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Development of Reference Value Ranges for Benthic Infauna Assessment Endpoints in Puget Sound

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DEVELOPMENT OF REFERENCE VALUE RANGES FOR BENTHIC INFAUNA ASSESSMENT ENDPOINTS IN PUGET SOUND

Final Report

January 30, 1996

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ANOVA	Analysis of Variance
CV	Coefficient of Variation
DAIS	Dredged Analysis Information System
DNR	Washington State Department of Natural Resources
EPA	U.S. Environmental Protection Agency
H'	Shannon-Wiener diversity
ITI	Infaunal Tropic Index
J	Pielou's evenness measure
METRO	Municipality of Metropolitan Seattle
NOAA	National Oceanic and Atmospheric Administration
NODC	National Oceanographic Data Center
NPDES	National Pollutant Discharge and Elimination System
PAH	Polycyclic Aromatic Hydrocarbon
PSAMP	Puget Sound Ambient Monitoring Program
PSEP	Puget Sound Estuary Program
SCCWRP	Southern California Coastal Water Research Project
SBS	Seahurst Baseline Studies
SDI	Swartz's Dominance Index
SEDQUAL	State Sediment Quality Database
SMS	Washington State Sediment Management Standards
SQS	Washington State Sediment Quality Standards
TOC	Total Organic Carbon
TPPS	Toxicant Pretreatment Planning
TVS	Total Volatile Solids
UW	University of Washington

1.0 INTRODUCTION

The Washington Department of Ecology (Ecology) contracted with Striplin Environmental Associates (SEA) to conduct studies in support of further development and refinement of the Sediment Management Standards (SMS, Chapter 173-204 WAC). SEA was funded by Ecology, the U.S. Environmental Protection Agency (EPA), and the Washington Department of Natural Resources (DNR) to compile historical chemical and biological data and calculate benthic community reference values that are representative of a variety of uncontaminated Puget Sound soft bottom habitats. This report describes the work conducted under Phase I (May 10 - September 30, 1993) and Phase II (June 29, 1994 - present) of the reference value project.

The assessment of benthic community structure is a pivotal tool in assessing sediment quality. It is widely used by resource management agencies concerned with the health of Puget Sound. As in other parts of the country, potential impacts to benthic communities are determined largely through comparisons of potentially impacted stations with reference stations. Identifying suitable reference stations in Puget Sound has often been problematic due to the physical complexity of the Sound. The goal of the reference value project was to develop ranges of reference values for Puget Sound by evaluating existing benthic infauna data from stations with little or no chemical contamination. These ranges, determined for several benthic indices among various habitats, may be used by the State's source control/sediment cleanup and dredge material management programs and for biological assessments under the NPDES and federal damage assessment programs to assess the degree of benthic impact at potentially contaminated stations.

The project was divided into two phases with each phase consisting of several tasks. Phase I contained four tasks: compiling chemical and biological data, identifying chemically contaminated and uncontaminated stations, dividing the benthic stations into potentially impacted and non-impacted data matrices (based on chemical data), and dividing both matrices into habitat categories (e.g., shallow water/fine-grained sediment; shallow water/coarse-grained sediment). Phase II consisted of three tasks: statistical evaluations of infaunal data among and within habitat categories, statistical testing between non-contaminated and contaminated habitat categories, and determining whether habitat categories vary geographically within Puget Sound.

1.1 IDENTIFICATION OF IMPACTED BENTHIC COMMUNITIES: A HISTORICAL PERSPECTIVE

The identification of anthropogenic effects on benthic communities has long been recognized as an important tool for understanding how these communities function. Approaches for separating impacted from unimpacted stations include the use of indicator species, comparisons to actual reference stations (based on higher taxa levels), and the development of administrative reference values. Some of these methods for determining benthic community impacts are described below.

The use of indicator organisms to define biological communities has a long tradition in benthic ecology. A few examples include identification of natural communities based on ophiuroids

(Barnard and Ziesenhenne 1960), the keystone species concept from Paine (1969), and the presence of the *Capitella capitata* complex (Grassle and Grassle 1974). The limitation of these approaches to identify infaunal communities is that they may result in the protection of a limited number of species, possibly at the expense of others.

A shift away from the use of indicator species began in the late 1970's and 80's with the work by Pearson and Rosenberg (1978), Gray et al. (1988), Warwick (1988a,b), and Gray (1989). All noted the limitations of the single species models and analyzed data using multispecies groups and higher taxa levels by both univariate and multivariate methods. In Puget Sound, many researchers have used higher taxa levels to document anthropogenic effects. Word and Striplin (1981) successfully used the multispecies groups from the infaunal trophic index to separate the effects of nutrients and toxic compounds on the benthic communities living in the erosional environment off of West Point. They also reduced species level data to major phyla and conducted ANOVA analyses to identify effects to the benthic community from combined sewer overflows (Word et al. 1984). Ferraro and Cole (1992) examined the taxonomic level sufficient for assessing moderate impacts to benthic communities and concluded that taxonomic identifications to the family level or higher were sufficient.

The history behind the reference value approach can be traced to work conducted by the Southern California Coastal Water Research Project (SCCWRP). In 1977, SCCWRP conducted a survey along the 60 meter isobath from Pt. Conception to the U.S. Mexico border (Word and Mearns 1979). The goal of the survey was to identify possible reference areas to compare with conditions at existing municipal wastewater discharge sites and to define the apparent normal variation in the chemistry and biology of the mainland shelf of southern California. Samples were collected at one water depth to minimize variability in benthic community structure resulting from different sediment grain sizes and water depths. Stations were established every 10 kilometers, except in areas surrounding southern California's municipal wastewater outfalls. In these areas stations were clustered, both up-current and down-current of the outfall pipe. Stations were sampled for benthic infauna, demersal fish and invertebrates, heavy metals and selected volatile/semivolatile organic compounds. Biological and chemical data from stations that exhibited chemical contamination were removed from the data set and reference (control) values were calculated using the remaining data. Reference values for all measured parameters were compared to data from contaminated stations when apparent differences in those parameters were noted.

In Puget Sound the same basic approach was used by the University of Washington's Roosevelt Environmental Laboratory to characterize the benthic infaunal communities in the central basin of Puget Sound (Word et al. 1984a). Data collected as part of the Municipality of Metropolitan Seattle's (METRO) Toxicant Pretreatment Planning (TPPS) and Seahurst Baseline Studies (SBS) were analyzed and the mean, standard deviation and coefficient of variation were calculated for each major taxa group within five water depth categories. In both of these studies, stations were placed along multiple transect lines from the coarse- grained, shallow-water environments on the east side of the central basin to the fined-grained deep-water environments in the middle of the central basin. The raw data were plotted and depressions in taxa richness and abundance were identified as stations with values less than one-half the mean for that water depth. Enhancements were considered to be stations with values 1.5 times the mean for that water depth. This analysis, which did not take potential chemical contamination into consideration, successfully identified stations where the benthic infauna were considered to be impacted by anthropogenic activity as identified by the Elliott Bay Action Program (Tetra Tech 1988).

The same UW laboratory conducted a baseline survey in Elliott Bay in support of METRO for the placement of the Renton Treatment Plant wastewater outfall (Word et al. 1984b). The goal of the survey was to identify potential depositional areas in Elliott Bay where the increased deposition of organic material from a new outfall could potentially cause depressions in benthic communities. In an analysis similar to that done for the TPPS and SBS surveys, stations were grouped by water depth because grain size typically varies by water depth, and the mean and various measures of variability were calculated for the major benthic infaunal taxa groups. In this instance, stations were considered depressed if the abundance and/or taxa richness were below the 1.96 standard normal deviate (1.96 times the standard deviation). The benthic infauna data were plotted and areas where depressed infauna communities were found were noted in relation to oceanographic models showing the predicted extent and direction of movement of the outfall plume.

In the Puget Sound Environmental Atlas, primary and secondary areas of concern for benthic infauna in Puget Sound were based on depressions and enhancements in major taxa richness and abundance (Evans-Hamilton 1987). The approach used in the Atlas was the precursor to the reference value approach developed here. Chemical data were screened and potential reference stations were identified based on the absence of chemical contaminants. Stations that passed the chemical screen were sorted into categories based on percent fines (combined percent silt and clay) and water depth. Stations that did not pass the chemical screen (i.e., chemically contaminated non-reference stations) were similarly sorted. Mean taxa richness and abundance were calculated for both sets of data, and benthic infauna data from chemically contaminated stations were compared to that from the chemically uncontaminated (i.e., reference) stations. Chemically contaminated stations were considered to be primary areas of concern if major taxa abundance was less than or equal to 20 percent of the major taxa abundance reference value. Using this approach the Atlas identified stations in Puget Sound where the benthic infauna were impacted due to organic or chemical contamination as identified by the Elliott Bay Action Program (Tetra Tech 1988).

1.2 PROGRAM OVERVIEW

The reference value project began in 1993 as an outgrowth of the recommendations from the National Benthic Experts Workshop (PTI 1993). The project was set up in two phases with several tasks in each phase. Each task is briefly described below.

1.2.1 Phase I

In Task 1, the available chemical and biological data sets from Puget Sound were compiled and spreadsheets of benthic indices and habitat data for each station were developed.

Lists of stations that represented chemically contaminated and chemically uncontaminated areas of Puget Sound were developed in Task 2. These lists were then used to divide the spreadsheet containing the benthic values into a matrix of potentially impacted stations and a matrix of potentially unimpacted stations.

The objective of Task 3 was to select subtidal habitat categories for Puget Sound that reflected natural changes in benthic community composition at recognizable water depths and sediment grain sizes. The work was carried out by Roy F. Weston, Inc. (Seattle, WA) under the direction of Ms. Nancy Musgrove.

Phase I concluded with a status report describing the habitat categories, the number of samples within each habitat category, and a listing of all benthic endpoints by survey.

