER	
45014.0	MCGRATH LAKE ESTUARY-N1S4	1827	7/9/98	MG1	0.3 m	-9		THICK OXIC LAYER	
45015.0	MCGRATH LAKE ESTUARY-N1S5	1828	7/9/98	MG1	0.3 m	-9		CREAMY THICK OXIC LAYER	
45021.0	MCGRATH LAKE ESTUARY-N2S1	1829	7/9/98	MG1	0.3 m	-9		THIN OXIC LAYER	
45022.0	MCGRATH LAKE ESTUARY-N2S2	1830	7/9/98	MG1	0.3 m	-9		THIN OXIC LAYER	
45023.0	MCGRATH LAKE ESTUARY-N2S3	1831	7/9/98	MG1	0.5 m	-9		THIN OXIC LAYER	
45024.0	MCGRATH LAKE ESTUARY-N2S4	1832	7/9/98	MG1	0.5 m	-9		NO OXIC LAYER	
45025.0	MCGRATH LAKE ESTUARY-N2S5	1833	7/9/98	MG1	0.3 m	-9			
45031.0	MCGRATH LAKE ESTUARY-N3S1	1834	7/9/98	MG1	0.5 m	-9		THIN OXIC LAYER	
45032.0	MCGRATH LAKE ESTUARY-N3S2	1835	7/9/98	MG1	0.5 m	-9		THIN OXIC LAYER	
45033.0	MCGRATH LAKE ESTUARY-N3S3	1836	7/9/98	MG1	0.6 m	-9			
45034.0	MCGRATH LAKE ESTUARY-N3S4	1837	7/9/98	MG1	0.5 m	-9		THIN OXIC LAYER	
45035.0	MCGRATH LAKE ESTUARY-N3S5	1838	7/9/98	MG1	0.5 m	-9		THIN OXIC LAYER	
45041.0	MCGRATH LAKE ESTUARY-M4S1	1839	7/9/98	MG1	0.3 m	-9			
45042.0	MCGRATH LAKE ESTUARY-M4S2	1840	7/9/98	MG1	0.5 m	-9			
45043.0	MCGRATH LAKE ESTUARY-M4S3	1841	7/9/98	MG1	0.6 m	-9		THIN OXIC LAYER	
45044.0	MCGRATH LAKE ESTUARY-M4S4	1842	7/9/98	MG1	0.6 m	-9			
45045.0	MCGRATH LAKE ESTUARY-M4S5	1843	7/9/98	MG1	0.6 m	-9			
45051.0	MCGRATH LAKE ESTUARY-M5S1	1844	7/9/98	MG1	0.3 m	-9		FINE SEDIMENT ON SAND	
45052.0	MCGRATH LAKE ESTUARY-M5S2	1845	7/9/98	MG1	0.5 m	-9			
45053.0	MCGRATH LAKE ESTUARY-M5S3	1846	7/9/98	MG1	0.6 m	-9			
45054.0	MCGRATH LAKE ESTUARY-M5S4	1847	7/9/98	MG1	1.0 m	-9			
45055.0	MCGRATH LAKE ESTUARY-M5S5	1848	7/9/98	MG1	0.5 m	-9		FINE SEDIMENT W/SAND	
45061.0	MCGRATH LAKE ESTUARY-M6S1	1849	7/9/98	MG1	0.3 m	-9		THICK OXIC LAYER	
45062.0	MCGRATH LAKE ESTUARY-M6S2	1850	7/9/98	MG1	0.5 m	-9		THIN OXIC LAYER	
45063.0	MCGRATH LAKE ESTUARY-M6S3	1851	7/9/98	MG1	0.8 m	-9			
45064.0	MCGRATH LAKE ESTUARY-M6S4	1852	7/9/98	MG1	1.3 m	-9			
45065.0	MCGRATH LAKE ESTUARY-M6S5	1853	7/9/98	MG1	0.6 m	-9			
45071.0	MCGRATH LAKE ESTUARY-M7S1	1854	7/9/98	MG1	0.3 m	-9		THIN SANDY OXIC LAYER	
45072.0	MCGRATH LAKE ESTUARY-M7S2	1855	7/9/98	MG1	0.5 m	-9		INES OVER GRITTY BOTTOM	
45073.0	MCGRATH LAKE ESTUARY-M7S3	1856	7/9/98	MG1	0.8 m	-9		NO OXIC LAYER	
45074.0	MCGRATH LAKE ESTUARY-M7S4	1857	7/9/98	MG1	1.3 m	-9			
45075.0	MCGRATH LAKE ESTUARY-M7S5	1858	7/9/98	MG1	1.5 m	-9			
45081.0	MCGRATH LAKE ESTUARY-S8S1	1859	7/9/98	MG1	0.8 m	-9			
45082.0	MCGRATH LAKE ESTUARY-S8S2	1860	7/9/98	MG1	0.8 m	-9			
45083.0	MCGRATH LAKE ESTUARY-S8S3	1861	7/9/98	MG1	0.6 m	-9			
45084.0	MCGRATH LAKE ESTUARY-S8S4	1862	7/9/98	MG1	1.3 m	-9			
45085.0	MCGRATH LAKE ESTUARY-S8S5	1863	7/9/98	MG1	0.3 m	-9		GRITTY SAND OVER MUD	
45091.0	MCGRATH LAKE ESTUARY-S9S1	1864	7/8/98	MG1	0.8 m	-9			

McGrath Lake Field Sampling Data

STANUM	STATION	IDORG	DATE	LEG	DEPTH	CORE	DEPTH	SED_TEXTUR	ODOR_SHEEN
45092.0	MCGRATH LAKE ESTUARY-S9S2	1865	7/8/98	MG1	1.0 m	-9		THIN OXIC LAYER	
45093.0	MCGRATH LAKE ESTUARY-S9S3	1866	7/8/98	MG1	1.0 m	-9			
45094.0	MCGRATH LAKE ESTUARY-S9S4	1867	7/8/98	MG1	1.3 m	-9			
45095.0	MCGRATH LAKE ESTUARY-S9S5	1868	7/8/98	MG1	0.8 m	-9			
45101.0	MCGRATH LAKE ESTUARY-S10S1	1869	7/8/98	MG1	0.6 m	-9			
45102.0	MCGRATH LAKE ESTUARY-S10S2	1870	7/8/98	MG1	0.8 m	-9			
45103.0	MCGRATH LAKE ESTUARY-S10S3	1871	7/8/98	MG1	1.0 m	-9			
45104.0	MCGRATH LAKE ESTUARY-S10S4	1872	7/8/98	MG1	1.3 m	-9			
45105.0	MCGRATH LAKE ESTUARY-S10S5	1873	7/8/98	MG1	0.6 m	-9			
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1874	7/10/98	MG1	0.3 m	-9		CLAY LIKE W/ FINES	
45002.0	MCGRATH LAKE ESTUARY-AG DRAIN	1875	7/10/98	MG1	0.3 m	-9		FINES W/ SANDY SED	
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1876	7/9/98	MG1	0.6 m	-9			
45004.0	MCGRATH LAKE ESTUARY-OCEAN BER	1877	7/10/98	MG1	0.3 m	-9			
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	0.3 m	0-5 cm		FINE	OILY-SHEEN
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	-9	5-35 cm			
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	-9	35-65 cm			
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	-9	65-82 cm			
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	0.3 m	0-5 cm		FINE	
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	-9	5-35 cm			
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	-9	35-65 cm			
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	-9	65-81 cm			
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	0.4 m	0-5 cm		FINE	
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	-9	5-35 cm			
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	-9	35-65 cm			
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	0.4 m	0-5 cm		FINE	H2S SMELL
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	0.6 m	0-5 cm		FINE	THIN OXIC LAYER
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	-9	5-35 cm			
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	-9	35-65 cm			
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	0.4 m	0-5 cm		FINE	THIN OXIC LAYER
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	1.1 m	0-5 cm		FINE, FLOCCULENT	H2S SMELL
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	-9	5-35 cm			
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	-9	35-65 cm			
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	1.2 m	0-5 cm		FINES VERY FLOCCULENT	STRONG H2S SMEL
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	0.8 m	0-5 cm		FINE	H2S SMELL
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	-9	5-35 cm			
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	-9	35-65 cm			
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	0.8 m	0-5 cm		ORGANIC MATTER	H2S SMELL
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	-9	5-35 cm			
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	0.6 m	0-5 cm		FINES	SEWEGE SMELL
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	0.1 m	0-5 cm		FINES W/ SAND	

**SECTION III**

Field Data for Water Quality

McGrath Lake Field Data for Water Quality

STANUM	STATION	IDORG	DATE	LEG	TIME	DO_PPM_S	DO_PPM_B	COND_MS_S	COND_MS_B	TURB_NTU_S	TURB_NTU_B
45011.0	MCGRATH LAKE ESTUARY-N1S1	1824	7/9/98	MG1	1740	8.49	-9.00	8.25	-9.00	62.7	-9.0
45012.0	MCGRATH LAKE ESTUARY-N1S2	1825	7/9/98	MG1	1750	8.28	-9.00	8.90	-9.00	45.7	-9.0
45013.0	MCGRATH LAKE ESTUARY-N1S3	1826	7/9/98	MG1	1756	9.21	-9.00	9.01	-9.00	53.8	-9.0
45014.0	MCGRATH LAKE ESTUARY-N1S4	1827	7/9/98	MG1	1804	8.58	-9.00	8.89	-9.00	52.6	-9.0
45015.0	MCGRATH LAKE ESTUARY-N1S5	1828	7/9/98	MG1	1813	8.69	-9.00	8.99	-9.00	65.6	-9.0
45021.0	MCGRATH LAKE ESTUARY-N2S1	1829	7/9/98	MG1	1659	8.53	-9.00	8.49	-9.00	56.0	-9.0
45022.0	MCGRATH LAKE ESTUARY-N2S2	1830	7/9/98	MG1	1706	9.04	-9.00	8.65	-9.00	45.8	-9.0
45023.0	MCGRATH LAKE ESTUARY-N2S3	1831	7/9/98	MG1	1713	8.70	-9.00	8.69	-9.00	42.8	-9.0
45024.0	MCGRATH LAKE ESTUARY-N2S4	1832	7/9/98	MG1	1719	8.63	-9.00	8.76	-9.00	41.5	-9.0
45025.0	MCGRATH LAKE ESTUARY-N2S5	1833	7/9/98	MG1	1726	8.83	-9.00	9.33	-9.00	44.3	-9.0
45031.0	MCGRATH LAKE ESTUARY-N3S1	1834	7/9/98	MG1	1611	7.17	-9.00	8.39	-9.00	53.2	-9.0
45032.0	MCGRATH LAKE ESTUARY-N3S2	1835	7/9/98	MG1	1617	8.64	-9.00	8.47	-9.00	52.8	-9.0
45033.0	MCGRATH LAKE ESTUARY-N3S3	1836	7/9/98	MG1	1623	8.39	-9.00	8.54	8.51	42.1	47.6
45034.0	MCGRATH LAKE ESTUARY-N3S4	1837	7/9/98	MG1	1635	8.88	-9.00	8.82	-9.00	39.5	-9.0
45035.0	MCGRATH LAKE ESTUARY-N3S5	1838	7/9/98	MG1	1642	7.80	-9.00	8.78	-9.00	44.5	-9.0
45041.0	MCGRATH LAKE ESTUARY-M4S1	1839	7/9/98	MG1	1516	6.40	-9.00	8.02	-9.00	37.4	-9.0
45042.0	MCGRATH LAKE ESTUARY-M4S2	1840	7/9/98	MG1	1524	8.11	-9.00	8.61	-9.00	41.5	-9.0
45043.0	MCGRATH LAKE ESTUARY-M4S3	1841	7/9/98	MG1	1531	9.01	9.01	8.57	8.57	45.9	46.6
45044.0	MCGRATH LAKE ESTUARY-M4S4	1842	7/9/98	MG1	1545	10.12	10.12	8.52	8.57	36.1	37.9
45045.0	MCGRATH LAKE ESTUARY-M4S5	1843	7/9/98	MG1	1554	7.84	7.84	9.14	10.11	43.9	53.0
45051.0	MCGRATH LAKE ESTUARY-M5S1	1844	7/9/98	MG1	1416	7.70	-9.00	6.44	-9.00	36.8	-9.0
45052.0	MCGRATH LAKE ESTUARY-M5S2	1845	7/9/98	MG1	1425	9.99	-9.00	8.20	-9.00	35.3	-9.0
45053.0	MCGRATH LAKE ESTUARY-M5S3	1846	7/9/98	MG1	1439	8.79	6.59	8.51	8.59	36.0	35.7
45054.0	MCGRATH LAKE ESTUARY-M5S4	1847	7/9/98	MG1	1450	8.38	6.66	9.08	10.30	36.9	57.0
45055.0	MCGRATH LAKE ESTUARY-M5S5	1848	7/9/98	MG1	1459	8.35	-9.00	8.42	-9.00	35.8	-9.0
45061.0	MCGRATH LAKE ESTUARY-M6S1	1849	7/9/98	MG1	1117	-9.00	-9.00	4.95	-9.00	25.5	-9.0
45062.0	MCGRATH LAKE ESTUARY-M6S2	1850	7/9/98	MG1	1124	-9.00	-9.00	7.68	-9.00	34.2	-9.0
45063.0	MCGRATH LAKE ESTUARY-M6S3	1851	7/9/98	MG1	1134	-9.00	-9.00	8.27	8.96	36.6	58.5
45064.0	MCGRATH LAKE ESTUARY-M6S4	1852	7/9/98	MG1	1145	-9.00	-9.00	8.32	32.48	33.8	122.0
45065.0	MCGRATH LAKE ESTUARY-M6S5	1853	7/9/98	MG1	1157	-9.00	-9.00	8.25	10.18	32.7	183.0
45071.0	MCGRATH LAKE ESTUARY-M7S1	1854	7/9/98	MG1	1015	-9.00	-9.00	6.58	-9.00	32.0	-9.0
45072.0	MCGRATH LAKE ESTUARY-M7S2	1855	7/9/98	MG1	1023	-9.00	-9.00	7.98	-9.00	35.5	-9.0
45073.0	MCGRATH LAKE ESTUARY-M7S3	1856	7/9/98	MG1	1036	-9.00	-9.00	8.29	8.73	33.7	41.0
45074.0	MCGRATH LAKE ESTUARY-M7S4	1857	7/9/98	MG1	1048	-9.00	-9.00	8.27	35.50	35.8	85.9
45075.0	MCGRATH LAKE ESTUARY-M7S5	1858	7/9/98	MG1	1058	-9.00	-9.00	8.39	8.85	34.8	56.4
45081.0	MCGRATH LAKE ESTUARY-S8S1	1859	7/9/98	MG1	910	10.61	-9.00	7.86	8.03	34.4	34.7
45082.0	MCGRATH LAKE ESTUARY-S8S2	1860	7/9/98	MG1	919	-9.00	-9.00	7.94	8.05	33.6	33.3
45083.0	MCGRATH LAKE ESTUARY-S8S3	1861	7/9/98	MG1	935	-9.00	-9.00	8.27	8.24	35.0	37.9
45084.0	MCGRATH LAKE ESTUARY-S8S4	1862	7/9/98	MG1	946	-9.00	-9.00	8.29	14.14	33.7	48.0
45085.0	MCGRATH LAKE ESTUARY-S8S5	1863	7/9/98	MG1	955	-9.00	-9.00	8.24	-9.00	38.4	-9.0
45091.0	MCGRATH LAKE ESTUARY-S9S1	1864	7/8/98	MG1	1523	-9.00	-9.00	8.17	8.12	47.2	48.0



McGrath Lake Field Data for Water Quality

STANUM	STATION	IDORG	DATE	LEG	TIME	DO	PPM	S	DO	PPM	B	COND	MS	S	COND	MS	B	TURB	NTU	S	TURB	NTU	B
45092.0	MCGRATH LAKE ESTUARY-S9S2	1865	7/8/98	MG1	1538	-9.00	-9.00		8.41	8.35		40.9	52.6										
45093.0	MCGRATH LAKE ESTUARY-S9S3	1866	7/8/98	MG1	1550	-9.00	-9.00		8.59	8.46		40.2	42.6										
45094.0	MCGRATH LAKE ESTUARY-S9S4	1867	7/8/98	MG1	1559	-9.00	-9.00		8.36	8.72		40.6	45.0										
45095.0	MCGRATH LAKE ESTUARY-S9S5	1868	7/8/98	MG1	1616	-9.00	-9.00		8.47	8.46		42.6	50.9										
45101.0	MCGRATH LAKE ESTUARY-S10S1	1869	7/8/98	MG1	1402	-9.00	-9.00		8.10	8.07		56.0	54.2										
45102.0	MCGRATH LAKE ESTUARY-S10S2	1870	7/8/98	MG1	1429	-9.00	-9.00		8.07	8.02		50.8	53.6										
45103.0	MCGRATH LAKE ESTUARY-S10S3	1871	7/8/98	MG1	1438	-9.00	-9.00		8.17	8.15		45.8	51.7										
45104.0	MCGRATH LAKE ESTUARY-S10S4	1872	7/8/98	MG1	1448	-9.00	-9.00		8.12	8.84		36.5	52.4										
45105.0	MCGRATH LAKE ESTUARY-S10S5	1873	7/8/98	MG1	1504	-9.00	-9.00		8.14	8.13		35.3	46.9										
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1874	7/10/98	MG1	900	10.10	-9.00		0.00	-9.00		3.3	-9.0										
45002.0	MCGRATH LAKE ESTUARY-AG DRAIN	1875	7/10/98	MG1	825	6.88	-9.00		0.00	-9.00		3.3	-9.0										
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1876	7/9/98	MG1	1833	9.21	-9.00		6.58	7.92		59.0	69.7										
45004.0	MCGRATH LAKE ESTUARY-OCEAN BERM	1877	7/10/98	MG1	940	11.31	-9.00		21.16	-9.00		51.5	-9.0										
45015.0	MCGRATH LAKE ESTUARY-N1S5	1977	10/28/98	MG2	1549	-9.00	-9.00		9.73	-9.00		43.2	-9.0										
45015.0	MCGRATH LAKE ESTUARY-N1S5 Z1	1989	10/28/98	MG2	1549	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45015.0	MCGRATH LAKE ESTUARY-N1S5 Z2	1990	10/28/98	MG2	1549	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45015.0	MCGRATH LAKE ESTUARY-N1S5 Z3	1991	10/28/98	MG2	1549	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45024.0	MCGRATH LAKE ESTUARY-N2S4	1978	10/28/98	MG2	1500	15.76	-9.00		9.30	-9.00		22.8	-9.0										
45024.0	MCGRATH LAKE ESTUARY-N2S4 Z1	1992	10/28/98	MG2	1500	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45024.0	MCGRATH LAKE ESTUARY-N2S4 Z2	1993	10/28/98	MG2	1500	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45024.0	MCGRATH LAKE ESTUARY-N2S4 Z3	1994	10/28/98	MG2	1500	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45034.0	MCGRATH LAKE ESTUARY-N3S4	1979	10/28/98	MG2	1433	15.58	-9.00		8.82	-9.00		28.3	-9.0										
45034.0	MCGRATH LAKE ESTUARY-N3S4 Z1	1995	10/28/98	MG2	1433	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45034.0	MCGRATH LAKE ESTUARY-N3S4 Z2	1996	10/28/98	MG2	1433	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45044.0	MCGRATH LAKE ESTUARY-M4S4	1980	10/28/98	MG2	1411	14.85	-9.00		8.56	-9.00		21.0	-9.0										
45053.0	MCGRATH LAKE ESTUARY-M5S3	1981	10/28/98	MG2	1330	14.92	14.01		8.49	8.50		22.1	25.0										
45053.0	MCGRATH LAKE ESTUARY-M5S3 Z1	1997	10/28/98	MG2	1330	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45053.0	MCGRATH LAKE ESTUARY-M5S3 Z2	1998	10/28/98	MG2	1330	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45064.0	MCGRATH LAKE ESTUARY-M6S4	1982	10/28/98	MG2	1258	14.06	13.85		8.41	8.41		19.0	18.8										
45074.0	MCGRATH LAKE ESTUARY-M7S4	1983	10/28/98	MG2	1156	13.88	5.35		8.20	22.44		18.0	19.8										
45074.0	MCGRATH LAKE ESTUARY-M7S4 Z1	1999	10/28/98	MG2	1156	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45074.0	MCGRATH LAKE ESTUARY-M7S4 Z2	2000	10/28/98	MG2	1156	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45084.0	MCGRATH LAKE ESTUARY-S8S4	1984	10/28/98	MG2	1047	12.82	11.42		8.14	17.56		18.3	23.1										
45092.0	MCGRATH LAKE ESTUARY-S9S2	1985	10/28/98	MG2	1002	11.89	11.36		7.56	7.62		17.7	17.1										
45092.0	MCGRATH LAKE ESTUARY-S9S2 Z1	2001	10/28/98	MG2	1002	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45092.0	MCGRATH LAKE ESTUARY-S9S2 Z2	2002	10/28/98	MG2	1002	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45102.0	MCGRATH LAKE ESTUARY-S10S2	1986	10/28/98	MG2	916	10.78	9.71		7.21	7.48		15.1	16.9										
45102.0	MCGRATH LAKE ESTUARY-S10S2 Z1	2003	10/28/98	MG2	916	-9.00	-9.00		-9.00	-9.00		-9.0	-9.0										
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	1645	8.85	-9.00		4.51	-9.00		98.3	-9.0										
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	730	8.30	-9.00		2.82	-9.00		30.9	-9.0										

McGrath Lake Field Data for Water Quality

STANUM	STATION	IDORG	DATE	LEG	TIME	PH	S	PH	B	TEMP	C	S	TEMP	C	B	DO	SAT	S	DO	SAT	B	SALN	PPT	S	
45011.0	MCGRATH LAKE ESTUARY-N1S1	1824	7/9/98	MG1	1740	8.87	-9.00	25.2	-9.0	902.0	-9.0	4.70													
45012.0	MCGRATH LAKE ESTUARY-N1S2	1825	7/9/98	MG1	1750	9.31	-9.00	25.7	-9.0	566.0	-9.0	4.90													
45013.0	MCGRATH LAKE ESTUARY-N1S3	1826	7/9/98	MG1	1756	9.31	-9.00	25.0	-9.0	582.0	-9.0	4.90													
45014.0	MCGRATH LAKE ESTUARY-N1S4	1827	7/9/98	MG1	1804	9.34	-9.00	25.6	-9.0	595.0	-9.0	5.00													
45015.0	MCGRATH LAKE ESTUARY-N1S5	1828	7/9/98	MG1	1813	9.35	-9.00	25.6	-9.0	810.0	-9.0	5.00													
45021.0	MCGRATH LAKE ESTUARY-N2S1	1829	7/9/98	MG1	1659	9.21	-9.00	26.0	-9.0	622.0	-9.0	4.80													
45022.0	MCGRATH LAKE ESTUARY-N2S2	1830	7/9/98	MG1	1706	9.35	-9.00	26.1	-9.0	332.0	-9.0	4.80													
45023.0	MCGRATH LAKE ESTUARY-N2S3	1831	7/9/98	MG1	1713	9.39	-9.00	26.0	-9.0	527.0	-9.0	4.80													
45024.0	MCGRATH LAKE ESTUARY-N2S4	1832	7/9/98	MG1	1719	9.41	-9.00	26.1	-9.0	482.0	-9.0	4.80													
45025.0	MCGRATH LAKE ESTUARY-N2S5	1833	7/9/98	MG1	1726	9.13	-9.00	25.8	-9.0	494.0	-9.0	5.30													
45031.0	MCGRATH LAKE ESTUARY-N3S1	1834	7/9/98	MG1	1611	9.18	-9.00	26.4	-9.0	491.0	-9.0	4.70													
45032.0	MCGRATH LAKE ESTUARY-N3S2	1835	7/9/98	MG1	1617	9.19	-9.00	26.3	-9.0	453.0	-9.0	4.70													
45033.0	MCGRATH LAKE ESTUARY-N3S3	1836	7/9/98	MG1	1623	9.34	9.35	26.2	26.2	525.0	-9.0	4.80													
45034.0	MCGRATH LAKE ESTUARY-N3S4	1837	7/9/98	MG1	1635	9.25	-9.00	26.1	-9.0	437.0	-9.0	4.90													
45035.0	MCGRATH LAKE ESTUARY-N3S5	1838	7/9/98	MG1	1642	9.30	-9.00	26.0	-9.0	468.0	-9.0	4.90													
45041.0	MCGRATH LAKE ESTUARY-M4S1	1839	7/9/98	MG1	1516	8.79	-9.00	25.3	-9.0	457.0	-9.0	3.60													
45042.0	MCGRATH LAKE ESTUARY-M4S2	1840	7/9/98	MG1	1524	9.13	-9.00	25.6	-9.0	334.0	-9.0	4.80													
45043.0	MCGRATH LAKE ESTUARY-M4S3	1841	7/9/98	MG1	1531	9.20	9.22	25.7	25.7	560.0	606.0	4.80													
45044.0	MCGRATH LAKE ESTUARY-M4S4	1842	7/9/98	MG1	1545	9.25	9.23	25.3	25.3	409.0	447.0	4.80													
45045.0	MCGRATH LAKE ESTUARY-M4S5	1843	7/9/98	MG1	1554	9.29	8.89	25.2	24.2	452.0	642.0	4.90													
45051.0	MCGRATH LAKE ESTUARY-M5S1	1844	7/9/98	MG1	1416	8.42	-9.00	25.0	-9.0	469.0	-9.0	3.30													
45052.0	MCGRATH LAKE ESTUARY-M5S2	1845	7/9/98	MG1	1425	9.05	-9.00	25.3	-9.0	454.0	-9.0	4.50													
45053.0	MCGRATH LAKE ESTUARY-M5S3	1846	7/9/98	MG1	1439	9.16	9.16	25.2	25.2	435.0	271.0	4.80													
45054.0	MCGRATH LAKE ESTUARY-M5S4	1847	7/9/98	MG1	1450	9.18	8.11	25.0	23.7	269.0	59.0	4.80													
45055.0	MCGRATH LAKE ESTUARY-M5S5	1848	7/9/98	MG1	1459	9.08	-9.00	24.8	-9.0	376.0	-9.0	4.70													
45061.0	MCGRATH LAKE ESTUARY-M6S1	1849	7/9/98	MG1	1117	8.24	-9.00	22.3	-9.0	-9.0	-9.0	2.90													
45062.0	MCGRATH LAKE ESTUARY-M6S2	1850	7/9/98	MG1	1124	8.89	-9.00	23.1	-9.0	-9.0	-9.0	4.20													
45063.0	MCGRATH LAKE ESTUARY-M6S3	1851	7/9/98	MG1	1134	9.03	8.40	23.3	23.3	-9.0	-9.0	4.70													
45064.0	MCGRATH LAKE ESTUARY-M6S4	1852	7/9/98	MG1	1145	9.07	6.77	23.4	23.4	-9.0	-9.0	4.70													
45065.0	MCGRATH LAKE ESTUARY-M6S5	1853	7/9/98	MG1	1157	9.10	8.52	23.3	23.0	-9.0	-9.0	4.70													
45071.0	MCGRATH LAKE ESTUARY-M7S1	1854	7/9/98	MG1	1015	8.62	-9.00	22.1	-9.0	-9.0	-9.0	3.60													
45072.0	MCGRATH LAKE ESTUARY-M7S2	1855	7/9/98	MG1	1023	8.98	-9.00	22.6	-9.0	-9.0	-9.0	4.50													
45073.0	MCGRATH LAKE ESTUARY-M7S3	1856	7/9/98	MG1	1036	9.03	8.75	22.8	22.8	-9.0	-9.0	4.60													
45074.0	MCGRATH LAKE ESTUARY-M7S4	1857	7/9/98	MG1	1048	8.93	6.95	22.8	23.4	-9.0	-9.0	4.70													
45075.0	MCGRATH LAKE ESTUARY-M7S5	1858	7/9/98	MG1	1058	8.82	8.33	25.1	23.2	-9.0	-9.0	4.70													
45081.0	MCGRATH LAKE ESTUARY-S8S1	1859	7/9/98	MG1	910	8.54	8.62	22.5	22.5	94.0	-9.0	4.40													
45082.0	MCGRATH LAKE ESTUARY-S8S2	1860	7/9/98	MG1	919	8.73	8.73	22.4	22.5	-9.0	-9.0	4.40													
45083.0	MCGRATH LAKE ESTUARY-S8S3	1861	7/9/98	MG1	935	8.73	8.65	23.5	22.6	-9.0	-9.0	4.60													
45084.0	MCGRATH LAKE ESTUARY-S8S4	1862	7/9/98	MG1	946	8.91	6.88	22.6	23.1	-9.0	-9.0	4.60													
45085.0	MCGRATH LAKE ESTUARY-S8S5	1863	7/9/98	MG1	955	8.94	-9.00	22.6	-9.0	-9.0	-9.0	4.60													
45091.0	MCGRATH LAKE ESTUARY-S9S1	1864	7/8/98	MG1	1523	8.90	8.94	25.8	25.7	-9.0	-9.0	4.50													

McGrath Lake Field Data for Water Quality

STANUM	STATION	IDORG	DATE	LEG	TIME	PH_S	PH_B	TEMP_C_S	TEMP_C_B	DO_SAT_S	DO_SAT_B	SALN_PPT_S
45092.0	MCGRATH LAKE ESTUARY-S9S2	1865	7/8/98	MG1	1538	9.01	9.02	25.8	25.6	-9.0	-9.0	4.60
45093.0	MCGRATH LAKE ESTUARY-S9S3	1866	7/8/98	MG1	1550	9.14	9.15	25.8	25.7	-9.0	-9.0	4.70
45094.0	MCGRATH LAKE ESTUARY-S9S4	1867	7/8/98	MG1	1559	9.19	9.18	26.0	25.7	-9.0	-9.0	4.70
45095.0	MCGRATH LAKE ESTUARY-S9S5	1868	7/8/98	MG1	1616	9.25	9.20	25.0	25.6	-9.0	-9.0	4.70
45101.0	MCGRATH LAKE ESTUARY-S10S1	1869	7/8/98	MG1	1402	8.70	8.60	25.6	25.5	-9.0	-9.0	4.50
45102.0	MCGRATH LAKE ESTUARY-S10S2	1870	7/8/98	MG1	1429	8.90	8.92	25.7	25.6	-9.0	-9.0	4.50
45103.0	MCGRATH LAKE ESTUARY-S10S3	1871	7/8/98	MG1	1438	8.80	8.87	25.7	25.3	-9.0	-9.0	4.50
45104.0	MCGRATH LAKE ESTUARY-S10S4	1872	7/8/98	MG1	1448	8.92	8.67	25.8	23.0	-9.0	-9.0	4.50
45105.0	MCGRATH LAKE ESTUARY-S10S5	1873	7/8/98	MG1	1504	8.89	8.89	26.0	25.7	-9.0	-9.0	4.50
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1874	7/10/98	MG1	900	7.21	-9.00	18.2	-9.0	103.0	-9.0	0.00
45002.0	MCGRATH LAKE ESTUARY-AG DRAIN	1875	7/10/98	MG1	825	7.05	-9.00	17.8	-9.0	71.0	-9.0	0.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1876	7/9/98	MG1	1833	8.47	8.93	23.8	25.2	613.0	-9.0	2.60
45004.0	MCGRATH LAKE ESTUARY-OCEAN BERM	1877	7/10/98	MG1	940	8.00	-9.00	20.3	-9.0	46.0	-9.0	24.70
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	1549	9.24	-9.00	20.2	-9.0	-9.0	-9.0	5.50
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	1549	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	1549	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	1549	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	1500	9.14	-9.00	20.2	-9.0	190.7	-9.0	5.82
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	1500	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	1500	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	1500	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	1433	9.14	-9.00	20.5	-9.0	183.3	-9.0	4.92
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	1433	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	1433	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	1411	9.13	-9.00	20.2	-9.0	177.4	-9.0	4.83
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	1330	9.11	9.11	20.0	20.0	164.7	166.0	4.76
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	1330	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	1330	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	1258	9.11	9.11	19.6	19.6	163.6	166.5	4.70
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	1156	9.09	8.56	18.7	20.6	158.5	71.5	4.56
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	1156	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	1156	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	1047	9.00	8.72	17.9	19.8	148.7	139.6	4.51
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	1002	8.93	8.93	17.0	17.0	129.1	132.8	4.21
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	1002	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	1002	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	916	8.77	8.74	16.2	16.2	120.3	107.1	3.99
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	916	-9.00	-9.00	-9.0	-9.0	-9.0	-9.0	-9.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	1645	8.32	-9.00	19.7	-9.0	100.3	-9.0	1.64
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	730	7.83	-9.00	17.5	-9.0	94.3	-9.0	1.46

McGrath Lake Field Data for Water Quality

STANUM	STATION	IDORG	DATE	LEG	TIME	SALN_PPT_B	NITRATE	N_N	NITRITE	PHOSPHATE
45011.0	MCGRATH LAKE ESTUARY-N1S1	1824	7/9/98	MG1	1740	-9.00	-9	-9	-9.00	-9.00
45012.0	MCGRATH LAKE ESTUARY-N1S2	1825	7/9/98	MG1	1750	-9.00	-9	-9	-9.00	-9.00
45013.0	MCGRATH LAKE ESTUARY-N1S3	1826	7/9/98	MG1	1756	-9.00	-9	-9	-9.00	-9.00
45014.0	MCGRATH LAKE ESTUARY-N1S4	1827	7/9/98	MG1	1804	-9.00	-9	-9	-9.00	-9.00
45015.0	MCGRATH LAKE ESTUARY-N1S5	1828	7/9/98	MG1	1813	-9.00	-9	-9	-9.00	-9.00
45021.0	MCGRATH LAKE ESTUARY-N2S1	1829	7/9/98	MG1	1659	-9.00	-9	-9	-9.00	-9.00
45022.0	MCGRATH LAKE ESTUARY-N2S2	1830	7/9/98	MG1	1706	-9.00	-9	-9	-9.00	-9.00
45023.0	MCGRATH LAKE ESTUARY-N2S3	1831	7/9/98	MG1	1713	-9.00	-9	-9	-9.00	-9.00
45024.0	MCGRATH LAKE ESTUARY-N2S4	1832	7/9/98	MG1	1719	-9.00	-9	-9	-9.00	-9.00
45025.0	MCGRATH LAKE ESTUARY-N2S5	1833	7/9/98	MG1	1726	-9.00	-9	-9	-9.00	-9.00
45031.0	MCGRATH LAKE ESTUARY-N3S1	1834	7/9/98	MG1	1611	-9.00	-9	-9	-9.00	-9.00
45032.0	MCGRATH LAKE ESTUARY-N3S2	1835	7/9/98	MG1	1617	-9.00	-9	-9	-9.00	-9.00
45033.0	MCGRATH LAKE ESTUARY-N3S3	1836	7/9/98	MG1	1623	4.80	-9	-9	-9.00	-9.00
45034.0	MCGRATH LAKE ESTUARY-N3S4	1837	7/9/98	MG1	1635	-9.00	-9	-9	-9.00	-9.00
45035.0	MCGRATH LAKE ESTUARY-N3S5	1838	7/9/98	MG1	1642	-9.00	-9	-9	-9.00	-9.00
45041.0	MCGRATH LAKE ESTUARY-M4S1	1839	7/9/98	MG1	1516	-9.00	-9	-9	-9.00	-9.00
45042.0	MCGRATH LAKE ESTUARY-M4S2	1840	7/9/98	MG1	1524	-9.00	-9	-9	-9.00	-9.00
45043.0	MCGRATH LAKE ESTUARY-M4S3	1841	7/9/98	MG1	1531	4.80	-9	-9	-9.00	-9.00
45044.0	MCGRATH LAKE ESTUARY-M4S4	1842	7/9/98	MG1	1545	4.80	-9	-9	-9.00	-9.00
45045.0	MCGRATH LAKE ESTUARY-M4S5	1843	7/9/98	MG1	1554	5.90	-9	-9	-9.00	-9.00
45051.0	MCGRATH LAKE ESTUARY-M5S1	1844	7/9/98	MG1	1416	-9.00	-9	-9	-9.00	-9.00
45052.0	MCGRATH LAKE ESTUARY-M5S2	1845	7/9/98	MG1	1425	-9.00	-9	-9	-9.00	-9.00
45053.0	MCGRATH LAKE ESTUARY-M5S3	1846	7/9/98	MG1	1439	4.80	-9	-9	-9.00	-9.00
45054.0	MCGRATH LAKE ESTUARY-M5S4	1847	7/9/98	MG1	1450	7.00	-9	-9	-9.00	-9.00
45055.0	MCGRATH LAKE ESTUARY-M5S5	1848	7/9/98	MG1	1459	-9.00	-9	-9	-9.00	-9.00
45061.0	MCGRATH LAKE ESTUARY-M6S1	1849	7/9/98	MG1	1117	-9.00	-9	-9	-9.00	-9.00
45062.0	MCGRATH LAKE ESTUARY-M6S2	1850	7/9/98	MG1	1124	-9.00	-9	-9	-9.00	-9.00
45063.0	MCGRATH LAKE ESTUARY-M6S3	1851	7/9/98	MG1	1134	5.40	-9	-9	-9.00	-9.00
45064.0	MCGRATH LAKE ESTUARY-M6S4	1852	7/9/98	MG1	1145	24.30	-9	-9	-9.00	-9.00
45065.0	MCGRATH LAKE ESTUARY-M6S5	1853	7/9/98	MG1	1157	8.00	-9	-9	-9.00	-9.00
45071.0	MCGRATH LAKE ESTUARY-M7S1	1854	7/9/98	MG1	1015	-9.00	-9	-9	-9.00	-9.00
45072.0	MCGRATH LAKE ESTUARY-M7S2	1855	7/9/98	MG1	1023	-9.00	-9	-9	-9.00	-9.00
45073.0	MCGRATH LAKE ESTUARY-M7S3	1856	7/9/98	MG1	1036	4.70	-9	-9	-9.00	-9.00
45074.0	MCGRATH LAKE ESTUARY-M7S4	1857	7/9/98	MG1	1048	17.70	-9	-9	-9.00	-9.00
45075.0	MCGRATH LAKE ESTUARY-M7S5	1858	7/9/98	MG1	1058	7.10	-9	-9	-9.00	-9.00
45081.0	MCGRATH LAKE ESTUARY-S8S1	1859	7/9/98	MG1	910	4.50	-9	-9	-9.00	-9.00
45082.0	MCGRATH LAKE ESTUARY-S8S2	1860	7/9/98	MG1	919	4.60	-9	-9	-9.00	-9.00
45083.0	MCGRATH LAKE ESTUARY-S8S3	1861	7/9/98	MG1	935	4.70	-9	-9	-9.00	-9.00
45084.0	MCGRATH LAKE ESTUARY-S8S4	1862	7/9/98	MG1	946	14.00	-9	-9	-9.00	-9.00
45085.0	MCGRATH LAKE ESTUARY-S8S5	1863	7/9/98	MG1	955	-9.00	-9	-9	-9.00	-9.00
45091.0	MCGRATH LAKE ESTUARY-S9S1	1864	7/8/98	MG1	1523	4.60	-9	-9	-9.00	-9.00

McGrath Lake Field Data for Water Quality

STANUM	STATION	IDORG	DATE	LEG	TIME	SALN	PPT_B	NITRATE	N_N	NITRITE	PHOSPHATE
45092.0	MCGRATH LAKE ESTUARY-S9S2	1865	7/8/98	MG1	1538	4.60	-9	-9	-9.00	-9.00	-9.00
45093.0	MCGRATH LAKE ESTUARY-S9S3	1866	7/8/98	MG1	1550	4.80	-9	-9	-9.00	-9.00	-9.00
45094.0	MCGRATH LAKE ESTUARY-S9S4	1867	7/8/98	MG1	1559	4.70	-9	-9	-9.00	-9.00	-9.00
45095.0	MCGRATH LAKE ESTUARY-S9S5	1868	7/8/98	MG1	1616	4.70	-9	-9	-9.00	-9.00	-9.00
45101.0	MCGRATH LAKE ESTUARY-S10S1	1869	7/8/98	MG1	1402	4.50	-9	-9	-9.00	-9.00	-9.00
45102.0	MCGRATH LAKE ESTUARY-S10S2	1870	7/8/98	MG1	1429	4.50	-9	-9	-9.00	-9.00	-9.00
45103.0	MCGRATH LAKE ESTUARY-S10S3	1871	7/8/98	MG1	1438	4.50	-9	-9	-9.00	-9.00	-9.00
45104.0	MCGRATH LAKE ESTUARY-S10S4	1872	7/8/98	MG1	1448	5.40	-9	-9	-9.00	-9.00	-9.00
45105.0	MCGRATH LAKE ESTUARY-S10S5	1873	7/8/98	MG1	1504	4.50	-9	-9	-9.00	-9.00	-9.00
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1874	7/10/98	MG1	900	-9.00	-9	-9	-9.00	-9.00	-9.00
45002.0	MCGRATH LAKE ESTUARY-AG DRAIN	1875	7/10/98	MG1	825	-9.00	-9	-9	-9.00	-9.00	-9.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1876	7/9/98	MG1	1833	4.40	-9	-9	-9.00	-9.00	-9.00
45004.0	MCGRATH LAKE ESTUARY-OCEAN BERM	1877	7/10/98	MG1	940	-9.00	-9	-9	-9.00	-9.00	-9.00
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	1549	-9.00	-9	-9	-9.00	-9.00	-9.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	1549	-9.00	-9	-9	-9.00	-9.00	-9.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	1549	-9.00	-9	-9	-9.00	-9.00	-9.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	1549	-9.00	-9	-9	-9.00	-9.00	-9.00
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	1500	-9.00	107	112	0.26	0.52	0.52
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	1500	-9.00	-9	-9	-9.00	-9.00	-9.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	1500	-9.00	-9	-9	-9.00	-9.00	-9.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	1500	-9.00	-9	-9	-9.00	-9.00	-9.00
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	1433	-9.00	-9	-9	-9.00	-9.00	-9.00
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	1433	-9.00	-9	-9	-9.00	-9.00	-9.00
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	1433	-9.00	-9	-9	-9.00	-9.00	-9.00
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	1411	-9.00	-9	-9	-9.00	-9.00	-9.00
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	1330	4.80	115	117	0.23	0.60	0.60
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	1330	-9.00	-9	-9	-9.00	-9.00	-9.00
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	1330	-9.00	-9	-9	-9.00	-9.00	-9.00
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	1258	4.70	-9	-9	-9.00	-9.00	-9.00
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	1156	13.89	-9	-9	-9.00	-9.00	-9.00
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	1156	-9.00	-9	-9	-9.00	-9.00	-9.00
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	1156	-9.00	-9	-9	-9.00	-9.00	-9.00
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	1047	8.29	-9	-9	-9.00	-9.00	-9.00
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	1002	4.24	110	103	0.24	0.57	0.57
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	1002	-9.00	-9	-9	-9.00	-9.00	-9.00
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	1002	-9.00	-9	-9	-9.00	-9.00	-9.00
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	916	4.08	-9	-9	-9.00	-9.00	-9.00
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	916	-9.00	-9	-9	-9.00	-9.00	-9.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	1645	-9.00	158	151	0.12	0.86	0.86
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	730	-9.00	206	202	0.06	0.63	0.63

## **APPENDIX C**

### **Analytical Chemistry Data**

## **SECTION I**

### **Trace Metal Analysis of Sediments**

## Trace Metal Analysis of Sediments (dry weight-ppm-ug/g)

STANUM	STATION	IDORG	DATE	LEG	METADATA	TMMOIST	ALUMINUM	CADMIUM	CHROMIUM	COPPER	IRON	LEAD	MANGANESE
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	MGMETA.WP6	73.30	30253.00	3.0550	87.480	57.02	56600.0	25.530	982.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	MGMETA.WP6	61.40	16212.00	2.5420	71.190	44.12	47800.0	22.740	970.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	MGMETA.WP6	62.40	22619.00	2.4920	83.080	48.69	54300.0	26.490	810.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	MGMETA.WP6	66.30	17277.00	1.9990	66.280	38.64	40800.0	24.110	1340.00
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	MGMETA.WP6	76.20	7857.00	2.1870	68.570	44.50	45400.0	18.410	789.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	MGMETA.WP6	66.00	5729.00	2.3880	73.270	46.53	44300.0	22.910	691.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	MGMETA.WP6	62.60	18001.00	2.2250	72.800	45.05	48200.0	25.400	616.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	MGMETA.WP6	59.60	3312.00	1.5680	56.110	31.70	40300.0	21.110	813.00
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	MGMETA.WP6	73.00	41915.00	2.7490	81.770	54.05	48700.0	30.150	791.00
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	MGMETA.WP6	66.70	1855.00	2.0360	81.160	38.07	39500.0	18.500	678.00
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	MGMETA.WP6	61.40	18154.00	1.7810	59.040	34.66	39400.0	21.520	824.00
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	MGMETA.WP6	81.60	10624.00	2.4890	77.090	51.18	48700.0	19.560	706.00
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	MGMETA.WP6	78.40	9298.00	2.4480	75.990	49.78	48900.0	19.380	697.00
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	MGMETA.WP6	55.00	1269.00	1.1830	49.340	21.47	30900.0	15.270	919.00
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	MGMETA.WP6	71.60	583.00	1.5260	50.810	30.04	31200.0	10.720	685.00
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	MGMETA.WP6	78.80	18206.00	2.3490	80.070	51.54	49400.0	18.700	627.00
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	MGMETA.WP6	84.50	4290.00	1.8350	68.520	44.99	39000.0	14.670	634.00
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	MGMETA.WP6	76.10	1142.00	1.7680	86.050	37.57	39900.0	11.920	543.00
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	MGMETA.WP6	62.30	1805.00	1.3490	78.370	24.88	30400.0	13.140	784.00
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	MGMETA.WP6	83.50	1798.00	1.6320	60.110	37.26	35000.0	14.010	630.00
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	MGMETA.WP6	80.70	3763.00	1.9350	72.220	44.96	43800.0	17.460	830.00
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	MGMETA.WP6	69.70	427.00	1.4280	48.000	28.20	30000.0	3.050	865.00
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	MGMETA.WP6	31.10	41966.00	0.3760	35.600	11.96	11800.0	12.470	508.00
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	MGMETA.WP6	76.90	18477.00	1.8480	86.350	42.11	42900.0	16.020	666.00
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	MGMETA.WP6	32.30	45060.00	0.3350	68.600	11.41	12000.0	11.120	466.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	MGMETA.WP6	57.30	38704.00	2.1390	60.690	37.30	39200.0	19.230	799.00
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	MGMETA.WP6	28.40	23361.00	0.7670	27.510	15.54	15500.0	16.180	380.00



## Trace Metal Analysis of Sediments (dry weight-ppm-ug/g)

STANUM	STATION	IDORG	DATE	LEG	MERCURY	NICKEL	SILVER	SELENIUM	ZINC	SEBATCH	TMBATCH	TMDATAQC
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	1.4770	47.660	0.6160	1.570	193.0000	L-429-98	98-27	-4
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	0.1160	39.390	0.5700	1.740	159.0000	L-429-98	98-27	-4
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	0.2320	44.060	0.5580	1.510	165.0000	L-429-98	98-27	-4
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	0.0600	35.870	0.5120	1.720	126.0000	L-471-98	98-27	-4
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	0.5410	38.940	0.4820	1.930	149.0000	L-429-98	98-27	-4
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	0.1190	40.560	0.5490	1.710	158.0000	L-429-98	98-27	-4
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	0.3320	39.610	0.5960	1.550	142.0000	L-429-98	98-27	-4
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	0.2230	31.860	0.4400	1.510	105.0000	L-471-98	98-27	-4
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	0.4100	43.810	0.7790	1.640	170.0000	L-429-98	98-27	-4
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	0.1690	34.340	0.4980	1.600	139.0000	L-429-98	98-27	-4
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	0.2310	30.890	0.6260	1.510	114.0000	L-429-98	98-27	-4
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	0.1270	42.930	0.4970	1.570	165.0000	L-429-98	98-27	-4
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	0.0960	42.330	0.4800	1.530	157.0000	L-429-98	98-27	-4
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	0.0550	20.420	0.5160	1.290	73.0000	L-429-98	98-27	-4
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	0.0660	27.140	0.5110	1.830	107.0000	L-429-98	98-27	-4
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	0.0920	43.050	0.4750	1.410	167.0000	L-429-98	98-27	-4
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	0.0910	36.410	0.4340	1.200	131.0000	L-429-98	98-27	-4
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	0.0730	33.430	0.4060	1.290	127.0000	L-429-98	98-27	-4
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	0.0520	24.000	0.4060	1.210	82.0000	L-429-98	98-27	-4
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	0.2680	33.460	0.5170	1.240	113.0000	L-429-98	98-27	-4
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	0.0960	39.880	0.5050	1.680	135.0000	L-429-98	98-27	-4
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	0.0710	26.390	0.2150	1.890	87.0000	L-429-98	98-27	-4
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	0.0380	8.200	0.3800	0.500	26.0000	L-471-98	98-27	-4
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	2.6400	34.380	0.4680	1.150	126.0000	L-429-98	98-27	-4
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	0.0460	6.890	0.3670	0.660	25.0000	L-429-98	98-27	-4
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	0.0590	31.580	0.5270	0.960	119.0000	L-429-98	98-27	-4
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	0.0350	9.850	0.3700	0.310	40.0000	L-429-98	98-27	-4