1.2.2 Phase II

The objectives of Phase II were to develop, assess, and recommend benthic infaunal reference area performance standards for the four grain size categories of the 150 foot water depth habitat category (i.e., Tables 3 & 4 in the *Status Report: Benthic Infauna Reference Value Project*). The following benthic indices were evaluated for their sensitivity in identifying adverse benthic effects within each habitat category: total richness, major taxa richness, total abundance, major taxa abundance, Shannon-Wiener Diversity (H'), Swartz's Dominance Index (SDI), and the Infaunal Trophic Index (ITI). These objectives were met by excluding outlier samples and then conducting a variety of statistical tests to examine variability within habitat categories, differences among habitat categories, and differences between chemically contaminated and reference habitat categories. Phase II concluded by prioritizing benthic endpoints for use based on the application of a scoring system.

1.3 REPORT ORGANIZATION

The remainder of this report describes the methods and results for each of the tasks undertaken during Phase I and Phase II. Section 2.0 contains a description of the data compilation process. Section 3.0 describes the steps taken to determine whether a station was chemically impacted. Section 4.0 describes the process taken to determine habitat categories. Section 5.0 describes the development of the benthic endpoint reference ranges. Section 6.0 discusses statistical testing of the reference values. Section 7.0 discusses the prioritization of benthic endpoints as reference endpoints along with a description of the numerical scoring process that led to the final recommendations. Lastly, Section 8.0 discusses the recommendations for use of the benthic endpoint reference ranges.

2.0 DATA COMPILATION

The first step in the reference value project was to compile available chemical and biological data and develop spreadsheets of benthic indices and habitat data for each station. The initial work plan called for only using data sets that contained synoptic collections of benthic infauna and sediment chemistry. A review of the Puget Sound literature showed that many surveys collected only chemical data. Other surveys collected samples for benthic infauna analysis in addition to chemical and perhaps toxicity data, but the benthic samples were not processed generally due to cost. All participants in the project agreed that valuable data that could be used to help define the difference between chemically contaminated and uncontaminated stations would be lost if only stations with synoptic data were examined. It was decided that all of the chemical data that met the following two criteria would be used:

- The chemical data were from marine subtidal stations.
- The chemical data passed a QA1 level of data validation (as defined by Ecology).

Using these criteria, 76 surveys were identified (Appendix A), of which 22 generated benthic infauna data.

The two largest Puget Sound databases were obtained and installed at SEA. The first was the SEDQUAL Data Management System (PTI 1989) which contained some benthic infauna data and a great deal of sediment chemistry data. The second was the Puget Sound Ambient Monitoring Program (PSAMP) Database System (PSAMP 1989) containing the sediment chemistry and benthic infauna data for the marine sediment monitoring task of the PSAMP from 1989 through 1992.

2.1 CHEMICAL DATA

In addition to data in the SEDQUAL and PSAMP databases, chemical data from the Seahurst Baseline Study were compiled. A spreadsheet was developed that included data for chemicals found in the Sediment Management Standards (conventionals, metals, and organics) as well as station positions and water depths.

In the course of data compilation and preparation of spreadsheets, numerous data gaps (missing fields) were noted in the SEDQUAL system and an extensive effort was made to fill these gaps. The following activities were required to make the spreadsheet complete.

- Missing data [water depth, total organic carbon (TOC), station position coordinates] from some SEDQUAL records were obtained and entered into spreadsheets. Both location and depth data were missing for 90 stations, and depth data were missing for an additional 231 stations. In addition, 52 stations had no location information and 445 more stations had "0" for recorded depth. Missing data were found for many of the surveys, but many station coordinates remain lacking.

- Organics data for the Duwamish Head Baseline Study were converted from wet weight to dry weight values.

- TOC data for the TPPS survey were manually loaded as was all of the SBS survey chemistry data. Adding Seahurst chemistry data was considered essential because of the large number of benthic stations sampled.

- In a number of surveys (i.e., Alki Outfall Study, Duwamish Head 1984 Survey, and the TPPS survey), the labels used to represent stations differed between the SEDQUAL database and the original reports. These discrepancies were resolved by SEA and Ecology.

- Finally, when a concentration of "0 U" was found in the NOAA data it was eliminated because a detection limit of zero is not achievable. Similarly, records with a "0.001 U" for neutral organics exclusive of chlorinated pesticides were eliminated. Detection limits of 0.001 ug/kg were considered unreasonable when the methods used do not allow such low detection limits and similar chemicals in the same sample had detection limits of 1-10 ug/kg.

2.2 BIOLOGICAL DATA

Biological data were obtained from the PSAMP and, to a lesser extent, the SEDQUAL databases. In addition, data were entered manually and via conversion programs from other sources. For example, Mr. Tom Gries and Mr. Tuan Vu of Ecology's Environmental Review/Sediment Management Section entered data from the Alki Outfall Study (METRO 1983) and the Puget Sound Dredge Disposal Analysis (PSDDA) 1990 disposal site monitoring program (SAIC 1990). Ms. Nancy Musgrove and staff at Roy F. Weston, Inc. converted digital files for the Seahurst Baseline Study into PSAMP format. The Municipality of Metropolitan Seattle provided SEA with TPPS data in electronic format.

Biological data from 22 surveys were compiled into spreadsheets. Species level data from 17 of these surveys were entered into the PSAMP database for calculation of benthic endpoints (e.g., diversity). Species level data from the remaining five surveys were not available, however, some benthic endpoints were obtained from original reports and entered into the spreadsheet. The spreadsheet is provided as Appendix B.

The biological data presented in Appendix B were from surveys which used two different sampler sizes. The majority of the data (98 percent) were collected using a $0.1m^2$ modified van Veen sampler. The Commencement Bay RI data (SURVEY = CBMSQS) were collected using a $0.06m^2$ modified van Veen and the PSDDA monitoring data were collected using a $0.06m^2$ Gray-O'Hara box core. Because the amount of data collected using the $0.06m^2$ sampler was very small, it was decided after a discussion with Ecology to use only data collected using the $0.1m^2$ modified van Veen sampler. This eliminated the need to standardize data to the same surface area.

3.0 DETERMINE CHEMICALLY IMPACTED STATIONS

The Washington State Marine Sediment Quality Standards (SQS, Table I) were used to separate chemically contaminated stations from chemically uncontaminated stations. Stations with one or more chemicals that exceeded an SQS were considered contaminated. In the event that the only chemical value to exceed an SQS was an undetected value, the station was still considered contaminated.

A second chemical screening approach was also considered. It involved calculating the 90th percentile values for each chemical in the SQS using only those stations with no SQS exceedances. Undetected values were manipulated prior to calculating the 90th percentile values using methods presented in Tetra Tech (1990). This approach was subsequently dropped because there were not enough stations/samples that were less than the 90th percentile within each habitat category to allow for statistical testing.

Lists of stations that represented chemically contaminated and chemically uncontaminated areas of Puget Sound were generated and compiled in a spreadsheet. These lists were then used to divide the spreadsheet containing the benthic endpoint values into a matrix of stations with potential biological impacts and a matrix of stations where biological impacts were thought to be lacking (i.e., unimpacted stations).

A number of issues arose that required clarification before stations could be designated as chemically contaminated or uncontaminated. The issues and their resolutions are presented below.

- There were a number of stations with neutral organics data which were missing TOC values. Therefore normalization of the organics data was not possible.

  Two approaches were taken to address this problem. The first was to derive a regression relationship between TOC and total volatile solids (TVS) which previous studies have shown to covary. The Seattle District Army Corps of Engineers' DAIS database contained synoptic TOC and TVS data collected as part of the PSDDA program. The Dredged Material Management Office ran the regression and provided SEA with the slope and coefficients so TOC could be approximated using the TVS data. The following regression relationship was used: TOC = 0.544 x TVS - 0.695, R=0.73. For surveys that did not analyze TVS, the regression relationship between TOC and percent fines, developed as part of the 1989 PSAMP sediment task survey (Tetra Tech 1990), was used to approximate TOC. The following regression relationship was used: TOC = 0.0199 x % FINES + 0.11, R = 0.87. Stations where TOC was approximated using either of the above approaches were marked in the spreadsheet with a VS for TVS or an FN for percent fines.

- Characterizing a station as chemically uncontaminated when organics data were lacking was questioned because there were a number of surveys with stations that had short chemical lists. For example, many stations in an early Battelle reconnaissance survey (Battelle 1985) had data for three metals only.

  This issue was discussed at a meeting with Ecology on September 13, 1993. It was decided that although only three metals were analyzed for, the data passed project QA requirements and should be used as part of the chemical screening.

- The approach to be used for undetected concentrations of chlorinated benzenes, hexachlorobutadiene, benzyl alcohol, 2,4-dimethylphenol, and pentachlorophenol when detection limits were high was questioned. In most cases, the high detection limits were due to interferences caused by other chemicals, primarily polycyclic aromatic hydrocarbons (PAH). The chemicals in question exhibited low detection frequencies, and the median concentrations in the chemistry data spreadsheets were less than the average detection limit.

  This issue was also discussed with Ecology at the September 13, 1993 meeting. The consensus was to be consistent and use the same approach for all chemicals. Raleigh Farlow (DMD, Inc.) indicated that in most cases where the above chemicals were present, the concentration of one of the chemicals causing the interference (i.e., a PAH) would most likely cause that sample to be considered contaminated. Therefore the detection limit was used to represent the chemical concentration.

- It was noted that the SQS of 670 ug/kg for 4-methylphenol is less than the Performance Standard for Reference Areas of 1,400 ug/kg.

  Ecology acknowledged this fact at the September 13, 1993 meeting.

Initial compilation of chemical data from SEDQUAL, PSAMP and other data sources resulted in 1,980 stations available for use in identifying contaminated stations. A closer examination of the data found that 327 of the stations from the SEDQUAL database contained no chemistry data (SVPS only) or had TOC data only. The remaining 1,657 stations were screened against SQS values to identify chemically contaminated stations, of which 416 were determined to be contaminated because at least one chemical was found at a concentration above the SQS. Summary statistics for data from stations with concentrations below the SQS are presented in Table 1.

Table 1. Summary statistics for SQS chemicals. Concentrations are in mg/kg dry wt for metals and mg/kg organic carbon for nonionic organic compounds. Concentrations are in ug/kg dry wt. for the ionic organic compounds.

CHEMICAL PARAMETER		SQS	N	MEAN	SD	MINIMUM	MAXIMUM	MEDIAN	90%ILE
TOC (%)			749	1.58	1.46	0.05	15.1	1.39	
Ag		6.1	762	0.39	0.61	0.005	6	0.2	0.91
As		57	728	9.72	7.47	0.05	46	8.1	18
Cd		5.1	731	0.54	0.73	0.007	5	0.26	1.35
Cr		260	590	44.28	35.71	1.5	233	33	87.7
Cu		390	758	38.05	35.7	0.03	311	30.95	76.2
Hg		0.41	745	0.11	0.09	0.0035	0.41	0.082	0.247
Pb		450	841	27.53	37.04	0.05	310	16.8	55.5
Zn		410	757	82.71	54.5	1	395	77	147
LPAH	*	370	576	17.08	26.57	0.1	295.39	6.005	52.34
Naphthalene	*	99	529	4.28	8.08	0.09	85.11	1.33	11.76
Acenaphthene	*	16	508	1.53	1.88	0.01	14.38	0.9	3.33
Acenaphthylene	*	66	481	1.5	1.92	0.01	23.05	0.9	3.33
Fluorene	*	23	544	1.75	2.24	0.01	21.28	1	3.96
Phenanthrene	*	100	570	7.41	10.64	0.05	95.74	3.29	19.14
Anthracene	*	220	562	3.82	8.43	0.05	149.73	1.44	9.24
2-Methylnaphthalene	*	38	464	2.25	3.52	0.06	33.33	1.02	5
HPAH	*	960	597	58.43	82.2	0.05	680.14	25.13	167.4
Fluoranthene	*	160	583	12.49	18.75	0.05	132.74	4.73	36.11
Pyrene	*	1000	585	12.79	19.84	0.05	166.67	4.78	36.1
Benzo(a)anthracene	*	110	559	5.26	7.33	0.05	67.38	2.29	13.53
Chrysene	*	110	564	8.15	11.93	0.05	106.34	3.245	23.24
Benzo(b+j+k)fluoranthenes	*	230	476	11.79	17.1	0.25	156.03	4.48	30.61
Benzo(a)pyrene	*	99	566	5.57	8.6	0.05	85.11	2.38	14.11
Indeno(123-cd)pyrene	*	34	488	3.94	4.64	0.07	27.27	2.09	10
Dibenzo(ah)anthracene	*	12	517	1.98	2.2	0.01	11.96	1.09	4.67
Benzo(ghi)perylene	*	31	448	3.82	4.07	0.04	30.67	2.12	9.29
1,2-Dichlorobenzene	*	2.3	479	0.01	0.15	0	1.99	0	0
1,4-Dichlorobenzene	*	3.1	483	0.08	0.35	0	3.01	0	0
1,2,4-Trichlorobenzene	*	0.81	467	0	0.03	0	0.56	0	0
Hexachlorobenzene	*	0.38	565	0	0.03	0	0.34	0	0
Hexachlorobutadiene	*	3.9	488	0.03	0.25	0	3.38	0	0
total PCBs	*	12	554	2.22	2.29	0	11.85	1.34	5.6
Dibenzofuran	*	15	376	1.77	2.24	0.06	15.07	0.99	3.74
N-Nitrosodiphenylamine	*	11	396	0.06	0.5	0	6.25	0	0
Dimethylphthalate	*	53	458	0.3	1.82	0	21.92	0	0.01
Diethylphthalate	*	61	415	1.26	1.85	0.02	22	0.71	2.67
Di-n-butylphthalate	*	220	408	6.5	22.13	0.02	217.14	1	10.85
Butylbenzylphthalate	*	4.9	396	1.16	0.99	0.01	4.88	0.81	2.59
bis(2-Ethylhexyl)phthalate	*	47	435	5.57	8.19	0.02	47.03	2.41	15.38
Di-n-octylphthalate	*	58	424	0.27	2.99	0	57.53	0	0
Benzoic acid		650	407	59.9	64.18	0.5	460	44	100
Benzyl alcohol		57	411	23.77	16.04	1	57	21	50
Phenol		420	487	34.14	76.87	0	420	0	130
2-Methylphenol		63	397	1.08	5.47	0	63	0	0
4-Methylphenol		670	433	25.12	84.6	0	670	0	56
2,4-Dimethylphenol		29	433	0.27	2.3	0	29	0	0
Pentachlorophenol		360	477	1.62	10.04	0	140	0	0

* Indicates that the chemical has been normalized to TOC-ppm

4.0 DETERMINE HABITAT CATEGORIES

Four physical factors primarily influence benthic infauna community structure: sediment grain size, salinity, total organic carbon (TOC), and water depth (Pearson and Rosenberg 1978). Of these four factors, the two that appear to most effect the structure and function of Puget Sound subtidal communities are sediment grain size and water depth. TOC, while also important, strongly covaries with grain size. Salinity plays a substantial role in regulating shallow benthic communities in areas near river mouths, however, salinity effects are minimal or absent at depth. The development of benthic reference values must therefore account for the ranges of sediment grain size and water depth found in the Sound.

Habitat categories were defined within which benthic communities would be expected to be relatively similar. Examples of habitat categories include shallow-water coarse sediment and shallow-water fine sediment. The Seahurst Baseline Study was used to develop the categories because of the large number of stations sampled in a variety of clean habitats and because stations were located on transect lines from the east side of the Puget Sound central basin to the west side. Each transect had stations located at water depths of 50', 75', 200', 400', and mid basin (~600') on the east and west sides of the basin. This allowed a direct comparison of differences in benthic communities due to grain size and water depth, which are believed to be the two major influences on benthic community structure, with the goal of determining whether benthic community composition could be appropriately defined in terms of specific habitat categories based on water depths and sediment grain sizes [represented as percent fines (silt plus clay)]. Other benthic surveys which could have been used to derive habitat categories did not sample the range of habitat categories contained in the Seahurst Study. The work was carried out by Roy F. Weston, Inc. under the direction of Ms. Nancy Musgrove.

4.1 METHODS

4.1.1 Database Management

The Seahurst Baseline Study abundance data were retrieved from compressed ASCII files and loaded into a data management system at Weston. Data files consisted of species and abundance records for six quarterly sampling periods between June 1982 and October 1983. Water column species and larval invertebrates entrained by the grab sampler were deleted from all surveys. Physical habitat data (grain size and water depth) were loaded into the database and linked to the associated abundance records. Custom programs were written to cross reference taxonomic designations to NODC codes from a dictionary provided by PTI Environmental Services (Bellevue, WA). Quality control checks revealed approximately 300 names that did not have NODC code assignments. New codes were assigned using the NODC Taxonomic Code document. Provisional species codes were assigned for those taxa with no current NODC listing and all new codes were added to the database dictionary and linked to the data records. New codes were flagged in the dictionary for appending to the PSAMP database. All data files were formatted for delivery as specified in the PSAMP Data Transfer Formats document. Creation of survey, station, and sample files required entry of missing station position coordinates, sampling date, sampling time, and additional attribute fields required by PSAMP. Some sample information had to be estimated because of missing data (e.g., some water depths were determined based on the station designation rather than actual measured depth).

Custom programs were written for transfer of the data to statistical programs. Internal data products included summaries of major taxa abundances, species richness, total abundance, Infaunal Trophic Index (ITI), species abundance, and dominant taxa for each station and replicate.

4.1.2 Data Analysis

Weston performed correlation, regression, and multivariate analyses of the physical and biological variables to assist in habitat classification and evaluation of habitat effects on benthic community structure. Analyses were performed for each season or survey. File size determined how data were combined for analyses. If the file size was small, then annual data for a given season were combined; whereas if the file size was large, then annual data for a season were analyzed separately. The following data sets were examined separately using multivariate techniques:

September and October 1982/1983 combined
November and December 1982
June and July 1982
February and March 1983
June and July 1983

Initial examination of the data included a graphical analysis of the distribution of abundance data, which resulted in the decision to log-transform [i.e., log(x+1)] all abundance data. Frequency distributions by grain size and depth were also plotted to assist in subsequent statistical analyses.

Species abundances were used in hierarchical cluster and principal component analyses to identify habitat characteristics. Correlation and regression analyses were conducted between habitat characteristics [grain size (expressed as percent fines) and depth] and community indices [major taxa abundances (polychaetes, molluscs, crustaceans), total abundance and richness] to further examine habitat effects. A step-wise regression was used to refine the apparent effects of grain size and depth. Analysis of variance techniques were used to examine the significance of the regression relationships.

4.2 RESULTS

Interpretation of the results of the statistical and multivariate analyses were carried out by examining the raw analytical results. Interpretation of the cluster dendograms, regression and principle component analyses were carried out jointly by SEA and Weston.

4.2.1 Definition of Habitat Categories

Habitat categories were defined using the results of hierarchical cluster analysis. Four major groups and two outlier stations were identified. Major group I showed high similarity among shallow-water benthic communities in sandy sediments, and major group II displayed high similarity among deep-water communities in silty sediments. However, for stations located in intermediate depths (200 - 500 ft) there was no clear relationship among water depth, grain size and benthic community structure. Within this depth range, two groups of stations were identified with most stations being at water depths between 185 and 400 feet, although each group contained some shallower and deeper stations. These two groups were identified in the dendogram as groups III and IV. The stations in group III were composed of silty sand with an average water depth of 453 feet, while group IV stations consisted of sand with an average water depth of 186 feet.

The dendogram produced from the cluster analysis showed that the benthic communities were segregating by water depth as a surrogate for grain size (Figure 1). This was confirmed by the step-wise regression analysis. The physical characteristics (as measured by percent fines and TOC) of each cluster group is shown in Table 2 and while grain size and water depth were highly correlated in the Seahurst data set, the results of the step-wise regression analysis pointed to grain size as the main factor driving changes in community composition rather than water depth. This conclusion was also reached by Tetra Tech (1990) following interpretation of the 1989 PSAMP data.