## **SECTION II**

### **Pesticide Analysis of Sediments**

Pesticide Analysis of Sediments (dry weight- ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	SOWEIGHT	SOMOIST	ALDRIN	CCHLOR	TCHLOR	ACDEN	CLPYR	DACTH	OPDDD
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	9.31	57.84	5.980	132.000	130.000	22.000	14.40	2.990	168.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	8.11	59.80	-8.000	52.100	49.700	12.600	-8.00	3.130	214.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	8.95	55.80	-8.000	89.200	115.000	27.400	-8.00	-8.000	311.00
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	7.90	63.40	2.700	12.900	10.900	4.200	-8.00	-8.000	153.00
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	7.56	64.70	-8.000	134.000	126.000	21.500	4.34	-8.000	221.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	9.40	57.20	-8.000	76.100	78.800	16.900	-8.00	-8.000	235.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	9.25	57.50	-8.000	82.900	103.000	25.100	-8.00	-8.000	284.00
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	7.78	61.00	-8.000	21.700	28.400	8.510	-8.00	-8.000	152.00
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	7.43	63.30	-8.000	189.000	183.000	34.200	-8.00	2.060	265.00
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	8.18	61.20	-8.000	70.700	75.300	15.800	4.18	2.200	208.00
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	7.74	61.00	-8.000	35.200	43.700	12.800	-8.00	-8.000	184.00
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	6.37	69.10	-8.000	244.000	257.000	51.100	20.40	4.470	253.00
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	5.42	67.30	-8.000	234.000	229.000	45.200	-8.00	-8.000	285.00
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	10.12	53.80	-8.000	8.210	10.800	3.300	-8.00	-8.000	37.90
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	6.56	67.86	-8.000	74.300	79.100	17.100	-8.00	-8.000	169.00
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	7.68	63.70	-8.000	202.000	218.000	41.800	4.43	12.500	231.00
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	7.19	68.21	-8.000	257.000	276.000	48.300	20.70	8.420	248.00
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	7.23	66.13	-8.000	156.000	157.000	28.200	8.10	5.480	186.00
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	9.61	57.21	-8.000	16.900	24.800	4.840	-8.00	1.630	67.40
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	3.50	77.66	-8.000	180.000	179.000	30.500	15.50	5.240	212.00
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	7.00	66.02	-8.000	225.000	239.000	43.000	10.90	3.160	139.00
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	8.08	61.78	-8.000	57.500	62.700	13.600	2.64	-8.000	69.60
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	14.42	37.24	-8.000	2.560	4.120	1.030	-8.00	-8.000	5.57
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	9.16	54.92	-8.000	153.000	158.000	31.400	15.00	8.250	105.00
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	15.80	33.12	-8.000	8.360	10.200	2.280	-8.00	-8.000	9.29
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUS	1988	10/28/98	MG2	16.28	25.55	-8.000	5.690	5.640	0.663	4.31	1.830	41.50
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	15.76	25.71	0.424	7.400	7.070	0.699	5.96	2.660	40.20

Pesticide Analysis of Sediments (dry weight- ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	PPDD	OPDDE	PPDDE	PPDDMU	OPDDT	PPDDT	DICLB	DIELD	DRIN	ENDO_I	ENDO_II
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	242.000	27.60	1560.00	192.00	32.50	308.00	43.60	17.300	20.400	13.10	
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	274.000	26.20	1380.00	382.00	23.60	181.00	100.00	14.300	19.800	9.02	
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	666.000	74.80	1720.00	455.00	16.40	155.00	133.00	14.600	17.500	11.60	
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	197.000	14.20	1030.00	607.00	8.68	61.30	94.40	4.890	17.300	3.34	
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	340.000	28.20	1670.00	178.00	46.10	294.00	55.00	26.200	20.000	16.90	
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	308.000	19.70	1510.00	310.00	26.80	213.00	94.40	14.400	22.700	9.01	
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	592.000	32.20	1670.00	406.00	19.00	160.00	97.50	14.300	28.300	8.20	
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	284.000	13.50	897.00	511.00	8.63	57.80	80.80	6.260	14.600	2.72	
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	408.000	28.80	1540.00	233.00	52.70	383.00	66.10	28.000	25.600	19.00	
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	365.000	21.60	1460.00	268.00	21.50	177.00	61.20	13.900	17.000	6.25	
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	305.000	15.10	1110.00	424.00	13.50	85.30	73.10	8.750	17.300	3.80	
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	362.000	24.10	1470.00	215.00	34.60	270.00	81.60	31.100	28.000	14.40	
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	549.000	25.20	2230.00	191.00	36.60	362.00	71.00	37.300	22.500	16.80	
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	106.000	5.27	361.00	129.00	4.02	28.80	53.90	2.210	5.640	0.86	
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	520.000	10.90	1030.00	120.00	14.30	120.00	117.00	11.700	11.900	3.11	
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	568.000	23.10	1370.00	251.00	45.10	339.00	53.90	35.600	15.000	14.80	
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	858.000	19.00	1790.00	285.00	37.90	459.00	71.20	38.100	19.800	7.51	
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	721.000	26.50	1290.00	182.00	32.70	275.00	63.70	19.800	7.960	4.74	
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	248.000	8.93	613.00	314.00	8.07	48.50	42.90	4.170	5.540	1.33	
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	667.000	19.90	1290.00	175.00	46.00	394.00	60.80	26.000	11.000	6.61	
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	855.000	14.30	1340.00	96.20	22.70	437.00	91.50	16.900	16.500	6.25	
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	300.000	6.05	565.00	74.50	9.80	67.80	-8.00	6.610	6.760	1.90	
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	30.700	1.84	106.00	26.80	0.40	5.71	17.90	0.472	1.110	0.30	
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	374.000	9.26	663.00	-8.00	18.40	199.00	55.10	14.500	7.300	7.66	
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	52.800	0.85	105.00	12.20	1.05	11.10	15.10	1.010	1.470	0.50	
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUS	1988	10/28/98	MG2	148.000	1.92	408.00	19.20	21.10	299.00	11.20	5.740	3.260	3.90	
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	119.000	5.02	297.00	27.10	29.80	235.00	14.00	5.940	3.770	3.69	

Pesticide Analysis of Sediments (dry weight- ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	ESO4	ENDRIN	ETHION	HCHA	HCHB	HCHG	HCHD	HEPTACHLOR	HE	HCB
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	14.50	19.60	17.80	0.321	3.05	4.500	1.520	2.430	-8.000	3.870
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	9.59	12.90	12.50	-8.000	0.81	2.480	-8.000	0.918	-8.000	1.740
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	8.19	19.00	10.30	-8.000	1.12	-8.000	-8.000	4.320	10.000	1.850
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	2.70	10.40	-8.00	-8.000	-8.00	1.260	-8.000	1.780	4.500	1.160
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	17.00	17.40	22.10	-8.000	3.12	-8.000	-8.000	2.320	6.310	4.020
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	10.30	8.71	12.80	-8.000	1.16	2.670	-8.000	-8.000	-8.000	2.560
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	7.73	16.10	-8.00	0.305	0.76	-8.000	-8.000	0.668	-8.000	2.430
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	3.20	9.38	2.70	-8.000	0.30	1.100	-8.000	-8.000	-8.000	1.100
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	19.90	15.30	28.70	-8.000	4.10	-8.000	-8.000	2.690	4.370	5.000
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	8.66	9.92	13.80	-8.000	0.90	1.780	-8.000	-8.000	-8.000	2.590
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	4.77	11.90	4.01	-8.000	-8.00	1.400	-8.000	-8.000	-8.000	1.650
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	17.70	18.50	21.50	-8.000	3.87	7.940	2.270	3.180	-8.000	6.440
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	14.00	17.10	24.00	-8.000	2.97	-8.000	-8.000	3.460	-8.000	5.980
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	1.69	4.73	4.49	7.190	-8.00	0.843	-8.000	-8.000	-8.000	-8.000
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	6.13	11.50	7.34	-8.000	-8.00	1.000	-8.000	-8.000	-8.000	2.460
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	20.60	13.80	21.50	-8.000	2.37	6.550	1.460	-8.000	2.010	3.830
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	11.90	14.10	20.20	-8.000	2.30	8.410	52.800	-8.000	4.390	5.470
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	6.46	11.20	11.60	-8.000	0.73	-8.000	0.752	0.289	2.070	3.650
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	2.58	4.65	-8.00	-8.000	-8.00	-8.000	-8.000	-8.000	-8.000	-8.000
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	15.80	13.00	15.40	-8.000	1.81	2.830	1.180	-8.000	-8.000	3.930
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	6.69	10.00	15.60	0.125	-8.00	-8.000	-8.000	2.030	6.150	3.790
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	3.76	6.51	4.41	-8.000	-8.00	-8.000	-8.000	0.685	3.770	1.330
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	0.30	1.76	-8.00	-8.000	-8.00	-8.000	-8.000	-8.000	-8.000	-8.000
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	3.02	9.85	-8.00	-8.000	-8.00	1.360	-8.000	1.880	5.750	2.540
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	0.61	1.50	-8.00	3.440	-8.00	-8.000	-8.000	-8.000	0.900	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUS	1988	10/28/98	MG2	6.32	3.84	12.20	-8.000	-8.00	-8.000	-8.000	0.155	-8.000	1.060
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	5.87	5.45	-8.00	-8.000	0.43	-8.000	-8.000	0.204	-8.000	1.440

Pesticide Analysis of Sediments (dry weight- ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	METHOXY	MIREX	CNONA	TNONA	OXAD	OCDAN	TOXAPH	PESBATCH
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	-8.00	-8.000	28.600	157.000	5.21	2.400	-8.00	98378
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	-8.00	-8.000	13.700	22.900	14.50	-8.000	-8.00	98378
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	-8.00	1.530	22.200	46.400	18.50	16.800	-8.00	98378
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	-8.00	-8.000	3.940	2.370	16.10	7.180	-8.00	98378
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	-8.00	4.020	37.800	156.000	19.70	3.340	-8.00	98378
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	-8.00	-8.000	22.600	44.000	23.10	-8.000	-8.00	98378
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	-8.00	-8.000	20.700	44.300	18.10	-8.000	-8.00	98378
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	-8.00	-8.000	7.270	9.800	11.90	-8.000	-8.00	98378
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	-8.00	-8.000	49.200	120.000	18.70	-8.000	-8.00	98378
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	-8.00	-8.000	23.700	39.800	20.00	-8.000	-8.00	98378
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	-8.00	-8.000	14.400	18.200	14.10	-8.000	-8.00	98378
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	-8.00	-8.000	58.600	170.000	16.20	4.900	-8.00	98378
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	-8.00	-8.000	70.200	162.000	18.40	4.270	-8.00	98378
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	-8.00	-8.000	4.590	4.510	3.54	-8.000	-8.00	98379
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	-8.00	-8.000	23.800	42.400	11.70	-8.000	-8.00	98379
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	-8.00	-8.000	74.400	149.000	18.40	3.330	-8.00	98379
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	-8.00	-8.000	86.400	192.000	16.00	4.560	-8.00	98379
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	-8.00	-8.000	49.200	104.000	12.10	2.420	-8.00	98379
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	-8.00	-8.000	8.430	10.500	5.37	-8.000	-8.00	98379
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	-8.00	-8.000	61.800	127.000	13.20	2.480	-8.00	98379
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	-8.00	-8.000	57.600	170.000	9.15	5.820	-8.00	98379
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	-8.00	-8.000	20.200	37.000	5.34	4.420	-8.00	98379
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	-8.00	-8.000	1.570	1.740	-8.00	-8.000	-8.00	98379
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	-8.00	-8.000	52.400	118.000	4.63	4.340	-8.00	98379
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	-8.00	-8.000	4.040	6.910	1.50	0.737	-8.00	98379
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUS	1988	10/28/98	MG2	-8.00	-8.000	-8.000	3.230	4.36	-8.000	-8.00	98379
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	-8.00	-8.000	-8.000	4.020	2.53	-8.000	-8.00	98379

### **SECITON III**

#### **PCB and Aroclor Analysis of Sediments**

PCB Congener and Aroclor Analysis of Sediments (dry weight-ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	PCB5	PCB8	PCB15	PCB18	PCB27	PCB28	PCB29	PCB31	PCB44	PCB49	PCB52	PCB66
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	0.677	-8.000	4.860	3.830	-8.000	1.560	25.200	-8.000	3.690	-8.000	9.300	-8.000
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	2.760	-8.000	18.000	0.590	-8.000	2.590	25.500	2.330	3.060	-8.000	4.970	-8.000
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	-8.000	1.370	-8.000	0.323	-8.000	5.490	-8.000	-8.000	14.600	-8.000	-8.000	-8.000
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	1.360	0.613	16.700	-8.000	-8.000	4.190	-8.000	-8.000	4.570	-8.000	-8.000	-8.000
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	0.207	1.020	3.080	-8.000	-8.000	1.740	121.000	-8.000	20.600	-8.000	-8.000	-8.000
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	-8.000	2.300	15.100	0.705	-8.000	2.600	-8.000	2.600	3.000	-8.000	6.120	-8.000
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	0.906	1.280	28.900	-8.000	-8.000	4.670	-8.000	-8.000	-8.000	-8.000	6.170	-8.000
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	0.341	0.484	14.900	0.295	-8.000	2.300	-8.000	-8.000	4.430	-8.000	2.540	-8.000
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	-8.000	1.140	4.770	5.120	-8.000	1.850	-8.000	-8.000	7.600	-8.000	14.400	-8.000
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	-8.000	1.020	15.900	0.327	-8.000	1.520	47.600	1.880	1.750	-8.000	5.060	0.434
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	0.282	0.385	17.300	-8.000	-8.000	2.300	-8.000	-8.000	-8.000	-8.000	3.040	-8.000
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	-8.000	1.250	4.790	5.960	-8.000	1.410	39.200	-8.000	8.750	-8.000	18.300	1.860
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	-8.000	1.480	4.250	5.900	-8.000	1.340	-8.000	-8.000	7.210	-8.000	17.100	1.090
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	1.920	6.940	5.880	0.347	-8.000	-8.000	0.558	-8.000	0.309	-8.000	0.866	-8.000
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	-8.000	-8.000	12.000	-8.000	-8.000	0.991	-8.000	-8.000	0.741	-8.000	3.710	-8.000
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	-8.000	-8.000	3.910	4.820	-8.000	2.300	-8.000	-8.000	7.090	0.571	19.800	1.480
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	-8.000	-8.000	7.170	9.850	-8.000	2.070	-8.000	12.600	6.660	-8.000	24.500	-8.000
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	0.378	0.086	8.610	2.330	0.337	0.879	-8.000	6.410	3.200	-8.000	11.100	0.477
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	6.680	74.800	10.800	0.397	-8.000	0.267	0.557	-8.000	-8.000	-8.000	1.290	0.104
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	0.321	0.760	2.760	4.700	-8.000	-8.000	-8.000	7.990	5.120	0.786	13.800	0.682
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	0.827	4.240	2.700	3.800	-8.000	-8.000	-8.000	-8.000	3.380	-8.000	-8.000	0.407
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	0.481	1.330	-8.000	-8.000	-8.000	0.109	-8.000	2.700	-8.000	-8.000	-8.000	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	1.980	17.000	-8.000	-8.000	-8.000	-8.000	-8.000	0.448	-8.000	-8.000	0.314	-8.000
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	-8.000	1.750	3.910	2.220	-8.000	0.784	-8.000	4.470	2.640	-8.000	-8.000	0.255
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	2.290	-8.000	1.900	-8.000	-8.000	-8.000	0.553	0.240	-8.000	-8.000	0.482	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	-8.000	-8.000	-8.000	0.939	-8.000	-8.000	-8.000	0.764	0.630	-8.000	0.862	0.105
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	-8.000	6.510	-8.000	0.751	-8.000	-8.000	-8.000	0.698	0.834	-8.000	1.070	-8.000



PCB Congener and Aroclor Analysis of Sediments (dry weight-ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	PCB70	PCB74	PCB87	PCB95	PCB97	PCB99	PCB101	PCB105	PCB110	PCB118	PCB128
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	-8.000	24.800	4.850	3.090	53.900	-8.000	62.400	-8.000	3.670	4.480	22.100
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	-8.000	15.100	2.570	1.220	48.700	1.140	5.300	-8.000	3.030	2.730	11.300
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	-8.000	27.300	1.490	0.962	69.700	1.380	9.160	-8.000	3.650	5.210	10.200
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	-8.000	11.100	1.070	0.793	5.770	-8.000	9.690	0.846	3.710	2.750	3.520
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	-8.000	23.400	7.530	16.500	75.400	-8.000	-8.000	-8.000	5.090	5.580	26.300
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	-8.000	17.200	3.060	-8.000	57.400	1.420	-8.000	0.485	3.020	4.250	16.900
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	-8.000	25.700	1.600	-8.000	61.200	1.360	7.360	1.040	3.180	4.450	10.500
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	-8.000	10.600	1.470	0.700	4.040	1.430	8.540	1.390	4.940	3.610	2.960
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	-8.000	23.700	6.940	7.800	67.400	-8.000	-8.000	-8.000	4.740	5.890	31.400
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	-8.000	16.600	2.840	-8.000	62.000	1.220	-8.000	1.990	4.120	4.300	14.500
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	-8.000	15.000	1.310	-8.000	39.600	-8.000	6.720	1.180	4.260	3.930	6.180
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	-8.000	27.400	5.530	-8.000	60.300	-8.000	112.000	10.300	6.880	7.210	27.500
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	-8.000	24.400	7.270	14.700	81.100	-8.000	-8.000	10.200	5.230	8.780	30.700
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	-8.000	-8.000	0.641	-8.000	10.500	-8.000	1.840	-8.000	0.774	1.420	2.390
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	-8.000	-8.000	1.620	-8.000	54.400	-8.000	-8.000	-8.000	2.600	3.420	8.730
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	-8.000	23.900	7.900	14.400	82.800	-8.000	-8.000	-8.000	6.390	9.190	37.600
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	-8.000	37.200	9.460	18.500	107.000	-8.000	-8.000	-8.000	8.530	10.300	30.700
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	-8.000	24.600	3.330	8.810	73.900	-8.000	-8.000	-8.000	4.170	7.120	18.700
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	-8.000	8.340	0.933	-8.000	21.300	-8.000	-8.000	-8.000	1.430	2.550	4.300
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	-8.000	30.800	6.370	12.200	93.200	-8.000	-8.000	-8.000	8.460	8.300	28.300
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	-8.000	21.000	4.030	13.500	52.600	-8.000	-8.000	-8.000	4.150	6.300	17.700
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	-8.000	7.880	1.140	-8.000	-8.000	-8.000	-8.000	-8.000	2.300	2.830	5.490
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	-8.000	-8.000	0.455	-8.000	-8.000	-8.000	0.577	-8.000	0.237	0.560	0.101
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	-8.000	10.900	2.920	6.640	-8.000	-8.000	-8.000	-8.000	2.750	4.700	13.200
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	-8.000	1.260	0.358	0.622	4.700	-8.000	-8.000	-8.000	0.428	0.689	0.910
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	0.124	1.790	4.150	2.530	13.200	-8.000	-8.000	-8.000	0.780	-8.000	12.600
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	0.119	1.780	4.290	2.580	8.750	-8.000	-8.000	-8.000	0.666	-8.000	12.500

PCB Congener and Aroclor Analysis of Sediments (dry weight-ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	PCB132	PCB137	PCB138	PCB149	PCB151	PCB153	PCB156	PCB157	PCB158	PCB170
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	3.310	26.700	15.600	19.400	0.388	12.700	2.810	0.597	1.040	0.271
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	3.630	10.300	10.100	7.060	0.738	3.310	1.500	0.166	0.320	0.316
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	2.130	8.120	7.790	-8.000	-8.000	6.530	1.280	0.107	0.462	-8.000
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	1.460	3.250	4.670	2.900	1.080	4.730	1.310	-8.000	-8.000	0.715
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	12.300	42.600	20.300	26.700	-8.000	9.360	3.150	0.786	1.290	0.232
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	4.680	13.100	11.300	9.360	-8.000	8.010	1.710	-8.000	0.444	0.363
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	1.850	8.170	-8.000	5.330	0.725	5.210	1.680	-8.000	0.383	0.274
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	2.200	2.730	5.470	3.250	0.770	4.470	1.380	-8.000	0.440	0.672
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	9.240	30.600	23.000	-8.000	-8.000	5.880	2.230	0.545	0.976	0.432
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	2.610	10.500	9.890	7.800	-8.000	5.310	1.500	-8.000	0.344	0.440
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	1.380	5.420	6.260	3.550	-8.000	4.040	0.899	-8.000	0.377	0.387
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	10.700	30.000	20.700	22.200	-8.000	6.230	1.510	-8.000	-8.000	0.394
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	7.230	38.600	22.900	-8.000	-8.000	5.860	-8.000	-8.000	1.580	0.299
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	0.911	1.880	2.310	0.359	-8.000	1.640	0.487	-8.000	-8.000	0.524
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	1.660	6.730	5.950	5.310	-8.000	2.350	1.040	-8.000	0.232	0.724
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	11.700	33.000	29.400	26.200	-8.000	6.090	3.180	-8.000	0.983	0.740
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	10.500	48.000	30.500	-8.000	4.400	7.340	1.580	-8.000	1.280	-8.000
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	6.230	20.900	-8.000	-8.000	-8.000	4.110	2.290	-8.000	0.572	-8.000
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	1.540	2.960	3.660	1.610	-8.000	1.600	0.628	-8.000	-8.000	0.395
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	9.680	33.300	23.600	-8.000	-8.000	6.250	2.890	-8.000	0.954	1.820
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	8.640	28.400	-8.000	-8.000	-8.000	4.110	1.990	0.353	0.890	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	2.210	5.010	4.060	3.700	-8.000	1.850	0.887	-8.000	-8.000	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	0.266	0.290	0.518	0.211	-8.000	0.406	-8.000	-8.000	-8.000	0.620
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	5.120	19.400	10.000	12.600	-8.000	2.980	1.570	0.564	-8.000	0.328
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	0.471	0.950	0.922	0.666	-8.000	0.648	0.392	-8.000	-8.000	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	5.930	15.900	-8.000	-8.000	-8.000	2.700	1.180	-8.000	0.950	-8.000
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	3.680	10.100	10.100	-8.000	-8.000	4.390	0.876	-8.000	0.593	-8.000

PCB Congener and Aroclor Analysis of Sediments (dry weight-ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	PCB174	PCB177	PCB180	PCB183	PCB187	PCB189	PCB194	PCB195	PCB201	PCB203
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	-8.000	0.770	0.396	17.500	8.630	0.190	0.263	-8.000	-8.000	0.148
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	-8.000	-8.000	0.643	7.740	3.970	-8.000	0.438	0.132	-8.000	-8.000
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	0.283	0.829	0.623	6.700	3.550	-8.000	0.376	-8.000	-8.000	0.196
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	0.450	0.873	1.350	2.650	2.230	-8.000	0.621	-8.000	-8.000	0.440
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	-8.000	0.864	0.383	22.400	12.300	0.187	0.328	-8.000	-8.000	0.177
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	-8.000	0.884	0.399	11.200	-8.000	0.160	0.442	-8.000	-8.000	0.194
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	0.243	0.843	0.459	6.410	3.010	0.145	0.274	-8.000	-8.000	0.123
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	0.614	1.200	1.740	2.520	2.140	0.131	0.698	0.082	-8.000	0.429
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	-8.000	0.734	-8.000	26.200	-8.000	-8.000	0.264	-8.000	-8.000	0.144
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	-8.000	0.665	0.677	9.380	-8.000	-8.000	0.350	0.069	-8.000	-8.000
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	0.278	0.691	0.858	4.100	-8.000	0.095	0.306	-8.000	-8.000	0.301
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	-8.000	-8.000	0.257	26.700	-8.000	-8.000	0.125	-8.000	-8.000	0.152
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	-8.000	-8.000	-8.000	31.100	14.600	-8.000	0.309	-8.000	-8.000	-8.000
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	-8.000	-8.000	0.316	1.210	0.736	-8.000	0.116	-8.000	-8.000	-8.000
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	-8.000	0.400	-8.000	4.810	-8.000	-8.000	0.267	-8.000	-8.000	0.148
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	-8.000	0.694	0.335	29.700	-8.000	0.283	0.190	-8.000	-8.000	0.210
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	3.170	0.871	0.382	31.500	29.900	-8.000	-8.000	-8.000	2.300	0.172
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	-8.000	0.518	0.367	15.600	8.900	-8.000	0.168	-8.000	-8.000	0.249
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	0.151	0.556	0.259	2.350	1.480	-8.000	0.196	-8.000	-8.000	0.152
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	-8.000	0.760	0.373	25.900	17.000	-8.000	0.390	-8.000	-8.000	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	-8.000	0.659	0.237	12.400	7.660	0.171	0.264	0.435	-8.000	0.121
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	-8.000	-8.000	-8.000	3.360	-8.000	-8.000	-8.000	0.085	-8.000	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	-8.000	-8.000	-8.000	0.309	0.164	-8.000	0.162	-8.000	-8.000	-8.000
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	-8.000	-8.000	-8.000	8.580	5.250	2.540	-8.000	0.282	-8.000	-8.000
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	-8.000	-8.000	-8.000	0.572	0.314	-8.000	-8.000	-8.000	-8.000	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	-8.000	0.395	-8.000	8.360	-8.000	-8.000	-8.000	-8.000	-8.000	0.157
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	-8.000	0.201	-8.000	8.330	-8.000	-8.000	-8.000	-8.000	-8.000	0.091

PCB Congener and Aroclor Analysis of Sediments (dry weight-ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	PCB206	PCB209	ARO1248	ARO1254	ARO1260	PCBBATCH
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	0.979	1.860	-8.000	-8.000	-8.000	98378
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	0.599	1.690	-8.000	-8.000	-8.000	98378
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	0.644	1.460	-8.000	-8.000	-8.000	98378
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	-8.000	0.502	-8.000	-8.000	-8.000	98378
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	-8.000	-8.000	-8.000	-8.000	-8.000	98378
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	0.548	1.760	-8.000	-8.000	-8.000	98378
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	0.806	1.180	-8.000	-8.000	-8.000	98378
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	0.379	0.452	-8.000	-8.000	-8.000	98378
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	0.481	1.300	-8.000	-8.000	-8.000	98378
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	0.384	0.825	-8.000	-8.000	-8.000	98378
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	0.420	0.803	-8.000	-8.000	-8.000	98378
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	0.356	1.030	-8.000	-8.000	-8.000	98378
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	0.673	1.073	-8.000	-8.000	-8.000	98378
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	-8.000	0.229	-8.000	-8.000	-8.000	98379
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	-8.000	0.773	-8.000	-8.000	-8.000	98379
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	0.438	0.763	-8.000	-8.000	-8.000	98379
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	0.349	0.700	-8.000	-8.000	-8.000	98379
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	0.443	0.731	-8.000	-8.000	-8.000	98379
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	0.169	0.367	-8.000	-8.000	-8.000	98379
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	0.497	1.110	-8.000	-8.000	-8.000	98379
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	0.420	-8.000	-8.000	-8.000	-8.000	98379
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	0.357	0.288	-8.000	-8.000	-8.000	98379
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	-8.000	0.168	-8.000	-8.000	-8.000	98379
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	-8.000	0.962	-8.000	-8.000	-8.000	98379
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	-8.000	0.112	-8.000	-8.000	-8.000	98379
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	-8.000	0.110	-8.000	-8.000	-8.000	98379
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	-8.000	0.110	-8.000	-8.000	-8.000	98379

**SECTION IV**

**PAH Analysis of Sediments**

PAH Analysis of Sediments (dry weight-ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	ACY	ACE	ANT	BAA	BAP	BBF	BKF	BGP	BEP	BPH	CHR	DBA	DBT	DMN	FLA	FLU	IND
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	-8.00	-8.00	-8.00	2.71	3.47	6.95	4.40	6.39	7.27	4.82	9.66	1.07	1.90	5.33	17.00	3.09	3.77
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	-8.00	-8.00	-8.00	3.33	4.41	8.77	5.47	6.86	8.39	5.62	11.20	1.35	5.67	6.87	12.80	5.38	4.62
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	-8.00	-8.00	-8.00	2.72	3.26	7.08	4.68	6.53	7.52	4.29	9.81	1.01	3.26	4.46	9.10	4.17	4.20
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	-8.00	-8.00	-8.00	3.23	3.49	8.06	5.02	8.20	8.54	4.19	9.29	-8.00	2.63	4.15	10.90	1.78	3.77
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	-8.00	-8.00	-8.00	2.36	2.65	5.50	4.09	6.64	6.29	3.83	8.35	-8.00	1.59	3.76	12.30	2.20	3.05
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	-8.00	-8.00	-8.00	2.68	3.36	6.86	4.43	6.11	7.04	3.62	8.96	1.00	3.28	3.48	12.70	2.84	3.32
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	-8.00	-8.00	-8.00	2.66	2.97	7.00	4.15	5.68	7.09	4.16	8.63	0.78	2.08	3.23	8.95	1.36	3.30
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	-8.00	-8.00	-8.00	3.03	3.29	7.28	4.36	6.59	8.45	3.42	8.14	1.16	2.32	3.81	5.53	1.38	3.28
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	-8.00	-8.00	-8.00	2.68	3.31	8.27	4.53	7.19	8.58	4.23	11.30	1.34	1.72	4.51	17.40	3.44	4.01
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	-8.00	-8.00	-8.00	2.12	2.77	6.00	4.03	4.80	6.23	3.74	8.22	0.76	2.75	3.09	9.72	2.88	2.89
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	-8.00	-8.00	-8.00	2.18	2.62	5.43	3.54	4.73	5.16	3.15	6.90	0.85	2.00	2.55	7.41	1.54	2.67
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	-8.00	-8.00	-8.00	2.06	2.73	6.91	4.25	5.80	6.62	4.15	9.31	0.86	1.71	3.10	13.60	2.66	3.34
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	-8.00	-8.00	-8.00	2.16	2.90	6.88	4.06	5.76	7.16	4.31	9.99	-8.00	1.62	3.69	13.30	2.83	3.40
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	-8.00	-8.00	-8.00	1.20	-8.00	4.17	2.10	3.11	3.68	2.56	4.49	-8.00	1.38	1.88	4.50	-8.00	1.99
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	-8.00	-8.00	-8.00	2.11	2.23	5.38	3.47	4.01	5.24	5.32	6.29	-8.00	2.38	2.34	7.49	2.45	2.79
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	-8.00	-8.00	-8.00	1.70	2.19	5.31	3.02	4.56	5.34	3.36	7.24	-8.00	1.66	2.86	10.50	2.54	3.21
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	-8.00	-8.00	-8.00	2.02	2.09	5.00	3.25	3.73	4.98	4.11	8.65	-8.00	1.25	2.57	10.60	2.24	2.50
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	-8.00	-8.00	2.13	2.11	2.36	5.25	2.88	3.46	5.19	4.75	7.01	-8.00	2.59	2.83	11.20	2.53	2.40
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	-8.00	-8.00	-8.00	1.97	-8.00	4.79	3.13	4.21	5.05	2.62	6.43	-8.00	1.66	2.57	6.12	-8.00	3.03
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	-8.00	-8.00	-8.00	2.42	-8.00	6.41	3.03	4.28	6.21	5.57	9.51	-8.00	1.67	2.16	12.40	1.88	3.06
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	-8.00	-8.00	-8.00	2.58	2.62	6.04	4.18	4.88	5.53	5.21	8.24	-8.00	1.44	1.89	11.20	2.04	2.71
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	-8.00	-8.00	1.59	1.37	1.72	4.37	3.09	3.54	3.75	3.38	5.12	-8.00	1.85	1.64	6.23	1.63	2.19
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	-8.00	-8.00	-8.00	2.17	-8.00	4.44	-8.00	3.66	5.88	1.99	3.56	-8.00	-8.00	0.98	5.00	-8.00	1.92
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	-8.00	-8.00	9.01	36.70	-8.00	43.40	-8.00	29.40	71.70	5.24	147.00	8.78	4.34	5.82	17.10	3.67	11.30
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	-8.00	-8.00	-8.00	1.46	-8.00	3.37	1.63	3.00	3.60	2.24	3.40	-8.00	1.01	1.42	5.68	-8.00	1.28
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	-8.00	-8.00	-8.00	0.52	-8.00	1.47	0.94	1.48	1.73	1.82	2.46	-8.00	0.44	1.45	5.58	-8.00	0.74
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	-8.00	-8.00	-8.00	1.08	-8.00	5.79	3.31	2.25	3.65	2.29	10.50	-8.00	0.66	1.28	26.00	-8.00	1.38

PAH Analysis of Sediments (dry weight-ppb-ng/g)

STANUM	STATION	IDORG	DATE	LEG	MNP1	MNP2	MPH1	NPH	PHN	PER	PYR	TMN	PAHBATCH	SODATAQA
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	6.71	6.93	4.00	5.66	13.70	7.81	8.96	4.21	98378	-4
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	10.00	12.70	6.19	11.20	13.30	164.00	11.90	7.25	98378	-4
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	6.22	6.99	5.69	4.87	12.00	159.00	10.10	4.57	98378	-4
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	6.76	7.38	4.96	7.04	12.30	156.00	14.10	3.34	98378	-4
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	5.02	5.31	3.57	5.16	10.20	8.51	7.72	3.20	98378	-4
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	5.21	5.71	5.18	5.37	11.30	14.40	10.50	2.96	98378	-4
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	5.12	5.39	5.10	4.47	10.10	33.20	9.63	3.43	98378	-4
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	6.38	5.68	4.21	5.00	11.30	30.70	12.80	3.43	98378	-4
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	5.98	6.24	4.84	8.73	13.30	8.84	10.40	4.03	98378	-4
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	4.42	5.42	4.70	4.82	9.17	18.90	8.83	2.78	98378	-4
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	3.84	3.98	2.94	4.21	7.85	51.30	8.96	-8.00	98378	-4
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	4.30	5.01	3.43	5.17	10.50	5.33	7.94	3.40	98378	-4
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	4.14	4.76	3.85	5.26	10.80	7.10	8.36	-8.00	98378	-4
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	3.25	3.30	2.09	3.64	5.39	9.73	6.86	-8.00	98379	-4
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	3.33	4.41	3.13	7.51	7.22	10.50	7.61	-8.00	98379	-4
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	2.99	3.92	2.85	4.23	8.31	3.50	6.67	2.32	98379	-4
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	2.85	3.44	2.44	4.17	9.65	3.63	7.75	2.37	98379	-4
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	3.12	3.93	2.90	5.06	11.60	6.52	7.88	-8.00	98379	-4
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	3.54	3.62	2.12	4.10	6.91	5.01	10.20	1.97	98379	-4
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	3.29	3.83	2.70	6.14	11.60	3.86	8.52	-8.00	98379	-4
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	2.48	3.24	2.33	6.52	7.32	4.71	7.46	-8.00	98379	-4
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	2.61	2.82	2.11	4.78	4.88	32.60	6.07	-8.00	98379	-4
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	1.62	1.69	-8.00	2.61	2.93	14.00	8.08	-8.00	98379	-4
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	2.54	3.56	54.80	5.65	22.20	79.30	70.70	19.50	98379	-4
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	1.52	2.43	-8.00	3.60	3.33	5.04	13.00	-8.00	98379	-5
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	2.82	3.24	1.27	3.25	4.72	-8.00	2.26	1.00	98379	-4
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	3.29	3.76	1.83	3.89	9.36	-8.00	13.10	-8.00	98379	-4

## **SECTION V**

### **Sediment Chemistry Summations and Quotients**



## CHEMICAL SUMMATIONS AND QUOTIENTS

In the following section, chemical summations (total chlordane, total DDT, total PCBs, LMW PAHs, HMW PAHs, total PAHs) and quotients (ERM and PEL) are presented. For purposes of these summations, samples which were found to have chemical concentrations less than the method detection limit (-8 in Appendix C) were adjusted to a value of one-half of the method detection limits given in the methods description. The summations were calculated as follows:

### Total chlordane

$$(TTL\_CHLR) = \sum ([\text{cis-Chlordane}] [\text{trans-Chlordane}] [\text{cis-Nonachlor}] [\text{trans-Nonachlor}] [\text{Oxychlordane}])$$

### Total DDT

$$(TTL\_DDT) = \sum ([\text{o',p' DDD}] [\text{p',p' DDD}] [\text{o',p' DDE}] [\text{p',p' DDE}] [\text{o',p' DDT}] [\text{p',p' DDT}])$$

### Total PCB

$$(TTL\_PCB) = \sum ([\text{PCB8}] [\text{PCB18}] [\text{PCB28}] [\text{PCB44}] [\text{PCB52}] [\text{PCB66}] [\text{PCB101}] [\text{PCB105}] [\text{PCB118}] [\text{PCB128}] [\text{PCB138}] [\text{PCB153}] [\text{PCB170}] [\text{PCB180}] [\text{PCB187}] [\text{PCB195}] [\text{PCB206}] [\text{PCB209}])$$

### Low Molecular Weight PAHs

$$(LMW\_PAH) = \sum ([\text{ACE}] [\text{ACY}] [\text{ANT}] [\text{BPH}] [\text{DMN}] [\text{FLU}] [\text{MNP1}] [\text{MNP2}] [\text{MPH1}] [\text{NPH}] [\text{PHN}] [\text{TMN}])$$

### High Molecular Weight PAHs

$$(HMW\_PAH) = \sum ([\text{BAA}] [\text{BAP}] [\text{BBF}] [\text{BKF}] [\text{BGP}] [\text{BEP}] [\text{CHR}] [\text{DBA}] [\text{FLA}] [\text{IND}] [\text{PER}] [\text{PYR}])$$

### Total PAHs

$$(TTL\_PAH) = \sum ([LMW\_PAH] [HMW\_PAH])$$

ERM Quotients and PEL Quotients were calculated using summations of the individual chemicals for which ERMs and PELs have been derived. Chemical concentrations are divided by their respective ERM or PEL values to obtain a specific individual chemical quotient (Example 1). TTLDDTQE (P) is expressed as:  $(TTL\_DDT/TOC)/100$ , where TTL\_DDT is the sum of the six DDT metabolites, TOC is the total organic carbon content of the sample, and 100 reflects the 100 µg/g DDT/TOC value reported by Swarzt to be associated with biological effect. A value greater than one indicates the chemical concentration in that sample exceeded its respective guideline value. A value of five would indicate the chemical was five times higher than the respective guideline value in that sample.

Example 1 - sample IDORG #199 Copper concentration = 170 mg/g

PEL for copper = 108.2

$$\text{CopperQ} = (170 \mu\text{g/g}) / (108.2 \mu\text{g/g}) = 1.57$$

Summations and averaging of the individual chemical quotients were calculated to give summary ERM Quotients (ERMQ) and PEL Quotients (PELQ). Each quotient summation is divided by the number of analytes used in the summation to yield an average summary quotient.

Summary ERM Quotient

$$\text{ERMQ} = ((\text{ANTIMONYQ} + \text{ARSENICQ} + \text{CADMIUMQ} + \text{CHROMIUMQ} + \text{COPPERQ} + \text{LEADQ} + \text{MERCURYQ} + \text{SILVERQ} + \text{ZINCQ} + \text{TTL\_DDTQ} + \text{TTL\_CHLRQ} + \text{DIELDRINQ} + \text{ENDRINQ} + \text{TTL\_PCBQ} + \text{LMW\_PAHQ} + \text{HMW\_PAHQ}) / 16)$$

Summary PEL Quotient

$$\text{PELQ} = ((\text{ARSENICQ} + \text{CADMIUMQ} + \text{CHROMIUMQ} + \text{COPPERQ} + \text{LEADQ} + \text{MERCURYQ} + \text{SILVERQ} + \text{ZINCQ} + \text{TTL\_DDTQ} + \text{TTL\_CHLRQ} + \text{DIELDRINQ} + \text{LINDANEQ} + \text{TTL\_PCBQ} + \text{LMW\_PAHQ} + \text{HMW\_PAHQ}) / 15)$$

## Sediment Chemistry Summations and Quotients

STANUM	STATION	IDORG	DATE	LEG	TTL_CHLR	TTL_DDT	TTL_PCB	LMW_PAH	HMW_PAH	TTL_PAH	ERMQ	PELQ	ERMEXCD	PELEXCD
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	450.000	2338.10	297.592	61.95	79.46	141.41	5.981	7.873	5	8
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	138.650	2098.80	104.100	86.01	243.10	329.11	2.004	2.784	3	5
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	289.600	2943.20	136.400	60.76	225.01	285.77	3.877	4.935	4	6
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	37.290	1464.18	83.252	59.40	235.60	295.00	0.663	0.969	2	5
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	457.140	2599.30	199.630	49.75	72.46	122.21	5.973	7.612	4	5
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	221.750	2312.50	119.480	53.17	81.36	134.53	2.990	4.039	3	5
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	251.150	2757.20	95.318	49.86	94.04	143.90	3.391	4.329	4	5
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	67.420	1412.93	84.408	52.11	94.61	146.72	1.029	1.411	2	5
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	541.450	2677.50	199.986	62.80	87.85	150.65	7.013	8.948	4	6
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	209.750	2253.10	97.992	48.52	75.27	123.79	2.823	3.757	3	5
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	111.750	1712.90	75.506	40.06	101.75	141.81	1.595	2.157	3	5
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	734.500	2413.70	448.014	49.22	68.75	117.97	9.390	12.469	4	7
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	699.470	3487.80	259.910	49.64	76.07	125.71	8.974	11.434	5	6
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	28.360	542.99	42.234	34.61	49.33	83.94	0.451	0.662	2	2
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	219.850	1864.20	59.278	45.71	62.12	107.83	2.859	3.728	3	5
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	646.730	2576.20	242.592	40.88	58.24	99.12	8.300	11.060	4	7
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	815.960	3411.90	309.502	41.34	59.20	100.54	10.389	13.794	5	7
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	468.620	2531.20	119.386	46.35	61.26	107.61	5.962	7.589	3	4
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	60.880	993.90	185.276	37.45	57.44	94.89	0.928	1.204	3	3
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	550.280	2628.90	226.624	47.17	67.20	114.37	7.058	9.164	4	6
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	697.420	2808.00	100.878	41.03	65.15	106.18	8.649	10.949	3	4
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	181.820	1018.25	37.298	32.94	75.05	107.99	2.317	2.962	2	4
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	10.240	150.22	44.856	26.82	58.71	85.53	0.183	0.254	2	2
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	485.740	1368.66	93.202	136.99	520.38	657.37	6.342	8.087	4	6
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	30.247	180.09	13.654	29.54	48.96	78.50	0.424	0.567	2	2
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	15.060	919.52	41.392	29.57	27.18	56.75	0.375	0.544	2	4
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	18.990	726.02	77.530	38.20	77.06	115.26	0.506	0.644	3	4

## **SECTION VI**

### **Trace Metal Analysis of Subsurface Water**

## Trace Metal Analysis of Subsurface Water (wet weight-ppb-ug/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	SAMPLE_TYP	ALUMINUM	CADMIUM	CHROMIUM	COPPER
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	572.00	0.1360	1.620	4.87
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	519.00	0.1950	1.570	4.96
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	317.00	0.2080	1.140	4.87
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	UNFILTERED WATER	1946.00	0.5300	2.590	7.09
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	4686.00	0.5900	6.120	8.88
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	FILTERED WATER	16.40	0.1070	0.400	3.80

Trace Metal Analysis of Subsurface Water (wet weight-ppb-ug/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE	DEPTH	IRON	LEAD	MANGANESE	MERCURY	NICKEL	SILVER	ZINC
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	576.0	0.280	106.00	0.0066	2.070	0.0140	7.3900	
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	448.0	0.218	105.00	0.0064	2.990	0.0100	6.8900	
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	341.0	0.180	95.50	0.0064	2.960	0.0080	6.2600	
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	2050.0	0.960	377.00	0.0080	5.130	0.0140	13.0000	
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	5210.0	2.880	359.00	0.0153	6.160	0.0280	25.2000	
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	64.0	0.040	131.00	0.0074	2.080	-8.0000	4.5600	

Trace Metal Analysis of Subsurface Water (wet weight-ppb-ug/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	TMBATCH	TMDATAQC
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	98-27	-4
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	98-27	-4
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	98-27	-4
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	98-27	-4
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	98-27	-4
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	98-27	-4

## **SECTION VII**

### **Pesticide Analysis of Subsurface Water**



Pesticide Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	SAMPLE_TYP	SO_VOLUME	ALDRIN	CCHLOR	TCHLOR	ACDEN
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	0.915	-8.000	4.720	2.400	-8.000
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	0.995	-8.000	3.920	1.420	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	1.000	-8.000	4.240	1.300	-8.000
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	UNFILTERED WATER	0.950	-8.000	2.170	1.160	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	-9.000	-8.000	1.710	-8.000	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	FILTERED WATER	0.960	-8.000	1.710	-8.000	-8.000

Pesticide Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	CLPYR	DACTH	OPDDD	PPDDD	OPDDE	PPDDE	PPDDMU	OPDDT
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	24.30	-8.000	6.15	26.800	-8.00	43.70	-8.00	1.55
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	23.30	-8.000	-8.00	20.100	-8.00	32.80	-8.00	-8.00
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	32.50	-8.000	4.90	21.200	-8.00	31.50	3.21	0.94
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	21.50	-8.000	9.64	31.500	-8.00	56.10	5.14	4.25
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	-8.00	-8.000	-8.00	20.690	-8.00	29.83	-8.00	1.48
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	8.07	-8.000	-8.00	9.490	-8.00	4.93	-8.00	-8.00

Pesticide Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	PPDDT	DICLB	DIELDRIN	ENDO_I	ENDO_II	ESO4	ENDRIN	ETHION
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	26.30	30.90	-8.000	-8.000	-8.00	2.81	-8.00	-8.00
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	19.50	29.30	14.300	-8.000	-8.00	-8.00	-8.00	-8.00
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	18.20	32.70	-8.000	-8.000	-8.00	2.02	2.23	-8.00
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	38.60	-8.00	-8.000	-8.000	-8.00	-8.00	-8.00	-8.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	24.70	11.40	-8.000	-8.000	3.71	2.85	-8.00	-8.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	5.00	11.40	-8.000	-8.000	3.71	2.85	-8.00	-8.00

Pesticide Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	HCHA	HCHB	HCHG	HCHD	HEPTACHLOR	HE	HCB	METHOXY
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	-8.000	-8.00	-8.000	-8.000	-8.000	-8.000	1.360	-8.00
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	-8.000	-8.00	-8.000	-8.000	-8.000	-8.000	-8.000	-8.00
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	-8.000	-8.00	-8.000	-8.000	-8.000	-8.000	-8.000	-8.00
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	-8.000	-8.00	-8.000	-8.000	-8.000	-8.000	-8.000	-8.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	4.570	-8.00	7.240	-8.000	-8.000	-8.000	-8.000	-8.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	-8.000	-8.00	-8.000	-8.000	-8.000	-8.000	-8.000	-8.00