Table 2. Physical characteristics of each major cluster group as defined by the hierarchical cluster analysis.

Cluster Group	Number of Samples	Water Depth		Percent Fines		Percent TOC	
		Mean	CV[1]	Mean	CV	Mean	CV
Outlier	1	23	NA	SILT[2]	NA	1.9	NA
Outlier	1	50	NA	2.3	NA	0.2	NA
I	44	71.6	52.0	4.1	70.9	0.3	95.1
II	17	603.1	25.2	91.3	5.1	1.9	20.9
III	21	453.8	35.7	43.7	43.9	0.8	49.7
IV	9	186.1	22.4	9.6	20.7	0.3	37.3

[1] CV = Coefficient of Variation

[2] Percent fines numerical data not available

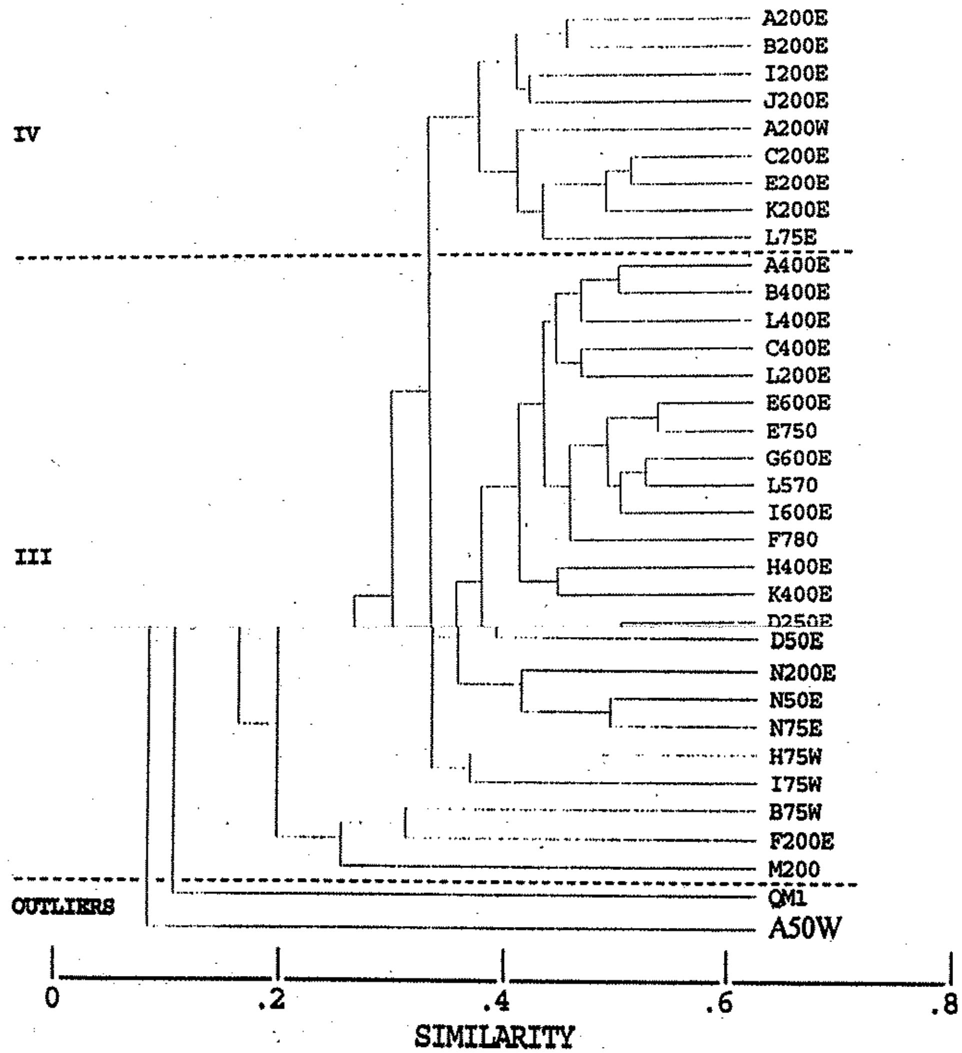

Figure 1. Dendogram resulting from Bray-Curtis classification analysis of data from the Seahurst Baseline Study. Due to matrix size limitations only the top 10 most abundant species in each sample were used. Roman numerals - Major cluster group.

Based on the results provided by Weston and additional data interpretation by Weston and SEA, the following 16 habitat categories were identified:

<150 ft and <20 percent fines	300-500 ft and <20 percent fines
<150 ft and 20-50 percent fines	300-500 ft and 20-50 percent fines
<150 ft and 50-80 percent fines	300-500 ft and 50-80 percent fines
<150 ft and >80 percent fines	300-500 ft and >80 percent fines
150-300 ft and <20 percent fines	>500 ft and <20 percent fines
150-300 ft and 20-50 percent fines	>500 ft and 20-50 percent fines
150-300 ft and 50-80 percent fines	>500 ft and 50-80 percent fines
150-300 ft and >80 percent fines	>500 ft and >80 percent fines

4.2.2 Development of Final Benthic Infauna Data Matrices

The benthic data listed in Appendix B were divided into two spreadsheets. The first contained 722 samples where the concentration of one or more chemicals was above the SQS; the second contained 801 samples with chemical concentrations below the SQS. An additional 188 samples were unusable because they had no synoptic chemical measurements.

The benthic infauna samples from stations with no SQS exceedances were divided into the 16 habitat categories. The number of samples in each habitat category shows the sampling bias in Puget Sound benthic infauna studies (Table 3). Most of the studies were conducted in urban embayments in shallow water or in relatively clean non-urban areas (i.e., PSAMP) in shallow water. Because the next step in the derivation of reference value ranges required statistical testing, a minimum of 11 samples was required for each habitat category. Habitat categories with 10 or fewer samples were not evaluated further. Such categories included two of the four categories in both the 150 to 300 ft. and 300 to 500 ft. depth ranges. In the greater than 500 ft. depth range, one of the four categories contained an insufficient number of samples for testing. This category consisted of coarse grained sediment and deep water coarse grained sediments are rare in nature.

There were an adequate number of samples in the less than 150 ft. depth range to derive reference values with statistical confidence. Since most of the regulatory programs in Puget Sound focus on shallow water depths, limiting the Phase II analyses to the four habitat categories that covered the 0-150 ft. water depth would still provide useful reference value information to several regulatory programs.

Table 3. Number of samples with no SQS exceedances in each habitat category.

Water Depth (ft)	Percent Fines			
	<20%Fines	20-50%Fines	50-80%Fines	>80%Fines
<150	214	83	104	118
150 - 300	6	2	23	13
300 - 500	3	29	1	28
>500	8	21	36	112

5.0 DEVELOPMENT OF REFERENCE VALUE RANGES

A full suite of benthic infauna endpoints (including calculated indices) were evaluated to identify preferred endpoints and indices and their associated numeric ranges. These endpoints were determined for habitat categories only in the 0-150 ft. water depth range. The current Sediment Quality Standards use both a 50 percent reduction in the mean abundance of one of the major taxa groups (polychaetes, crustaceans and molluscs) relative to a reference station and statistical significance between the reference and test station to differentiate between an impacted and unimpacted station. For the development of reference values for Puget Sound, additional endpoints were studied based on recommendations from the experts panel at the National Benthic Experts Workshop (PTI 1993). The panel made five recommendations, two of which were directly related to the reference value project. One was the identification of reference conditions for benthic invertebrates in Puget Sound; and the second was the use of more than one endpoint to assess adverse benthic effects. In response to the second recommendation, this project evaluated 16 benthic infauna endpoints. Some of these endpoints require taxonomic identification to the lowest possible level while others allow taxonomic identification at a higher level.

5.1 BENTHIC INDICES SELECTED FOR EVALUATION AS POTENTIAL REFERENCE ENDPOINTS

The benthic infauna endpoints selected for inclusion in the project were total taxa richness, major taxa richness (i.e., polychaetes, crustaceans, amphipods, molluscs, echinoderms, and miscellaneous phyla), total abundance, major taxa abundance (polychaetes, crustaceans, amphipods, molluscs, echinoderms, and miscellaneous phyla), Shannon-Wiener diversity (Pielou 1966), Pielou's evenness (J', Pielou 1966), Swartz's dominance index (SDI, Swartz et al. 1985), and the infaunal trophic index (ITI, Word 1982). Each is briefly described below.

Total taxa richness

Total taxa richness is defined as the total number of species or taxa identified from a sample.

Major taxa richness

Major taxa richness is defined as the number of species or taxa within each major phyla identified from a sample.

Total abundance

The total abundance is defined as the number of individual organisms found in a sample.

Major taxa abundance

Major taxa abundance is defined as the number of individual organisms within each major phyla found in a sample.

Shannon-Wiener diversity (H')

The Shannon-Wiener diversity index is used world-wide to examine the relationship between taxa richness and abundance (Shannon and Weaver 1964). It is normally distributed, relatively independent of sample size, and statistically testable (Tetra Tech 1990). H' scores are dependent primarily on the distribution of individuals among species and secondarily on taxa richness. In habitats with no pollution or environmental stress, the H' values theoretically should be large; conversely, where pollution is present or where environmental stress is high, the H' value should be low. However, since H' is dependent on the equitability of individuals among species, it may actually increase in conditions of slight to moderate pollution (stress), thus giving false positives.

Pielou's eveness (J')

Pielou's eveness is expressed as the observed diversity of a sample as a proportion of the maximum possible diversity (Pielou 1966, Zap 1984). Eveness values close to 1.0 indicate a homogeneously distributed population with little or no dominance.

Swartz's dominance index (SDI)

Swartz's dominance index is defined as the minimum number of taxa that makes up 75 percent of the sample abundance (Swartz et al. 1985).

Infaunal Trophic Index (ITI)

The infaunal trophic index is a functional measure of benthic community structure based on feeding strategy. It ranges from 0 to 100 with low values indicating a community dominated by surface or subsurface detrital/deposit feeders and high numbers indicating a community dominated by suspension feeders.

Ranges for each of these endpoints that represent conditions at uncontaminated (i.e., reference) stations are developed via the following analyses. In the course of the discussion the mean, standard deviation, and coefficient of variation around the mean reference value are discussed because of their importance in statistical evaluations. However reference values will be applied in the form of ranges by future investigators. Suggestions for the application of the ranges are found in Section 8.

5.2 IDENTIFICATION OF OUTLIER DATA POINTS

Outlier data points were identified through a two step process. First, a hierarchical cluster analysis was performed on the major taxa abundance measures within each habitat category, and outliers were identified and removed from the data set. Second, any sample with a value that was greater or less than 1.96 standard normal deviates from the mean of the remaining data was considered an outlier and also removed.

5.2.1 Cluster Analysis

A cluster analysis was conducted using Euclidean distance with single linkage to identify outlier stations within each habitat category (Appendix C, Tables C-1 to C-4). Samples that were considered outliers were identified, using best professional judgement and by the amount of separation of the main cluster groups. The cluster analyses showed separations between the main cluster groups and outlier stations at a Euclidean distance of between 75 and 100. Using a distance of 100 as the cutoff, outlier stations were identified and removed from the data set. A total of 41 samples were removed; 14 were from the less than 20 percent fines category, 8 were from the 20 - 50 percent fines category, 11 were from the 50 - 80 percent fines category and 8 were from the 80 - 100 percent fines category (Table 4).

5.2.2 1.96 Standard Normal Deviate

To define the potential reference value ranges, the mean, standard deviation, and 1.96 standard normal deviate (Sokal and Rolfe 1981) were calculated for each benthic infaunal endpoint within each habitat category. The 1.96 standard normal deviate can also be defined as two standard deviations from a mean value. For each habitat category and each endpoint, data were plotted and any sample that exceeded the plus or minus 1.96 standard normal deviate value was considered an outlier and eliminated from further consideration in the calculation of the reference range for that endpoint (Appendix D, Tables D1-D4). This screening was applied to each endpoint in each habitat category. Elimination of a sample from one endpoint calculation did not influence the use of that same sample in another endpoint calculation.

The result of this exercise was the creation of a data set that minimized extremes of variability, yet still incorporated the natural variability in uncontaminated areas of Puget Sound.

5.3 CHARACTERISTICS OF HABITAT CATEGORIES

Following removal of outlier stations, the characteristics of each benthic infaunal endpoint in each habitat category were examined. The following summary statistics were calculated to characterize the variability in natural, uncontaminated (reference) habitats throughout Puget Sound (Appendix E).

Number of samples	Coefficient of variation
Median	Minimum
Mean	Maximum
Standard deviation (STD)	Range
Variance	Skewness
Standard error of the mean (SE)	Kurtosis
95 percent confidence interval (95% CI)	1.96 Standard normal deviate (2 Sigma)

Statistical analyses were conducted using the SYSTAT version 5.03 software program.

Table 4. Stations and samples removed from the calculation of Puget Sound reference values due to being identified as outliers in the cluster analyses. Stations and samples are presented by habitat category.

Habitat Category	N^1	Survey	Station	Samples	Location	N^2
0 - 20% Fines	207	EVCHEM	NG-06	5	Mukilteo Oil Dock	193
		SED18903	13	1,3,5	North Hood Canal	
		SED19103	13	2,4,5	North Hood Canal	
		SED19103	15	1,2,3,4,5	Hood Canal (Dabob Bay)	
		SED19203	22	2	Mukilteo Oil Dock	
		SED19203	25	4	Pilot Point (Kitsap Penn.)	
20 - 50% Fines	77	SED18903	11	1,3,5	Discovery Bay	69
		SED19103	11	1,2,3,4,5	Discovery Bay	
50 - 80% Fines	97	SED18903	30	1,3	Eagle Harbor	86
		SED19003	41	1,2,3	Commencement Bay	
		SED19103	41	1,2,3,4,5	Commencement Bay	
		SED19203	23	1	Meadowdale	
80 - 100% Fines	112	EVCHEM	SR-07	1,2,3,4,5	Everett Marina	104
		SED18903	41	1,3,5	Commencement Bay	

N^1 -- Number of samples prior to elimination from calculation of reference values.
N^2 -- Number of samples after elimination from calculation of reference values.

A review of the summary statistics indicated that there was a large amount of variability in the abundance and richness of the Echinodermata and the miscellaneous phyla. It is well known that echinoderms are sensitive to anthropogenic inputs (Pearson and Rosenberg 1978, Gray and Pearson 1982), however the reason for the variability in uncontaminated areas of Puget Sound is unknown. Miscellaneous phyla are also poorly understood in Puget Sound, and taxonomic expertise in the studies included in the reference value project varied greatly by survey. For these reasons these two endpoints were eliminated from further consideration.

6.0 TESTING OF REFERENCE VALUE RANGES

For each endpoint and habitat category, a series of statistical tests was carried out to help determine whether benthic impacts could be identified in samples from contaminated stations relative to uncontaminated stations. Testing was carried out only between like habitat categories (e.g., contaminated 0-20 percent fines versus uncontaminated 0-20 percent fines).

6.1 TESTS FOR NORMALITY

Prior to initiating statistical testing, histogram plots were constructed to determine the structure of the data and to assess whether it departed from normality (Appendix F, Tables F1-F4). Data with large departures from normality were log transformed prior to continued statistical testing.

6.2 VARIABILITY WITHIN REFERENCE HABITAT CATEGORIES

Variability within habitat categories was assessed by examining the amount of variation around the mean using the coefficient of variation (CV). The CV is obtained by dividing the sample standard deviation by the sample mean and is usually expressed as a percent. Typically, the less variable the data the smaller the CV. Benthic infauna data, particularly abundance data, tends to have a high amount of variability and therefore a high CV. This variability tends to decrease with larger sample sizes; thus, the Puget Sound Estuary Program Benthic Protocols recommend that a minimum of five replicate samples be used to characterize a station.

As a general rule, variability, as measured by the CV, is greatest for the abundance endpoints, followed by the richness and calculated endpoints. The largest CVs were found in the amphipod, mollusc, and crustacean abundance endpoints (CV greater than 75 percent are shaded in Table 5), and the smallest CVs were found in the Infaunal Trophic Index endpoint (Table 5).

6.3 DIFFERENCES AMONG HABITAT CATEGORIES

Differences among habitat categories were assessed by testing the following hypothesis:

H_o: Benthic endpoints do not differ among habitat categories ($\alpha = 0.05$)

Tests for normality and homogeneity of variances were conducted. When the data departed substantially from normality, they were transformed. ANOVAs were conducted to determine whether statistically significant differences existed among the habitat categories. The mean values and measures of variability (i.e., variance, standard deviation and standard error of the mean) for each benthic endpoint within each habitat category were calculated (Appendix E).

Table 5. Results of the ANOVA analyses on inter-habitat variability for selected benthic infauna endpoints. Shaded cells are those with a CV greater than 75 percent.

Benthic Endpoint	Habitat Category <150 ft												F Ratio	P Value
	0-20% Fines			20-50% Fines			50-80% Fines			80-100% Fines				
	N	Mean	CV	N	Mean	CV	N	Mean	CV	N	Mean	CV		
Total abundance	184	491.4	40.0	69	494.2	30.9	79	343.5	54.5	97	307.0	42.0	32.9	0.00
Total Richness	183	68.7	31.4	66	64.4	22.3	81	51.8	26.7	99	32.9	26.7	102.	0.00
Crustacean Abundance	180	120.4	64.6	68	103.3	61.7	77	51.2	103.1	98	75.8	94.8	20.6	0.00
Crustacean Richness	181	12.1	37.8	66	10.3	36.3	80	6.9	45.5	103	4.9	36.6	93.6	0.00
Amphipod Abundance	186	27.8	118.3	63	13.4	92.0	83	15.0	103.8	95	20.5	70.2	13.8	0.00
Amphipod Richness	185	6.6	46.2	66	4.8	57.5	78	3.1	57.5	92	2.1	48.0	82.2	0.00
Polychaete Abundance	178	197.2	63.3	67	224.3	43.6	82	146.7	46.6	97	88.3	64.7	34.9	0.00
Polychaete Richness	193	34.0	39.0	68	37.5	28.5	81	27.9	28.6	99	15.7	40.1	79.7	0.00
Mollusc Abundance	178	87.7	70.4	65	109.5	75.1	78	111.2	108.3	98	64.1	62.3	7.4	0.00
Mollusc Richness	185	16.2	28.2	66	13.1	28.5	82	12.9	37.9	100	9.3	36.2	58.5	0.00
Shannon-Wiener Diversity (H')	185	1.340	17.0	69	1.314	16.6	86	1.231	17.6	95	1.058	16.6	38.6	0.00
Pielou's Eveness Index (J')	182	0.737	12.2	69	0.724	13.2	86	0.739	13.8	99	0.709	15.3	2.1	0.11
Infaunal Trophic Index (ITI)	183	74.4	9.0	65	71.6	7.9	83	70.2	10.0	101	77.2	12.9	15.4	0.00
Swartz's Dominance Index (SDI)	186	14.2	52.0	68	13.8	39.5	84	11.0	49.8	98	6.9	38.8	34.9	0.00

Results of the ANOVA analyses are also presented in the last two columns of Table 5. Statistically significant differences were seen among all benthic endpoints and all habitat categories except for Pielou's evenness measure. The strength of the F value gives a relative indication as to the number of comparisons that were statistically different and to the magnitude of their differences. Measures of species richness (i.e., total taxa) had the largest F values followed by the derived indices and abundance measures.