Pesticide Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE	DEPTH	MIREX	CNONA	TNONA	OXAD	OCDAN	TOXAPH	PESBATCH
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2		0.3 m	10.400	-8.000	-8.000	-8.00	-8.000	-8.00	98378
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2		0.3 m	10.400	-8.000	-8.000	-8.00	-8.000	-8.00	98378
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2		0.3 m	11.000	-8.000	-8.000	1.89	-8.000	-8.00	98378
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2		0.3 m	-8.000	-8.000	-8.000	-8.00	-8.000	-8.00	98378
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2		0.3 m	4.400	-8.000	-8.000	-8.00	-8.000	-8.00	CALCULATED
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2		0.3 m	4.400	-8.000	-8.000	-8.00	-8.000	-8.00	98378

## **SECTION VIII**

### **PCB and Aroclor Analysis of Subsurface Water**

PCB Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	SAMPLE_TYP	PCB5	PCB8	PCB15	PCB18	PCB27	PCB28	PCB29
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	9.400	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	-8.000	10.400	-8.000	-8.000	-8.000	-8.000	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	7.870	-8.000	-8.000	-8.000	-8.000	3.970	-8.000
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	UNFILTERED WATER	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	38.600	-8.000	-8.000	-8.000	-8.000	25.120	2.610
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	FILTERED WATER	20.600	-8.000	-8.000	-8.000	-8.000	9.820	2.610

PCB Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	PCB31	PCB44	PCB49	PCB52	PCB66	PCB70	PCB74	PCB87	PCB95
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	2.970	-8.000	0.606
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	2.290	-8.000	0.557
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	2.810	-8.000	0.502
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	-8.000	-8.000	-8.000	-8.000	-8.000	1.260	0.742	-8.000	0.861
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	0.331	-8.000	-8.000	-8.000	-8.000	-8.000	3.020	-8.000	2.890
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	0.331	-8.000	-8.000	-8.000	-8.000	-8.000	1.490	-8.000	1.450



PCB Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE	DEPTH	PCB97	PCB99	PCB101	PCB105	PCB110	PCB118	PCB128	PCB132
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2		0.3 m	6.630	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	1.380
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2		0.3 m	5.720	0.975	-8.000	-8.000	-8.000	-8.000	-8.000	2.080
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2		0.3 m	6.920	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	1.600
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2		0.3 m	4.150	-8.000	2.230	-8.000	-8.000	-8.000	-8.000	0.479
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2		0.3 m	2.900	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	0.935
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2		0.3 m	2.900	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	0.935

PCB Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	PCB137	PCB138	PCB149	PCB151	PCB153	PCB156	PCB157	PCB158
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	1.890	3.200	2.200	-8.000	1.630	-8.000	-8.000	-8.000
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	1.750	1.960	1.790	0.755	2.130	-8.000	-8.000	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	1.640	3.450	2.670	0.933	2.060	-8.000	-8.000	-8.000
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	3.240	4.090	2.340	-8.000	-8.000	-8.000	-8.000	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	2.000	63.800	3.540	-8.000	-8.000	-8.000	-8.000	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	2.000	13.800	2.320	-8.000	-8.000	-8.000	-8.000	-8.000

PCB Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	PCB170	PCB174	PCB177	PCB180	PCB183	PCB187	PCB189	PCB194
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	6.910	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	6.160	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	6.890	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	4.130	-8.000	-8.000	-8.000	1.940	-8.000	-8.000	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	32.150	-8.000	6.720	-8.000	-8.000	-8.000	-8.000	1.140
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	5.950	-8.000	2.780	-8.000	-8.000	-8.000	-8.000	1.140

PCB Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	PCB195	PCB201	PCB203	PCB206	PCB209	ARO1248	ARO1254
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	3.742	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	0.682	-8.000	-8.000	-8.000	-8.000	-8.000	-8.000

PCB Analysis of Subsurface Water (wet weight-ppt-ng/L)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE	DEPTH	ARO1260	PCBBATCH
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2		0.3 m	-8.000	98378
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2		0.3 m	-8.000	98378
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2		0.3 m	-8.000	98378
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2		0.3 m	-8.000	98378
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2		0.3 m	-8.000	CALCULATED
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2		0.3 m	-8.000	98378

**SECTION IX**

**PAH Analysis of Subsurface Water**

PAH Analysis of Subsurface Water (wet weight-ppt-ng/L) and Dissolved Organic Carbon (uM)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	SAMPLE_TYP	ACY	ACE	ANT	BAA	BAP	BBF	BKF	BGP	BEP
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	-8.00	-8.00	2.96	2.13	-8.00	-8.00	-8.00	-8.00	-8.00
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	UNFILTERED WATER	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	UNFILTERED WATER	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	FILTERED WATER	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00

PAH Analysis of Subsurface Water (wet weight-ppt-ng/L) and Dissolved Organic Carbon (uM)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	BPH	CHR	DBA	DBT	DMN	FLA	FLU	IND	MNP1	MNP2	MPH1	NPH
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	3.47	2.73	-8.00	-8.00	51.20	3.78	3.79	-8.00	9.68	12.20	4.66	19.30
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	1.74	-8.00	-8.00	-8.00	28.80	-8.00	-8.00	-8.00	6.69	8.19	-8.00	14.90
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	-8.00	-8.00	-8.00	-8.00	30.90	-8.00	-8.00	-8.00	6.61	8.70	-8.00	14.90
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	4.86	7.00	-8.00	13.40
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	-8.00	-8.00	-8.00	-8.00	17.20	-8.00	-8.00	-8.00	-8.00	11.50	-8.00	25.57
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	-8.00	11.50	-8.00	15.80



PAH Analysis of Subsurface Water (wet weight-ppt-ng/L) and Dissolved Organic Carbon (uM)

STANUM	STATION	IDORG	DATE	LEG	SAMPLE_DEPTH	PHN	PER	PYR	TMN	PAHBATCH	DOC
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978.0	10/28/98	MG2	0.3 m	5.32	-8.00	4.39	-8.00	98376	536.0
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981.0	10/28/98	MG2	0.3 m	-8.00	-8.00	-8.00	-8.00	98376	498.0
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985.0	10/28/98	MG2	0.3 m	-8.00	-8.00	-8.00	-8.00	98376	567.0
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987.0	10/29/98	MG2	0.3 m	-8.00	-8.00	-8.00	-8.00	98376	349.0
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.0	10/28/98	MG2	0.3 m	-8.00	-8.00	-8.00	-8.00	CALCULATED	420.0
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988.1	10/28/98	MG2	0.3 m	-8.00	-8.00	-8.00	-8.00	98376	-9.0

## **APPENDIX D**

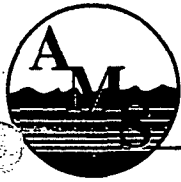
**Grain Size, Total Organic Carbon, and Total Organic Nitrogen**

McGrath Lake Grain Size, Total Organic Carbon (% dry weight), and Total Organic Nitrogen (% dry weight) Data

STANUM	STATION	IDORG	DATE	LEG	COARSE	SAND	FINE	SAND	SILT	CLAY	TOC	TON
45011.0	MCGRATH LAKE ESTUARY-N1S1	1824	7/9/98	MG1	0.00	0.12	19.37	80.51	4.04	0.418		
45012.0	MCGRATH LAKE ESTUARY-N1S2	1825	7/9/98	MG1	0.00	0.24	24.49	75.27	3.24	0.334		
45013.0	MCGRATH LAKE ESTUARY-N1S3	1826	7/9/98	MG1	0.00	1.51	37.51	60.98	3.08	0.328		
45014.0	MCGRATH LAKE ESTUARY-N1S4	1827	7/9/98	MG1	0.00	0.64	34.95	64.41	4.00	0.364		
45015.0	MCGRATH LAKE ESTUARY-N1S5	1828	7/9/98	MG1	0.00	0.21	23.77	76.02	4.24	0.390		
45021.0	MCGRATH LAKE ESTUARY-N2S1	1829	7/9/98	MG1	0.00	1.11	17.09	81.80	4.48	0.477		
45022.0	MCGRATH LAKE ESTUARY-N2S2	1830	7/9/98	MG1	0.00	0.15	19.76	80.09	4.84	0.370		
45023.0	MCGRATH LAKE ESTUARY-N2S3	1831	7/9/98	MG1	0.00	0.18	30.20	69.92	6.07	0.390		
45024.0	MCGRATH LAKE ESTUARY-N2S4	1832	7/9/98	MG1	0.00	0.16	23.09	76.75	7.40	0.446		
45025.0	MCGRATH LAKE ESTUARY-N2S5	1833	7/9/98	MG1	0.00	0.22	16.34	83.44	5.08	0.410		
45031.0	MCGRATH LAKE ESTUARY-N3S1	1834	7/9/98	MG1	0.00	0.15	15.63	84.22	6.05	0.424		
45032.0	MCGRATH LAKE ESTUARY-N3S2	1835	7/9/98	MG1	0.00	0.16	21.22	78.62	5.82	0.405		
45033.0	MCGRATH LAKE ESTUARY-N3S3	1836	7/9/98	MG1	0.00	0.34	30.08	69.58	6.52	0.434		
45034.0	MCGRATH LAKE ESTUARY-N3S4	1837	7/9/98	MG1	0.00	0.31	30.07	69.62	8.04	0.488		
45035.0	MCGRATH LAKE ESTUARY-N3S5	1838	7/9/98	MG1	0.00	4.58	24.55	70.86	6.08	0.390		
45041.0	MCGRATH LAKE ESTUARY-M4S1	1839	7/9/98	MG1	0.00	8.50	24.05	67.46	5.54	0.554		
45042.0	MCGRATH LAKE ESTUARY-M4S2	1840	7/9/98	MG1	0.00	3.20	12.90	83.90	4.64	0.400		
45043.0	MCGRATH LAKE ESTUARY-M4S3	1841	7/9/98	MG1	0.00	0.44	28.03	71.53	9.34	0.538		
45044.0	MCGRATH LAKE ESTUARY-M4S4	1842	7/9/98	MG1	0.00	1.00	28.96	70.04	8.65	0.434		
45045.0	MCGRATH LAKE ESTUARY-M4S5	1843	7/9/98	MG1	0.00	1.75	12.98	85.27	5.13	0.369		
45051.0	MCGRATH LAKE ESTUARY-M5S1	1844	7/9/98	MG1	0.00	76.00	7.56	16.44	2.18	0.131		
45052.0	MCGRATH LAKE ESTUARY-M5S2	1845	7/9/98	MG1	0.00	1.30	19.93	78.77	6.40	0.369		
45053.0	MCGRATH LAKE ESTUARY-M5S3	1846	7/9/98	MG1	0.00	0.33	38.37	61.30	9.33	0.510		
45054.0	MCGRATH LAKE ESTUARY-M5S4	1847	7/9/98	MG1	0.00	0.08	1.98	97.94	3.41	0.347		
45055.0	MCGRATH LAKE ESTUARY-M5S5	1848	7/9/98	MG1	0.00	75.59	3.52	20.89	1.10	0.096		
45061.0	MCGRATH LAKE ESTUARY-M6S1	1849	7/9/98	MG1	0.00	93.64	1.89	4.45	2.32	0.097		
45062.0	MCGRATH LAKE ESTUARY-M6S2	1850	7/9/98	MG1	0.00	1.15	16.32	82.53	4.65	0.409		
45063.0	MCGRATH LAKE ESTUARY-M6S3	1851	7/9/98	MG1	0.00	0.49	26.22	73.29	6.33	0.396		
45064.0	MCGRATH LAKE ESTUARY-M6S4	1852	7/9/98	MG1	0.00	2.39	24.67	72.94	6.02	0.376		
45065.0	MCGRATH LAKE ESTUARY-M6S5	1853	7/9/98	MG1	0.00	16.08	32.21	51.71	10.46	0.694		
45071.0	MCGRATH LAKE ESTUARY-M7S1	1854	7/9/98	MG1	0.00	96.19	1.18	2.63	1.33	0.071		
45072.0	MCGRATH LAKE ESTUARY-M7S2	1855	7/9/98	MG1	0.00	16.17	17.39	66.44	5.22	0.394		
45073.0	MCGRATH LAKE ESTUARY-M7S3	1856	7/9/98	MG1	0.00	0.30	14.42	85.27	4.20	0.375		
45074.0	MCGRATH LAKE ESTUARY-M7S4	1857	7/9/98	MG1	0.00	1.51	8.43	90.06	4.84	0.329		
45075.0	MCGRATH LAKE ESTUARY-M7S5	1858	7/9/98	MG1	0.00	35.30	30.83	33.90	4.42	0.185		
45081.0	MCGRATH LAKE ESTUARY-S8S1	1859	7/9/98	MG1	0.00	1.40	28.40	70.20	7.90	0.448		
45082.0	MCGRATH LAKE ESTUARY-S8S2	1860	7/9/98	MG1	0.00	0.86	28.25	70.89	9.41	0.448		
45083.0	MCGRATH LAKE ESTUARY-S8S3	1861	7/9/98	MG1	0.00	0.49	27.94	71.57	8.72	0.401		
45084.0	MCGRATH LAKE ESTUARY-S8S4	1862	7/9/98	MG1	0.00	0.54	11.11	88.36	6.27	0.384		
45085.0	MCGRATH LAKE ESTUARY-S8S5	1863	7/9/98	MG1	0.00	77.77	3.39	18.84	1.49	0.116		
45091.0	MCGRATH LAKE ESTUARY-S9S1	1864	7/8/98	MG1	0.00	0.44	22.85	76.71	5.60	0.453		

McGrath Lake Grain Size, Total Organic Carbon (% dry weight), and Total Organic Nitrogen (% dry weight) Data

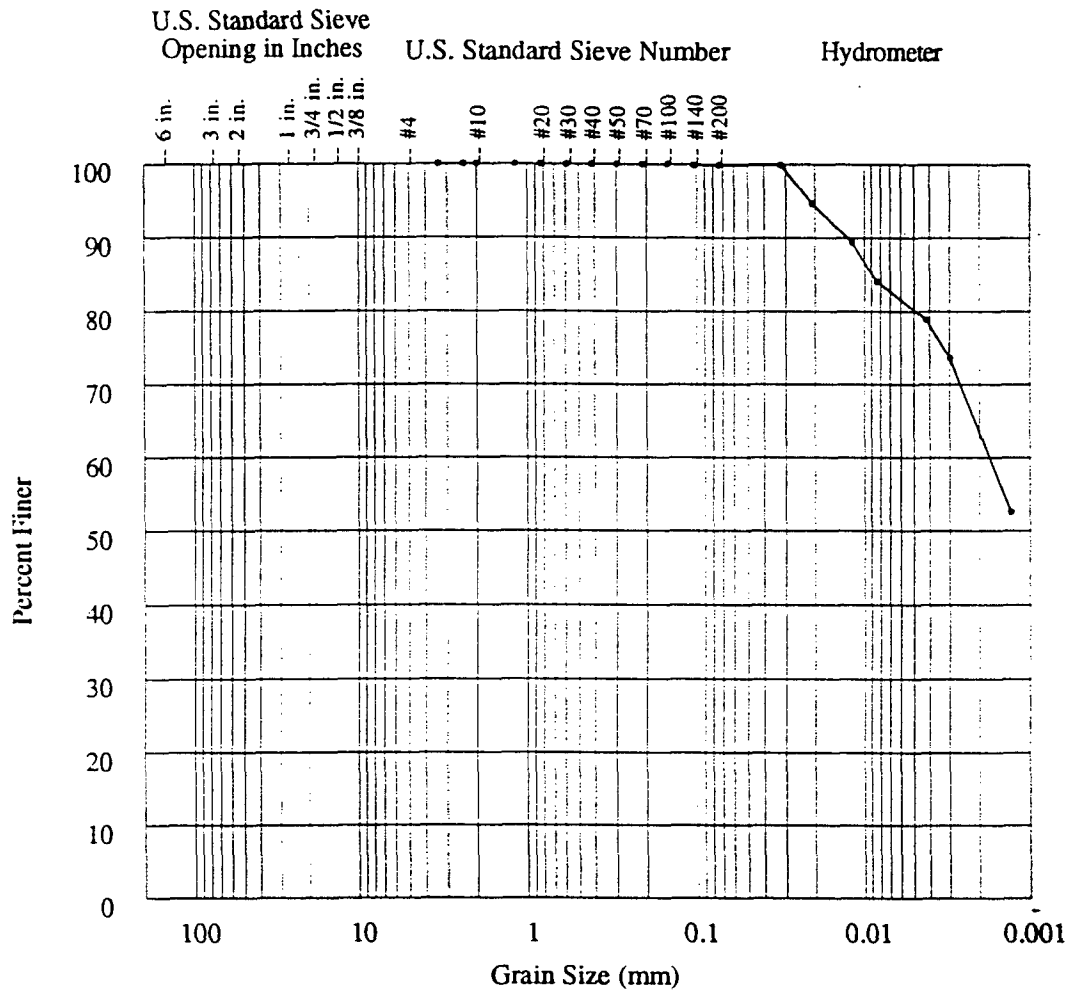
STANUM	STATION	IDORG	DATE	LEG	COARSE	SAND	FINE	SAND	SILT	CLAY	TOC	TON
45092.0	MCGRATH LAKE ESTUARY-S9S2	1865	7/8/98	MG1	0.00	0.32	31.20	68.49	8.78	0.471		
45093.0	MCGRATH LAKE ESTUARY-S9S3	1866	7/8/98	MG1	0.00	1.44	19.11	79.45	4.32	0.375		
45094.0	MCGRATH LAKE ESTUARY-S9S4	1867	7/8/98	MG1	0.00	8.47	39.48	52.05	5.21	0.430		
45095.0	MCGRATH LAKE ESTUARY-S9S5	1868	7/8/98	MG1	0.00	31.47	34.29	34.24	10.68	0.576		
45101.0	MCGRATH LAKE ESTUARY-S10S1	1869	7/8/98	MG1	-9.00	-9.00	-9.00	-9.00	-9.00	-9.000		
45102.0	MCGRATH LAKE ESTUARY-S10S2	1870	7/8/98	MG1	0.00	40.03	9.63	50.34	6.88	0.440		
45103.0	MCGRATH LAKE ESTUARY-S10S3	1871	7/8/98	MG1	0.00	50.18	6.67	43.15	3.26	0.228		
45104.0	MCGRATH LAKE ESTUARY-S10S4	1872	7/8/98	MG1	0.00	57.31	12.90	29.79	0.92	0.060		
45105.0	MCGRATH LAKE ESTUARY-S10S5	1873	7/8/98	MG1	0.08	46.38	8.34	45.20	2.78	0.259		
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1874	7/10/98	MG1	0.00	23.98	67.12	8.90	0.80	0.091		
45002.0	MCGRATH LAKE ESTUARY-AG DRAIN	1875	7/10/98	MG1	0.00	95.81	1.45	2.74	0.64	0.086		
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1876	7/9/98	MG1	0.00	1.54	48.80	49.66	4.06	0.434		
45004.0	MCGRATH LAKE ESTUARY-OCEAN BERM	1877	7/10/98	MG1	0.00	99.07	0.93	0.00	0.34	0.048		
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/28/98	MG2	0.00	0.00	51.84	48.16	2.71	0.345		
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z1	1989	10/28/98	MG2	0.00	0.00	52.87	47.13	2.55	0.274		
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z2	1990	10/28/98	MG2	0.00	0.00	48.48	51.52	2.29	0.259		
45015.0	MCGRATH LAKE ESTUARY- N1S5 Z3	1991	10/28/98	MG2	0.00	0.00	61.22	38.78	2.67	0.221		
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/28/98	MG2	0.00	0.00	51.27	48.73	3.60	0.368		
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z1	1992	10/28/98	MG2	0.00	0.00	49.31	50.69	2.89	0.262		
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z2	1993	10/28/98	MG2	0.00	0.00	44.61	55.39	2.24	0.232		
45024.0	MCGRATH LAKE ESTUARY- N2S4 Z3	1994	10/28/98	MG2	0.00	0.00	58.93	41.07	3.04	0.210		
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/28/98	MG2	0.00	0.00	46.18	53.82	2.94	0.346		
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z1	1995	10/28/98	MG2	0.00	0.00	45.98	54.02	3.35	0.252		
45034.0	MCGRATH LAKE ESTUARY- N3S4 Z2	1996	10/28/98	MG2	3.07	8.22	46.84	41.87	3.04	0.202		
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/28/98	MG2	0.00	0.00	48.56	51.44	3.12	0.366		
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/28/98	MG2	0.00	0.00	45.54	54.46	2.98	0.348		
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z1	1997	10/28/98	MG2	7.69	18.63	50.82	22.86	3.48	0.174		
45053.0	MCGRATH LAKE ESTUARY- M5S3 Z2	1998	10/28/98	MG2	0.00	0.00	48.50	51.50	4.98	0.240		
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/28/98	MG2	0.00	0.00	47.01	52.99	2.88	0.328		
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/28/98	MG2	0.00	0.00	47.50	52.50	2.33	0.318		
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z1	1999	10/28/98	MG2	0.00	0.07	45.68	54.25	3.09	0.280		
45074.0	MCGRATH LAKE ESTUARY- M7S4 Z2	2000	10/28/98	MG2	0.75	9.39	57.43	32.43	3.48	0.167		
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/28/98	MG2	0.00	0.00	48.56	51.44	2.77	0.345		
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/28/98	MG2	0.00	0.00	47.59	52.41	4.16	0.390		
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z1	2001	10/28/98	MG2	0.00	0.00	54.86	45.14	5.84	0.260		
45092.0	MCGRATH LAKE ESTUARY- S9S2 Z2	2002	10/28/98	MG2	28.04	42.79	22.71	6.46	3.76	0.148		
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/28/98	MG2	1.86	25.66	43.26	29.22	3.68	0.320		
45102.0	MCGRATH LAKE ESTUARY- S10S2 Z1	2003	10/28/98	MG2	25.98	54.53	14.56	4.93	1.65	0.104		
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/28/98	MG2	0.14	9.35	62.96	27.54	1.62	0.258		
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/29/98	MG2	2.88	47.61	45.92	3.60	0.35	0.085		



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

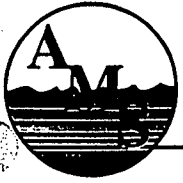
## Grain Size Distribution Test Report



% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.01	0.11	19.37	80.51

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

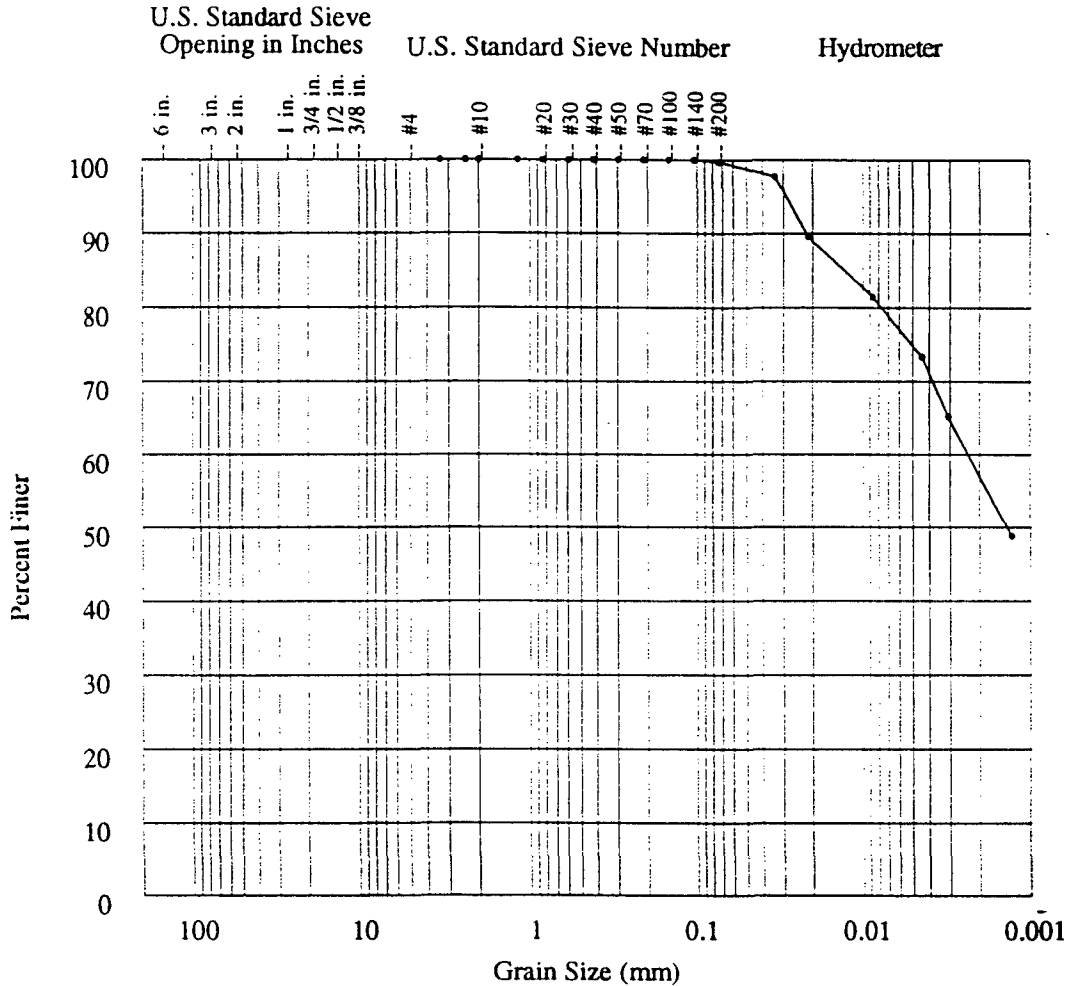
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1824
		AMS ID:	3000
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

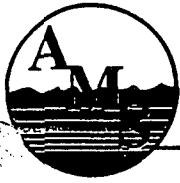
## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.01	0.23	24.49	75.27

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0013					

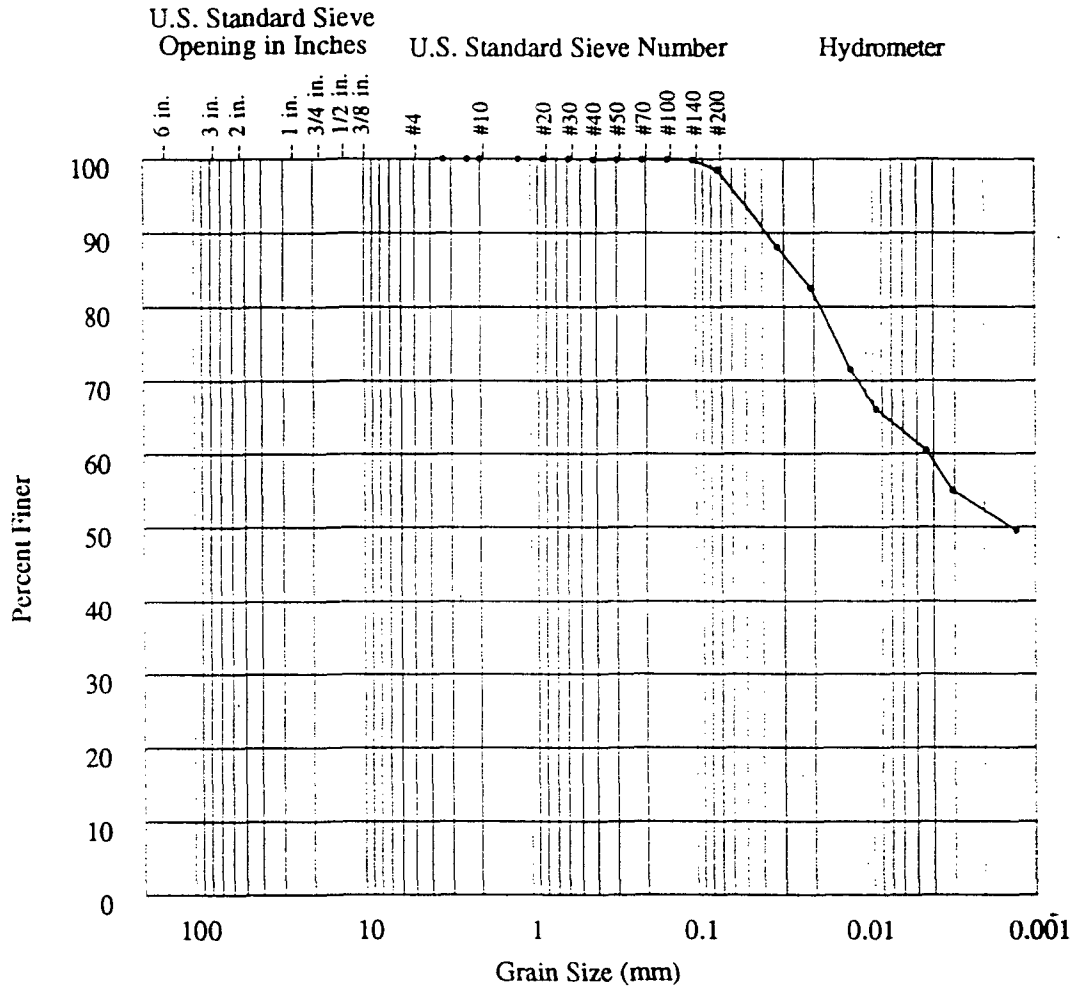
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1825
		AMS ID:	3001
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

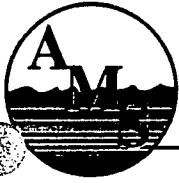
## Grain Size Distribution Test Report



% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.07	1.44	37.51	60.98

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0014					

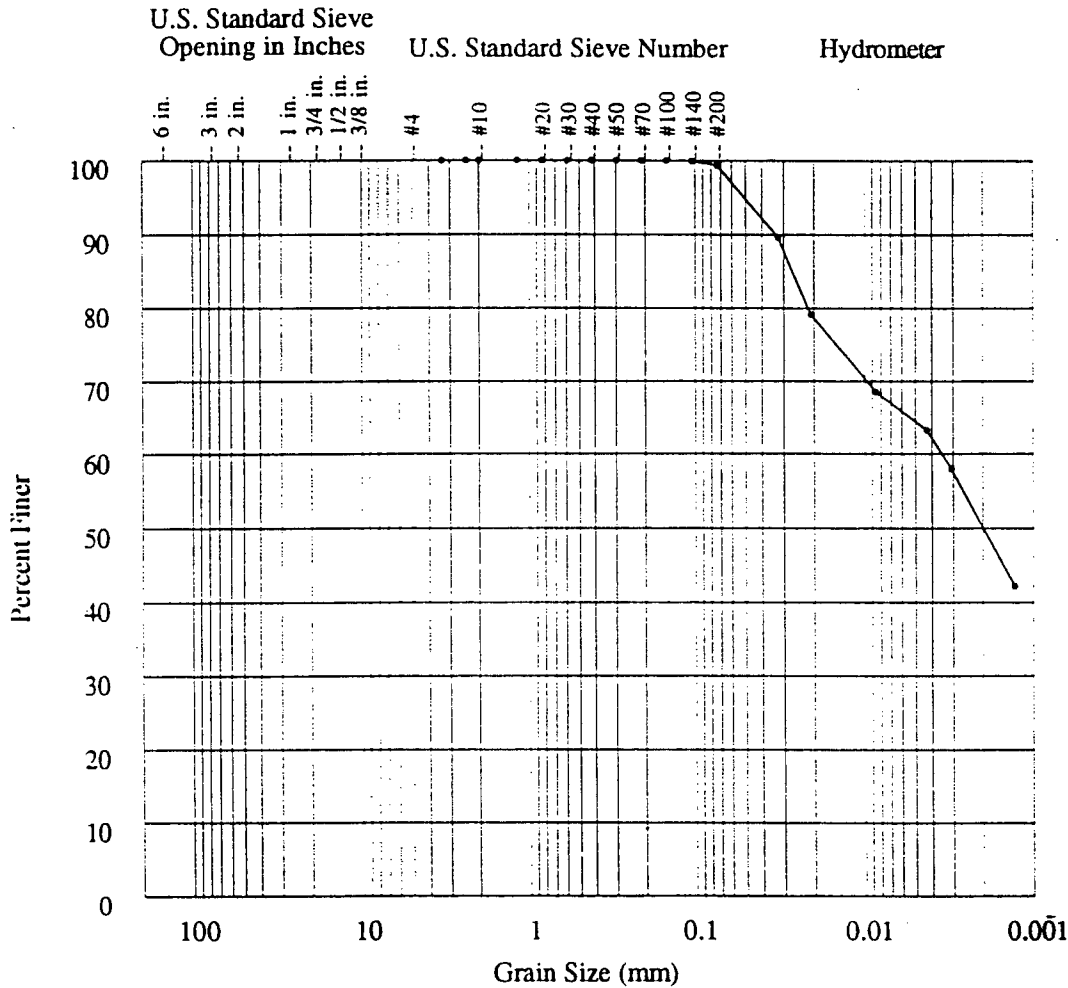
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1826
		AMS ID:	3002
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



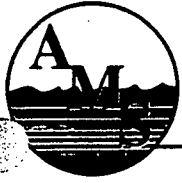
%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.01	0.63	34.95	64.41

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.002					

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1827
		AMS ID:	3003
		Date:	8/14/98

625

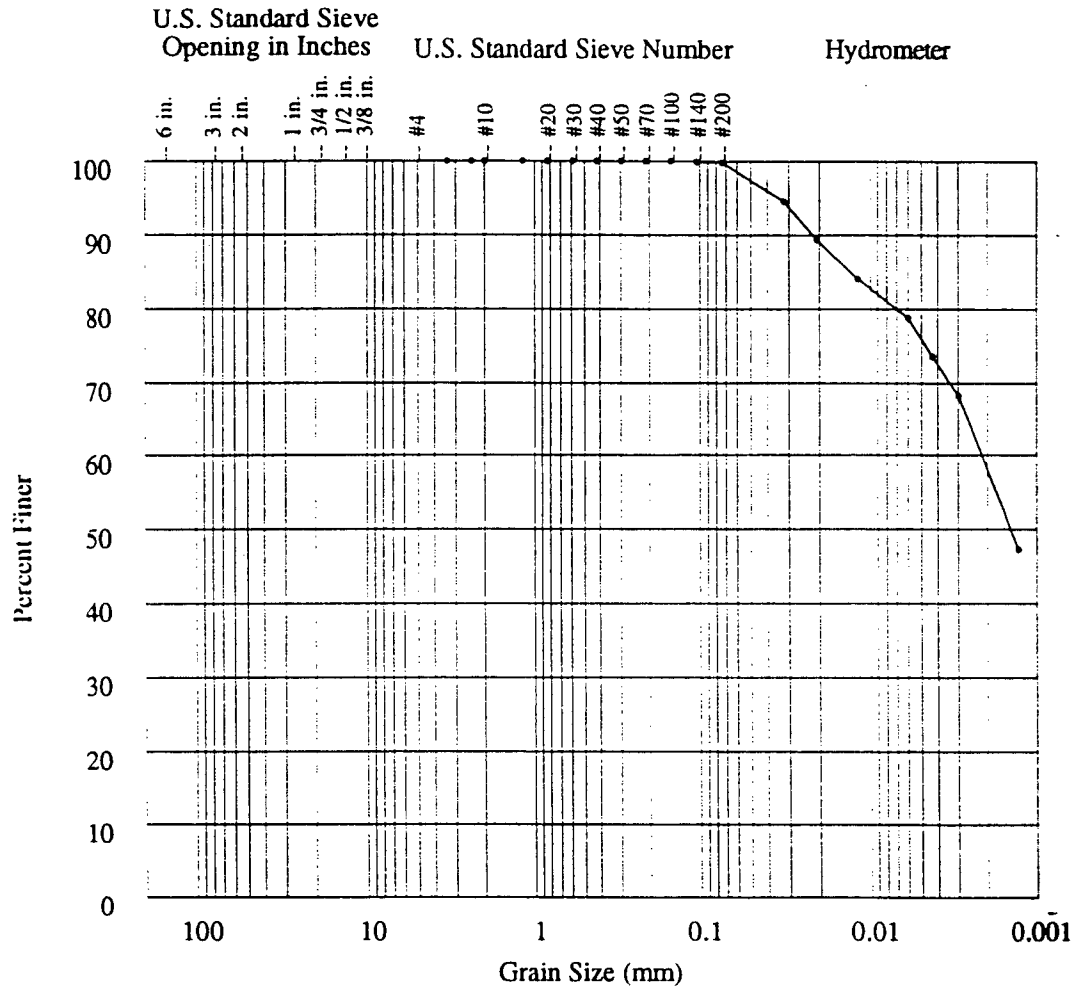




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.01	0.20	23.77	76.02

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0014					

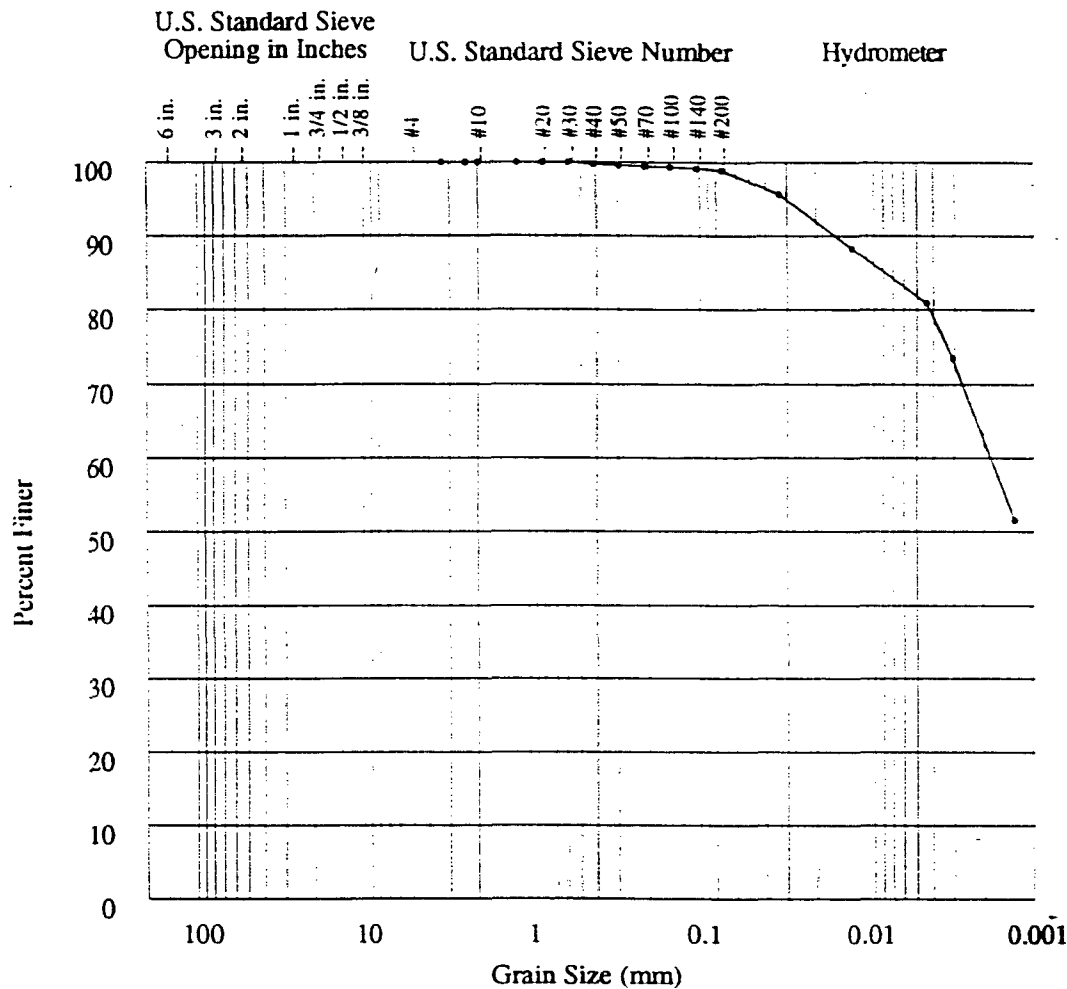
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1828
		AMS ID:	3004
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

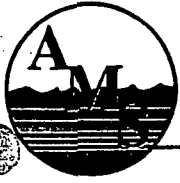
## Grain Size Distribution Test Report



%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.22	0.89	17.09	81.80

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

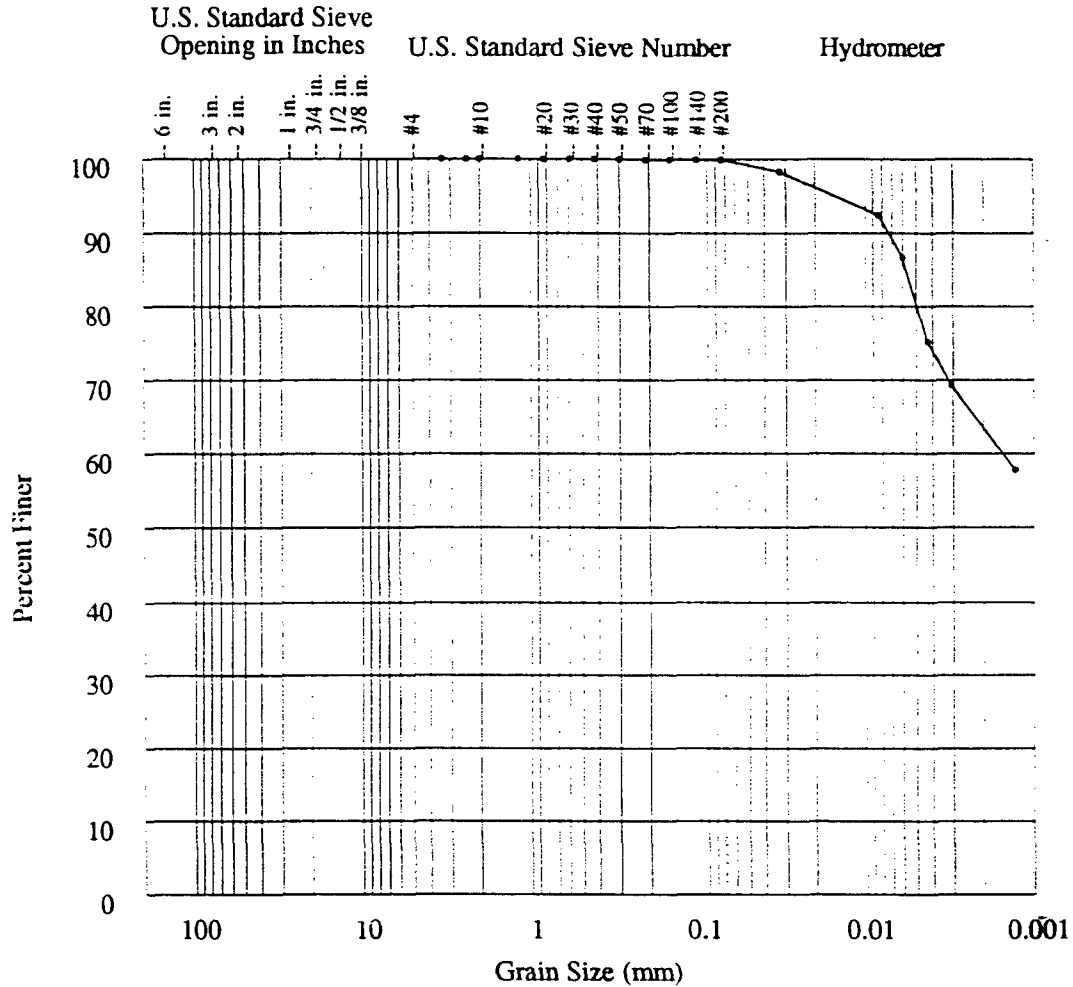
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1829
		AMS ID:	3005
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

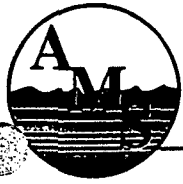
## Grain Size Distribution Test Report



% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.05	0.10	19.76	80.09

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

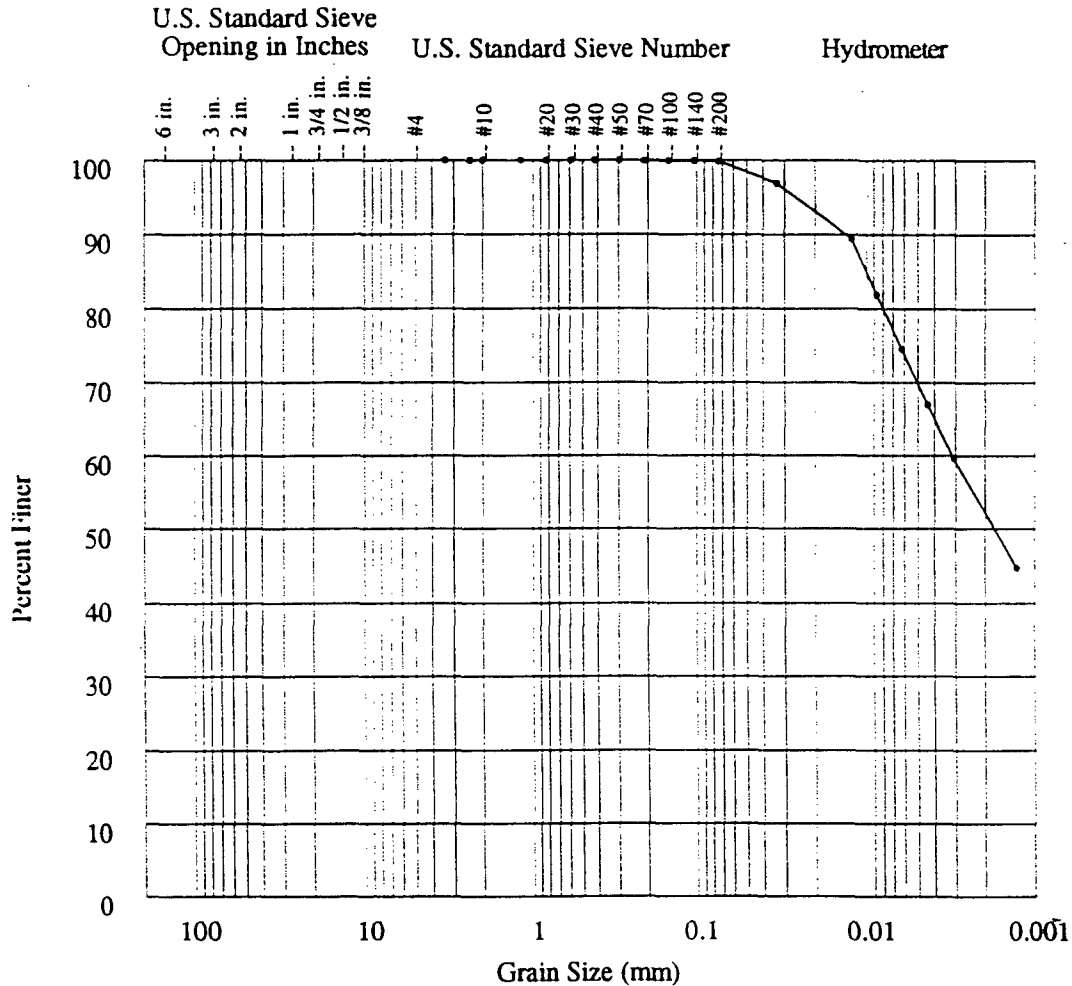
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1830
		AMS ID:	3006
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.04	0.14	30.20	69.62