Multiple comparison (i.e., Bonferroni) tests were conducted to determine which habitat categories were different, following adjustment due to multiple tests. These procedures test mean values for pairwise differences, and calculate probabilities based on the number of comparisons. Three multiple comparison tests are most frequently used in environmental work; they include the Tukey-HSD, Bonferroni, and Dunnett's procedures. The optimal test to use is dependent on sample size, the number of comparisons to be made, and the type of data (Berthouex and Brown 1994). Dunnett's test is typically used to compare test data to a control or reference sample (i.e., bioassay or infauna data compared to a reference sample). The Tukey-HSD test is relatively insensitive or less powerful than Dunnett's or the Bonferroni procedure when the number of comparisons are less than 30 (SYSTAT 1992). For a large number of comparisons (i.e., > 30), the Tukey-HSD procedure is more sensitive than the others (Striplin pers. comm. 1994). The number of tests conducted in the reference value project is small (i.e. <30); for these reasons, the Bonferroni procedure was considered the most appropriate procedure for conducting multiple tests on this data set.

Six sets of multiple comparison tests were conducted using the reference value data. The objective of these tests was to determine, for each endpoint, whether the values within each habitat category differed. Tests conducted included 0-20 percent fines versus 20-50, 50-80, and 80-100 percent fines; 20-50 percent fines versus 50-80 and 80-100 percent fines; and 50-80 percent fines versus 80-100 percent fines (Table 6). In each of the six sets of comparisons, at least four and at most ten endpoints from adjacent habitat categories (e.g., 0-20 percent fines and 20-50 percent fines) were not significantly different (Table 6). This is not surprising because benthic invertebrate communities exist in a continuous gradient controlled by physical factors and biological interactions. The habitat categories, while selected in as objective a method as possible, are still reflected as abrupt cut offs which are not truly valid in communities that exist as gradients. Given that benthic communities exist as gradients, it is expected that the most dissimilar habitat categories would be the most different. This is borne out in tests between the most dissimilar habitat categories which had the most endpoints that were significantly different. For example, only two endpoints were not significantly different between the 0-20 and 80-100 percent fines categories.

Two endpoints (i.e., amphipod and polychaete richness) were significantly different over all comparisons, while six endpoints differed in all but one comparison. On the other hand, Pielou's evenness index did not differ among any habitat category.

Table 6. Table of Bonferroni adjusted probabilities for the comparison among habitat categories. Shaded areas are those that were statistically different ($p<0.05$).

Benthic Endpoint	Habitat Categories <150 ft					
	0-20% Fines versus			20-50% Fines versus		50-80% Fines versus
	20-50%	50-80%	80-100%	50-80%	80-100%	80-100
Total abundance	1.000	0.000	0.000	0.000	0.000	1.000
Total Richness	0.480	0.000	0.000	0.000	0.000	0.000
Crustacean Abundance	0.534	0.000	0.000	0.000	0.080	0.134
Crustacean Richness	0.005	0.000	0.000	0.000	0.000	0.004
Amphipod Abundance	0.000	0.000	0.015	1.000	0.133	0.343
Amphipod Richness	0.000	0.000	0.000	0.001	0.000	0.032
Polychaete Abundance	0.334	0.001	0.000	0.000	0.000	0.001
Polychaete Richness	0.107	0.000	0.000	0.000	0.000	0.000
Mollusc Abundance	0.287	0.137	0.080	1.000	0.001	0.000
Mollusc Richness	0.000	0.000	0.000	1.000	0.000	0.000
Shannon-Wiener Diversity (H')	1.000	0.001	0.000	0.100	0.000	0.000
Pielou's Evenness Index (J')	1.000	1.000	0.161	1.000	1.000	0.238
Infaunal Trophic Index (ITI)	0.062	0.000	0.016	1.000	0.000	0.000
Swartz's Dominance Index (SDI)	1.000	0.000	0.000	0.028	0.000	0.000

6.4 GEOGRAPHIC VARIABILITY WITHIN REFERENCE HABITAT CATEGORIES

The benthic data in the reference value study were generated throughout greater Puget Sound (i.e., from the Canadian border to the southern reaches of the Sound), and may be influenced by geographic variability. Large-scale factors that could contribute to geographic variability over this distance include the latitudinal distance covered by the data set (i.e., roughly 135 miles), various exposure regimes, and possibly larval availability. However, other geographic features which may occur on a considerably smaller scale, such as exposure (east vs. west sides of an island or the central basin of Puget Sound), local siltation, and flushing, may also influence benthic community structure over the study area.

Because benthic communities are largely regulated by sediment grain size and possibly other covarying parameters such as TOC, differences in these factors within Puget Sound were examined prior to assessing possible benthic differences within geographic regions of the Sound. The reference value data set was sorted into the three geographic regions used by the Puget Sound Ambient Monitoring Program (PSAMP) sediment task (i.e., northern, central, and southern Puget Sound). The percent fines data, as well as TOC and water depth, were then summarized for each habitat category and region.

The range of differences in mean values for percent fines, TOC, and water depth among regions varied, with TOC having the greatest differences followed by percent fines and water depth (Table 7). For example, in the 0-20 percent fines category, mean TOC ranged from 0.137 percent (northern Puget Sound) to 0.367 percent (southern Puget Sound). Simultaneously, mean percent fines ranged from 3.2 percent (northern Puget Sound) to 11.3 percent (southern Puget Sound). Water depth was generally more constant due to the large reliance on the PSAMP sediment task data set which targeted a water depth of 20 m for much of its sampling.

ANOVAs were also used to evaluate the conventionals data. The Bonferroni pairwise multiple comparison test was conducted to identify which regions were different, and probabilities were adjusted to account for multiple tests. Of the twelve comparisons made for each parameter (four habitat categories times three tests), water depth had the fewest number of mean values that were significantly different among regions (seven), followed by percent fines (five) and TOC (four) (Table 8). In other words, over half of the time mean percent fines and TOC for any given habitat category differed among the three regions of Puget Sound.

For each conventional parameter, the rank order of the three regions was not constant, indicating that gradual trends ordered along a north-south axis were not present. For example, in the 0-20 and 50-80 percent fines categories percent fines was lowest in the northern Sound and highest in the southern Sound, while in the 20-50 percent fines category the lowest and highest percent fines occurred in the southern and northern Sound, respectively. Lastly, the lowest and highest percent fines mean values in the 80-100 percent fines category occurred in the southern and central Sound, respectively.

The implications of significant variability in conventional parameters among the three regions of Puget Sound was considered highly significant to the assessment of possible geographic variability in benthic endpoints. As demonstrated earlier in this report and by others, benthic communities are strongly regulated by conventional parameters. Differences in conventional parameters such as contained in the reference value data set, may be sufficient to override possible larger-scale geographic variability. It was concluded that a substantially larger data set, containing more stations in similar physical conditions within each region of the Sound, would be required to tease apart possible large-scale geographic variability from the smaller-scale variability documented in Tables 7 and 8. It is suggested that potential reference stations be located in similar parts of Puget Sound to account for possible geographic variability.

Table 7. Summary statistics percent fines, total organic carbon (TOC), and water depth in meters for each habitat category by Puget Sound region. CV = coefficient of variation.

Physical Parameter	Region	Habitat Category <150 ft											
		0-20% Fines			20-50% Fines			50-80% Fines			80-100% Fines		
		N	Mean	CV	N	Mean	CV	N	Mean	CV	N	Mean	CV
Percent Fines	North	8	3.2	132.6	27	38.2	13.6	43	62.4	11.6	51	94.9	2.3
	Central	131	6.1	75.1	33	28.7	18.0	25	65.4	10.7	16	95.1	2.5
	South	47	11.3	36.4	3	23.5	22.1	15	67.9	10.3	28	89.2	2.4
TOC	North	8	0.14	100.0	27	0.81	51.3	43	1.63	44.3	51	1.81	23.7
	Central	131	0.25	45.8	33	1.06	43.4	25	1.21	57.9	16	1.05	41.9
	South	47	0.37	37.1	3	0.29	149.4	15	2.69	25.9	28	2.44	19.5
Water Depth	North	8	17.8	31.8	27	18.1	34.4	43	20.3	32.3	51	22.0	25.9
	Central	131	17.8	32.1	33	18.6	34.0	25	17.1	38.0	16	11.3	46.0
	South	47	20.2	27.1	3	20.0	32.0	15	7.9	83.3	28	14.6	36.2

Table 8. Results of the ANOVA analyses on the variability within habitat categories by geographic location in Puget Sound. Puget Sound Region: C-central, N-north, S-south. N= Number of samples per region. Result = regions were different (≠) or regions were not different (=). Probabilities were adjusted using the Bonferroni procedure.

Physical Parameter	Habitat Category <150 ft.							
	0-20% Fines		20-50% Fines		50-80% Fines		80-100% Fines	
	N	Result	N	Result	N	Result	N	Result
Percent Fines	8	C=N	27	C≠N	43	C=N	51	C=N
	13	C≠S	33	C=S	25	C=S	16	C≠S
	47	N≠S	3	N≠S	15	N≠S	28	N≠S
TOC	8	C=N	27	C=N	43	C=N	51	C≠N
	13	C≠S	33	C≠S	25	C≠S	16	C≠S
	47	N≠S	3	N=S	15	N≠S	28	N≠S
Water Depth	8	C=N	27	C=N	43	C=N	51	C≠N
	13	C≠S	33	C=S	25	C≠S	16	C=S
	47	N=S	3	N=S	15	N≠S	28	N≠S

6.5 DIFFERENCES IN BENTHIC ENDPOINTS BETWEEN REFERENCE AND CHEMICALLY CONTAMINATED HABITAT CATEGORIES

Differences in benthic infauna endpoints in chemically contaminated and uncontaminated (i.e., reference) habitat categories were assessed by testing the following hypothesis.

H_o: There are no differences between chemically contaminated and uncontaminated habitat categories ($\alpha = 0.05$)

Statistical evaluations of benthic endpoints in chemically contaminated and uncontaminated (i.e., reference) habitat categories were conducted following tests for normality and homogeneity of variances. When the data departed substantially from normality, they were log transformed. When this occurred, both transformed and untransformed results were presented in Table 9, however, only the results from the log transformed data were used in the comparisons between contaminated and reference habitat categories. To identify differences for each endpoint, the habitat category mean for contaminated stations was statistically compared to the mean of the appropriate reference habitat category using ANOVA and *t*-tests. The Bonferroni pairwise multiple comparison test was used to identify which stations were different, and probabilities were adjusted to account for multiple tests. The objective of these tests was to determine whether measurable biological impacts were associated with the contaminated stations relative to the uncontaminated stations.

Results showed that there were statistically significant differences in most of the benthic endpoints between the contaminated and uncontaminated habitat categories (Table 9). While many endpoints were significantly depressed within the contaminated categories relative to uncontaminated categories, other endpoints showed statistically significant enhancements in the contaminated categories when compared to the reference categories. Enhancements in abundance and taxa richness represented 41.1% of the comparisons, and of these enhancements 65.2% were statistically different. The 20-50 and 80-100 percent fines habitat categories had the most number of endpoints showing nonsignificance. In the 20-50 percent fines category there was no difference between contaminated and uncontaminated stations for the crustacea, amphipoda, polychaeta and mollusca abundance endpoints, and crustacea and amphipoda richness endpoints. In the 80-100 percent fines category, crustacea, amphipoda, and mollusca abundance, in addition to polychaeta and mollusca richness measures showed nonsignificance. These results are not surprising because TOC content at many stations with SQS exceedances was also high.

Moderate increases in TOC have been shown repeatedly to stimulate benthic infaunal communities by causing increases in abundance and, to a lesser extent, species richness (Pearson and Rosenberg 1978). The Pearson and Rosenberg model hypothesizes that benthic communities exist as a continuum and that in circumstances where an area is receiving an increasing amount of organic enrichment (i.e.,TOC) both species abundance and richness will be stimulated. At a critical point the amount of excess organic material cannot be assimilated by the benthic

Table 9. Table of Bonferroni adjusted probabilities for the comparison of benthic endpoints from reference value categories to habitat categories composed of stations with chemical concentrations greater than SQS. X^1 - Mean of the reference habitat category, X^2 - Mean of the contaminated habitat category, F - Calculated F ratio, P - Probability of significant difference. Mean values were rounded to one decimal point. Cells with two sets of F and P values are those where the data were log transformed and the analysis was run a second time. The second value was the score for log transformed data. Shaded cells indicate no statistical difference between mean values.

Benthic Endpoint	Habitat Categories <150 ft.															
	0-20% Fines				20-50% Fines				50-80% Fines				80-100% Fines			
	X^1	X^2	F	P	X^1	X^2	F	P	X^1	X^2	F	P	X^1	X^2	F	P
Total abundance	491.4	563.4	5.2 1.5	0.024 0.221	494.2	616.7	8.5	0.004	343.5	930.2	39.8 12.2	0.000 0.001	307.0	527.2	22.2 12.4	0.000 0.001
Total Taxa	68.7	63.7	3.6 5.0	0.060 0.026	64.4	56.3	5.5	0.021	51.8	38.4	20.9	0.000	33.0	37.3	4.0	0.046
Crustacean Abundance	120.4	219.8	28.1 20.1	0.000 0.000	103.4	137.8	4.6 0.4	0.034 0.534	51.2	166.6	18.6 606	0.000 0.011	75.8	125.0	3.4 1.7	0.065 0.199
Crustacean Taxa	12.1	14.4	11.2 5.9	0.001 0.015	11.2	10.8	0.2	0.703	6.9	8.4	4.5	0.035	4.9	6.2	8.6 4.2	0.004 0.042
Amphipod Abundance	27.8	14.4	56.3	0.000	13.4	10.8	1.6	0.207	15.0	8.4	15.1	0.000	20.5	22.8	0.3	0.600
Amphipod Taxa	6.6	7.8	7.8	0.006	4.8	4.3	0.6	0.460	3.1	3.9	4.2	0.043	2.1	2.8	7.5	0.007
Polychaete Abundance	197.2	156.9	3.5 9.2	0.004 0.003	224.3	302.3	5.9 1.3	0.017 0.259	146.7	624.0	39.9 18.7	0.000 0.000	88.3	298.7	37.5 70.7	0.000 0.000
Polychaete Taxa	34.0	30.5	5.2 5.6	0.023 0.019	39.4	31.7	11.8	0.001	27.9	20.9	15.5 24.0	0.000 0.000	15.7	20.2	11.7 1.5	0.001 0.219
Mollusc Abundance	87.7	168.7	30.5 23.4	0.000 0.000	109.5	160.5	5.4 .03	0.021 0.601	111.2	82.3	2.9 6.8	0.092 0.010	64.1	79.0	1.9 0.9	0.165 0.591
Mollusc Taxa	16.3	14.2	14.7	0.000	13.1	11.0	6.1	0.015	12.9	6.8	66.6	0.000	9.3	8.4	2.7 1.2	0.099 0.262
Shannon-Wiener Diversity (H')	1.340	1.213	22.7	0.000	1.314	1.134	10.8	0.001	1.231	0.823	79.0	0.000	1.058	0.934	9.5	0.002
Pielou's Evenness Index (J')	0.737	0.681	25.8	0.000	0.724	0.662	6.5	0.012	0.722	0.556	50.9	0.000	0.709	0.608	21.2	0.000
Infaunal Trophic Index (ITI)	74.4	71.0	21.9	0.000	71.6	62.3	24.8	0.000	70.2	47.3	41.7	0.000	77.2	70.5	17.2	0.000
Swartz's Dominance Index (SDI)	14.1	12.4	4.1 6.6	0.043 0.011	13.8	9.7	15.6	0.000	11.0	4.7	74.4 95.0	0.000 0.000	6.9	5.8	8.0	0.005

community. First, species richness decreases rapidly while species abundance continues to increase, and second, after a considerable lag species abundance also drops rapidly. If the process of organic enrichment continues sulfides and ammonia will increase while oxygen diffusion into the sediment will decrease eventually resulting in azoic conditions.

6.6 DIFFERENCES BETWEEN REFERENCE HABITAT CATEGORIES AND INDIVIDUAL CONTAMINATED STATIONS

Statistical tests were used to determine whether samples from contaminated stations were different from reference conditions. The following hypothesis was tested.

H_o: There are no differences between individual contaminated stations and the appropriate reference value ($\alpha = 0.05$)

For each benthic endpoint, the data from individual contaminated stations were statistically tested against the reference values within corresponding habitat categories. Stations whose mean values were less than one standard deviation below the reference value were considered impacted and were statistically compared to the reference value stations using *t*-tests. For many stations sampled as part of the Seahurst Baseline Study, only one replicate sample was processed and the *t*-test could not be conducted. In these cases if the sample endpoint value was less than one standard deviation below the reference value mean then it was counted and listed in Table 10, but no statistical test was conducted using the data.

Results for each habitat category are presented in Table 10. Overall, 86.7 percent of the contaminated stations with mean values less than one standard deviation below the reference value mean were significantly different ($p < 0.05$). The habitat category with the greatest number of significant differences between contaminated and uncontaminated was the 50-80 percent fines category (98.3%) and the category with the least number of significant differences was the 0-20 percent fines category (79.8%). By counting the number of times contaminated stations with mean values less than one standard deviation below the reference value mean were significantly different as a measure of success, it appears the derived benthic indices were the most sensitive in identifying contaminated stations followed by taxa richness and abundance measures.

6.7 SUMMARY OF STATISTICAL TESTING

The statistical testing program showed that measures of benthic community structure generally differed for stations with chemical concentrations below the SQS versus those with chemical concentrations above the SQS. Statistical testing also showed that the habitat categories are effective in limiting benthic variability. Finally, the statistical tests showed that a range of one standard deviation about the mean is a reasonable estimate of natural variability, and that values which fall outside of this range may be associated with impacted sediments.

Table 10. Results of *t*-tests comparing reference values to individual impacted stations whose mean is 1 standard deviation or more below the mean reference value.

Benthic Endpoint	# of stations tested	# of stations ≤ -1 SD of mean reference value	# of stations ≤ -1 SD where reps/station =1	# of stations different after *t*-test vs. reference p ≤ 0.05	# of stations tested	# of stations ≤ -1 SD of mean reference value	# of stations ≤ -1 SD where reps/station =1	# of stations different after *t*-test vs. reference p ≤ 0.05
	0-20% Fines				**20-50% Fines**			
Total Abundance	55	4	0	4/4	14	2	0	1/1
Total Richness	56	8	1	6/7	14	4	1	3/3
Crustacean Abundance	54	4	1	1/3	14	3	1	2/2
Crustacean Richness	55	3	1	2/2	14	3	0	2/3
Amphipod Abundance	56	3	0	3/3	*standard deviation of reference value is greater than the mean*			
Amphipod Richness	54	5	1	3/4	14	4	0	2/4
Polychaete Abundance	55	9	4	5/5	13	2	0	2/2
Polychaete Richness	56	13	3	9/9	14	6	0	5/5
Mollusc Abundance	53	2	1	1/1	14	3	1	2/2
Mollusc Richness	56	12	3	7/9	14	5	1	3/4
Shannon-Wiener Diversity (H')	55	18	8	10/10	11	3	0	2/3
Pielou's Evenness Index (J)	55	30	10	8/16	11	2	0	2/2
Infaunal Trophic Index (ITI)	55	11	2	5/9	14	7	2	5/5
Swartz's Dominance Index (SDI)	54	10	0	7/7	11	4	0	3/3
	50-80%Fines				**80-100% Fines**			
Total Abundance	17	3	0	3/3	26	5	0	5/5
Total Richness	18	5	0	5/5	25	7	0	6/7
Crustacean Abundance	*standard deviation of reference value is greater than the mean*				24	2	0	2/2
Crustacean Richness	17	2	0	2/2	25	2	0	2/2
Amphipod Abundance	18	2	0	1/1	*standard deviation of reference value is greater than the mean*			
Amphipod Richness	18	2	0	1/1	23	4	0	2/4
Polychaete Abundance	13	3	0	3/3	24	0	0	NA
Polychaete Richness	18	5	0	5/5	25	4	1	3/3
Mollusc Abundance	*standard deviation of reference value is greater than the mean*				25	9	1	5/8
Mollusc Richness	18	11	0	11/11	28	8	0	4/6
Shannon-Wiener Diversity (H')	17	10	0	9/10	26	8	0	8/8
Pielou's Evenness Index (J)	17	7	0	7/7	26	11	0	11/11
Infaunal Trophic Index (ITI)	18	7	0	4/4	26	8	0	6/7
Swartz's Dominance Index (SDI)	18	8	0	7/7	26	7	0	4/5

7.0 PRIORITIZATION OF BENTHIC INDICES AS REFERENCE VALUE ENDPOINTS

The final objective of this report was to prioritize benthic endpoints for use by other investigators. By prioritizing endpoints based on their usefulness in identifying benthic impacts, investigators may be able to focus their work on the most efficient endpoints.