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0017					

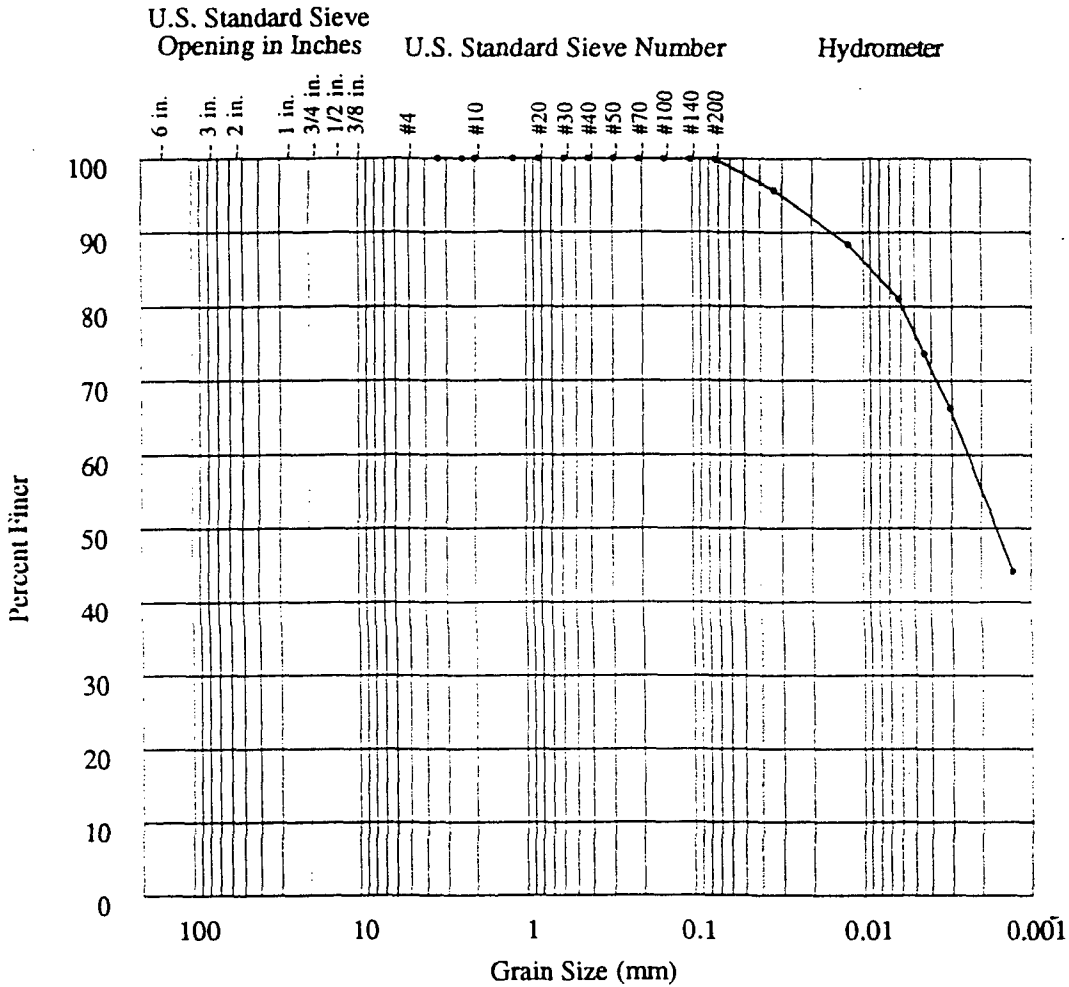
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1831
		AMS ID:	3007
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

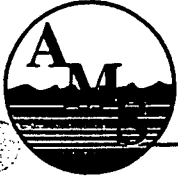
## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.03	0.13	23.09	76.75

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0016					

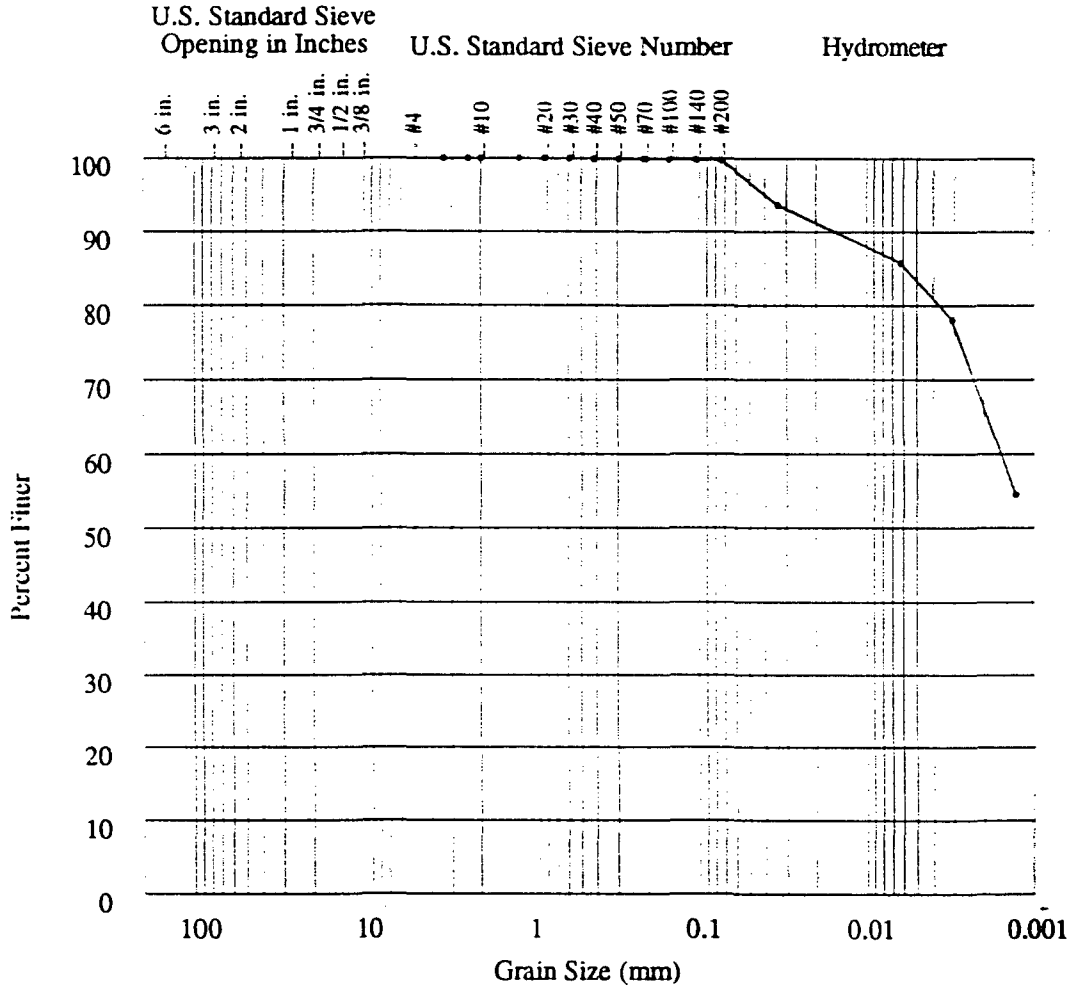
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1832
		AMS ID:	3008
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.08	0.14	16.34	83.44

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

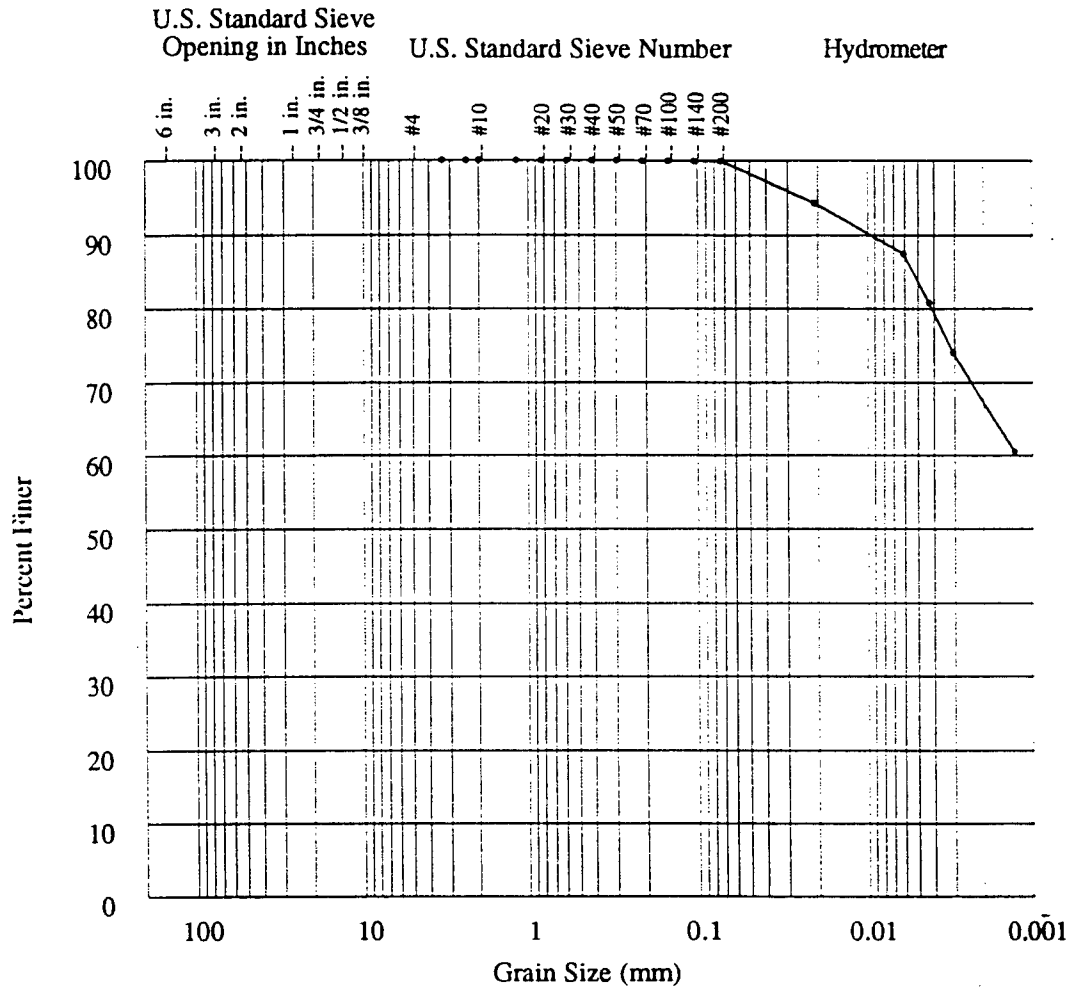
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1833
		AMS ID:	3009
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



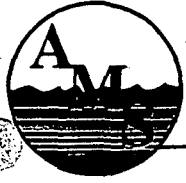
%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.04	0.11	15.63	84.22

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

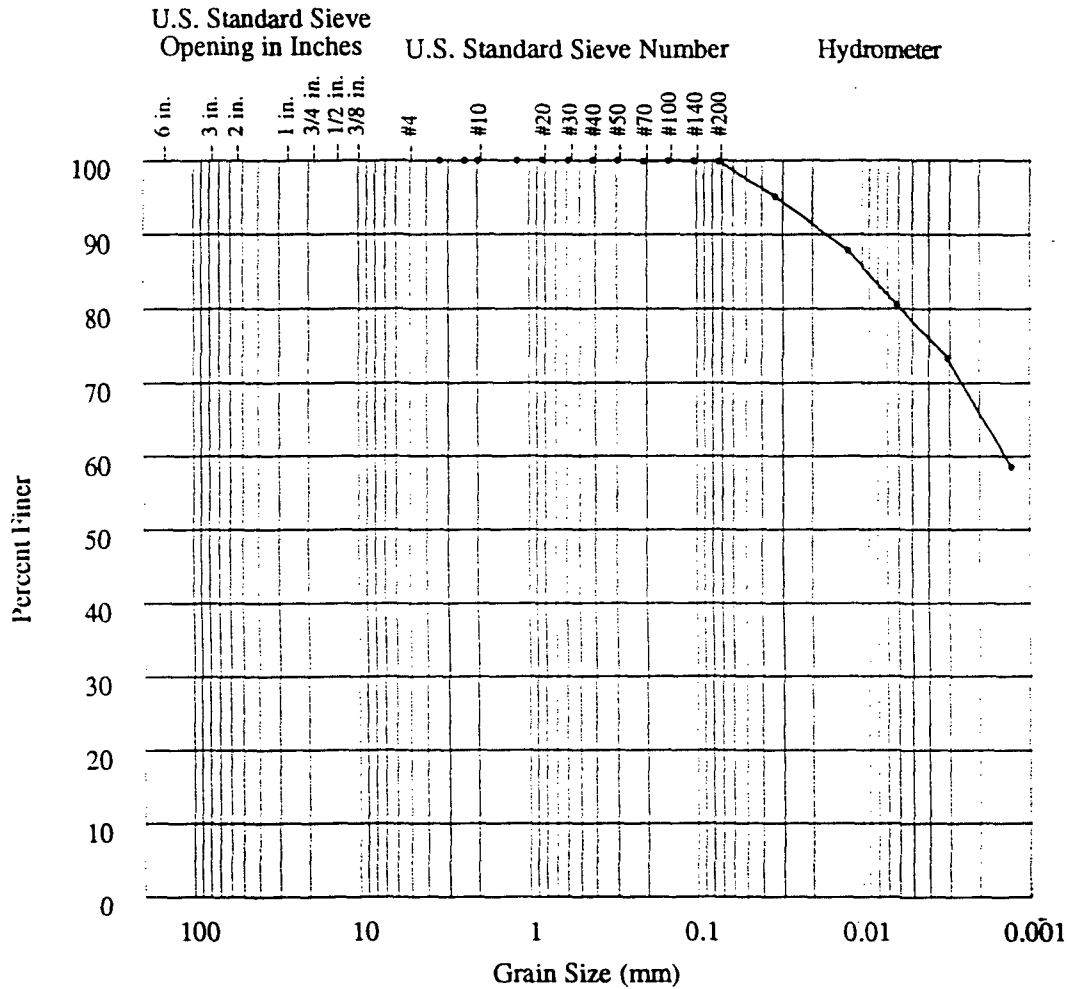
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1834
		AMS ID:	3010
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report

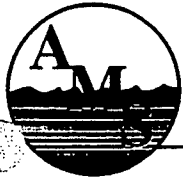


% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.03	0.13	21.22	78.62

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1835
		AMS ID:	3011
		Date:	8/14/98

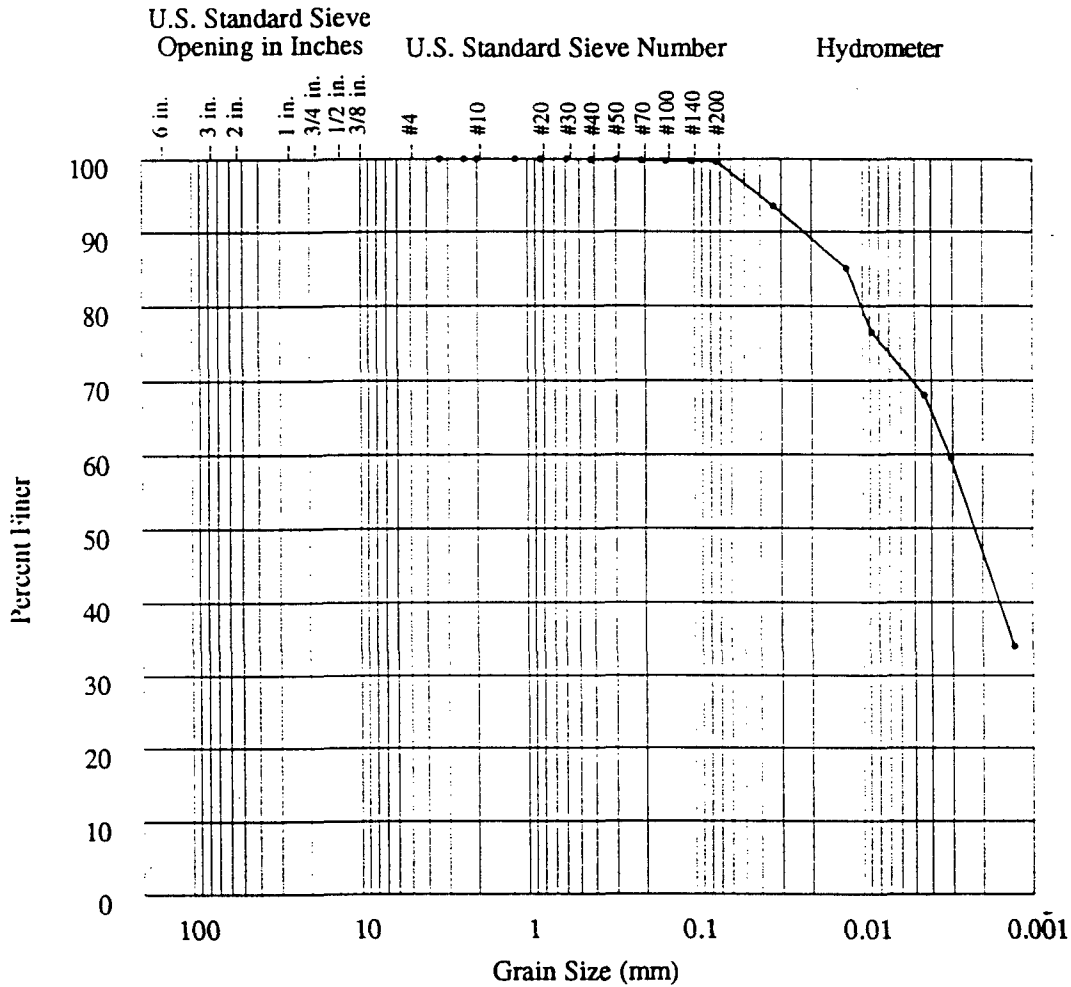




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

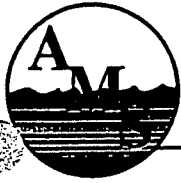
## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.08	0.26	30.08	69.58

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0022					

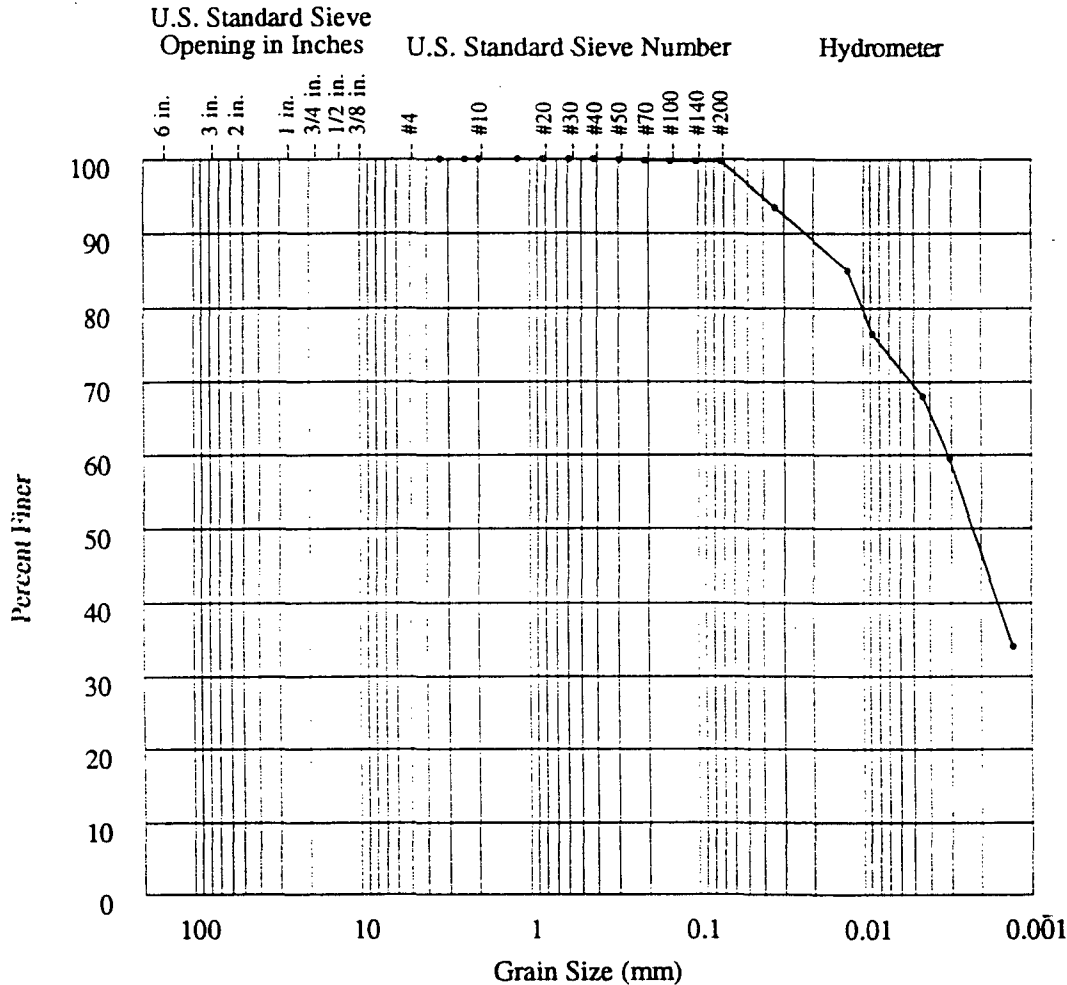
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1836
		AMS ID:	3012
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

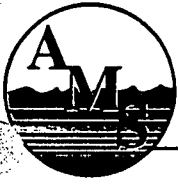
## Grain Size Distribution Test Report



%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.04	0.27	30.07	69.62

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0021					

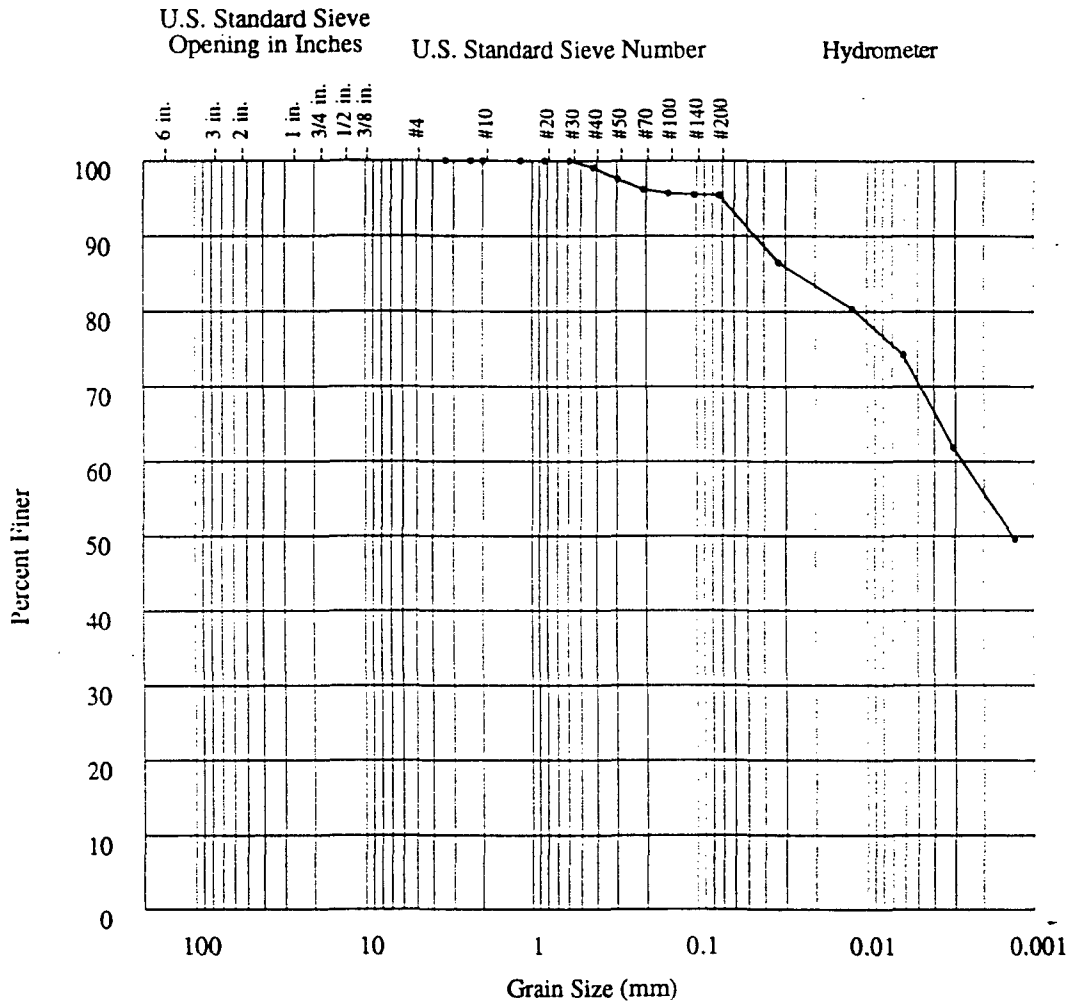
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1837
		AMS ID:	3013
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

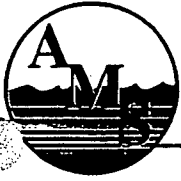
## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.95	3.63	24.55	70.86

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0013					

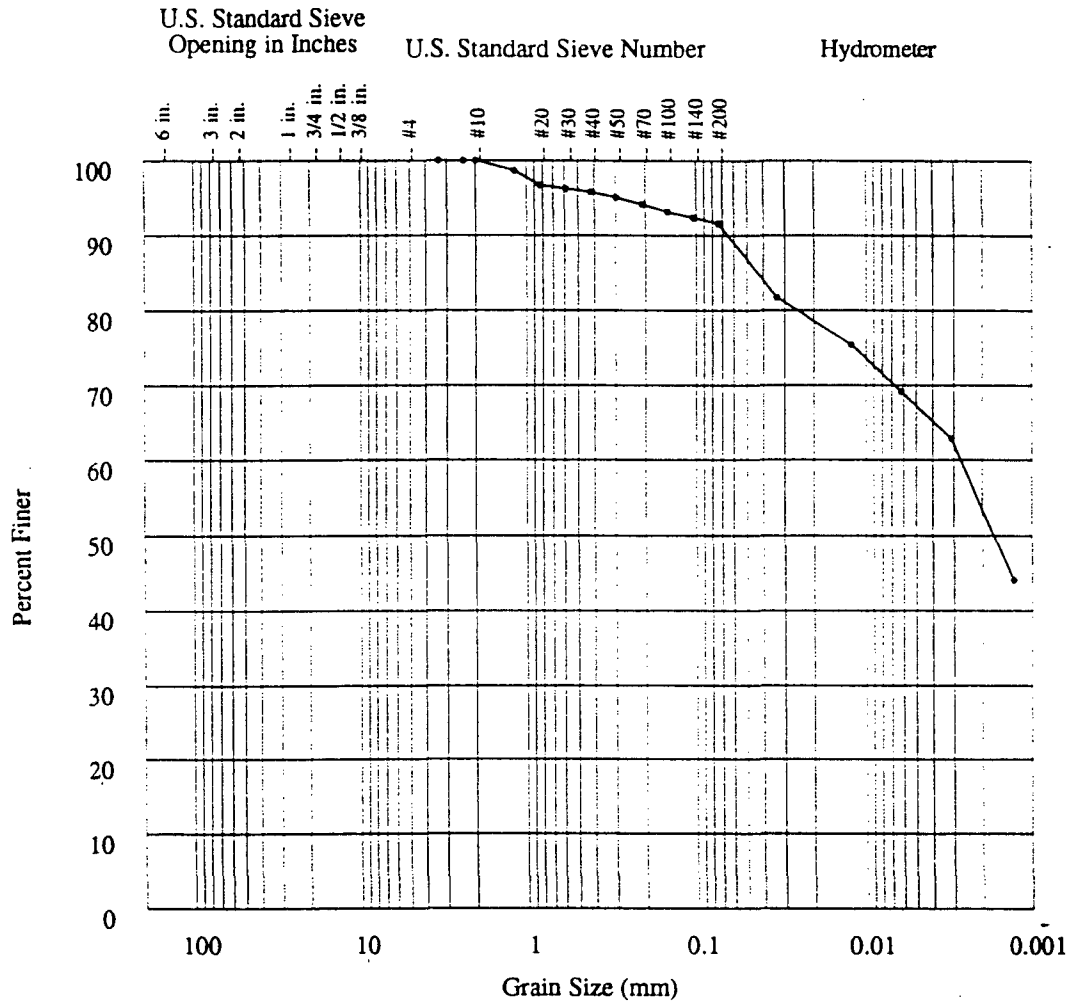
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1838
		AMS ID:	3014
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report

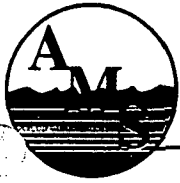


%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	4.17	4.33	24.05	67.46

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0017					

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1839
		AMS ID:	3015
		Date:	8/14/98

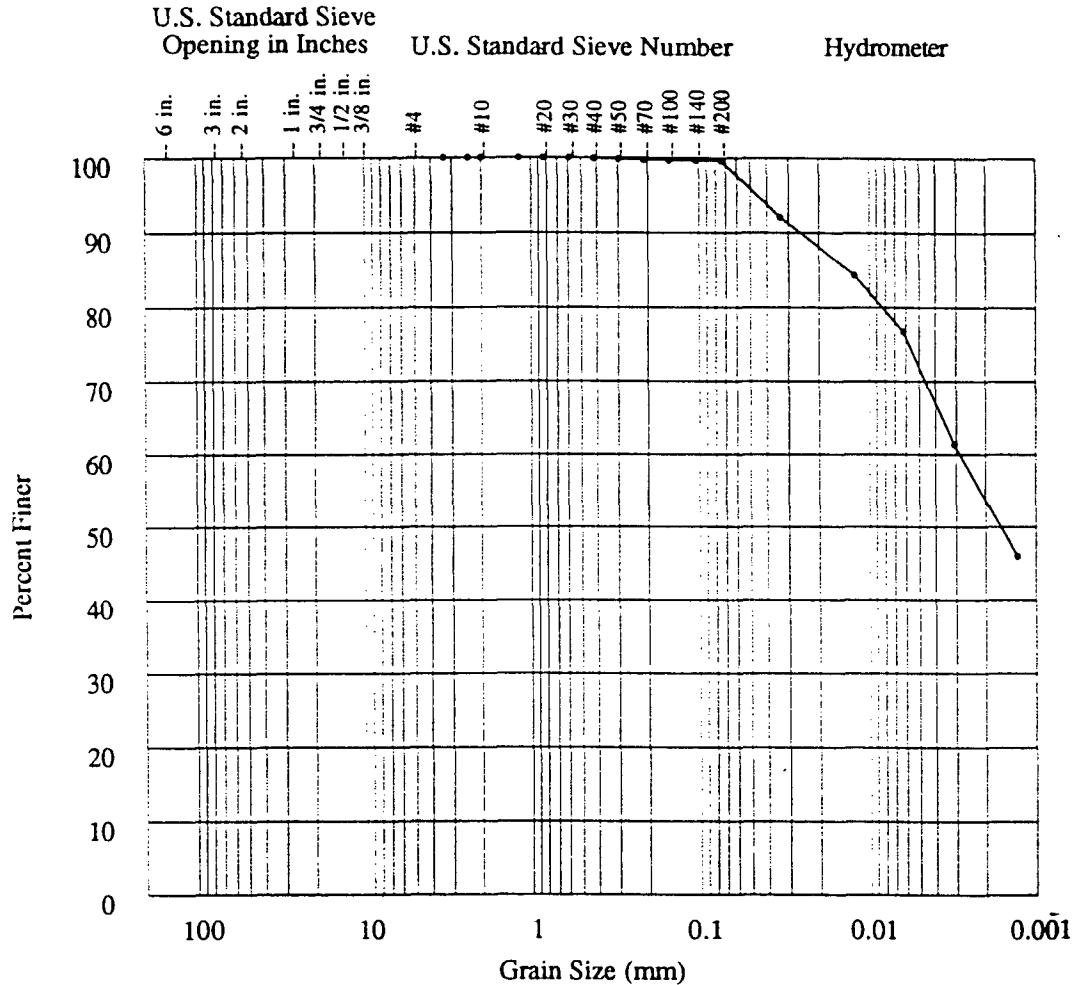




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

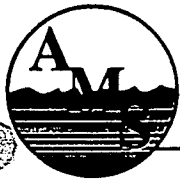
## Grain Size Distribution Test Report



%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.10	0.34	28.03	71.53

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0016					

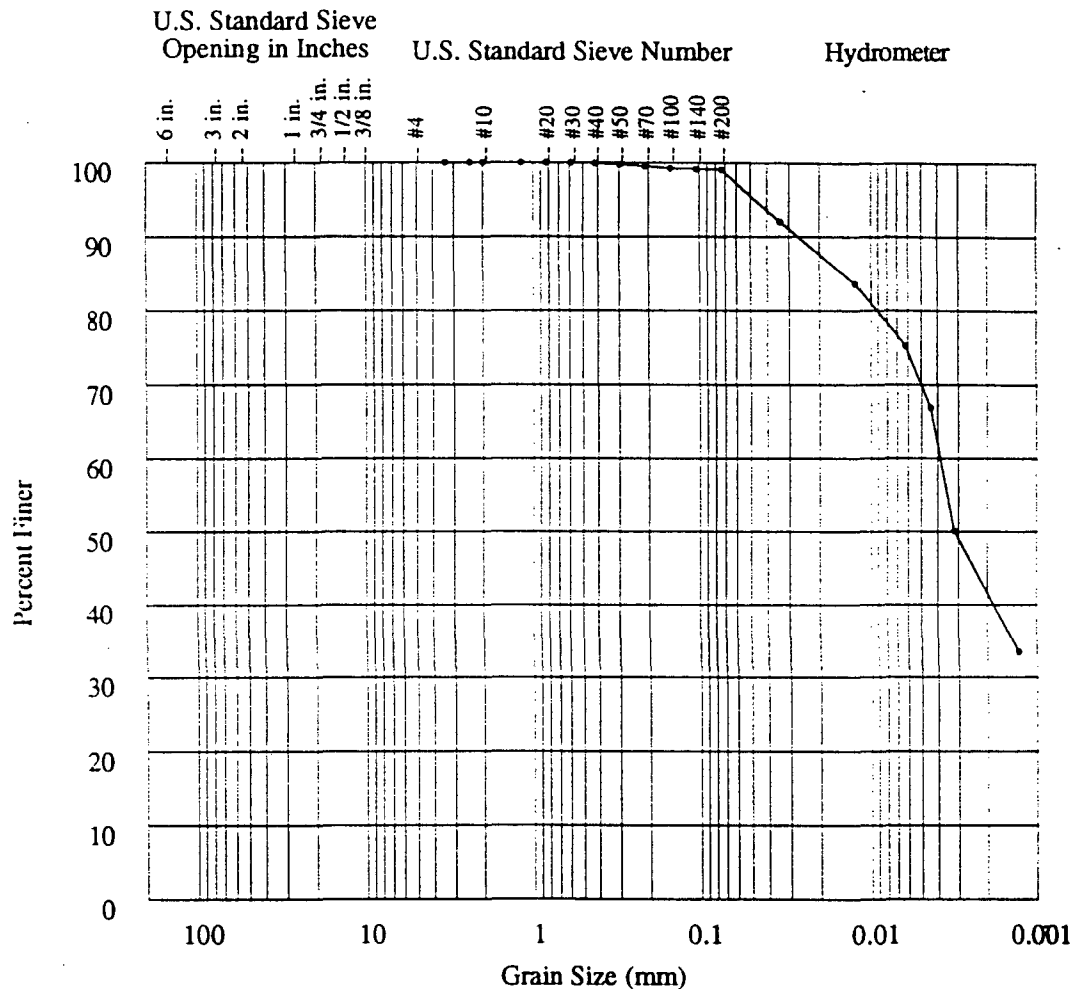
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1841
		AMS ID:	3017
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

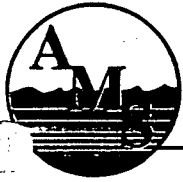
## Grain Size Distribution Test Report



%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.14	0.86	28.96	70.04

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0030					

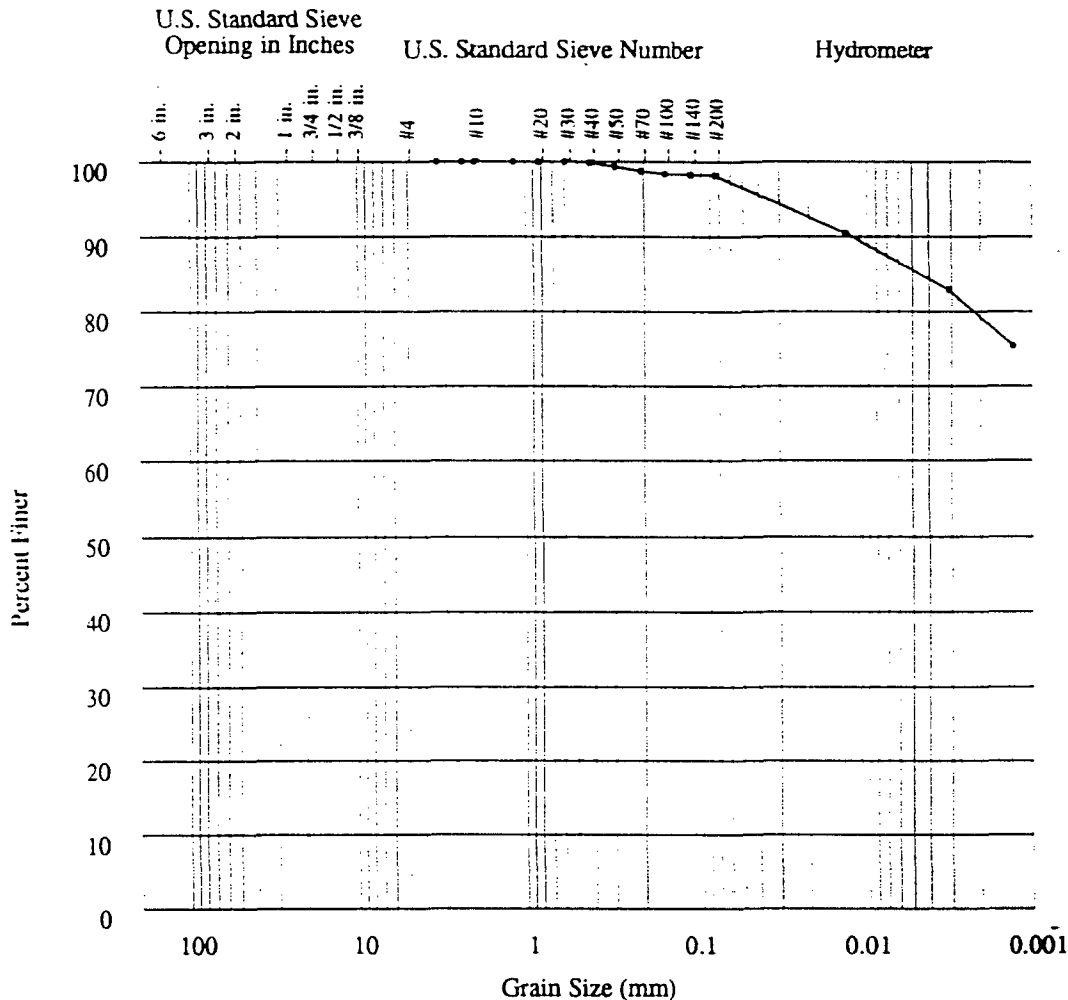
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1842
		AMS ID:	3018
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report

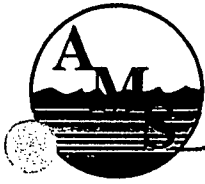


%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.19	1.56	12.98	85.27

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1843
		AMS ID:	3019
		Date:	8/14/98

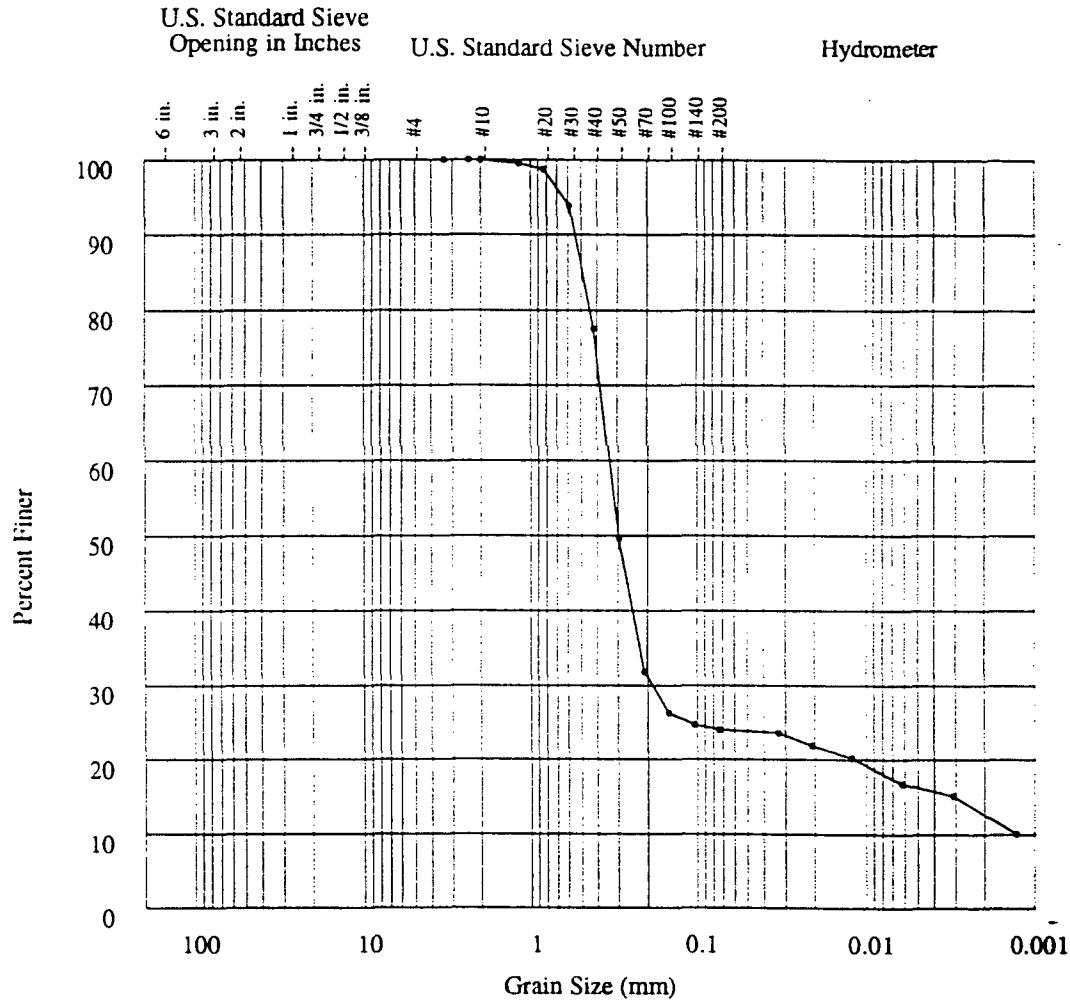




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

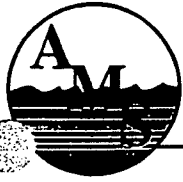
## Grain Size Distribution Test Report



%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	22.43	53.57	7.56	16.44

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.30					

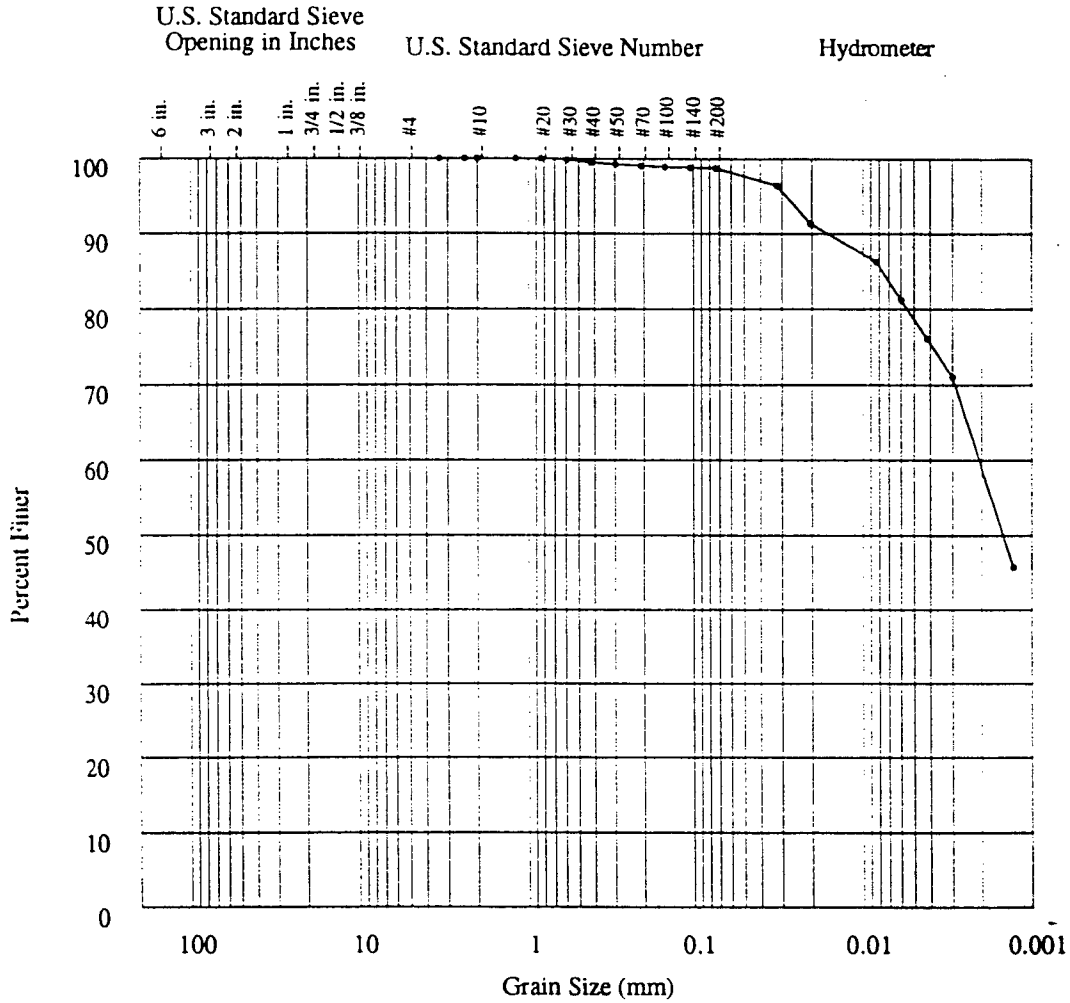
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1844
		AMS ID:	3020
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

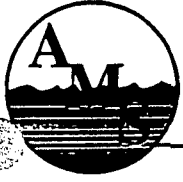
## Grain Size Distribution Test Report



%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.54	0.76	19.93	78.77

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0015					

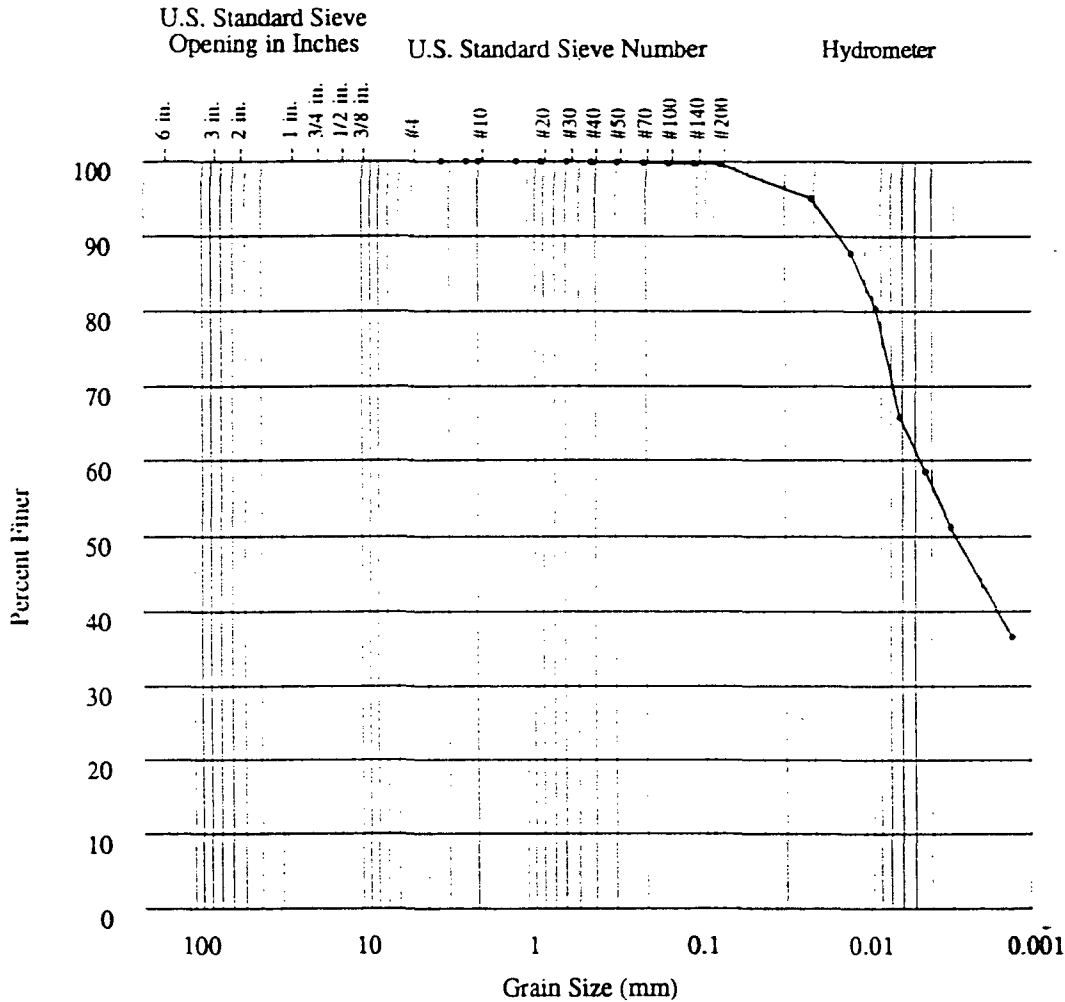
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1845
		AMS ID:	3021
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

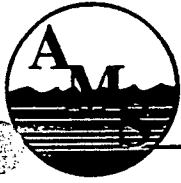
## Grain Size Distribution Test Report



%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.06	0.27	38.37	61.30

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0030					

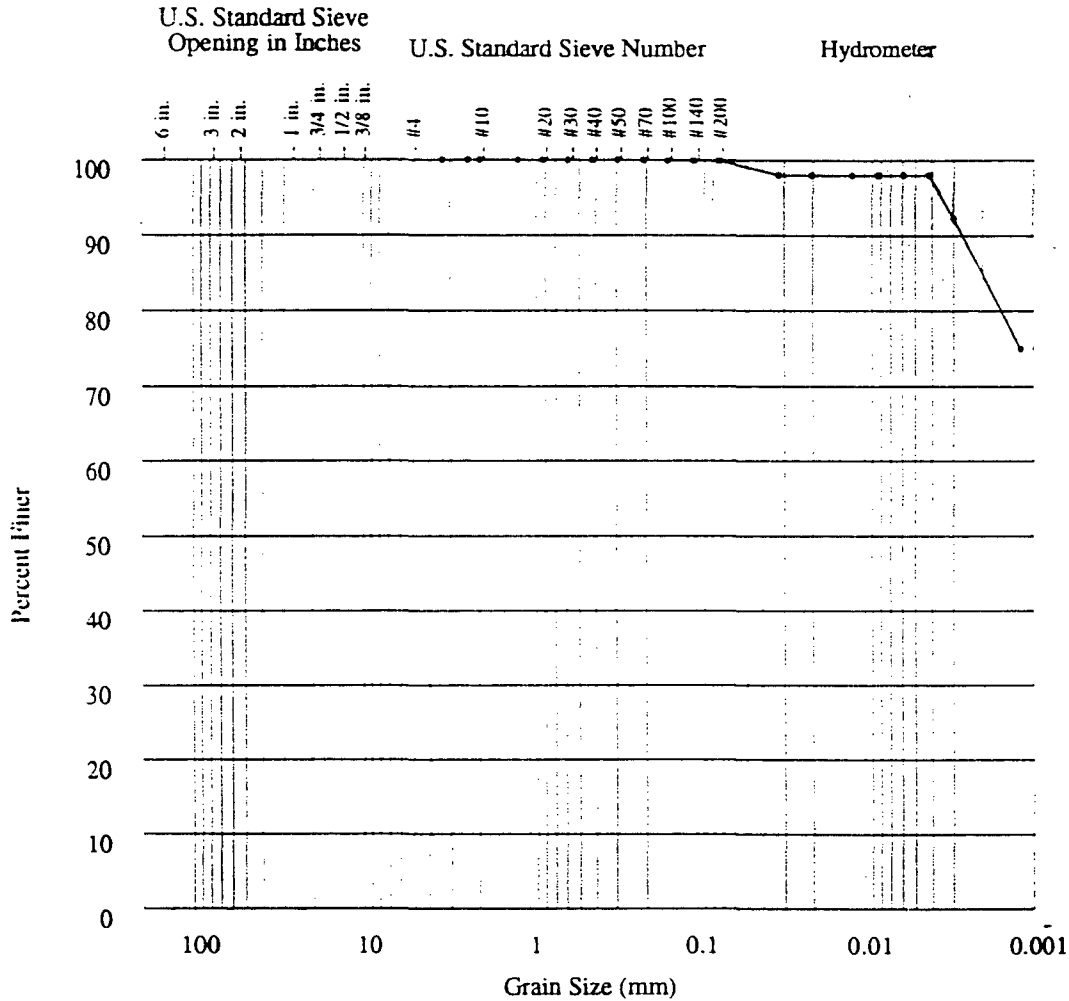
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1846
		AMS ID:	3022
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

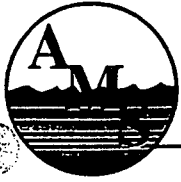
## Grain Size Distribution Test Report



% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.00	0.08	1.98	97.94

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

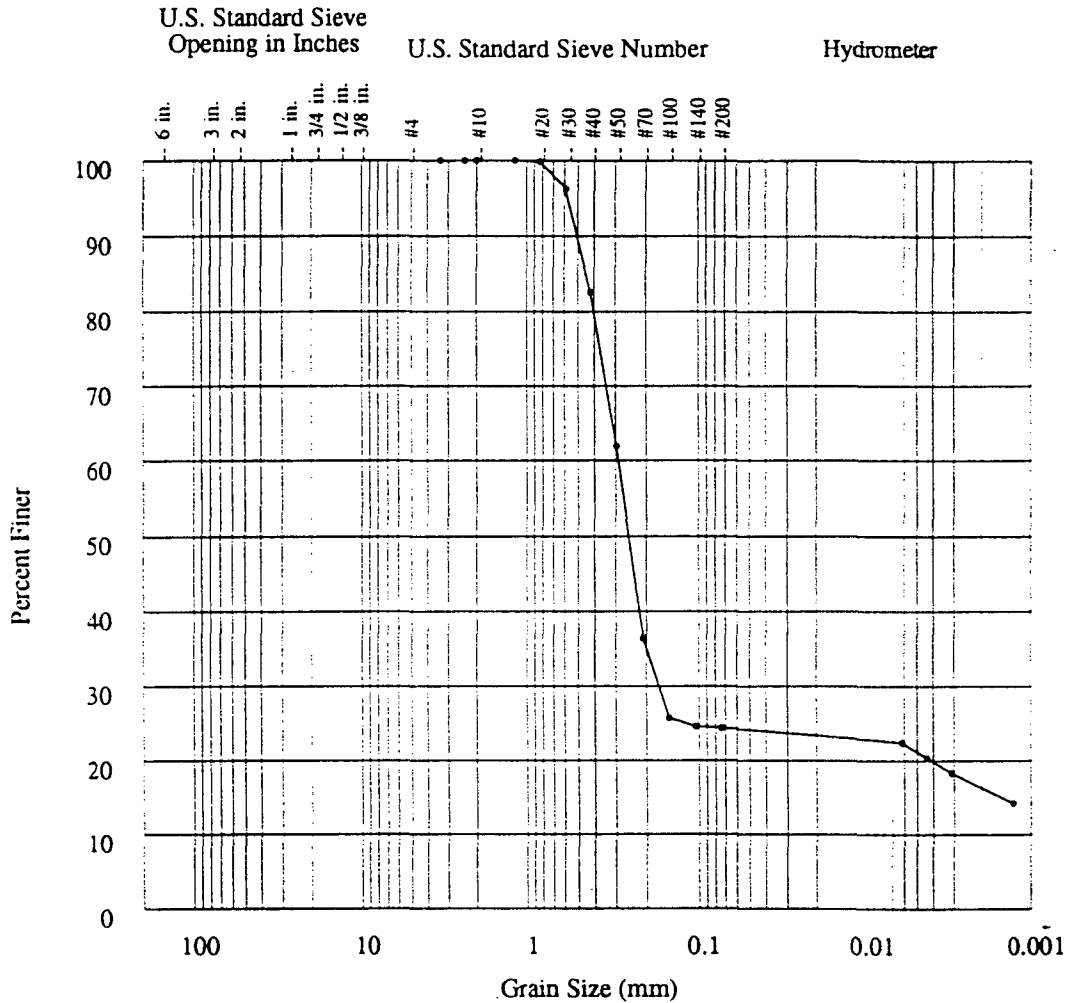
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1847
		AMS ID:	3023
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

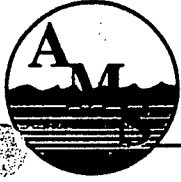
## Grain Size Distribution Test Report



% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	17.46	58.13	3.52	20.89

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.2500					

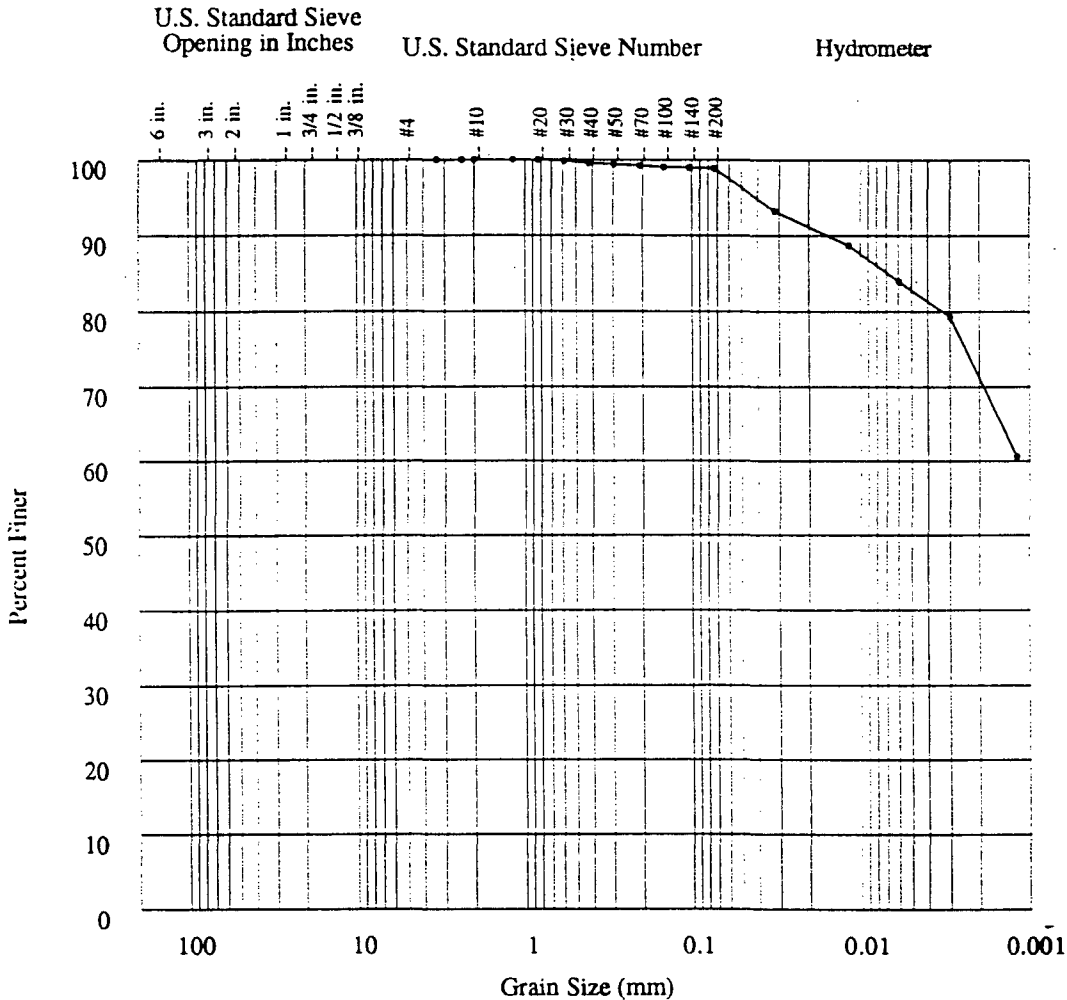
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1848
		AMS ID:	3024
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

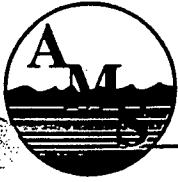
## Grain Size Distribution Test Report



%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
>3"						
0.00	0.00	0.00	0.43	0.72	16.32	82.53

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

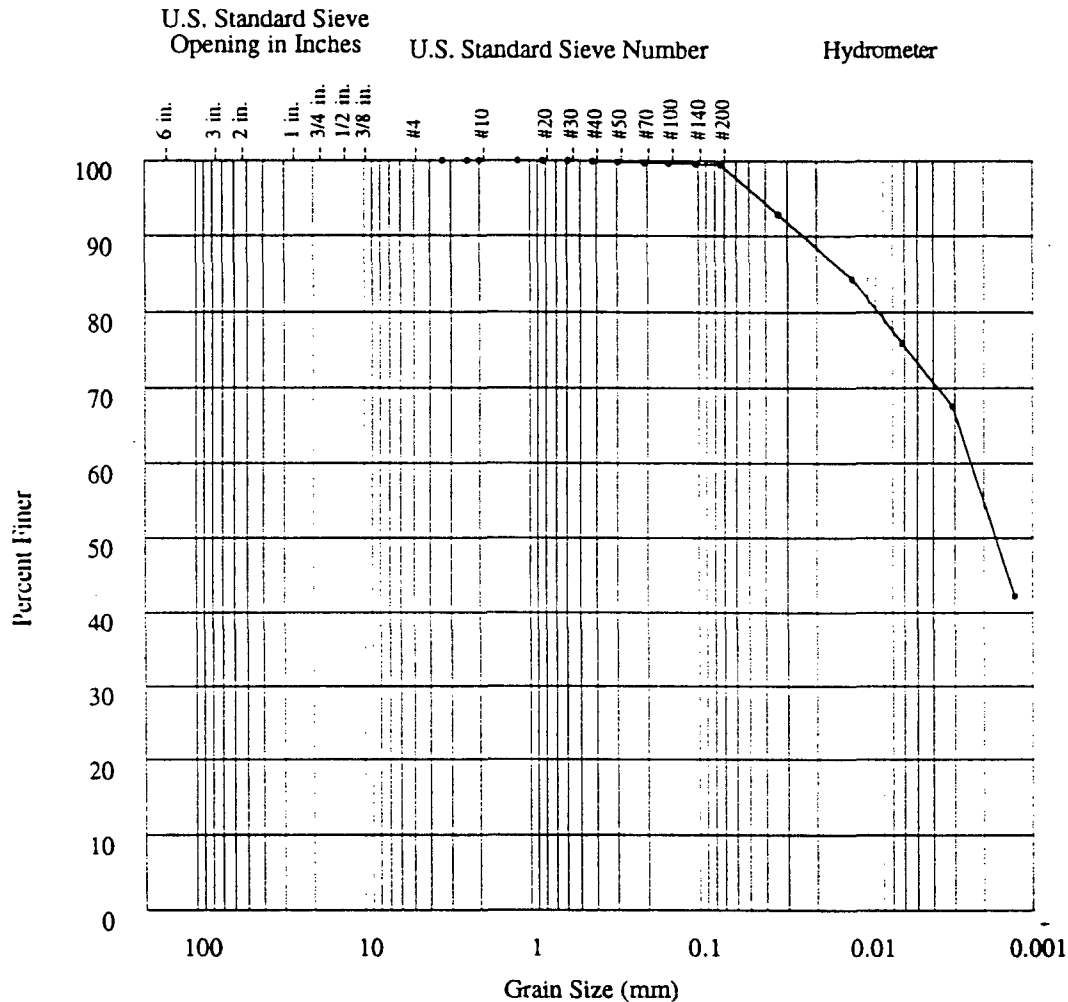
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1850
		AMS ID:	3026
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.12	0.37	26.22	73.29

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0017					

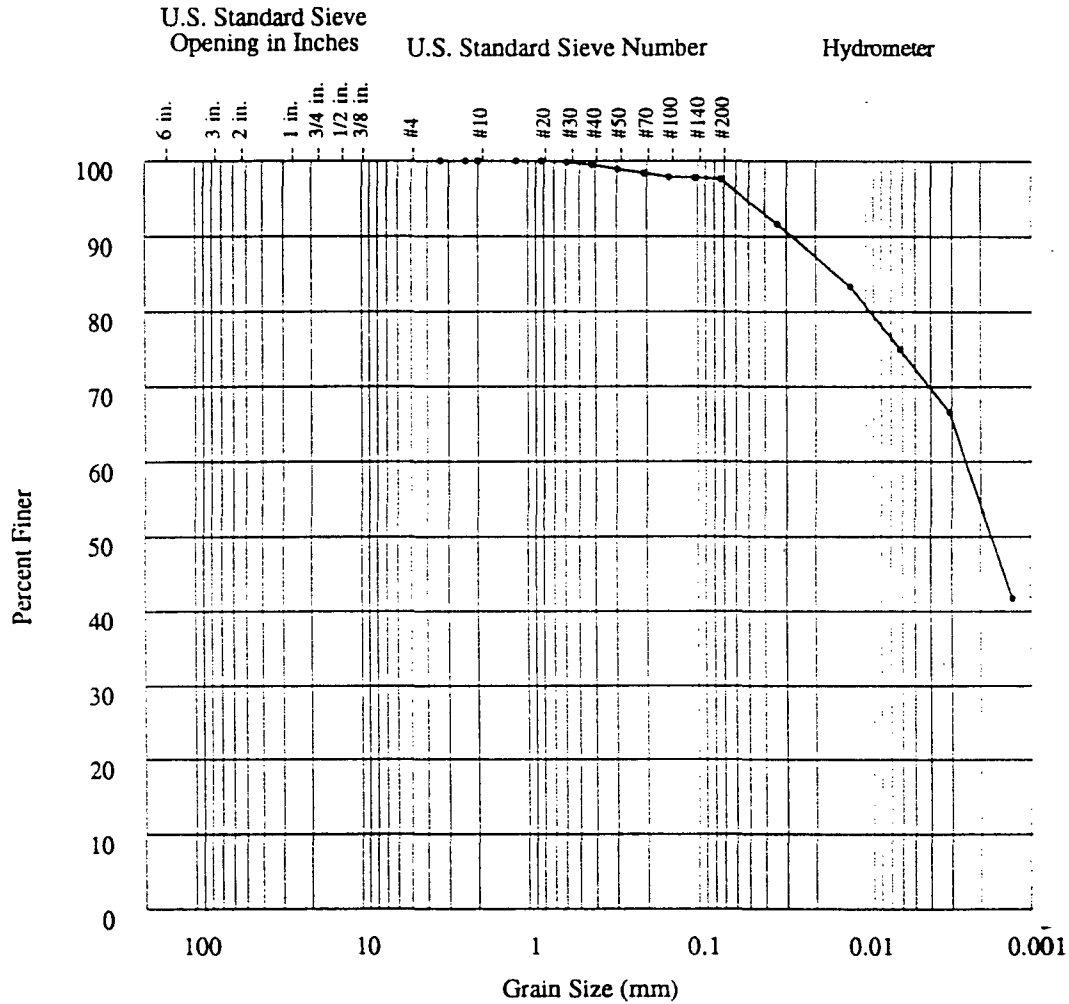
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1851
		AMS ID:	3027
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report

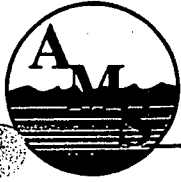


% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.55	1.84	24.67	72.94

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0017					

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1852
		AMS ID:	3028
		Date:	8/14/98

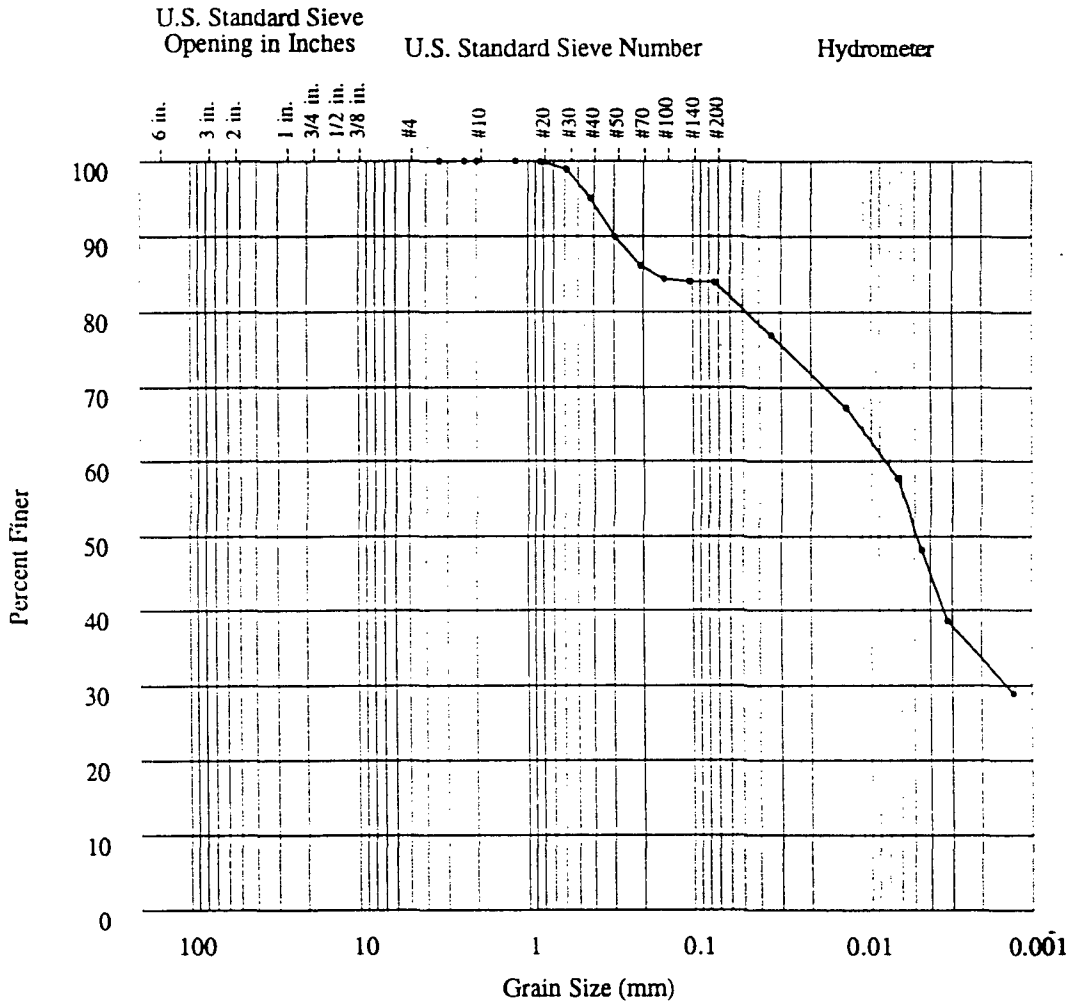


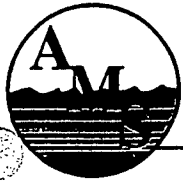


# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report

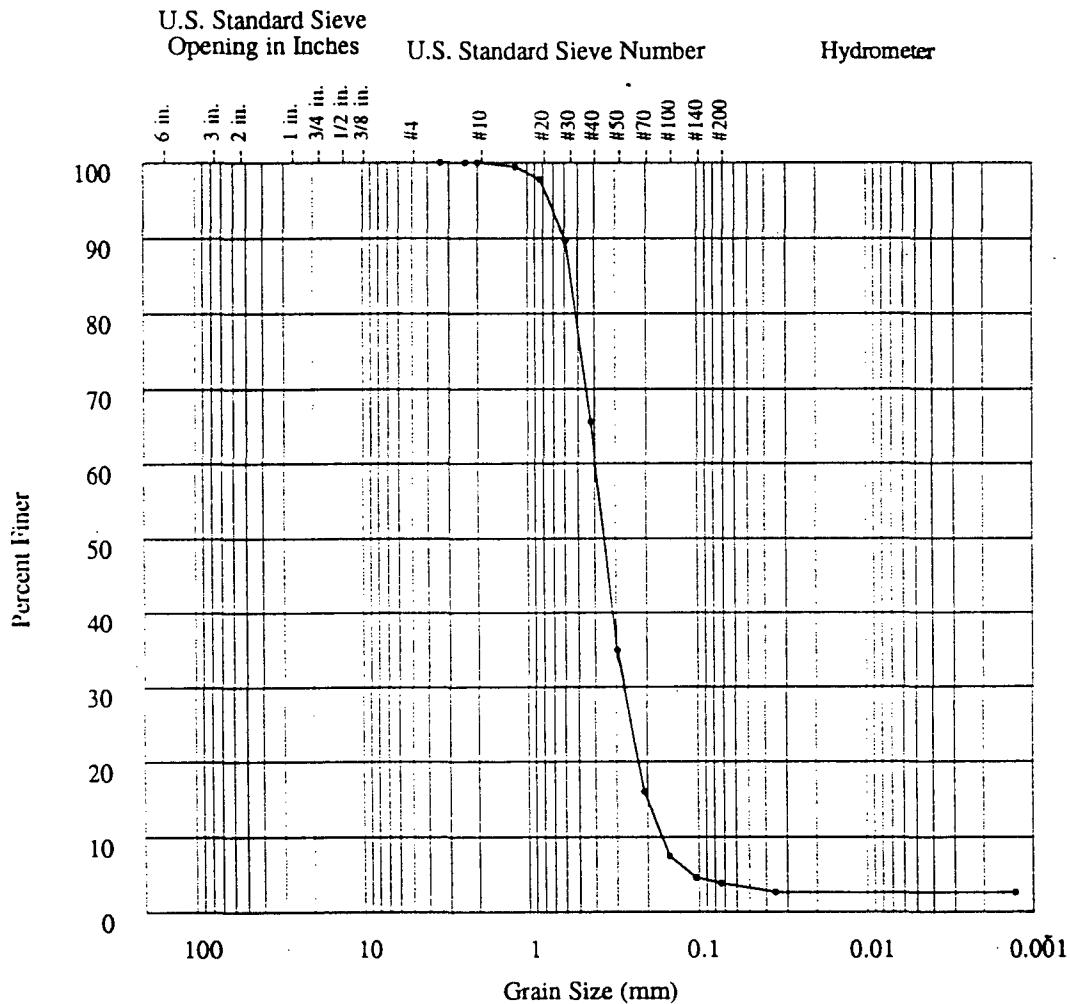




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

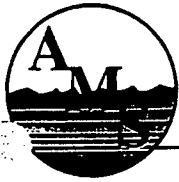
## Grain Size Distribution Test Report



%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
>3"						
0.00	0.00	0.00	34.39	61.80	1.18	2.63

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.35					

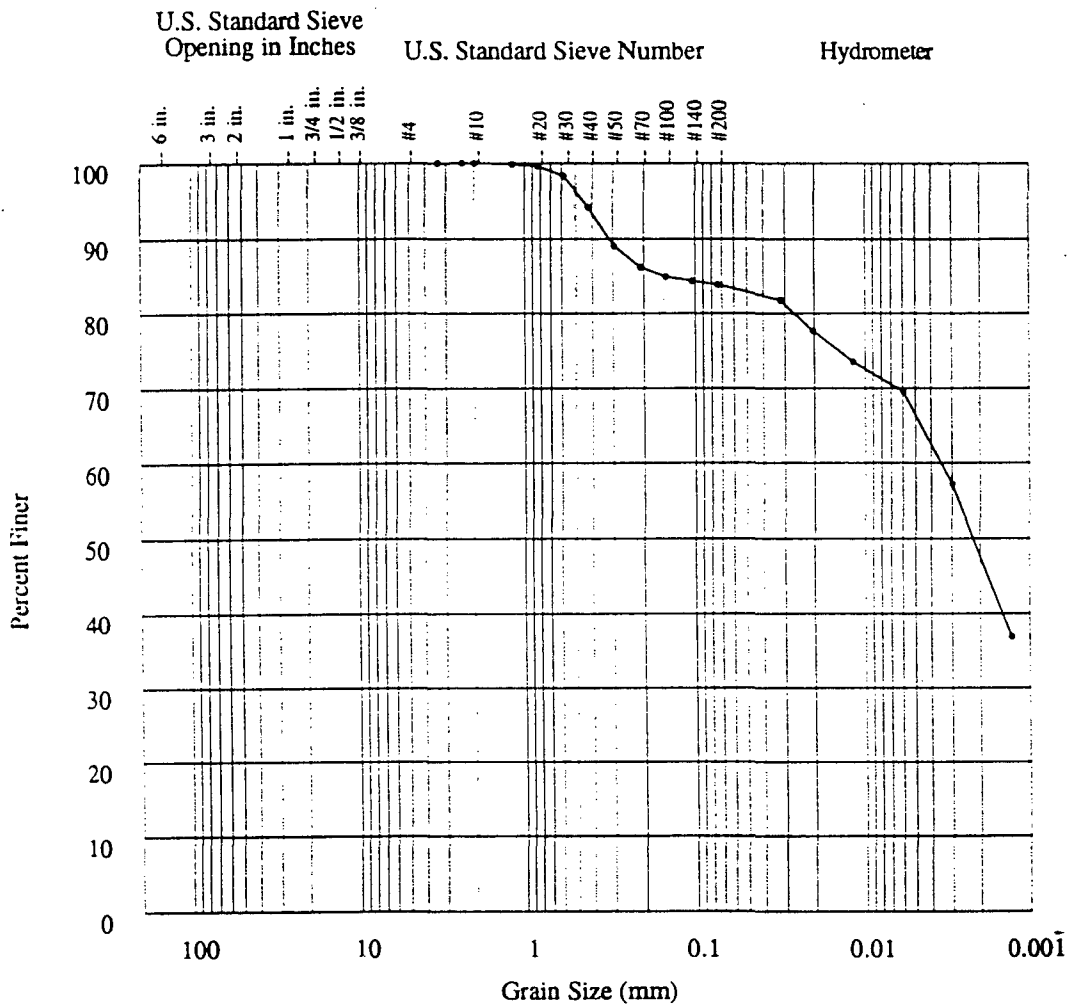
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1854
		AMS ID:	3030
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

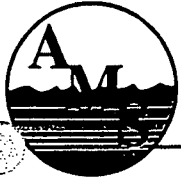
## Grain Size Distribution Test Report



%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	5.83	10.34	17.39	66.44

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0022					

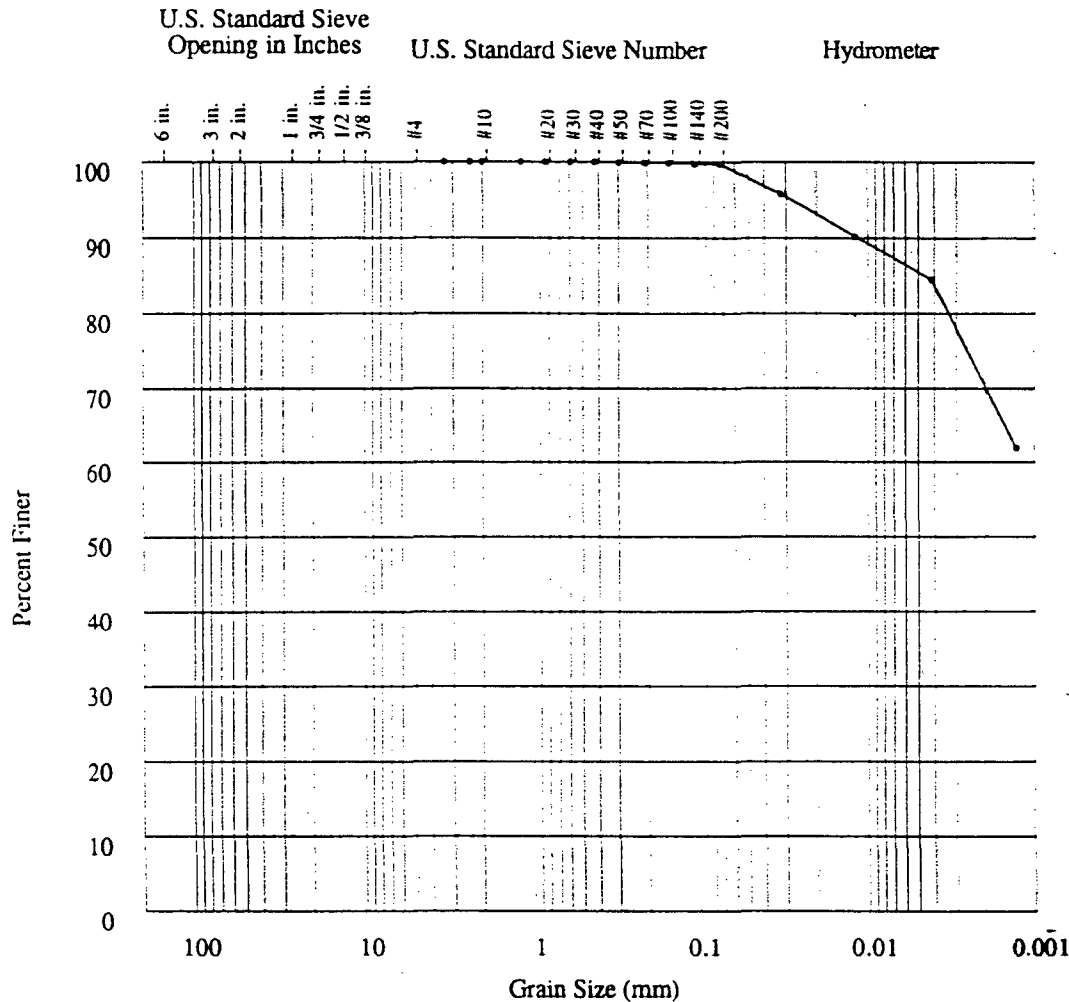
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1855
		AMS ID:	3031
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

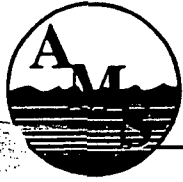
## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.03	0.27	14.42	85.27

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

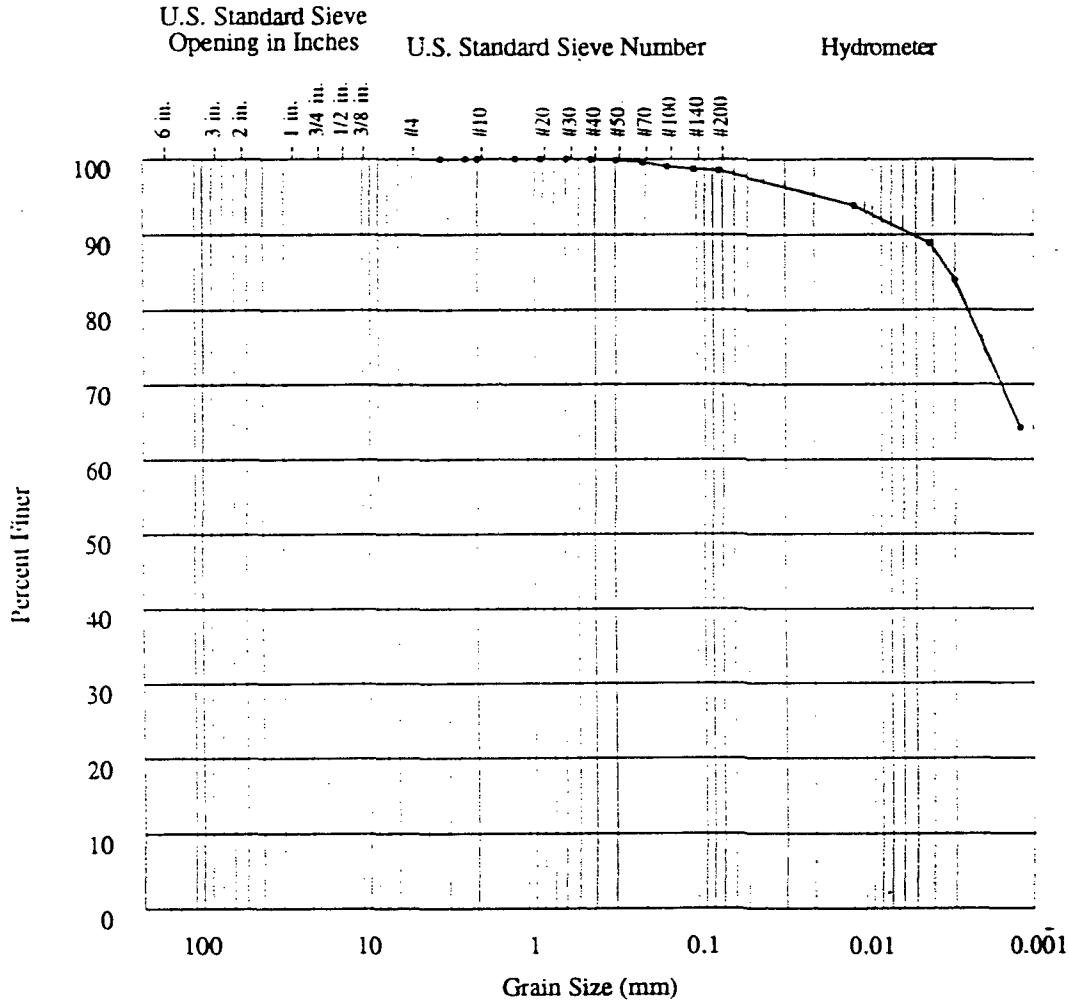
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1856
		AMS ID:	3032
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report

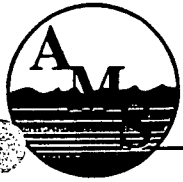


% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.05	1.46	8.43	90.06

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1857
		AMS ID:	3033
		Date:	8/14/98

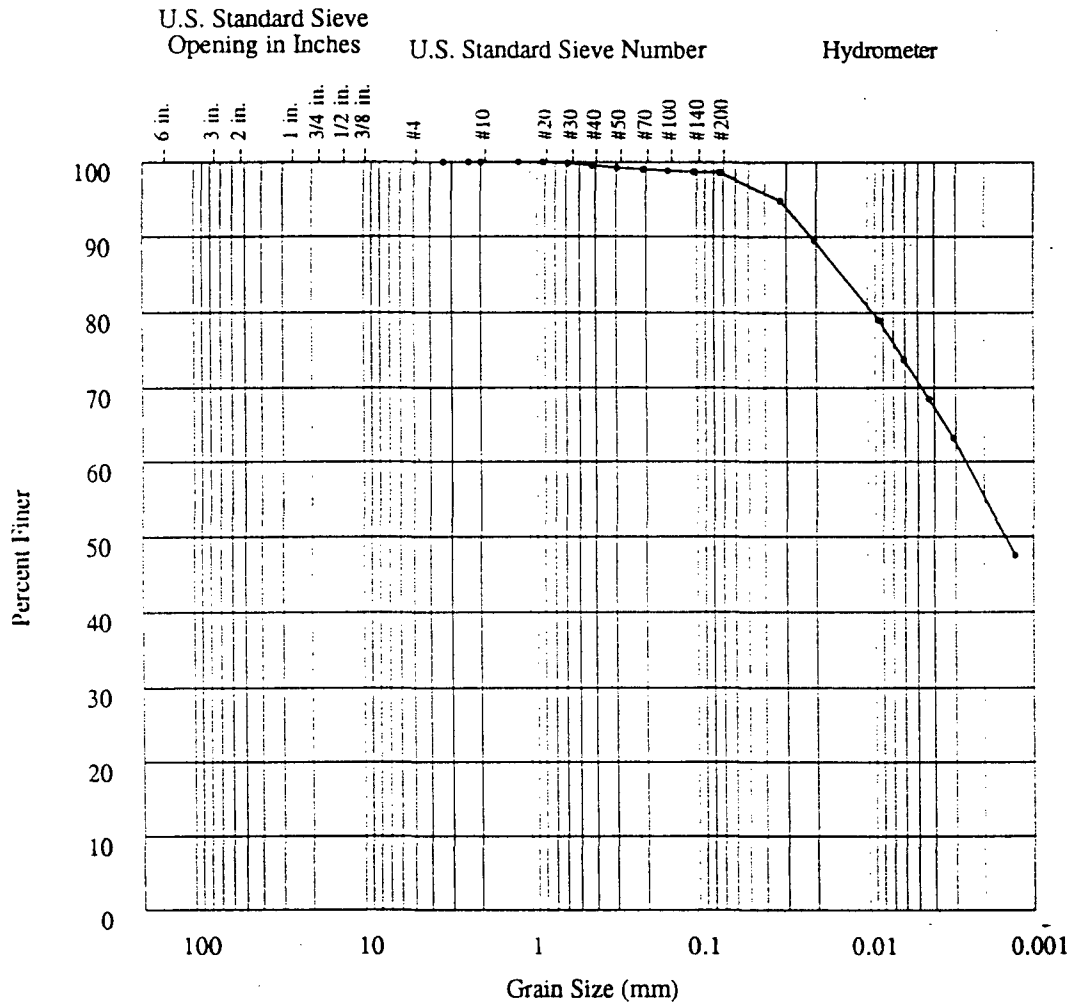




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



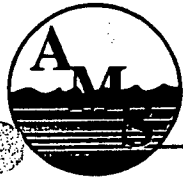
%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
>3"	0.00	0.00	0.46	0.94	28.40	70.20

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0014					

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1859
		AMS ID:	3035
		Date:	8/14/98



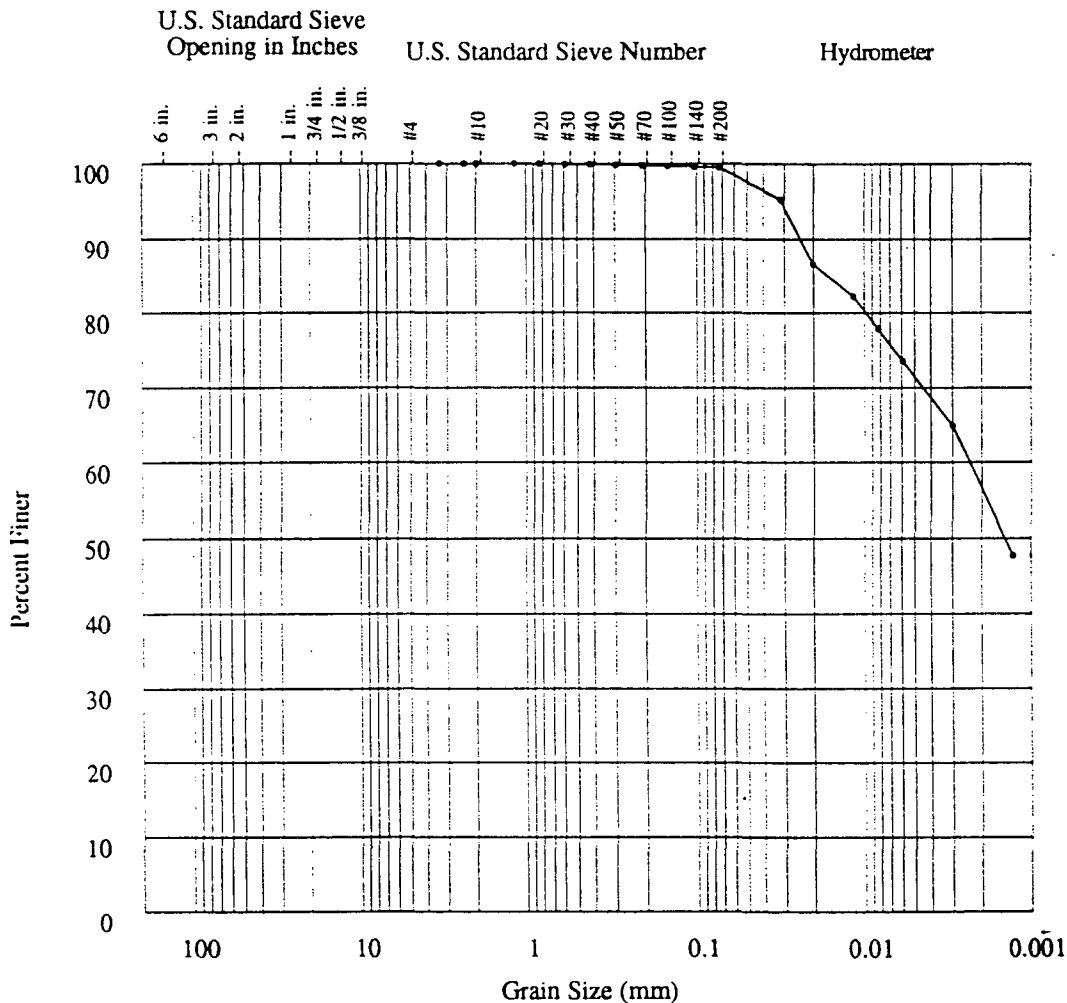




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
	0.00	0.00	0.08	0.41	27.94	71.57

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0014					

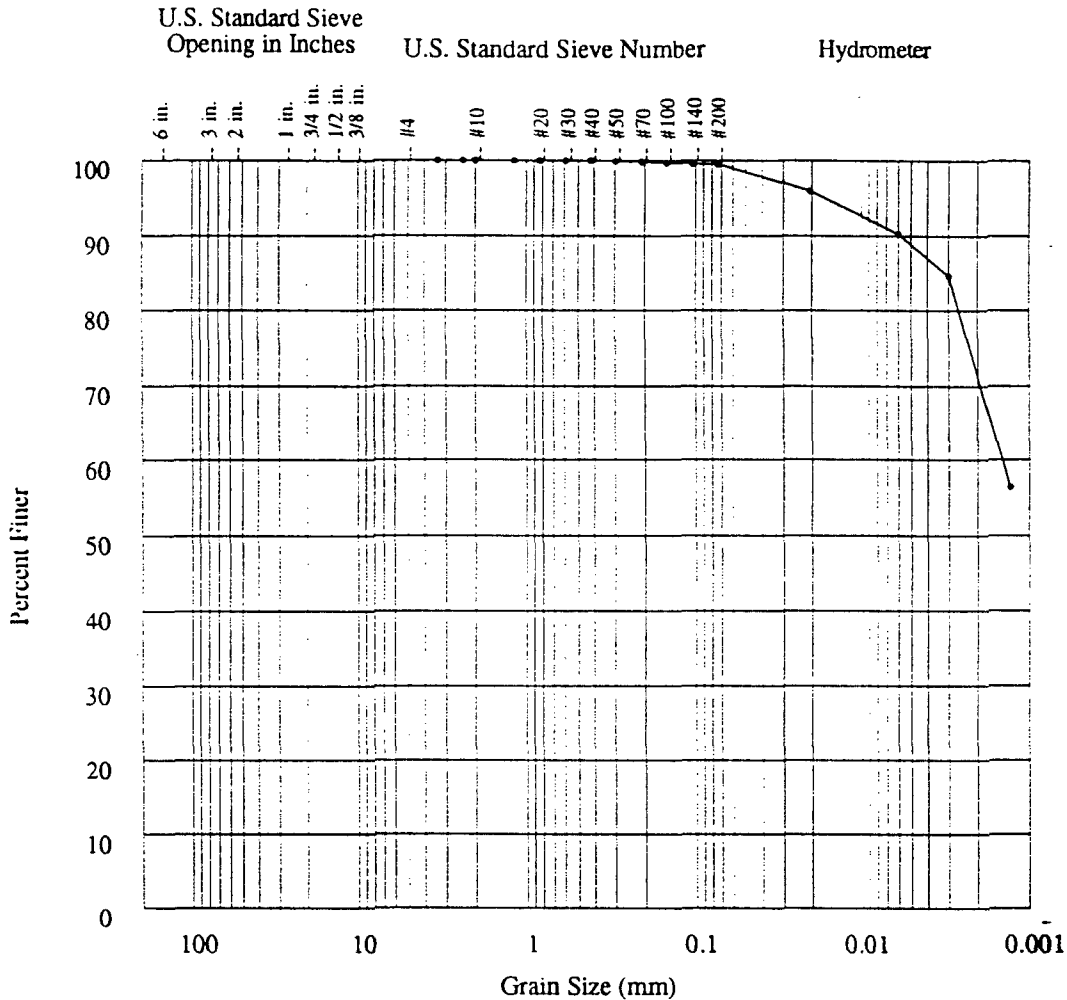
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1861
		AMS ID:	3037
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

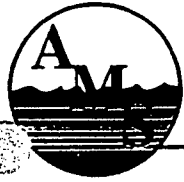
## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.03	0.51	11.11	88.36

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

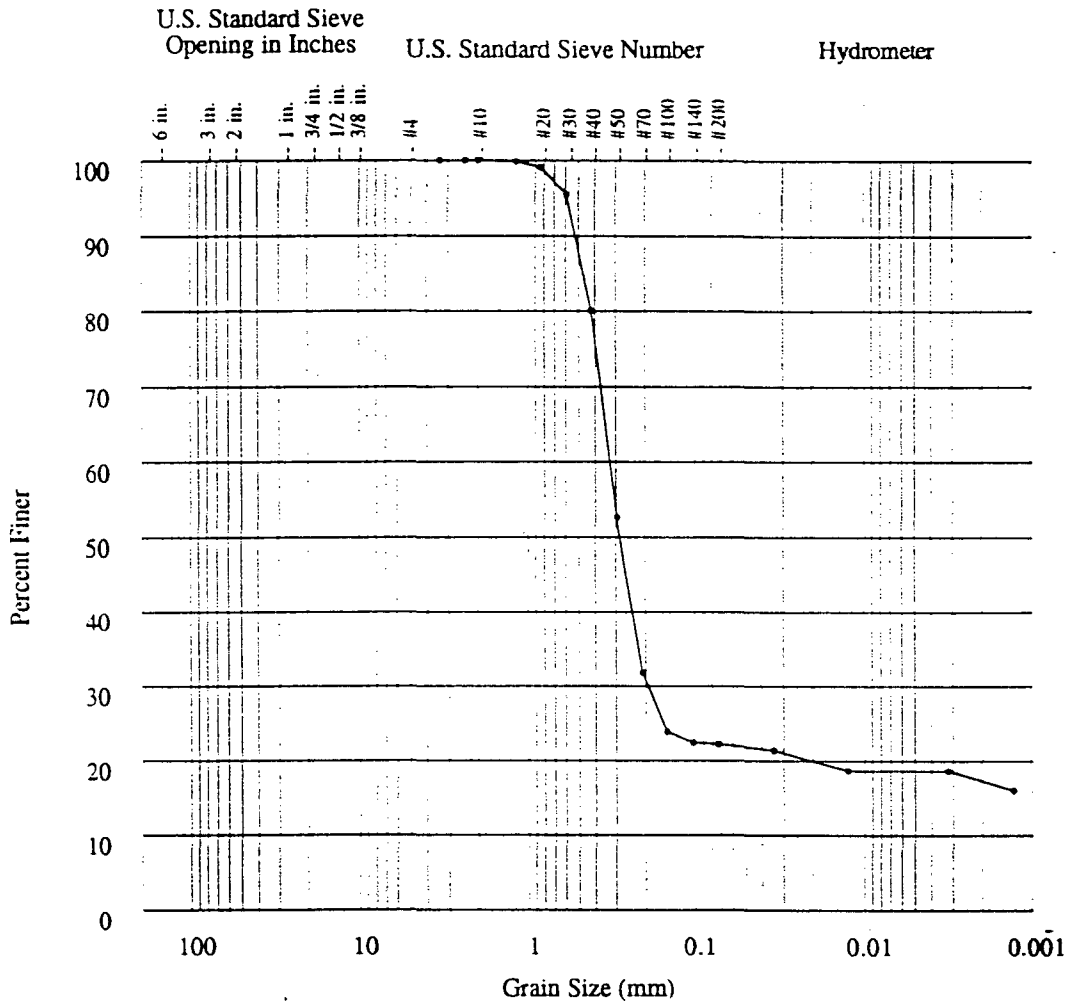
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1862
		AMS ID:	3038
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

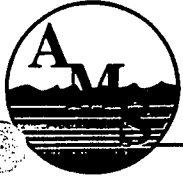
## Grain Size Distribution Test Report



%	% Gravel >3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	19.90	57.87	3.39	18.84

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.28					

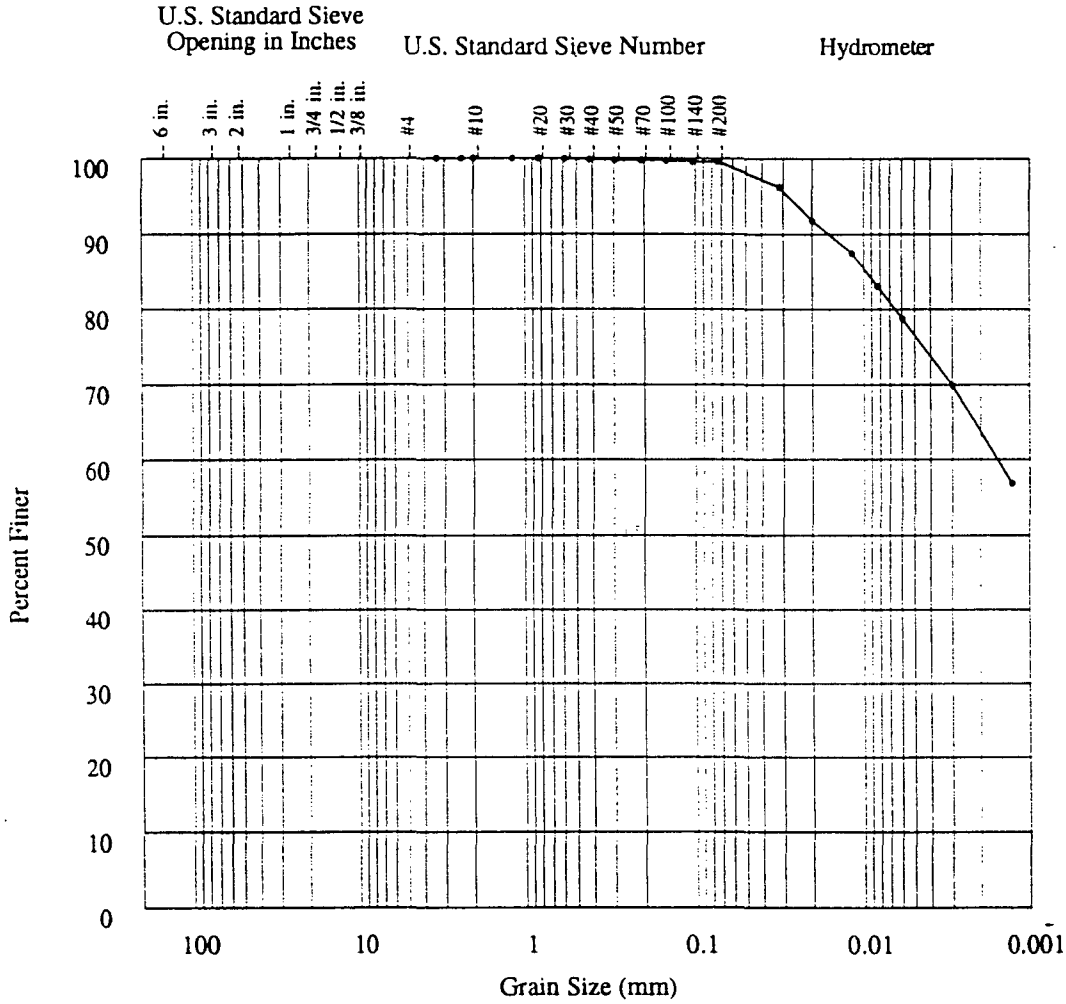
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1863
		AMS ID:	3039
		Date:	8/14/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

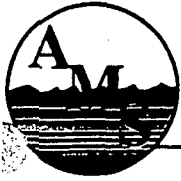
## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.14	0.30	22.85	76.71

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu

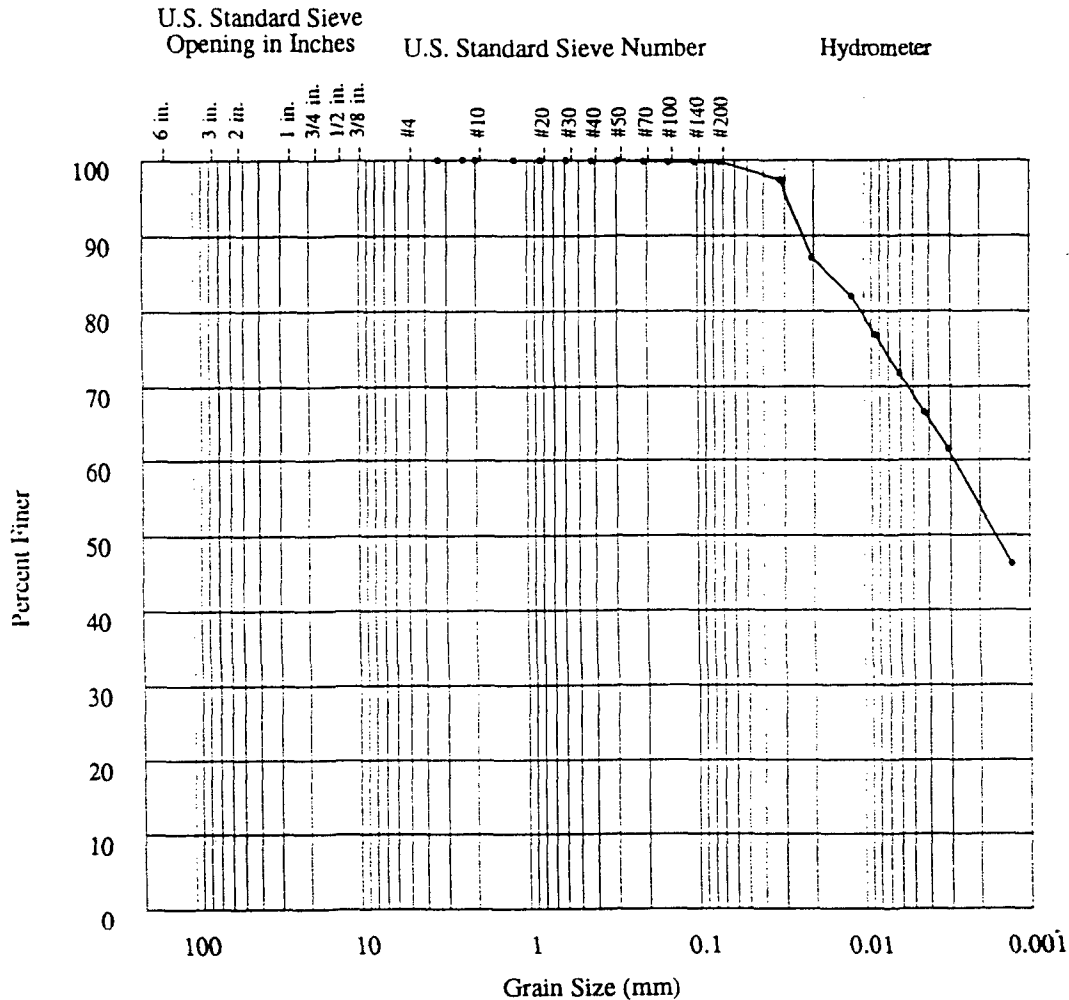
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1864
		AMS ID:	3040
		Date:	8/15/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report

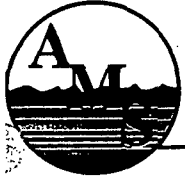


% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	0.08	0.24	31.20	68.49

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0016					

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1865
		AMS ID:	3041
		Date:	8/15/98

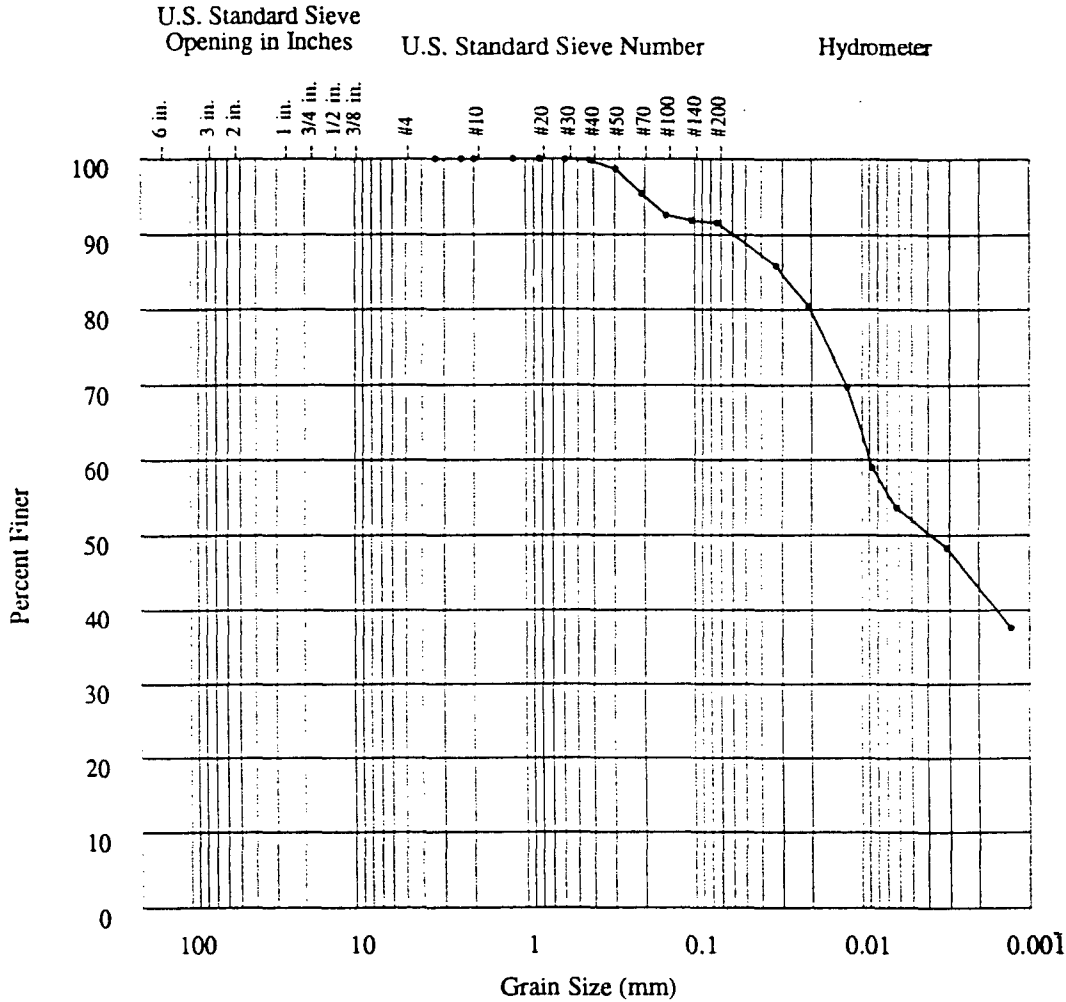




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
>3"	<3" - #4	#6-#10	#16-#40	#50-#200	0.074-0.005 mm	<0.005 mm
0.00	0.00	0.00	0.24	8.23	39.48	52.05

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0040					

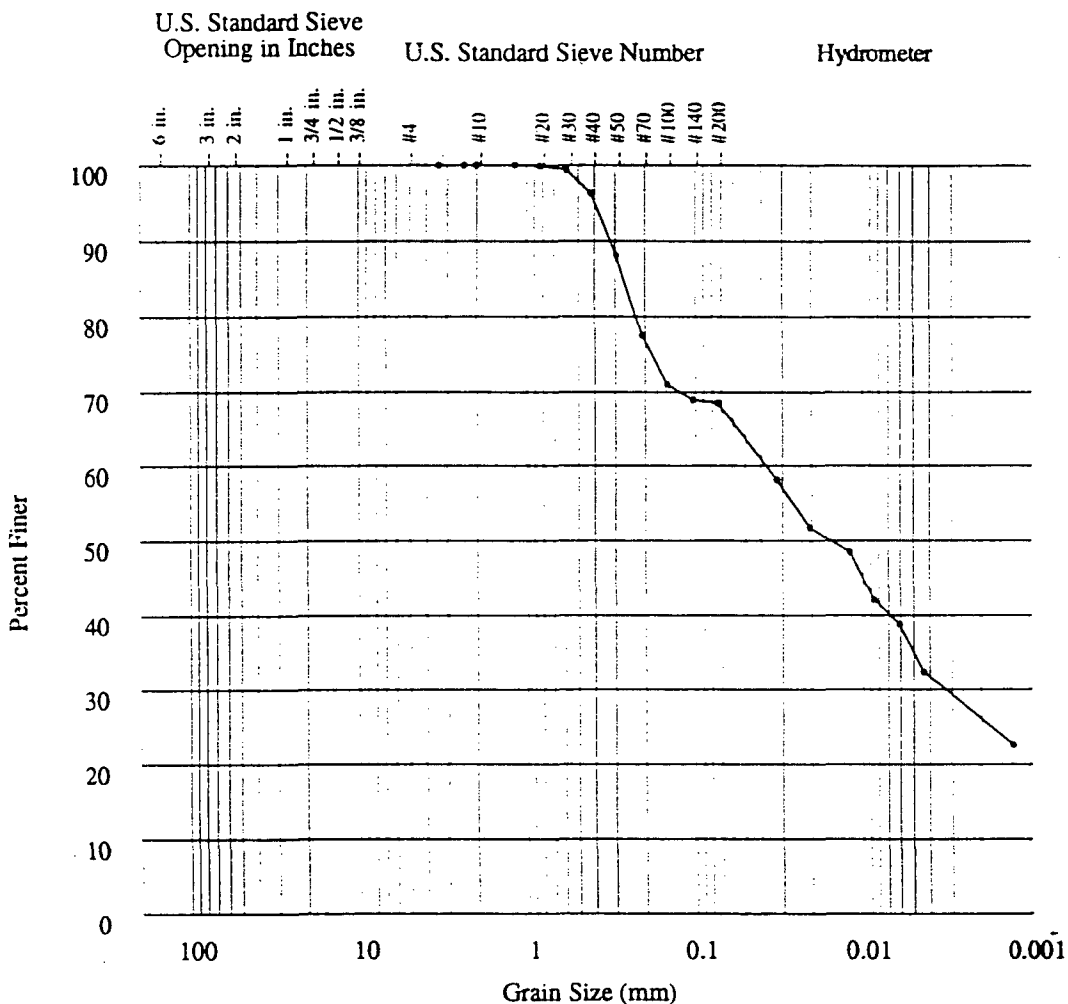
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1867
		AMS ID:	3043
		Date:	8/15/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
>3"	0.00	0.00	3.69	27.78	34.29	34.24

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0160					

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1868
		AMS ID:	3044
		Date:	8/15/98

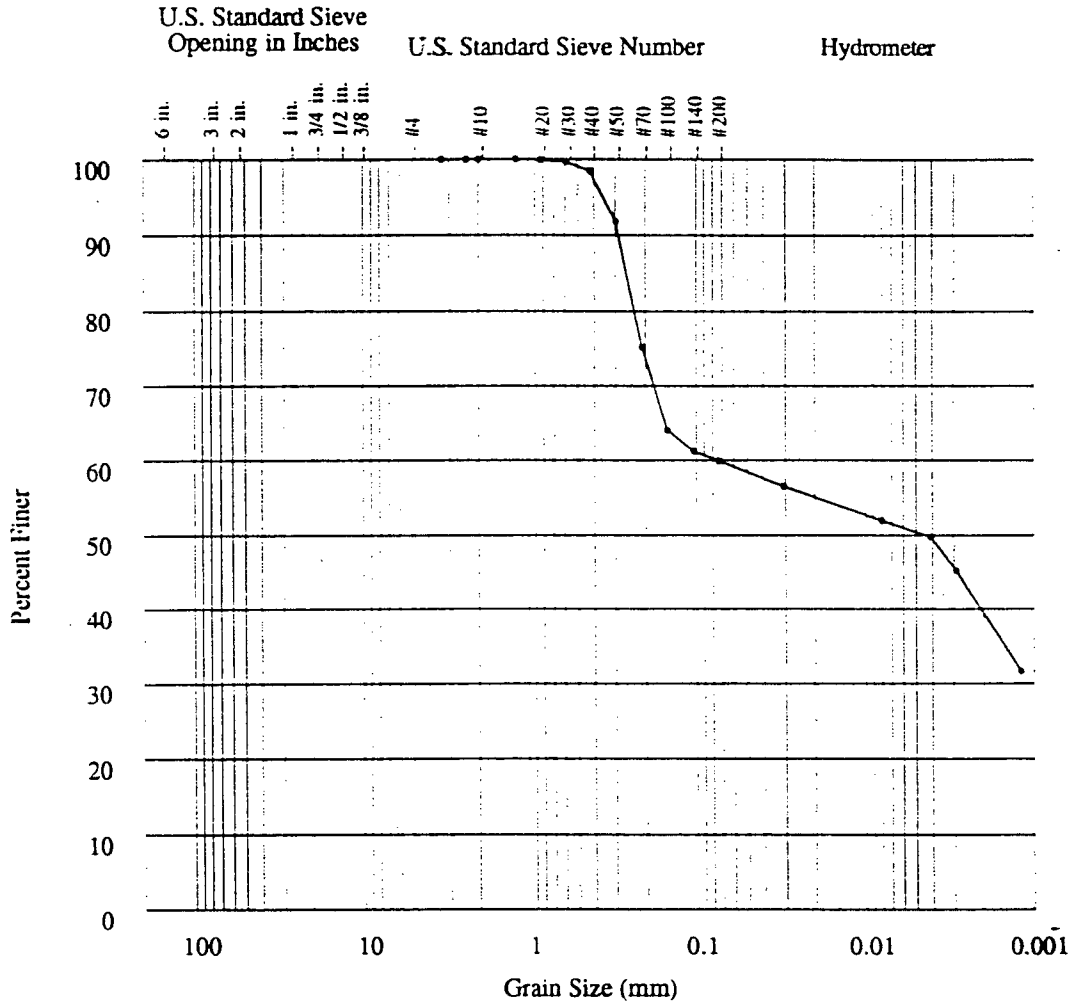




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

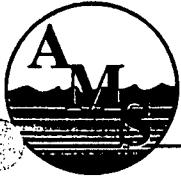
## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	1.50	38.53	9.63	50.34

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0044					

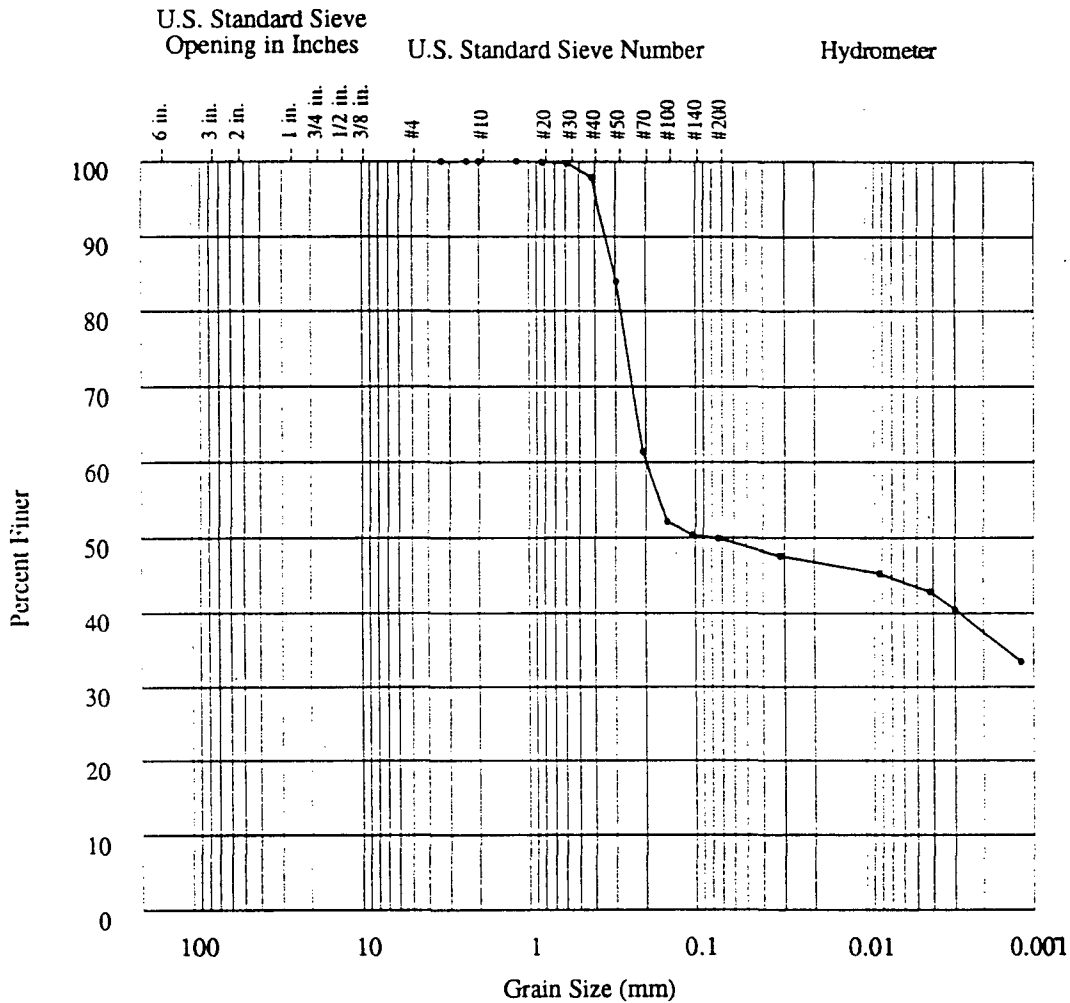
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1870
		AMS ID:	3045
		Date:	8/15/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

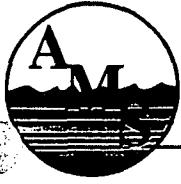
## Grain Size Distribution Test Report



%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
>3"						
0.00	0.00	0.00	2.17	48.01	6.67	43.15

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.088					

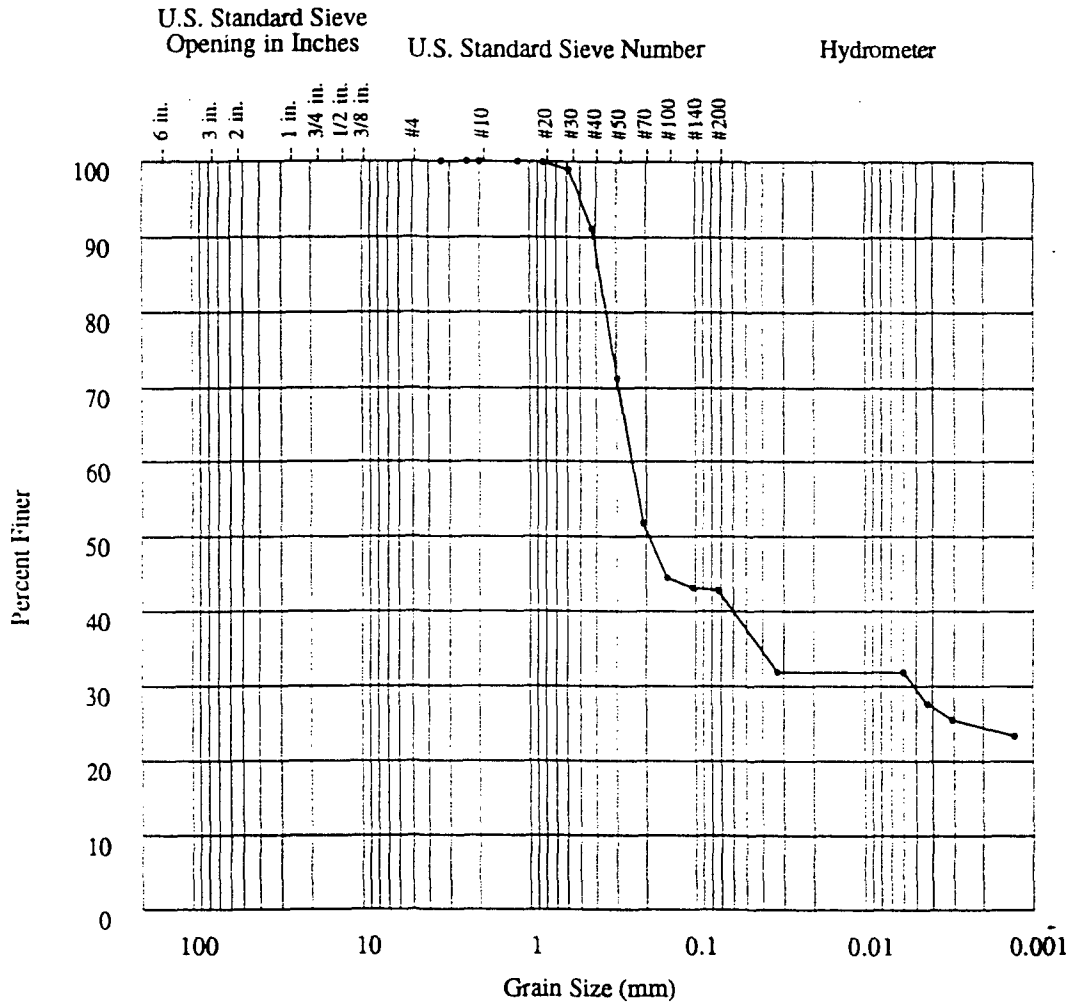
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1871
		AMS ID:	3046
		Date:	8/15/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

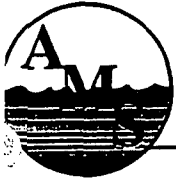
## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	8.86	48.45	12.90	29.79

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.19					

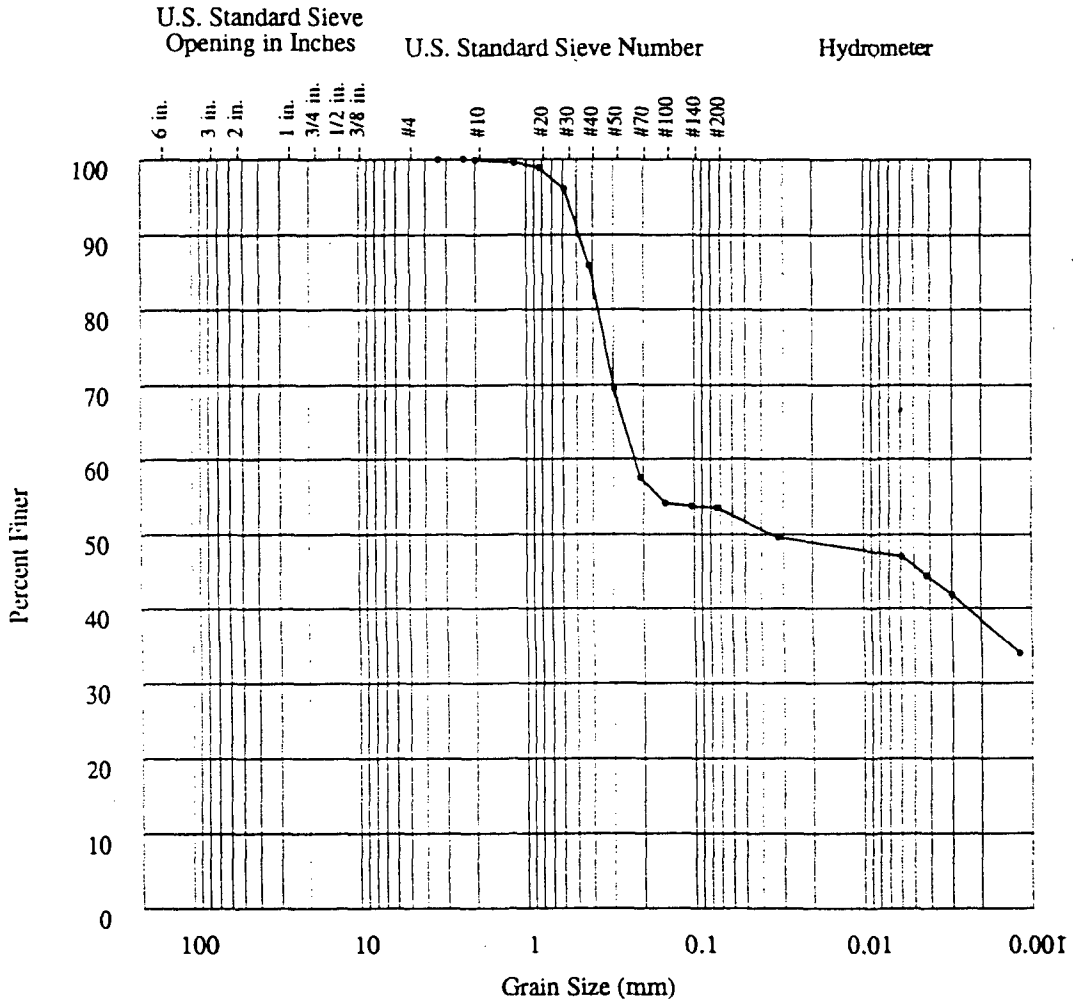
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1872
		AMS ID:	3047
		Date:	8/15/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

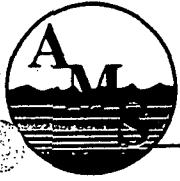
## Grain Size Distribution Test Report



% >3"	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.08	14.02	32.36	8.34	45.20

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0338					

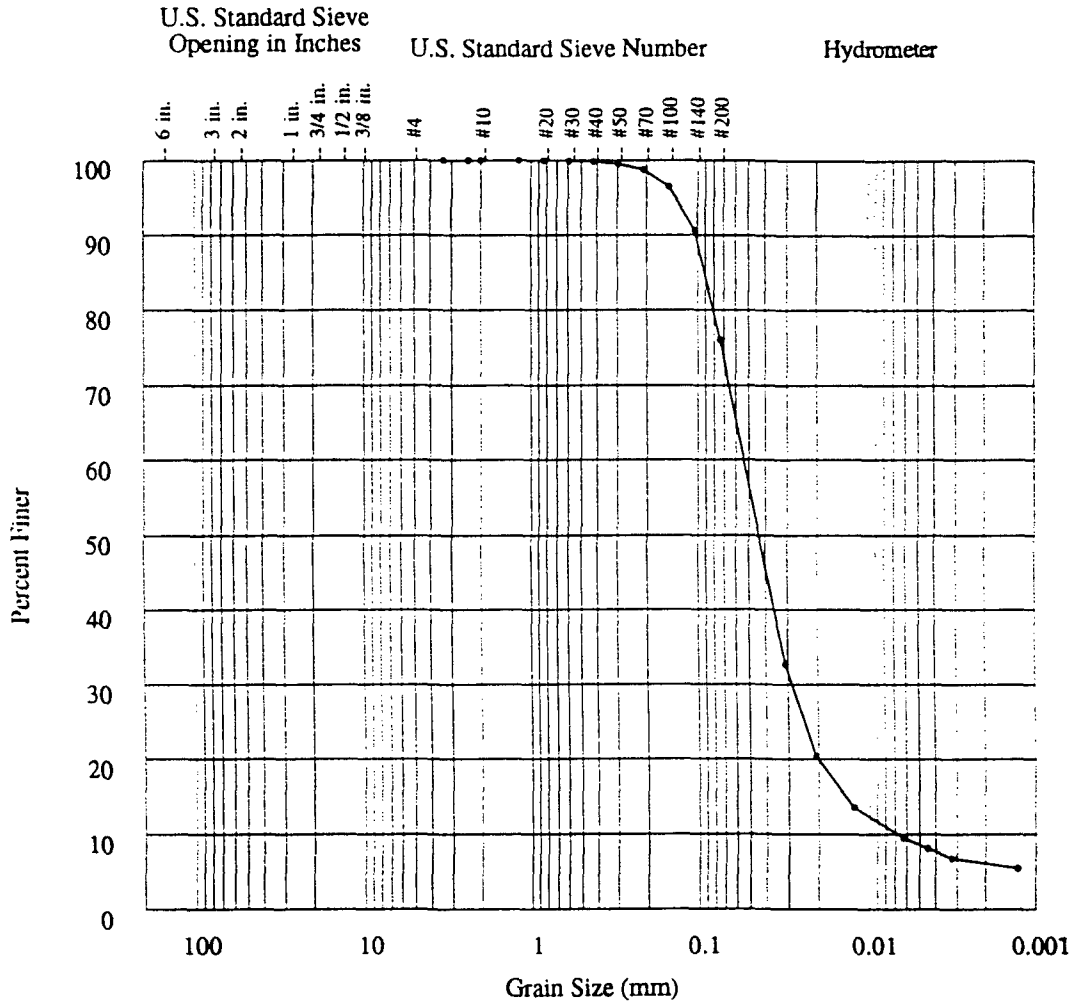
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1873
		AMS ID:	3048
		Date:	8/15/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report

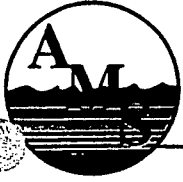


%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
>3"						
0.00	0.00	0.00	0.21	23.78	67.12	8.90

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0434					

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1874
		AMS ID:	3049
		Date:	8/15/98

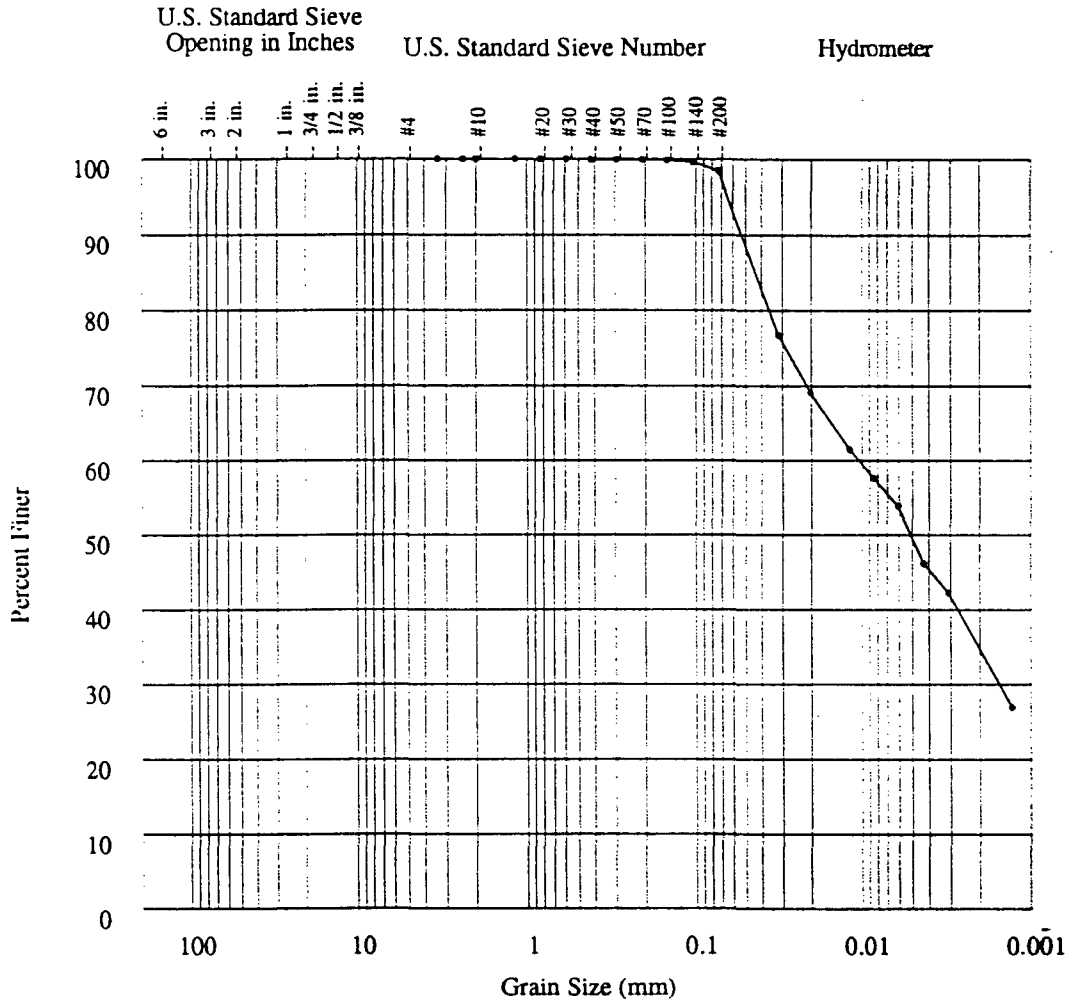




# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
	0.00	0.00	0.06	1.48	48.80	49.66

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.0051					

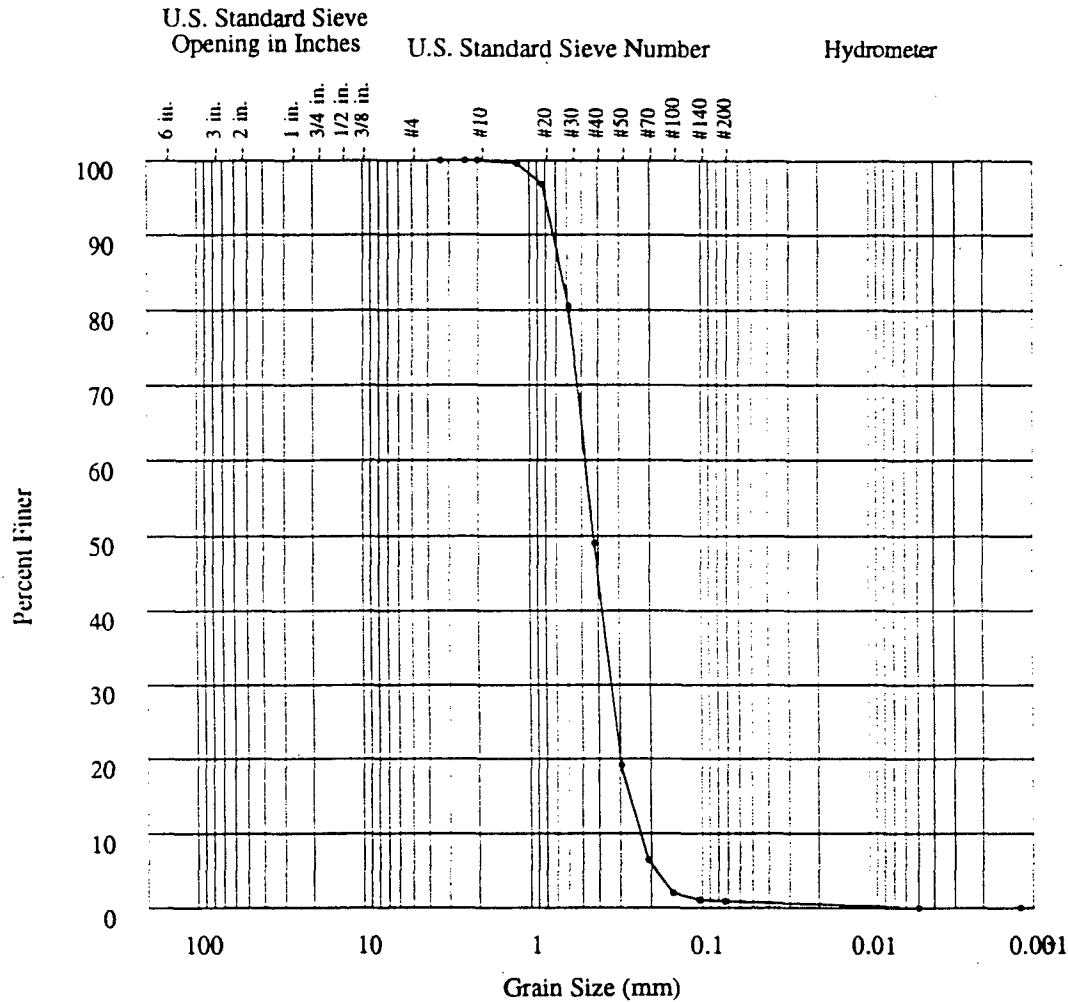
Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1876
		AMS ID:	3051
		Date:	8/15/98



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



%	% Gravel <3" - #4	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	50.97	48.10	0.93	0.00

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.41					

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1877
		AMS ID:	3052
		Date:	8/15/98



## Sieve and Hydrometer Analysis

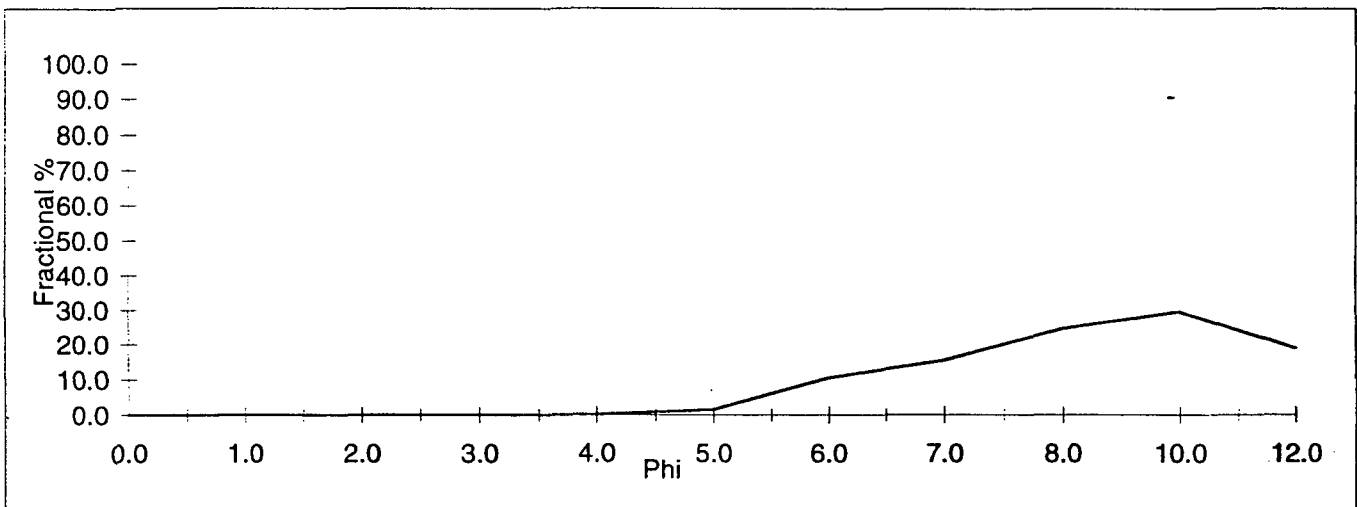
Project	McGrath Lake	ID Org #	1977
Sample I.D.	45015/N1	Lab Number	98.33401
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	1.50	1.50
Medium/Fine Silt	8.0	0.004	50.34	51.84
Clay/Colloids	>8.0	<.004	48.16	100.00

**excluded from analysis**

% Debris 0.4  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.004	7.95	0.0625	4.0	0.0
Median	0.004	7.93	0.0313	5.0	1.5
Sorting	0.365	1.45	0.0156	6.0	11.9
Skewness		-0.04	0.0078	7.0	27.2
Kurtosis		0.73	0.0039	8.0	51.8
			0.0010	10.0	81.3
			0.0002	12.0	100.0



Comments:

## Sieve and Hydrometer Analysis

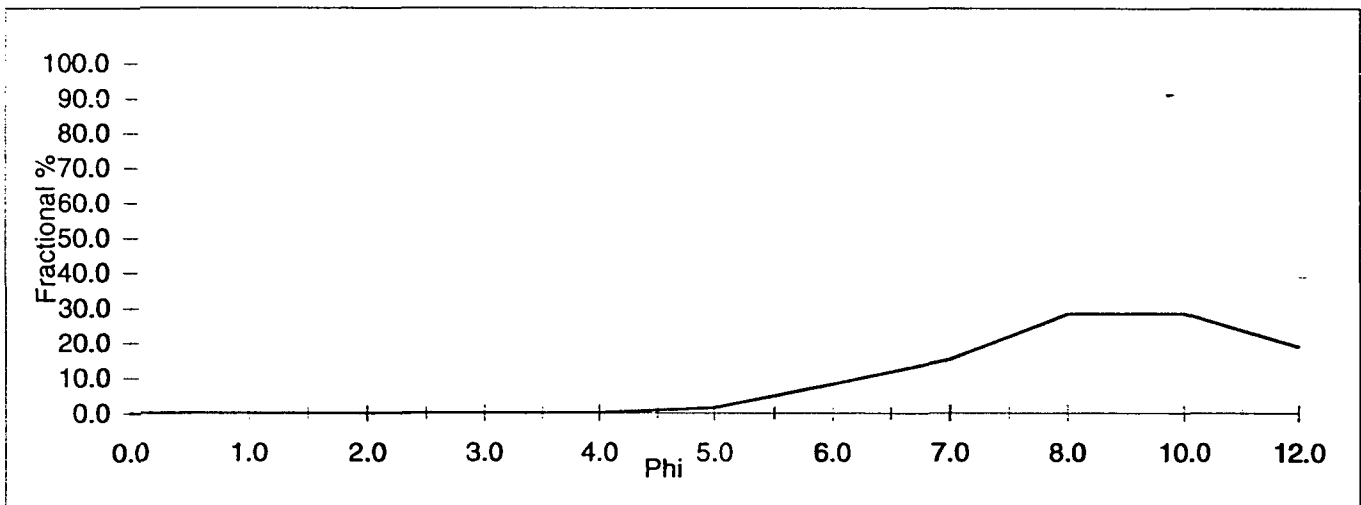
Project	McGrath Lake	ID Org #	1989
Sample I.D.	45015/Z1	Lab Number	98.33402
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	1.46	1.46
Medium/Fine Silt	8.0	0.004	51.41	52.87
Clay/Colloids	>8.0	<.004	47.13	100.00

**excluded from analysis**

% Debris 0.2  
Debris Type ORGANIC MATERIAL, WOOD CHIPS

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.004	8.01	0.0625	4.0	0.0
Median	0.004	7.92	0.0313	5.0	1.5
Sorting	0.381	1.39	0.0156	6.0	9.5
Skewness		0.00	0.0078	7.0	24.6
Kurtosis		0.76	0.0039	8.0	52.9
			0.0010	10.0	81.3
			0.0002	12.0	100.0



**Comments:**

## Sieve and Hydrometer Analysis

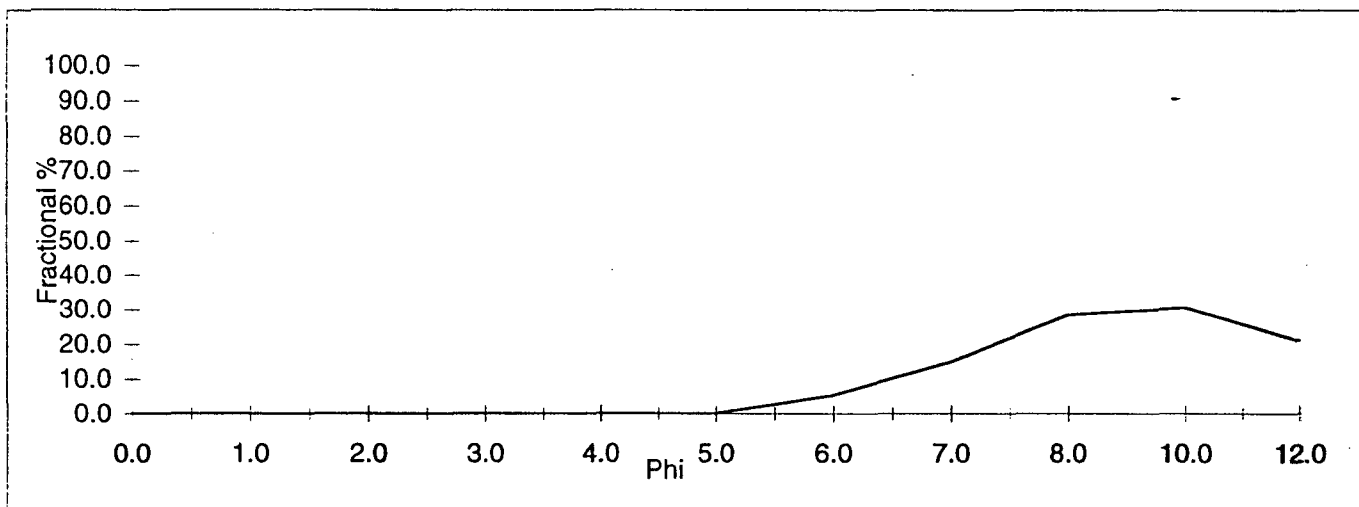
Project	McGrath Lake	ID Org #	1990
Sample I.D.	45015/Z2	Lab Number	98.33403
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.00	0.00
Medium/Fine Silt	8.0	0.004	48.48	48.48
Clay/Colloids	>8.0	<.004	51.52	100.00

**excluded from analysis**

% Debris 1.3  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.003	8.16	0.0625	4.0	0.0
Median	0.004	8.05	0.0313	5.0	0.0
Sorting	0.411	1.28	0.0156	6.0	5.3
Skewness		0.03	0.0078	7.0	20.1
Kurtosis		0.74	0.0039	8.0	48.5
			0.0010	10.0	79.0
			0.0002	12.0	100.0



**Comments:**

## Sieve and Hydrometer Analysis

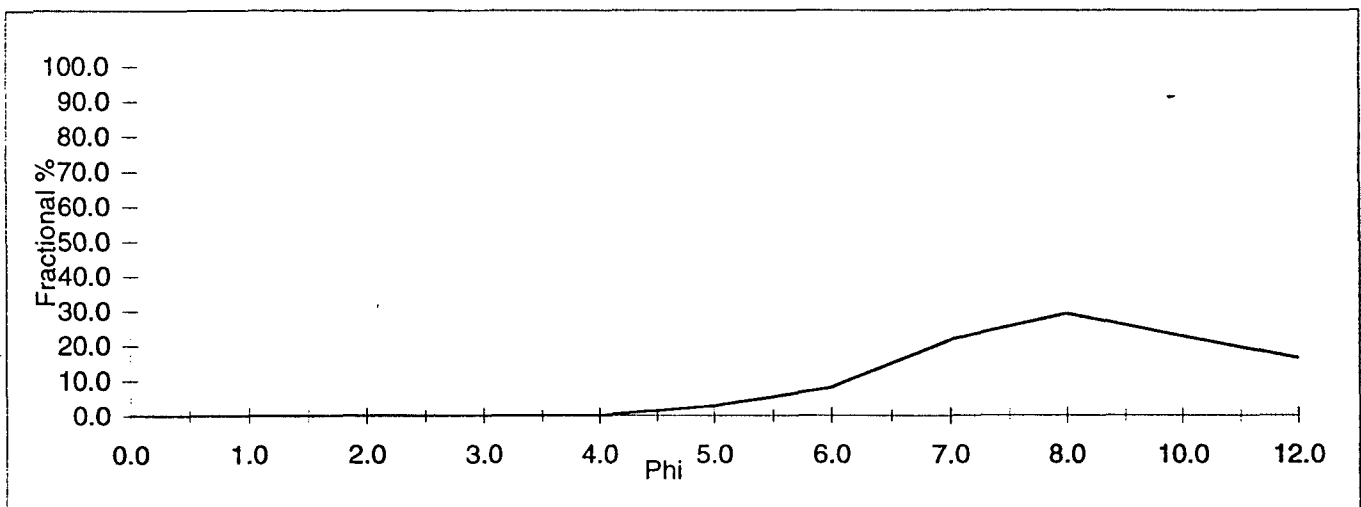
Project	McGrath Lake	ID Org #	1991
Sample I.D.	45015/Z3	Lab Number	98.33404
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	2.76	2.76
Medium/Fine Silt	8.0	0.004	58.46	61.22
Clay/Colloids	>8.0	<.004	38.78	100.00

**excluded from analysis**

% Debris 2.0  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm      phi	0.1250	3.0	0.0	0.0
Mean	0.004      7.81	0.0625	4.0	0.0	0.0
Median	0.005      7.55	0.0313	5.0	2.8	2.8
Sorting	0.371      1.43	0.0156	6.0	10.6	7.9
Skewness	0.14	0.0078	7.0	32.1	21.4
Kurtosis	0.82	0.0039	8.0	61.2	29.1
		0.0010	10.0	83.8	22.6
		0.0002	12.0	100.0	16.2



**Comments:**

## Sieve and Hydrometer Analysis

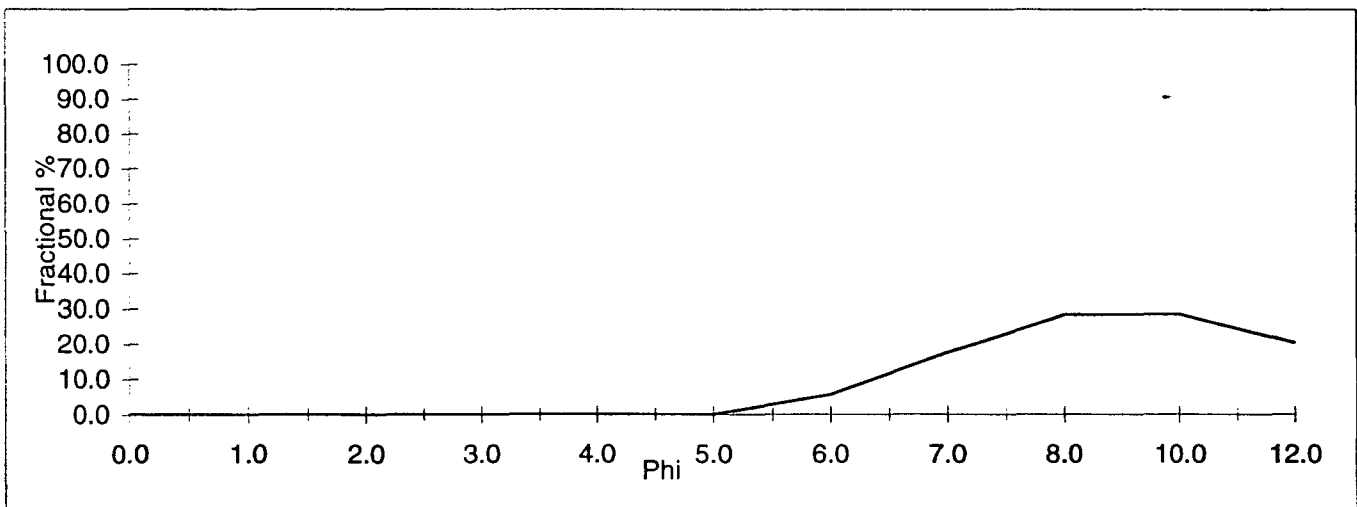
<b>Project</b>	McGrath Lake	ID Org #	1978
<b>Sample I.D.</b>	45024/N2	Lab Number	98.33405
<b>Date</b>	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.00	0.00
Medium/Fine Silt	8.0	0.004	51.27	51.27
Clay/Colloids	>8.0	<.004	48.73	100.00

**excluded from analysis**

% Debris 0.6  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm      phi	0.1250	3.0	0.0	0.0
Mean	0.004	8.08	0.0625	4.0	0.0
Median	0.004	7.97	0.0313	5.0	0.0
Sorting	0.409	1.29	0.0156	6.0	5.4
Skewness		0.06	0.0078	7.0	23.0
Kurtosis		0.69	0.0039	8.0	51.3
			0.0010	10.0	79.6
			0.0002	12.0	100.0



**Comments:**

## Sieve and Hydrometer Analysis

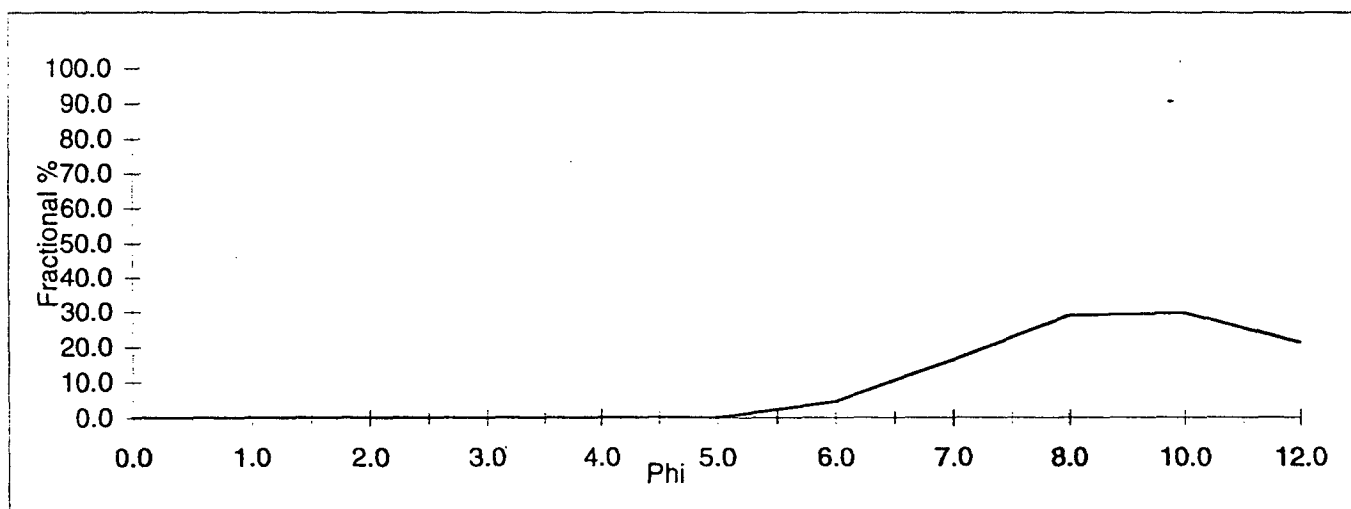
Project	McGrath Lake	ID Org #	1992
Sample I.D.	45024/Z1	Lab Number	98.33406
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.00	0.00
Medium/Fine Silt	8.0	0.004	49.31	49.31
Clay/Colloids	>8.0	<.004	50.69	100.00

**excluded from analysis**

% Debris 0.7  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	0.0	0.0
Grain Size Statistics (Folk & Ward)			0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0	0.0
Mean	0.004	8.16	0.0625	4.0	0.0	0.0
Median	0.004	8.03	0.0313	5.0	0.0	0.0
Sorting	0.421	1.25	0.0156	6.0	4.3	4.3
Skewness		0.07	0.0078	7.0	20.5	16.1
Kurtosis		0.70	0.0039	8.0	49.3	28.8
			0.0010	10.0	78.9	29.6
			0.0002	12.0	100.0	21.1



**Comments:**

## Sieve and Hydrometer Analysis

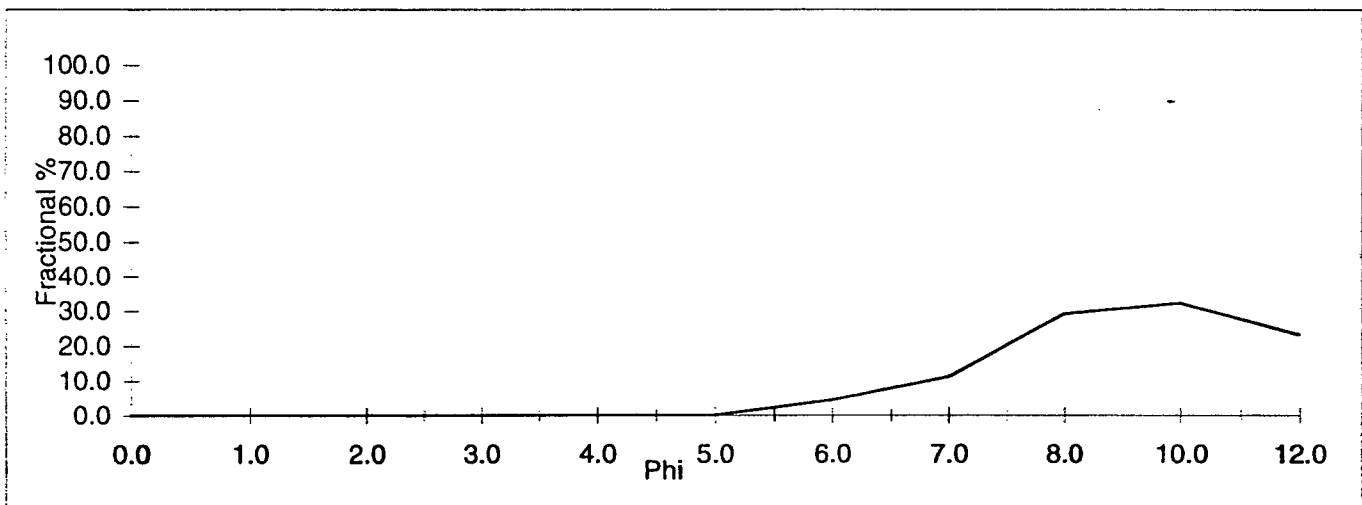
Project	McGrath Lake	ID Org #	1993
Sample I.D.	45024/Z2	Lab Number	98.33407
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.00	0.00
Medium/Fine Silt	8.0	0.004	44.61	44.61
Clay/Colloids	>8.0	<.004	55.39	100.00

**excluded from analysis**

% Debris 0.8  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.003	8.28	0.0625	4.0	0.0
Median	0.004	8.14	0.0313	5.0	0.0
Sorting	0.435	1.20	0.0156	6.0	4.3
Skewness		0.06	0.0078	7.0	15.4
Kurtosis		0.79	0.0039	8.0	44.6
			0.0010	10.0	76.8
			0.0002	12.0	100.0



**Comments:**

## Sieve and Hydrometer Analysis

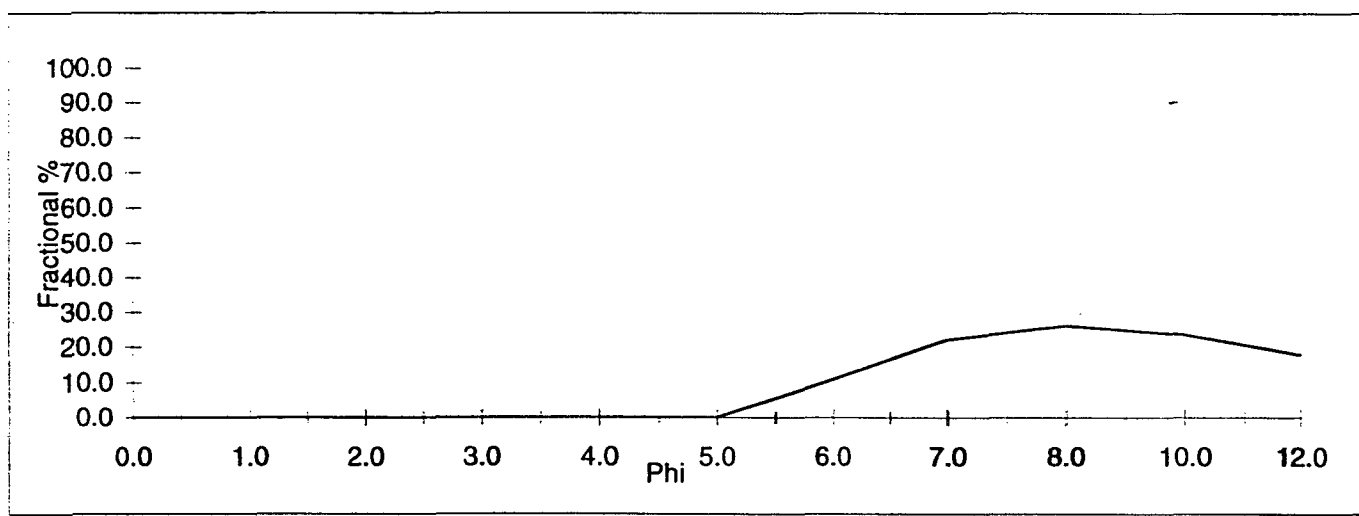
Project	McGrath Lake	ID Org #	1994
Sample I.D.	45024/Z3	Lab Number	98.33408
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.00	0.00
Medium/Fine Silt	8.0	0.004	58.93	58.93
Clay/Colloids	>8.0	<.004	41.07	100.00

**excluded from analysis**

% Debris 9.3  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.004	7.83	0.0625	4.0	0.0
Median	0.005	7.65	0.0313	5.0	0.0
Sorting	0.379	1.40	0.0156	6.0	10.8
Skewness		0.14	0.0078	7.0	32.8
Kurtosis		0.66	0.0039	8.0	58.9
			0.0010	10.0	82.3
			0.0002	12.0	100.0



Comments:



## Sieve and Hydrometer Analysis

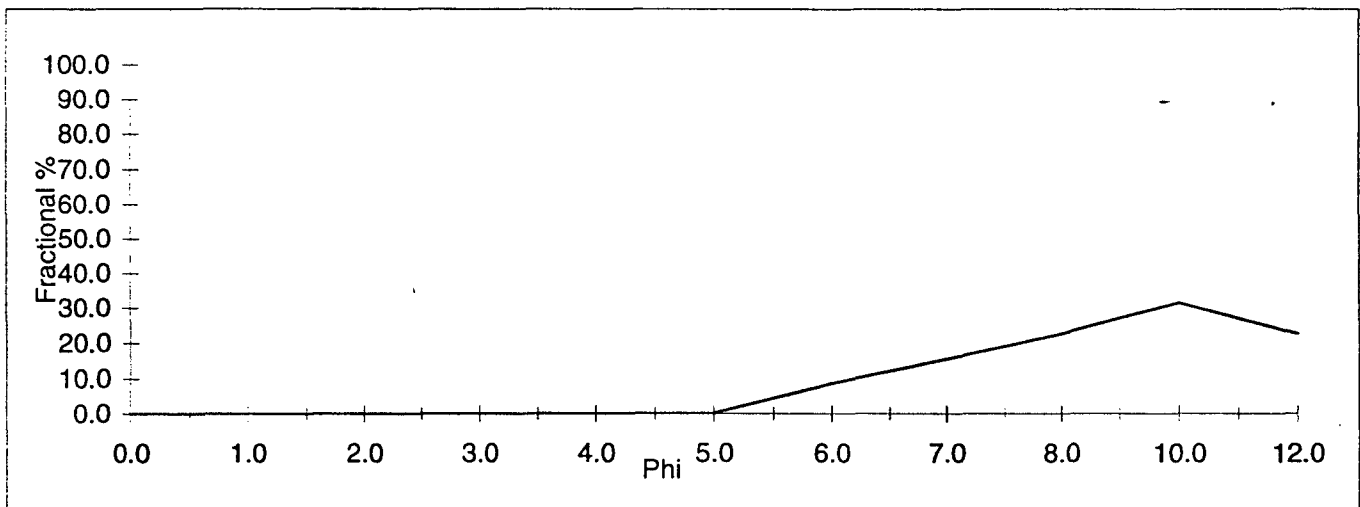
Project	McGrath Lake	ID Org #	1979
Sample I.D.	45034/N3	Lab Number	98.33409
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.00	0.00
Medium/Fine Silt	8.0	0.004	46.18	46.18
Clay/Colloids	>8.0	<.004	53.82	100.00

**excluded from analysis**

% Debris 0.3  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.004	8.11	0.0625	4.0	0.0
Median	0.004	8.16	0.0313	5.0	0.0
Sorting	0.387	1.37	0.0156	6.0	8.5
Skewness		-0.09	0.0078	7.0	23.8
Kurtosis		0.71	0.0039	8.0	46.2
			0.0010	10.0	77.6
			0.0002	12.0	100.0



**Comments:**

## Sieve and Hydrometer Analysis

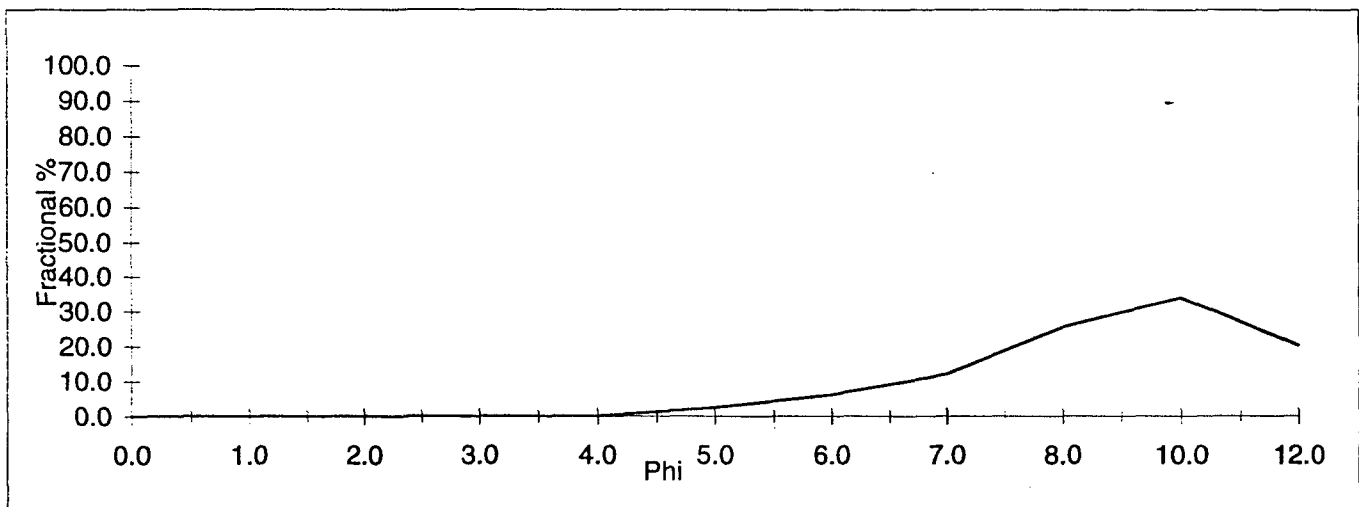
Project	McGrath Lake	ID Org #	1995
Sample I.D.	45034/Z1	Lab Number	98.3341
Date	10/28/98		

	size ranges			
	phi	mm	Fract. %	Cum. %
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	2.33	2.33
Medium/Fine Silt	8.0	0.004	43.65	45.98
Clay/Colloids	>8.0	<.004	54.02	100.00

**excluded from analysis**

% Debris 2.7  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0	0.0
Mean	0.003	8.19	0.0625	4.0	0.0	0.0
Median	0.004	8.15	0.0313	5.0	2.3	2.3
Sorting	0.397	1.33	0.0156	6.0	8.4	6.1
Skewness		-0.08	0.0078	7.0	20.4	12.0
Kurtosis		0.81	0.0039	8.0	46.0	25.6
			0.0010	10.0	79.8	33.8
			0.0002	12.0	100.0	20.2



**Comments:**

## Sieve and Hydrometer Analysis

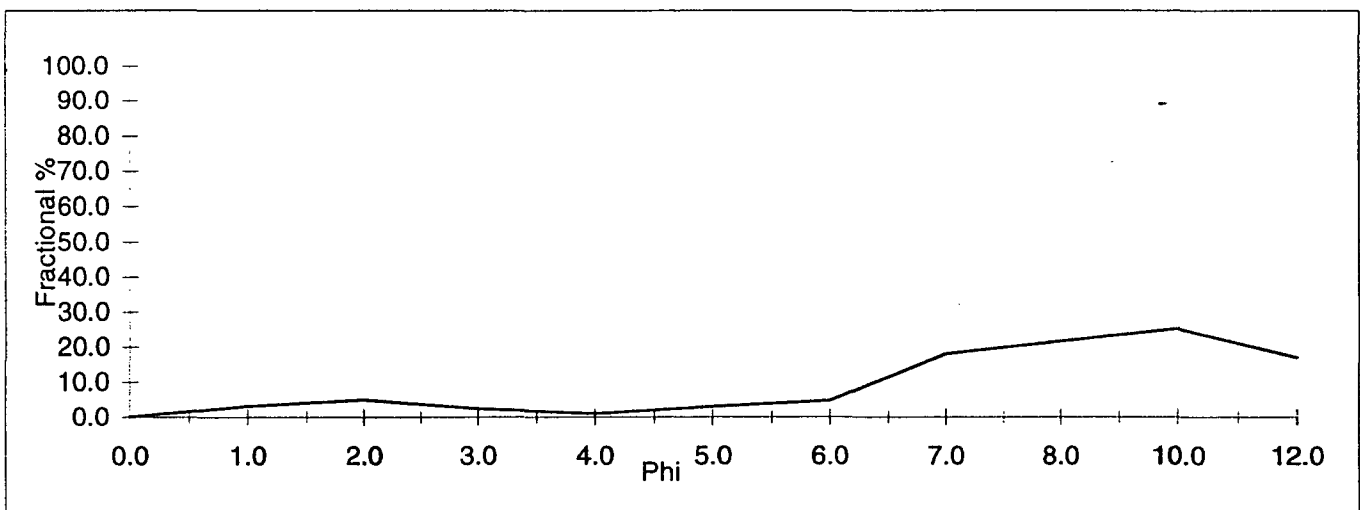
Project	McGrath Lake	ID Org #	1996
Sample I.D.	45034/Z2	Lab Number	98.33411
Date	10/28/98		

	size ranges			
	phi	mm	Fract. %	Cum. %
Coarse Sand	1.0	0.500	3.07	3.07
Medium/Fine Sand	4.0	0.063	8.22	11.29
Coarse Silt	5.0	0.031	2.83	14.12
Medium/Fine Silt	8.0	0.004	44.01	58.13
Clay/Colloids	>8.0	<.004	41.87	100.00

**excluded from analysis**

% Debris 0.8  
Debris Type ORGANIC MATERIAL, WOOD CHIPS

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	3.1	3.1
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	8.1	5.0
	mm	phi	0.1250	3.0	10.4
Mean	0.005	7.56	0.0625	4.0	11.3
Median	0.005	7.60	0.0313	5.0	14.1
Sorting	0.213	2.23	0.0156	6.0	18.7
Skewness		-0.25	0.0078	7.0	36.6
Kurtosis		1.26	0.0039	8.0	58.1
			0.0010	10.0	83.3
			0.0002	12.0	100.0
					16.7



**Comments:**

## Sieve and Hydrometer Analysis

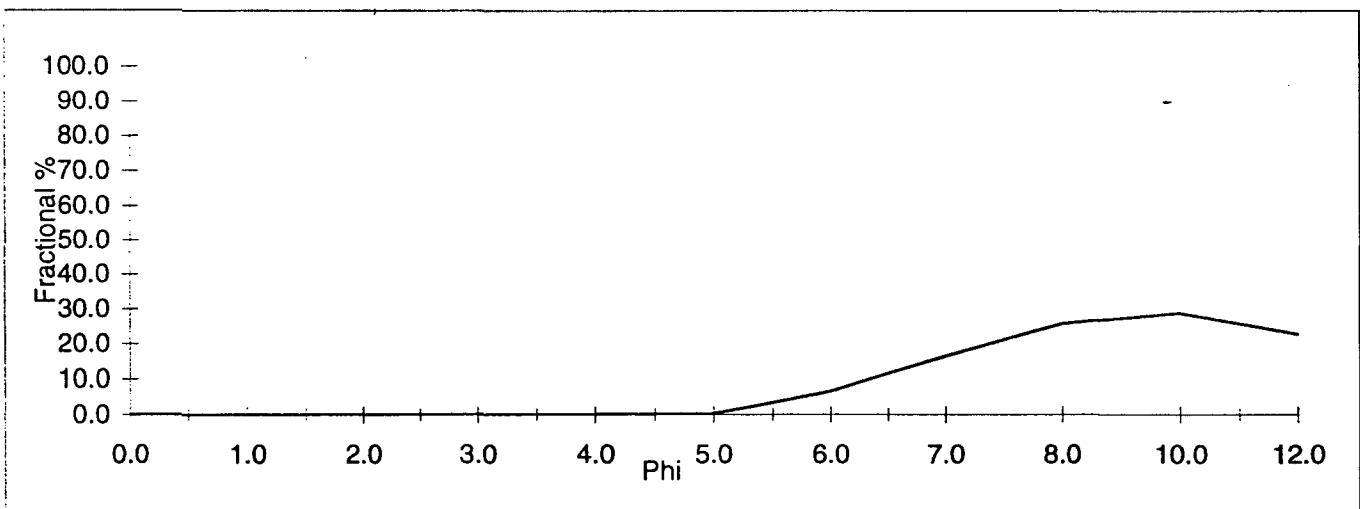
<b>Project</b>	McGrath Lake	ID Org #	1980
<b>Sample I.D.</b>	45044/M4	Lab Number	98.33412
<b>Date</b>	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.09	0.09
Medium/Fine Silt	8.0	0.004	48.47	48.56
Clay/Colloids	>8.0	<.004	51.44	100.00

**excluded from analysis**

% Debris 0.4  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.004	8.13	0.0625	4.0	0.0
Median	0.004	8.06	0.0313	5.0	0.1
Sorting	0.400	1.32	0.0156	6.0	6.4
Skewness		0.00	0.0078	7.0	22.8
Kurtosis		0.71	0.0039	8.0	48.6
			0.0010	10.0	77.4
			0.0002	12.0	100.0



**Comments:**

## Sieve and Hydrometer Analysis

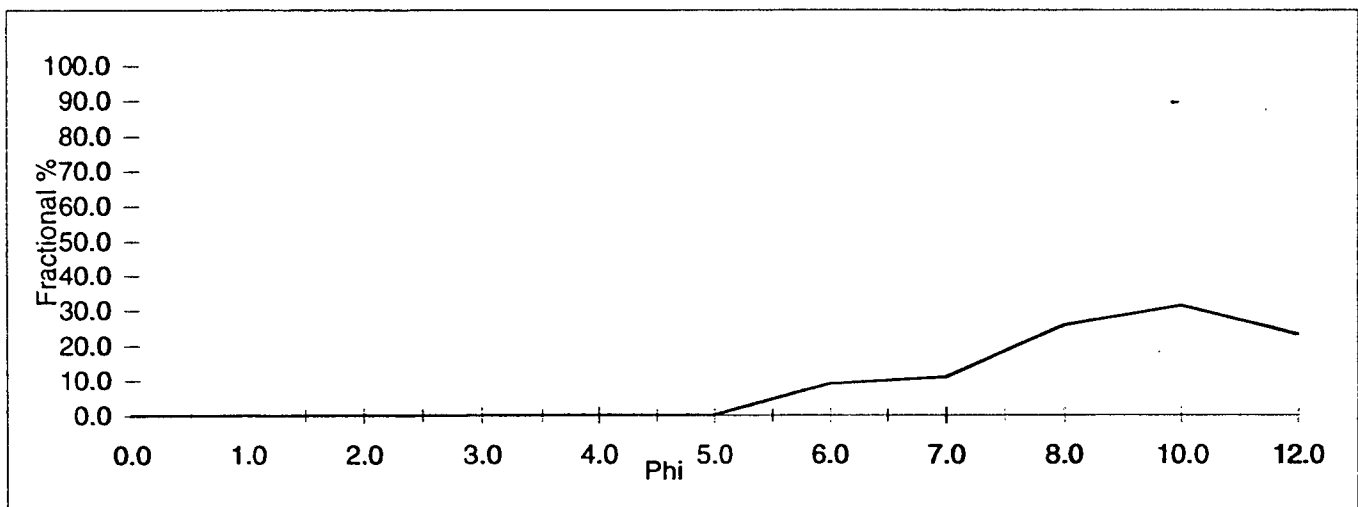
<b>Project</b>	McGrath Lake	<b>ID Org #</b>	1981
<b>Sample I.D.</b>	45053/M5	<b>Lab Number</b>	98.33413
<b>Date</b>	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.00	0.00
Medium/Fine Silt	8.0	0.004	45.54	45.54
Clay/Colloids	>8.0	<.004	54.46	100.00

**excluded from analysis**

% Debris 0.8  
Debris Type ORGANIC MATERIAL, WOOD CHIPS

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.003	8.21	0.0625	4.0	0.0
Median	0.003	8.17	0.0313	5.0	0.0
Sorting	0.404	1.31	0.0156	6.0	8.9
Skewness	-0.05	0.0078	7.0	19.8	10.9
Kurtosis	0.77	0.0039	8.0	45.5	25.7
		0.0010	10.0	76.8	31.3
		0.0002	12.0	100.0	23.2



**Comments:**

## Sieve and Hydrometer Analysis

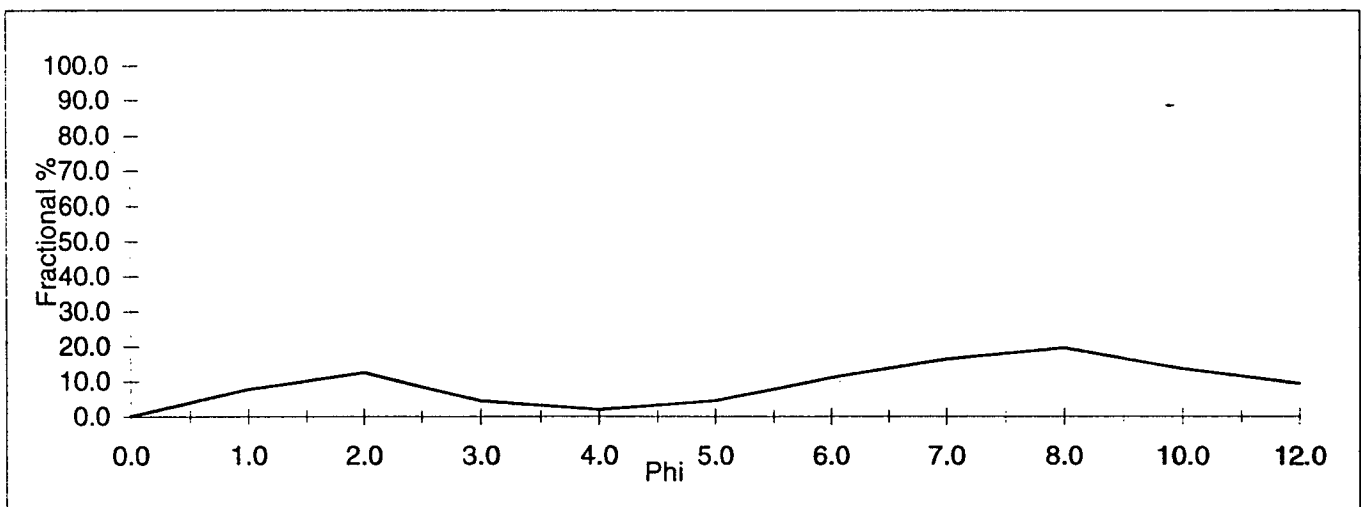
Project	McGrath Lake	ID Org #	1997
Sample I.D.	45053/Z1	Lab Number	98.33414
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	7.69	7.69
Medium/Fine Sand	4.0	0.063	18.63	26.32
Coarse Silt	5.0	0.031	4.34	30.66
Medium/Fine Silt	8.0	0.004	46.48	77.14
Clay/Colloids	>8.0	<.004	22.86	100.00

**excluded from analysis**

% Debris 1.0  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	7.7	7.7
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	20.1	12.4
	mm	phi	0.1250	3.0	24.4	4.4
Mean	0.019	5.75	0.0625	4.0	26.3	1.9
Median	0.010	6.68	0.0313	5.0	30.7	4.3
Sorting	0.125	3.00	0.0156	6.0	41.5	10.9
Skewness	-0.34	0.0078	7.0	57.7	16.2	16.2
Kurtosis	0.83	0.0039	8.0	77.1	19.4	19.4
			0.0010	10.0	90.6	13.5
			0.0002	12.0	100.0	9.4



**Comments:**

## Sieve and Hydrometer Analysis

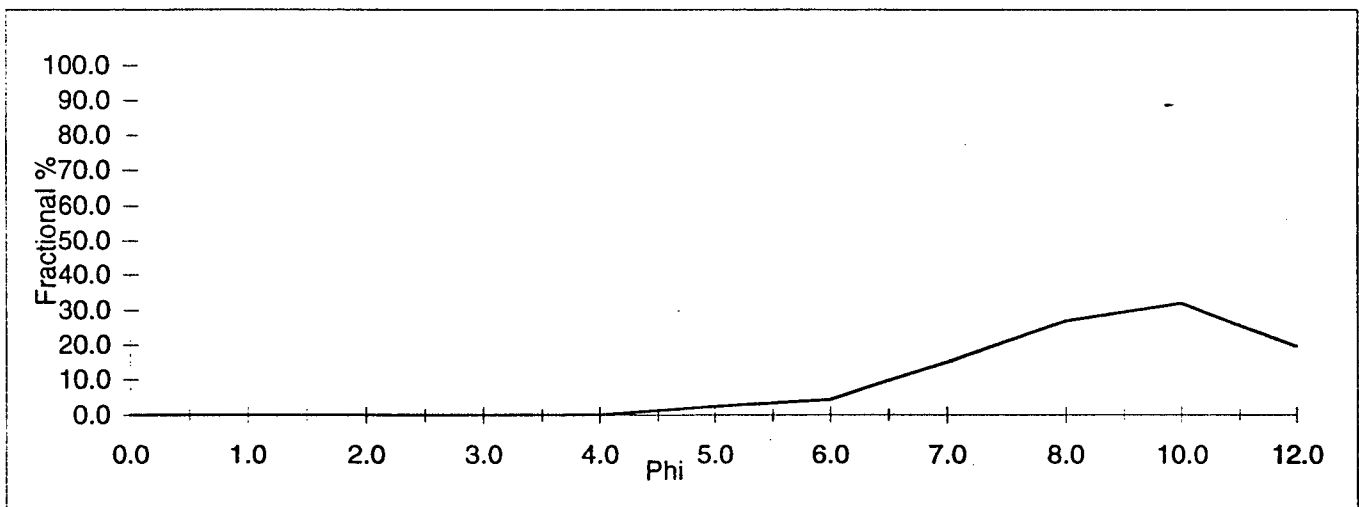
<b>Project</b>	McGrath Lake	<b>ID Org #</b>	1998
<b>Sample I.D.</b>	45053/Z2	<b>Lab Number</b>	98.33415
<b>Date</b>	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
<b>Coarse Sand</b>	1.0	0.500	0.00	0.00
<b>Medium/Fine Sand</b>	4.0	0.063	0.00	0.00
<b>Coarse Silt</b>	5.0	0.031	2.40	2.40
<b>Medium/Fine Silt</b>	8.0	0.004	46.10	48.50
<b>Clay/Colloids</b>	>8.0	<.004	51.50	100.00

**excluded from analysis**

*% Debris* 1.4  
*Debris Type* ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0	0.0
<b>Mean</b>	0.004	8.09	0.0625	4.0	0.0	0.0
<b>Median</b>	0.004	8.05	0.0313	5.0	2.4	2.4
<b>Sorting</b>	0.397	1.33	0.0156	6.0	6.6	4.2
<b>Skewness</b>		-0.03	0.0078	7.0	21.6	14.9
<b>Kurtosis</b>		0.77	0.0039	8.0	48.5	27.0
			0.0010	10.0	80.4	31.9
			0.0002	12.0	100.0	19.6



**Comments:**

## Sieve and Hydrometer Analysis

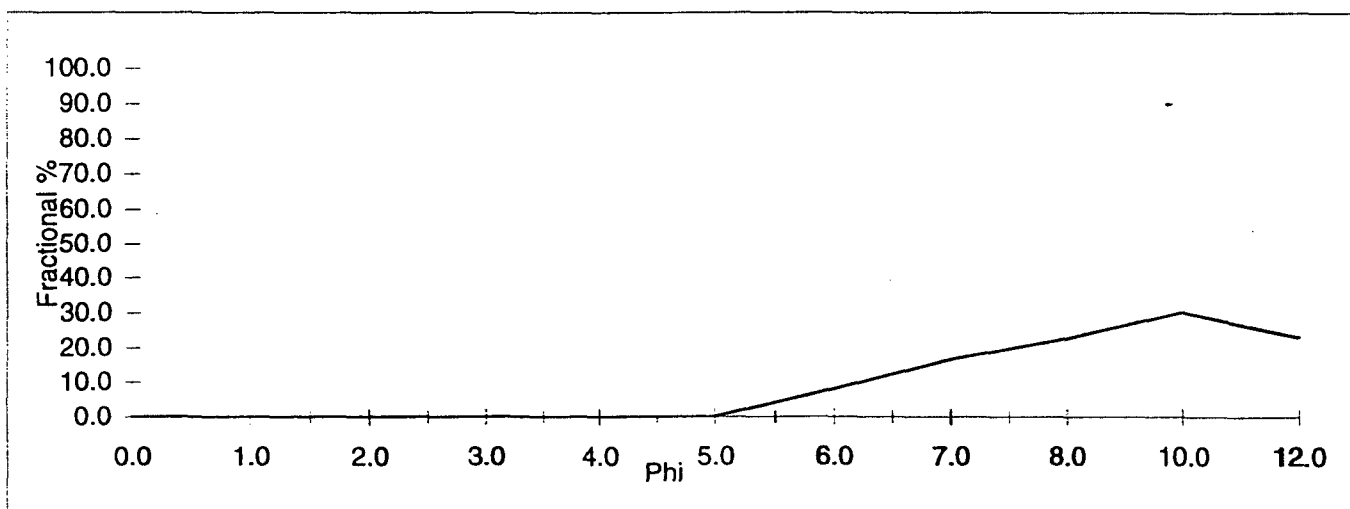
Project	McGrath Lake	ID Org #	1982
Sample I.D.	45064/M6	Lab Number	98.33416
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.00	0.00
Medium/Fine Silt	8.0	0.004	47.01	47.01
Clay/Colloids	>8.0	<.004	52.99	100.00

**excluded from analysis**

% Debris 0.2  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.004	8.09	0.0625	4.0	0.0
Median	0.004	8.11	0.0313	5.0	0.0
Sorting	0.383	1.39	0.0156	6.0	7.9
Skewness		-0.06	0.0078	7.0	24.5
Kurtosis		0.69	0.0039	8.0	47.0
			0.0010	10.0	77.1
			0.0002	12.0	100.0



**Comments:**



## Sieve and Hydrometer Analysis

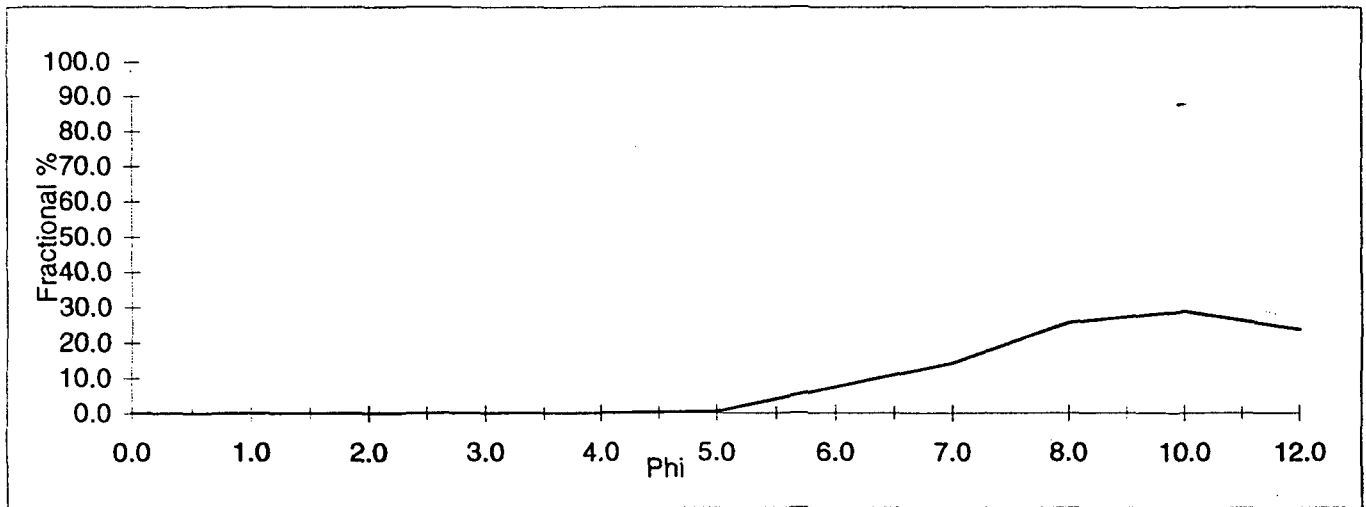
Project	McGrath Lake	ID Org #	1983
Sample I.D.	45074/M7	Lab Number	98.33417
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.31	0.31
Medium/Fine Silt	8.0	0.004	47.19	47.50
Clay/Colloids	>8.0	<.004	52.50	100.00

**excluded from analysis**

% Debris 0.7  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0	0.0
Mean	0.003	8.17	0.0625	4.0	0.0	0.0
Median	0.004	8.09	0.0313	5.0	0.3	0.3
Sorting	0.399	1.33	0.0156	6.0	7.6	7.3
Skewness	-0.02		0.0078	7.0	21.9	14.2
Kurtosis	0.74		0.0039	8.0	47.5	25.6
			0.0010	10.0	76.3	28.7
			0.0002	12.0	100.0	23.7



**Comments:**

## Sieve and Hydrometer Analysis

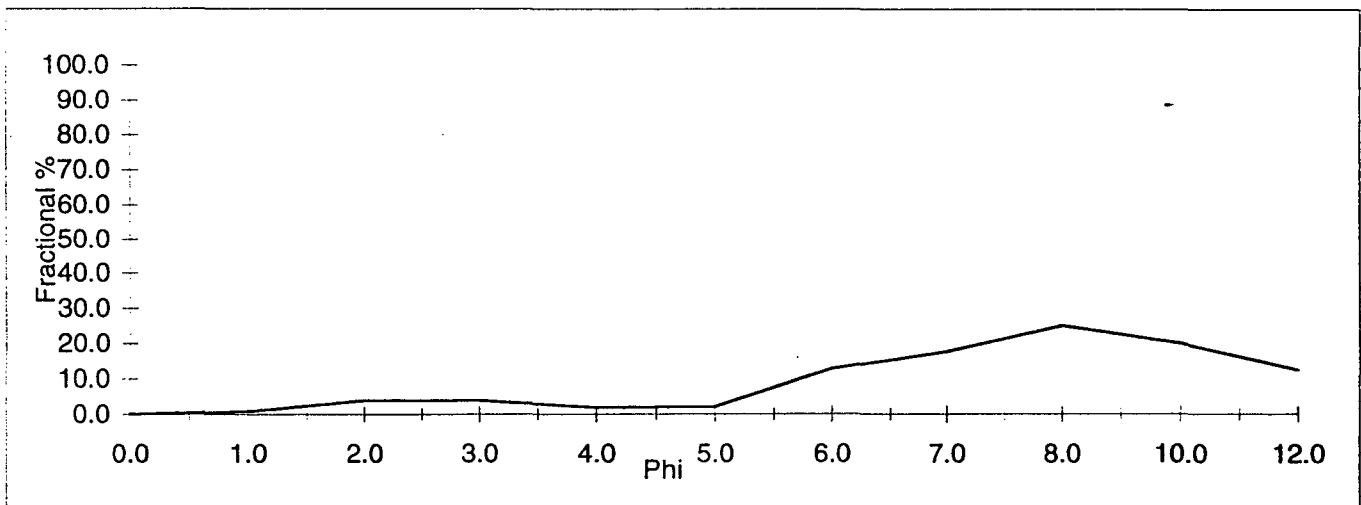
<b>Project</b>	McGrath Lake	<b>ID Org #</b>	2000
<b>Sample I.D.</b>	45074/Z2	<b>Lab Number</b>	98.33419
<b>Date</b>	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.75	0.75
Medium/Fine Sand	4.0	0.063	9.39	10.14
Coarse Silt	5.0	0.031	2.03	12.17
Medium/Fine Silt	8.0	0.004	55.40	67.57
Clay/Colloids	>8.0	<.004	32.43	100.00

**excluded from analysis**

% Debris 0.8  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	0.8	0.8
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	4.6	3.8
	mm	phi	0.1250	3.0	8.3	3.8
<b>Mean</b>	0.006	7.36	0.0625	4.0	10.1	1.8
<b>Median</b>	0.006	7.32	0.0313	5.0	12.2	2.0
<b>Sorting</b>	0.224	2.16	0.0156	6.0	24.9	12.8
<b>Skewness</b>		-0.17	0.0078	7.0	42.6	17.6
<b>Kurtosis</b>		1.26	0.0039	8.0	67.6	25.0
			0.0010	10.0	87.5	20.0
			0.0002	12.0	100.0	12.5



**Comments:**

## Sieve and Hydrometer Analysis

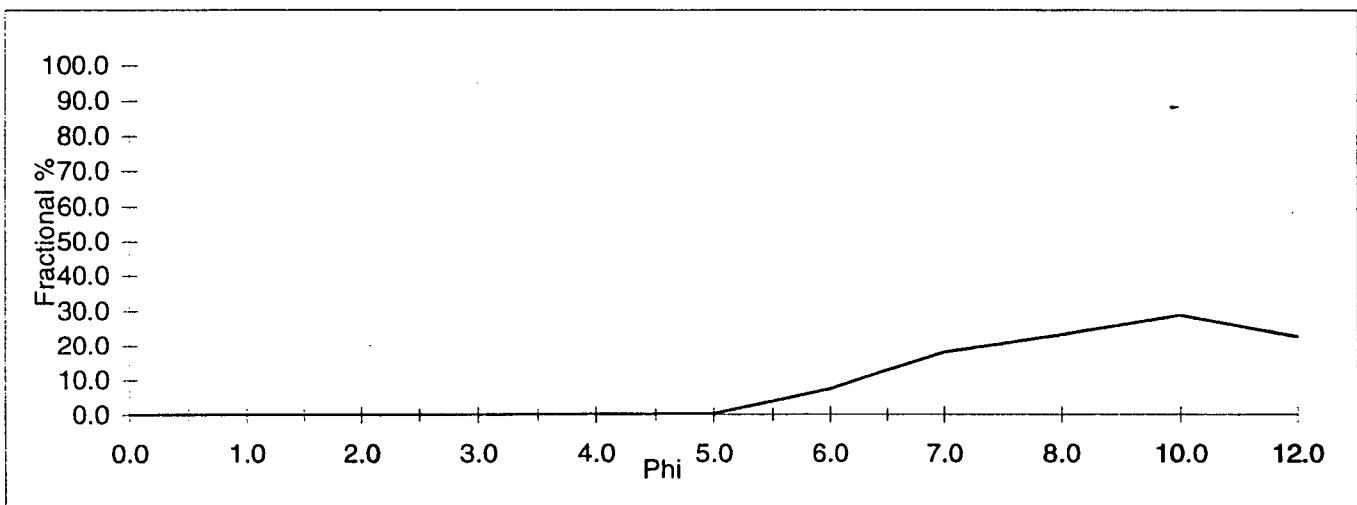
Project	McGrath Lake	ID Org #	1984
Sample I.D.	45084/S8	Lab Number	98.3342
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.09	0.09
Medium/Fine Silt	8.0	0.004	48.47	48.56
Clay/Colloids	>8.0	<.004	51.44	100.00

**excluded from analysis**

% Debris 2.0  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0	0.0
Mean	0.004	8.06	0.0625	4.0	0.0	0.0
Median	0.004	8.06	0.0313	5.0	0.1	0.1
Sorting	0.385	1.38	0.0156	6.0	7.3	7.2
Skewness		-0.04	0.0078	7.0	25.4	18.1
Kurtosis		0.68	0.0039	8.0	48.6	23.1
			0.0010	10.0	77.4	28.8
			0.0002	12.0	100.0	22.6



**Comments:**

## Sieve and Hydrometer Analysis

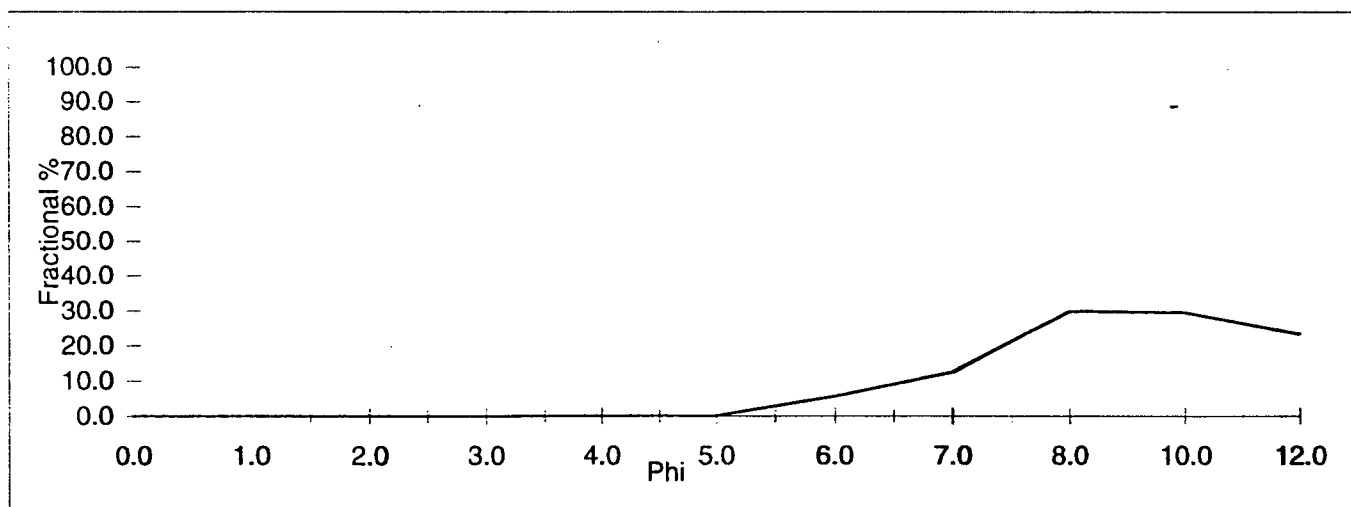
Project	McGrath Lake	ID Org #	1985
Sample I.D.	45092/S9	Lab Number	98.33421
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.07	0.07
Medium/Fine Silt	8.0	0.004	47.52	47.59
Clay/Colloids	>8.0	<.004	52.41	100.00

excluded from analysis

% Debris 1.3  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %
		1.0000	0.0	0.0	0.0
		0.5000	1.0	0.0	0.0
Grain Size Statistics (Folk & Ward)		0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0
Mean	0.003	8.22	0.0625	4.0	0.0
Median	0.004	8.07	0.0313	5.0	0.1
Sorting	0.419	1.26	0.0156	6.0	5.6
Skewness	0.05	0.0078	7.0	17.9	12.4
Kurtosis	0.77	0.0039	8.0	47.6	29.7
		0.0010	10.0	76.8	29.2
		0.0002	12.0	100.0	23.2



Comments:

## Sieve and Hydrometer Analysis

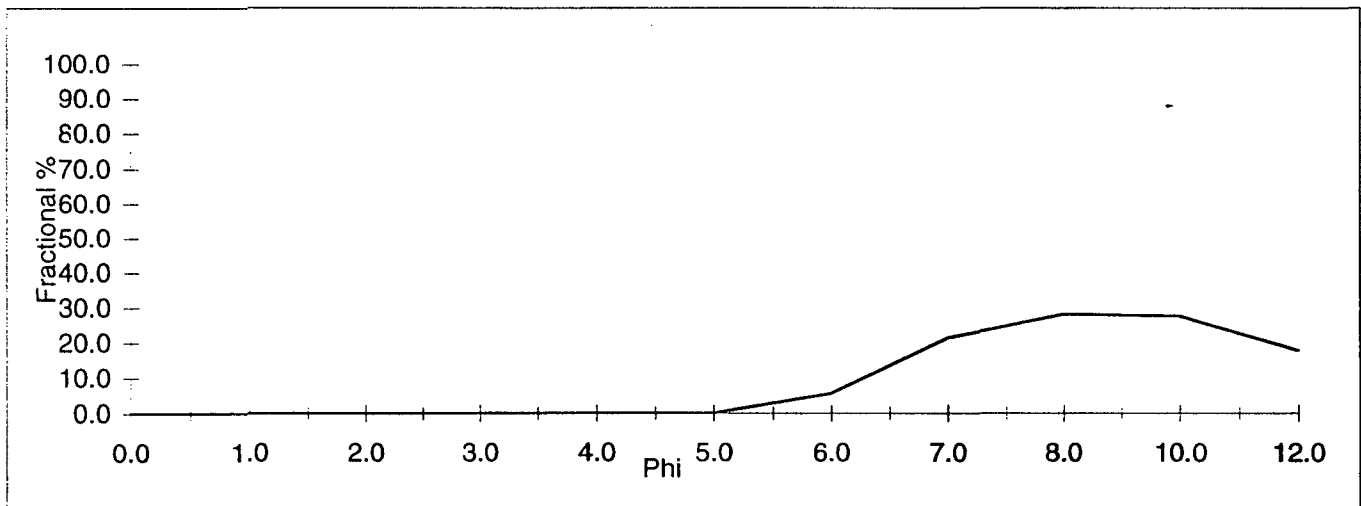
Project	McGrath Lake	ID Org #	2001
Sample I.D.	45092/Z1	Lab Number	98.33422
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.00	0.00
Medium/Fine Sand	4.0	0.063	0.00	0.00
Coarse Silt	5.0	0.031	0.00	0.00
Medium/Fine Silt	8.0	0.004	54.86	54.86
Clay/Colloids	>8.0	<.004	45.14	100.00

**excluded from analysis**

% Debris 9.2  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	0.0	0.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	0.0	0.0
	mm	phi	0.1250	3.0	0.0	0.0
Mean	0.004	7.98	0.0625	4.0	0.0	0.0
Median	0.004	7.85	0.0313	5.0	0.0	0.0
Sorting	0.405	1.30	0.0156	6.0	5.4	5.4
Skewness		0.09	0.0078	7.0	26.8	21.4
Kurtosis		0.68	0.0039	8.0	54.9	28.1
			0.0010	10.0	82.4	27.5
			0.0002	12.0	100.0	17.6



**Comments:**

## Sieve and Hydrometer Analysis

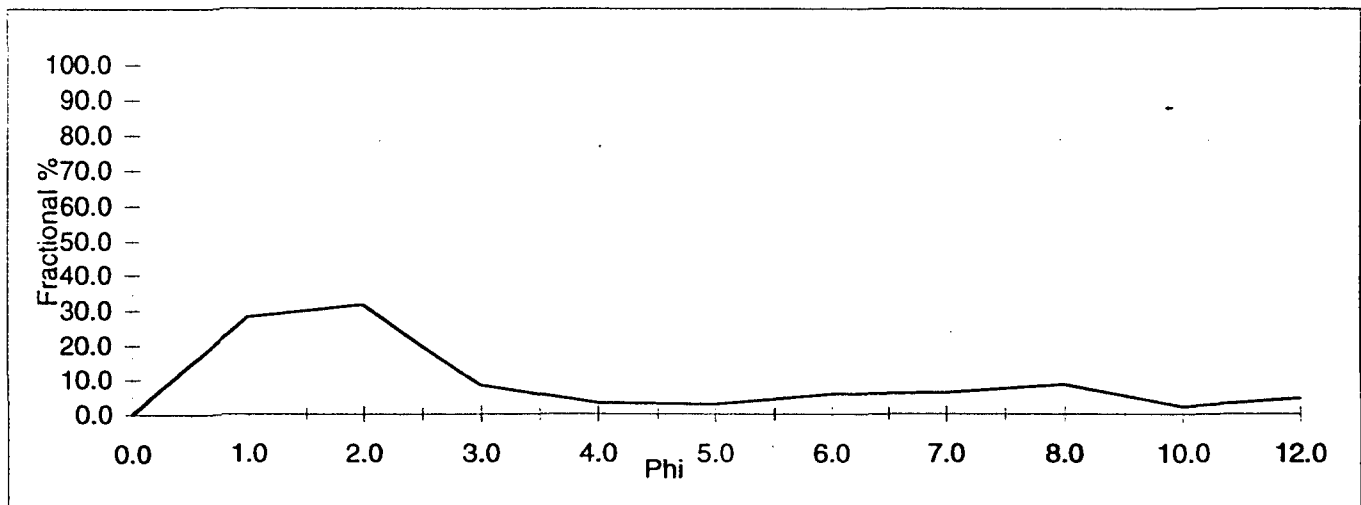
Project	McGrath Lake	ID Org #	2002
Sample I.D.	45092/Z2	Lab Number	98.33423
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	28.04	28.04
Medium/Fine Sand	4.0	0.063	42.79	70.83
Coarse Silt	5.0	0.031	2.75	73.58
Medium/Fine Silt	8.0	0.004	19.96	93.54
Clay/Colloids	>8.0	<.004	6.46	100.00

excluded from analysis

% Debris 6.0  
Debris Type ORGANIC MATERIAL

		mm	Phi	Cum. %	Fract. %	
		1.0000	0.0	0.0	0.0	
		0.5000	1.0	28.0	28.0	
<b>Grain Size Statistics (Folk &amp; Ward)</b>		0.2500	2.0	59.5	31.5	
	mm	phi	0.1250	3.0	67.7	8.2
Mean	0.103	3.28	0.0625	4.0	70.8	3.1
Median	0.302	1.73	0.0313	5.0	73.6	2.8
Sorting	0.162	2.62	0.0156	6.0	79.2	5.6
Skewness		0.85	0.0078	7.0	85.1	6.0
Kurtosis		0.88	0.0039	8.0	93.5	8.4
			0.0010	10.0	95.6	2.1
			0.0002	12.0	100.0	4.4



Comments:

## Sieve and Hydrometer Analysis

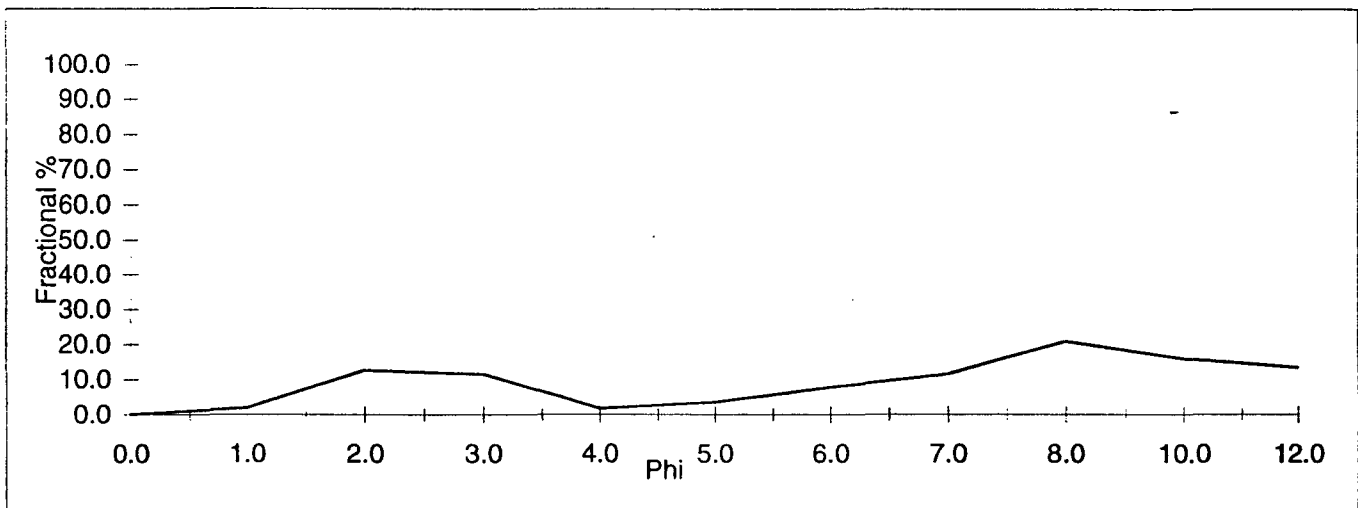
<b>Project</b>	McGrath Lake	<b>ID Org #</b>	1986
<b>Sample I.D.</b>	45102/S10	<b>Lab Number</b>	98.33424
<b>Date</b>	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
<b>Coarse Sand</b>	1.0	0.500	1.86	1.86
<b>Medium/Fine Sand</b>	4.0	0.063	25.66	27.52
<b>Coarse Silt</b>	5.0	0.031	3.40	30.92
<b>Medium/Fine Silt</b>	8.0	0.004	39.86	70.78
<b>Clay/Colloids</b>	>8.0	<.004	29.22	100.00

excluded from analysis

% Debris 4.8  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	1.9	1.9
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	14.4	12.5
	mm	phi	0.1250	3.0	25.9	11.5
<b>Mean</b>	0.014	6.16	0.0625	4.0	27.5	1.6
<b>Median</b>	0.008	7.00	0.0313	5.0	30.9	3.4
<b>Sorting</b>	0.120	3.05	0.0156	6.0	38.5	7.6
<b>Skewness</b>		-0.33	0.0078	7.0	50.0	11.5
<b>Kurtosis</b>		0.56	0.0039	8.0	70.8	20.8
			0.0010	10.0	86.7	15.9
			0.0002	12.0	100.0	13.3



Comments:

## Sieve and Hydrometer Analysis

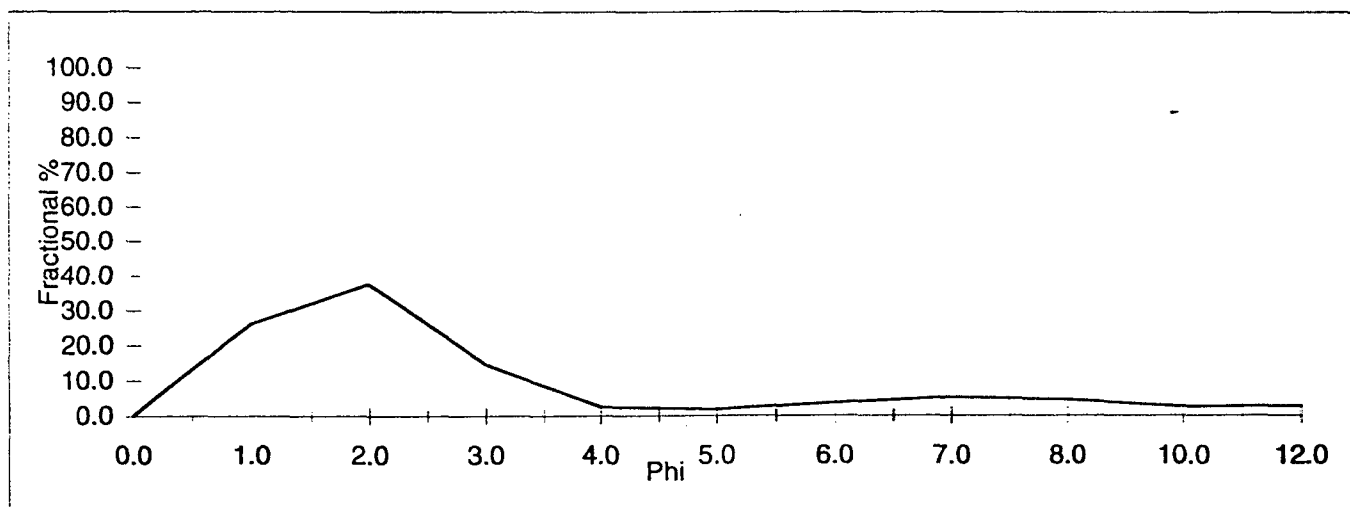
Project	McGrath Lake	ID Org #	2003
Sample I.D.	45102/Z1	Lab Number	98.33425
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	25.98	25.98
Medium/Fine Sand	4.0	0.063	54.53	80.52
Coarse Silt	5.0	0.031	1.57	82.08
Medium/Fine Silt	8.0	0.004	12.99	95.07
Clay/Colloids	>8.0	<.004	4.93	100.00

**excluded from analysis**

% Debris 2.5  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	26.0	26.0
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	63.6	37.6
	mm	phi	0.1250	3.0	78.1	14.6
Mean	0.149	2.74	0.0625	4.0	80.5	2.4
Median	0.300	1.74	0.0313	5.0	82.1	1.6
Sorting	0.197	2.35	0.0156	6.0	85.6	3.5
Skewness	0.63	0.0078	7.0	90.8	5.2	5.2
Kurtosis	2.61	0.0039	8.0	95.1	4.3	4.3
		0.0010	10.0	97.5	2.4	2.4
		0.0002	12.0	100.0	2.5	2.5



**Comments:**



## Sieve and Hydrometer Analysis

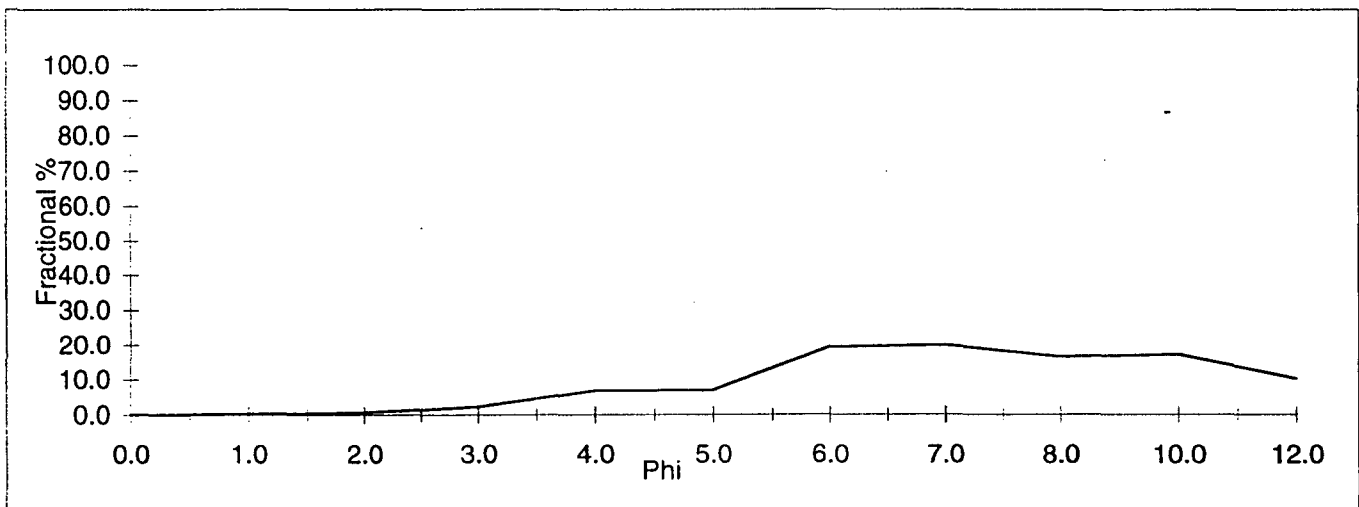
Project	McGrath Lake	ID Org #	1988
Sample I.D.	45003/PUMP HOUSE	Lab Number	98.33427
Date	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
Coarse Sand	1.0	0.500	0.14	0.14
Medium/Fine Sand	4.0	0.063	9.35	9.50
Coarse Silt	5.0	0.031	6.86	16.36
Medium/Fine Silt	8.0	0.004	56.10	72.46
Clay/Colloids	>8.0	<.004	27.54	100.00

**excluded from analysis**

% Debris 0.5  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	0.1	0.1
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	0.6	0.5
	mm	phi	0.1250	3.0	2.8	2.1
Mean	0.008	6.90	0.0625	4.0	9.5	6.7
Median	0.010	6.65	0.0313	5.0	16.4	6.9
Sorting	0.271	1.88	0.0156	6.0	35.9	19.5
Skewness		0.12	0.0078	7.0	55.9	20.0
Kurtosis		0.89	0.0039	8.0	72.5	16.6
			0.0010	10.0	89.8	17.3
			0.0002	12.0	100.0	10.2



**Comments:**

## Sieve and Hydrometer Analysis

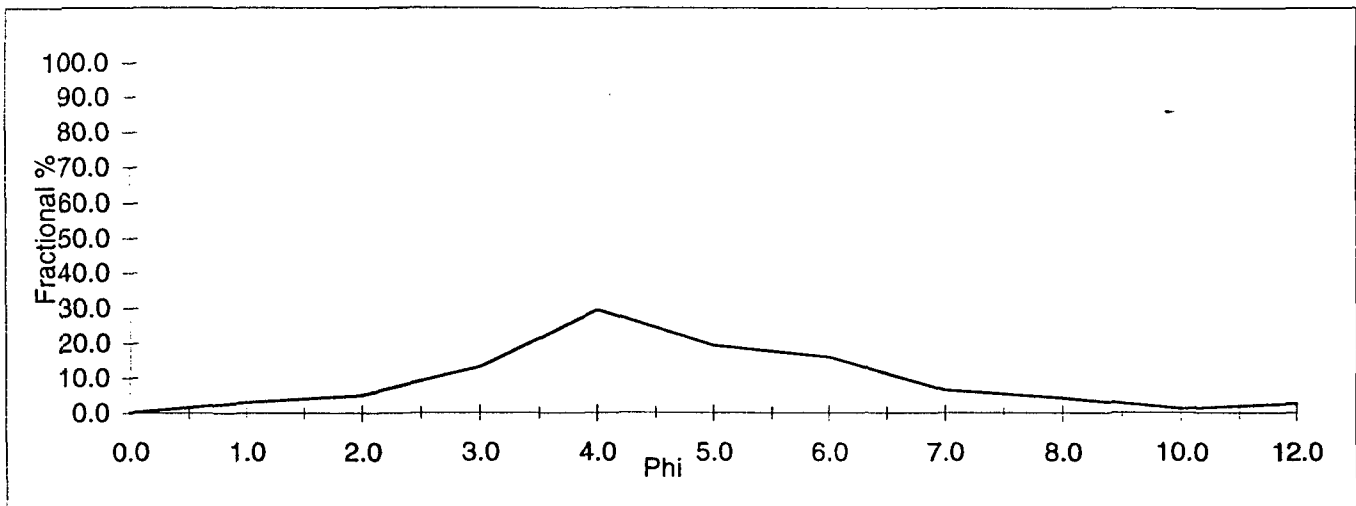
<b>Project</b>	McGrath Lake	ID Org #	1987
<b>Sample I.D.</b>	45001/AG DRAIN	Lab Number	98.33426
<b>Date</b>	10/28/98		

	size ranges		Fract. %	Cum. %
	phi	mm		
<b>Coarse Sand</b>	1.0	0.500	2.88	2.88
<b>Medium/Fine Sand</b>	4.0	0.063	47.61	50.49
<b>Coarse Silt</b>	5.0	0.031	19.33	69.81
<b>Medium/Fine Silt</b>	8.0	0.004	26.59	96.40
<b>Clay/Colloids</b>	>8.0	<.004	3.60	100.00

**excluded from analysis**

% Debris 1.1  
Debris Type ORGANIC MATERIAL

			mm	Phi	Cum. %	Fract. %
			1.0000	0.0	0.0	0.0
			0.5000	1.0	2.9	2.9
<b>Grain Size Statistics (Folk &amp; Ward)</b>			0.2500	2.0	7.9	5.0
	mm	phi	0.1250	3.0	21.0	13.2
<b>Mean</b>	0.056	4.17	0.0625	4.0	50.5	29.5
<b>Median</b>	0.063	4.00	0.0313	5.0	69.8	19.3
<b>Sorting</b>	0.309	1.70	0.0156	6.0	85.8	16.0
<b>Skewness</b>		0.19	0.0078	7.0	92.2	6.4
<b>Kurtosis</b>		1.33	0.0039	8.0	96.4	4.2
			0.0010	10.0	97.5	1.1
			0.0002	12.0	100.0	2.5



**Comments:**

## **APPENDIX E**

### **Toxicity Data**

**SECTION I**

*Eohaustorius estuarius* Solid Phase Survival

*Eohaustorius estuarius* Percent Survival for Solid Phase Test and Water Quality (mg/L)

STANUM	STATION	IDORG	LEG	TYPE	EE_MN	EE_SD	EE_SG	EE_TOX	EE_BATCH	EE_QC	EE_OTNH3	EE_OUNH3	EE_OH2S
45015.0	MCGRATH LAKE ESTUARY-N1S5	1977	MG2	SAM	61.00	16.00	*	T	mcgee	-3	2.900	0.077	-9.0000
45024.0	MCGRATH LAKE ESTUARY-N2S4	1978	MG2	SAM	70.00	15.00	*	T	mcgee	-3	5.700	0.192	-9.0000
45034.0	MCGRATH LAKE ESTUARY-N3S4	1979	MG2	SAM	41.00	2.00	*	T	mcgee	-3	5.800	0.205	-9.0000
45044.0	MCGRATH LAKE ESTUARY-N4S4	1980	MG2	SAM	57.00	14.00	*	T	mcgee	-3	6.000	0.158	-9.0000
45053.0	MCGRATH LAKE ESTUARY-N5S3	1981	MG2	SAM	65.00	8.00	*	T	mcgee	-3	6.000	0.177	-9.0000
45064.0	MCGRATH LAKE ESTUARY-N6S4	1982	MG2	SAM	57.00	4.00	*	T	mcgee	-3	2.100	0.061	-9.0000
45074.0	MCGRATH LAKE ESTUARY-N7S4	1983	MG2	SAM	34.00	22.00	*	T	mcgee	-3	12.000	0.396	-9.0000
45084.0	MCGRATH LAKE ESTUARY-N8S4	1984	MG2	SAM	43.00	31.00	*	T	mcgee	-3	15.000	0.553	-9.0000
45092.0	MCGRATH LAKE ESTUARY-N9S2	1985	MG2	SAM	74.00	7.00	*	T	mcgee	-3	3.500	0.101	-9.0000
45102.0	MCGRATH LAKE ESTUARY-N10S2	1986	MG2	SAM	85.00	9.00	*	NT	mcgee	-3	2.700	0.097	-9.0000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1987	MG2	SAM	7.00	6.00	*	T	mcgee	-3	3.600	0.043	-9.0000
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1988	MG2	SAM	20.00	12.00	*	T	mcgee	-3	2.000	0.055	-9.0000
	CONTROL-C1		MG2	C1	100.00	0.00	-9	-9	mcgee	-3	8.000	0.169	-9.0000
	CONTROL-C2		MG2	C2	-9.00	-9.00	-9	-9	-9	-9	-9.000	-9.000	-9.0000

*Eohaustorius estuarius* Percent Survival for Solid Phase Test and Water Quality (mg/L)

STANUM	STATION	IDORG	LEG	TYPE	EE	ITNH3	EE_IUNH3	EE_IH2S
45015.0	MCGRATH LAKE ESTUARY-N1S5	1977	MG2	SAM	13.000		0.127	0.0408
45024.0	MCGRATH LAKE ESTUARY-N2S4	1978	MG2	SAM	14.000		0.114	0.0356
45034.0	MCGRATH LAKE ESTUARY-N3S4	1979	MG2	SAM	13.000		0.106	0.0403
45044.0	MCGRATH LAKE ESTUARY-N4S4	1980	MG2	SAM	13.000		0.127	0.0279
45053.0	MCGRATH LAKE ESTUARY-N5S3	1981	MG2	SAM	14.000		0.149	0.0294
45064.0	MCGRATH LAKE ESTUARY-N6S4	1982	MG2	SAM	4.900		0.048	0.0239
45074.0	MCGRATH LAKE ESTUARY-N7S4	1983	MG2	SAM	50.000		0.234	2.8882
45084.0	MCGRATH LAKE ESTUARY-N8S4	1984	MG2	SAM	70.000		0.328	0.4397
45092.0	MCGRATH LAKE ESTUARY-N9S2	1985	MG2	SAM	11.000		0.151	0.0214
45102.0	MCGRATH LAKE ESTUARY-N10S2	1986	MG2	SAM	8.100		0.116	0.0346
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1987	MG2	SAM	12.000		0.277	0.0667
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1988	MG2	SAM	12.000		0.051	0.1003
	CONTROL-C1		MG2	C1	-9.000		-9.000	-9.0000
	CONTROL-C2		MG2	C2	-9.000		-9.000	-9.0000

## SECTION II

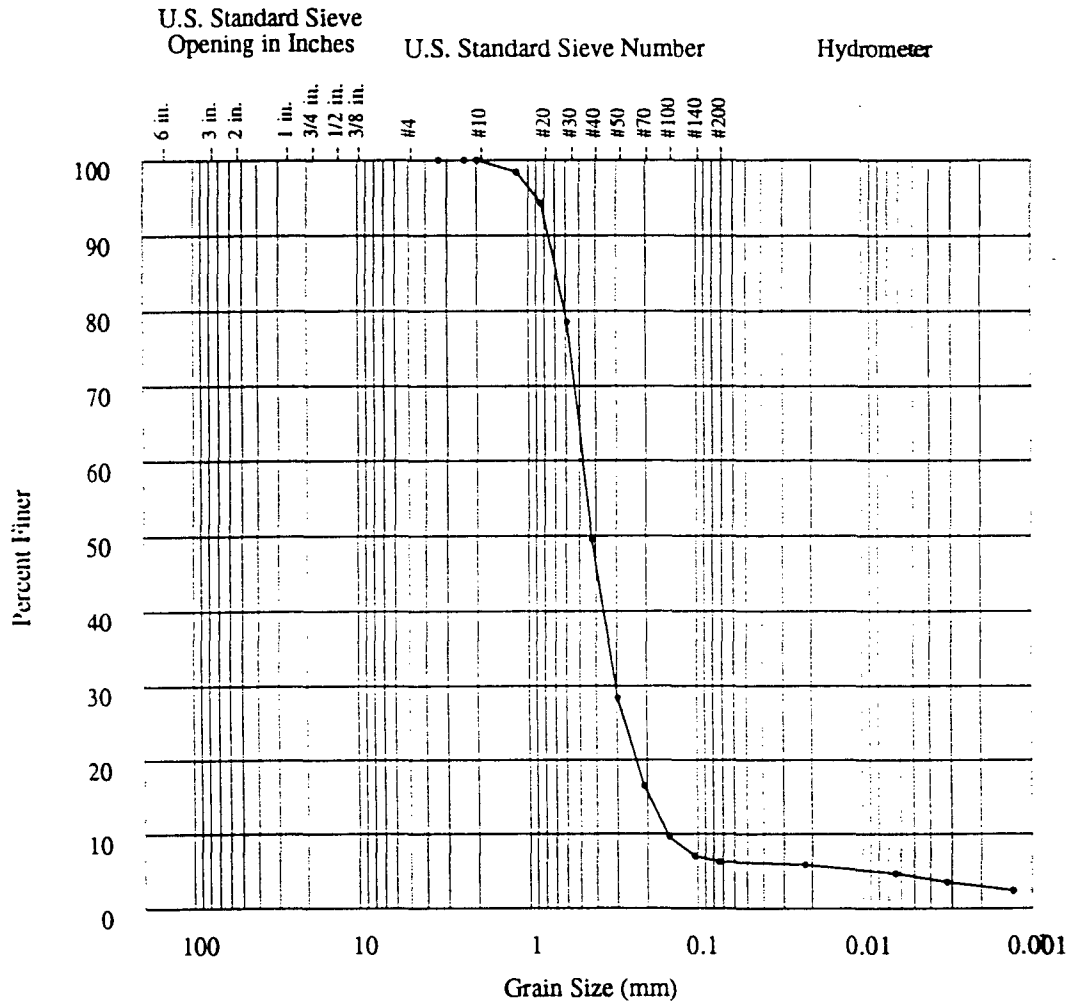
*Neomysis mercedis* Subsurface Water Survival



# Applied Marine Sciences, Inc.

502 N. Highway 3, Suite B • League City, TX 77573 • (281) 554-7272 • Fax (281) 554-6356

## Grain Size Distribution Test Report



%	% Gravel >3"	% Sand			% Fines	
		Coarse #6-#10	Medium #16-#40	Fine #50-#200	% Silt 0.074-0.005 mm	% Clay <0.005 mm
0.00	0.00	0.00	50.62	43.05	1.89	4.45

LL	PI	D85	D60	D50	D30	D15	D10	Cc	Cu
				0.4100					

Material Description	USCS	Client P/N:	58.5
		AMS P/N:	9812-01
		Client ID:	1849
		AMS ID:	3025
		Date:	8/14/98



*Neomysis mercedis* Percent Survival for Subsurface Water Test and Water Quality (mg/L)

STANUM	STATION	IDORG	LEG	TYPE	NM_MN	NM_SD	NM_SG	NM_TOX	NM_BATCH	NMQC	NM_OTNH3	NM_OUNH3	NM_OH2S
45015.0	MCGRATH LAKE ESTUARY-N1S5	1977	MG2	SAM	-9.00	-9.00	-9	-9	mcgnm	-3	-9.000	-9.000	-9.0000
45024.0	MCGRATH LAKE ESTUARY-N2S4	1978	MG2	SAM	96.00	9.00	ns	NT	mcgnm	-3	0.910	0.038	-9.0000
45034.0	MCGRATH LAKE ESTUARY-N3S4	1979	MG2	SAM	-9.00	-9.00	-9	-9	mcgnm	-3	-9.000	-9.000	-9.0000
45044.0	MCGRATH LAKE ESTUARY-N4S4	1980	MG2	SAM	-9.00	-9.00	-9	-9	mcgnm	-3	-9.000	-9.000	-9.0000
45053.0	MCGRATH LAKE ESTUARY-N5S3	1981	MG2	SAM	96.00	9.00	ns	NT	mcgnm	-3	1.100	0.037	-9.0000
45064.0	MCGRATH LAKE ESTUARY-N6S4	1982	MG2	SAM	-9.00	-9.00	-9	-9	mcgnm	-3	-9.000	-9.000	-9.0000
45074.0	MCGRATH LAKE ESTUARY-N7S4	1983	MG2	SAM	-9.00	-9.00	-9	-9	mcgnm	-3	-9.000	-9.000	-9.0000
45084.0	MCGRATH LAKE ESTUARY-N8S4	1984	MG2	SAM	-9.00	-9.00	-9	-9	mcgnm	-3	-9.000	-9.000	-9.0000
45092.0	MCGRATH LAKE ESTUARY-N9S2	1985	MG2	SAM	92.00	11.00	ns	NT	mcgnm	-3	1.100	0.043	-9.0000
45102.0	MCGRATH LAKE ESTUARY-N10S2	1986	MG2	SAM	-9.00	-9.00	-9	-9	mcgnm	-3	-9.000	-9.000	-9.0000
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1987	MG2	SAM	12.00	27.00	*	T	mcgnm	-3	0.420	0.012	-9.0000
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1988	MG2	SAM	24.00	26.00	*	T	mcgnm	-3	0.410	0.020	-9.0000
	CONTROL-C1		MG2	C1	100.00	0.00	-9	-9	mcgnm	-3	0.550	0.013	-9.0000
	CONTROL-C2		MG2	C2	96.00	9.00	-9	-9	mcgnm	-3	0.530	0.015	-9.0000

**APPENDIX F**

**Benthic Community Data**

McGrath Lake Benthic Community Summaries

STANUM	STATION	IDORG	DATE	LEG
45015.0	MCGRATH LAKE ESTUARY- N1S5	1977	10/29/02	MG2
Totals		Taxa	Group	# of species # of individuals
		Chironomidae larva A	Diperta	26
		Chironomidae larva B	Diperta	2
		Chironomidae pupa	Diperta	2
		Oligochaeta	Oligochaeta	3
		Podocopida	Ostracoda	250
	<b>Total Species</b>			5 283
	Total Oligochaetes			1 3
	Total Insects			3 30
	Total Crustaceans			1 250
STANUM	STATION	IDORG	DATE	LEG
45024.0	MCGRATH LAKE ESTUARY- N2S4	1978	10/29/02	MG2
Totals		Taxa	Group	# of species # of individuals
		Chironomidae larva A	Diperta	12
		Chironomidae larva B	Diperta	3
		Chironomidae pupa	Diperta	2
		Oligochaeta	Oligochaeta	50
		Podocopida	Ostracoda	100
	<b>Total Species</b>			5 167
	Total Oligochaetes			1 50
	Total Insects			3 17
	Total Crustaceans			1 100
STANUM	STATION	IDORG	DATE	LEG
45034.0	MCGRATH LAKE ESTUARY- N3S4	1979	10/29/02	MG2
Totals		Taxa	Group	# of species # of individuals
		Chironomidae larva A	Diperta	11
		Chironomidae larva B	Diperta	1
		Chironomidae pupa	Diperta	3
		Oligochaeta	Oligochaeta	33
		Podocopida	Ostracoda	250
	<b>Total Species</b>			5 298
	Total Oligochaetes			1 33
	Total Insects			3 15
	Total Crustaceans			1 250

McGrath Lake Benthic Community Summaries

STANUM	STATION	IDORG	DATE	LEG
45044.0	MCGRATH LAKE ESTUARY- M4S4	1980	10/29/02	MG2
Totals		Taxa	Group	# of species # of individuals
		Chironomidae larva A	Diperta	47
		Chironomidae pupa	Diperta	2
		Oligochaeta	Oligochaeta	2
		Podocopida	Ostracoda	50
	<b>Total Species</b>			4 101
	Total Oligochaetes			1 2
	Total Insects			2 49
	Total Crustaceans			1 50

STANUM	STATION	IDORG	DATE	LEG
45053.0	MCGRATH LAKE ESTUARY- M5S3	1981	10/29/02	MG2
Totals		Taxa	Group	# of species # of individuals
		Chironomidae larva A	Diperta	50
		Chironomidae larva B	Diperta	1
		Chironomidae pupa	Diperta	1
		Podocopida	Ostracoda	150
	<b>Total Species</b>			4 202
	Total Oligochaetes			
	Total Insects			3 52
	Total Crustaceans			1 150

STANUM	STATION	IDORG	DATE	LEG
45064.0	MCGRATH LAKE ESTUARY- M6S4	1982	10/29/02	MG2
Totals		Taxa	Group	# of species # of individuals
		Chironomidae larva A	Diperta	21
		Chironomidae larva B	Diperta	4
		Chironomidae pupa	Diperta	1
		Podocopida	Ostracoda	230
	<b>Total Species</b>			4 256
	Total Oligochaetes			
	Total Insects			3 26
	Total Crustaceans			1 230

### McGrath Lake Benthic Community Summaries

STANUM	STATION	IDORG	DATE	LEG	
45074.0	MCGRATH LAKE ESTUARY- M7S4	1983	10/29/02	MG2	
Totals		Taxa	Group	# of species	# of individuals
		Podocopida	Ostracoda	1	4
<b>Total Species</b>				1	4
Total Oligochaetes					
Total Insects					
Total Crustaceans				1	4
STANUM	STATION	IDORG	DATE	LEG	
45084.0	MCGRATH LAKE ESTUARY- S8S4	1984	10/29/02	MG2	
Totals		Taxa	Group	# of species	# of individuals
		Oligochaeta	Oligochaeta		1
		Podocopida	Ostracoda		28
<b>Total Species</b>				2	29
Total Oligochaetes				1	1
Total Insects					
Total Crustaceans				1	28
STANUM	STATION	IDORG	DATE	LEG	
45092.0	MCGRATH LAKE ESTUARY- S9S2	1985	10/29/02	MG2	
Totals		Taxa	Group	# of species	# of individuals
		Chironomidae larva A	Diperta		56
		Chironomidae larva B	Diperta		3
		Chironomidae pupa	Diperta		3
		Podocopida	Ostracoda		50
<b>Total Species</b>				4	112
Total Oligochaetes					
Total Insects				3	62
Total Crustaceans				1	50

McGrath Lake Benthic Community Summaries

STANUM	STATION	IDORG	DATE	LEG	
45102.0	MCGRATH LAKE ESTUARY- S10S2	1986	10/29/02	MG2	
	Totals	Taxa	Group	# of species	# of individuals
		Chironomidae larva A	Diperta		3
		Chironomidae larva B	Diperta		7
		Chironomidae pupa	Diperta		1
		Oligochaeta	Oligochaeta		16
		Podocopida	Ostracoda		73
	<b>Total Species</b>			5	100
	Total Oligochaetes			1	16
	Total Insects			3	11
	Total Crustaceans			1	73
45003.0	MCGRATH LAKE ESTUARY-PUMPHOUSE	1988	10/29/02	MG2	
	Totals	Taxa	Group	# of species	# of individuals
		Chironomidae larva A	Diperta		8
		Oligochaeta	Oligochaeta		4
		Podocopida	Ostracoda		130
	<b>Total Species</b>			3	142
	Total Oligochaetes			1	4
	Total Insects			1	8
	Total Crustaceans			1	130
45001.0	MCGRATH LAKE ESTUARY-AG DRAIN	1987	10/30/02	MG2	
	Totals	Taxa	Group	# of species	# of individuals
		Chironomidae larva A	Diperta		1
		Oligochaeta	Oligochaeta		197
		Podocopida	Ostracoda		500
		Tipulidae larva	Diperta		11
		Trichoptera pupa	Trichoptera		1
	<b>Total Species</b>			5	710
	Total Oligochaetes			1	197
	Total Insects			3	13
	Total Crustaceans			1	500