7.1 CHARACTERISTICS OF OPTIMAL REFERENCE VALUE ENDPOINTS

Elements that are characteristic of a good reference area endpoint for Puget Sound are derived from the hypotheses discussed in Section 6.0. The following elements may be considered to be characteristic of a good reference area endpoint:

1. Low variability within habitat categories
2. Statistically significant separation among habitat categories
3. Ability to statistically differentiate between chemically impacted and non-impacted stations

7.2 NUMERICAL SCORING PROCESS

A numerical scoring process was developed to prioritize the endpoints. The desirable characteristics of reference area endpoints are discussed below along with the approach for scoring each element. The scores for each element were summed and the endpoints with the greatest scores are considered most appropriate for use as reference value endpoints.

Element 1. Low Variability within Habitat Categories

Variability within habitat categories was assessed by examining the amount of variation around the mean using the coefficient of variation (CV). If the coefficient of variation was greater than 100 percent, the endpoint was given a score of -1; if the CV was between 50-100 percent, then a score of 0 was assigned; and if the CV was less than 50 percent, a +1 was assigned (Table 11). The derived benthic indices (H', J, ITI), total richness and mollusc and crustacean richness were the least variable and therefore received the highest scores.

Table 11. Relative measure of the coefficient of variation for each benthic endpoint within each habitat category. (1= CV less than 50 percent, 0= CV between 50 and 100 percent, and -1= CV greater than 50 percent.

Benthic Endpoint	Habitat Category <150 ft.				
	0-20%	20-50%	50-80%	80-100%	Score
Total abundance	1	1	0	1	3
Total Richness	1	1	1	1	4
Crustacean Abundance	0	0	-1	0	-1
Crustacean Richness	1	1	1	1	4
Amphipod Abundance	-1	0	-1	0	-2
Amphipod Richness	1	0	0	1	2
Polychaete Abundance	0	1	1	0	2
Polychaete Richness	0	-1	-1	0	-2
Mollusc Abundance	0	-1	-1	0	-2
Mollusc Richness	1	1	1	1	4
Shannon-Wiener Diversity (H')	1	1	1	1	4
Pielou's Evenness Index (J')	1	1	1	1	4
Infaunal Trophic Index (ITI)	1	1	1	1	4
Swartz's Dominance Index (SDI)	0	1	1	1	3

Element 2. Statistically Significant Separation Among Habitat Categories

ANOVAs were conducted for each endpoint among the four habitat categories to test for statistically significant separation among habitat categories. Endpoints showing a significant difference were given a score of +1 and endpoints showing non-significance were given a score of 0 (Table 12). Polychaete and amphipod richness scored the highest (each with a score of 6), followed by crustacean, mollusc, and total richness, polychaete abundance and the SDI (all with a score of 5).

Element 3. Ability to statistically differentiate between chemically contaminated and uncontaminated stations

Element 3A. Differentiate based on group means

ANOVAs were used to statistically differentiate between mean endpoint values from chemically contaminated and uncontaminated habitat categories. An endpoint showing a significant decrease in the contaminated stations relative to the reference value stations was given a +1; an endpoint with a significant increase was given a -1; and a non-significant endpoint was given a 0. When two results are shown in Table 9, the first is the result from the untransformed data and the second is from log transformed data. If data were log transformed, the log transformed results were scored in Table 13. Based on the scoring, the derived endpoints (H', J, ITI, SDI) and total taxa richness were the most efficient at showing significant decreases from the reference values (Score of +4) followed by polychaete and mollusc richness (score of +3).

Element 3B. Differentiate based on mean reference value versus an individual chemically impacted station

Element 3B examined the ability to differentiate between the reference values and individual stations with chemicals that exceeded the SQS. Statistical testing was done using the *t*-test comparing the reference value against the samples from each individual impacted station. Endpoints that showed statistically significant reduction between the reference values and the contaminated stations were assigned a score of +1 and nonsignificant differences were scored as 0. Significant enhancements were scored as a -1. The scoring indicated that crustacean, amphipod, and molluscs richness (score of 3) were most sensitive in identifying statistical differences followed by total richness, H', and the ITI (score of 2; Table 14).

7.3 SUMMARY OF NUMERICAL SCORING

Following all scoring a master table was prepared. Those endpoints with the greatest score are considered to be the preferred benthic endpoints to assess the benthic effects of chemical contamination in Puget Sound (Table 15). The maximum number of points an endpoint could receive was 22. The greatest number of points was scored by molluscan richness with 15 points, followed by Shannon-Wiener Diversity and the Infaunal Trophic Index, both with 14 points, and total taxa richness and Swartz's Dominance Index with 13 points. The two lowest scores were for the molluscan crustacean and molluscan abundance.

Table 12. Variability among habitat categories. Significant differences ($p<0.05$) were scored as 1; non-significant differences ($p>0.05$) were scored as 0.

Benthic Endpoint	Habitat Category <150 ft.						
	20% fines versus			50% fines versus		80% fines versus	Score
	50%	80%	100%	80%	100%	100%	
Total abundance	0	1	1	1	1	0	4
Total Richness	0	1	1	1	1	1	5
Crustacean Abundance	0	1	1	1	0	0	3
Crustacean Richness	0	1	1	1	1	1	5
Amphipod Abundance	1	1	1	0	0	0	3
Amphipod Richness	1	1	1	1	1	1	6
Polychaete Abundance	0	1	1	1	1	1	5
Polychaete Richness	1	1	1	1	1	1	6
Mollusc Abundance	0	0	0	0	1	1	2
Mollusc Richness	1	1	1	0	1	1	5
Shannon-Wiener Diversity (H')	0	1	1	0	1	1	4
Pielou's Evenness Index (J')	0	0	0	0	0	0	0
Infaunal Trophic Index (ITI)	0	1	1	0	1	1	4
Swartz's Dominance Index (SDI)	0	1	1	1	1	1	5

Table 13. Comparison between mean reference values for each habitat category and mean values from stations with chemicals at concentrations > SQS. When two results are indicated, the first is the result from untransformed data and the second is from log transformed data.

Benthic Endpoint	Habitat Category <150 ft.				
	0-20%	20-50%	50-80%	80-100%	Score
Total abundance	0	-1	-1	-1	-3
Total Richness	1	1	1	-1	2
Crustacean Abundance	-1	0	-1	0	-2
Crustacean Richness	-1	0	-1	-1	-3
Amphipod Abundance	1	0	1	0	2
Amphipod Richness	-1	0	-1	-1	-3
Polychaete Abundance	1	0	-1	-1	-1
Polychaete Richness	1	1	1	0	3
Mollusc Abundance	-1	0	1	0	0
Mollusc Richness	1	1	1	0	3
Shannon-Wiener Diversity (H')	1	1	1	1	4
Pielou's Evenness Index (J')	1	1	1	1	4
Infaunal Trophic Index (ITI)	1	1	1	1	4
Swartz's Dominance Index (SDI)	1	1	1	1	4

Table 14. Comparison between mean reference values for each habitat category and the mean values from individual contaminated stations (chemical concentrations > SQS).

Benthic Endpoint	Habitat Category <150 ft.				
	0-20%	20-50%	50-80%	80-100%	Score
Total abundance	0	0	0	0	0
Total Richness	1	0	0	1	2
Crustacean Abundance	1	0	-1	0	0
Crustacean Richness	1	0	1	1	3
Amphipod Abundance	0	-1	0	-1	-2
Amphipod Richness	1	1	0	1	3
Polychaete Abundance	0	0	0	-1	-1
Polychaete Richness	0	0	0	0	0
Mollusc Abundance	0	0	-1	1	0
Mollusc Richness	1	1	0	1	3
Shannon-Wiener Diversity (H')	0	1	1	0	2
Pielou's Evenness Index (J')	1	0	0	0	1
Infaunal Trophic Index (ITI)	1	0	0	1	2
Swartz's Dominance Index (SDI)	0	0	0	1	1

Table 15. Summary of scoring by element.

Benthic Endpoint	Element				
	1	2	3A	3B	Total Score
Total abundance	3	4	-3	0	4
Total Richness	4	5	2	2	13
Crustacean Abundance	-1	3	-2	0	0
Crustacean Richness	4	5	-3	3	9
Amphipod Abundance	-2	3	2	-2	5
Amphipod Richness	2	6	-3	3	8
Polychaete Abundance	2	5	-1	-1	5
Polychaete Richness	-2	6	3	0	7
Mollusc Abundance	-2	2	0	0	0
Mollusc Richness	4	5	3	3	15
Shannon-Wiener Diversity (H')	4	4	4	2	14
Pielou's Evenness Index (J')	4	0	4	1	9
Infaunal Trophic Index (ITI)	4	4	4	2	14
Swartz's Dominance Index (SDI)	3	5	4	1	13

The rank order of the endpoints with their respective score is as follows:

1.	Molluscan richness	15
2.	Shannon Wiener Diversity Index (H'), Infaunal Tropic Index (ITI)	14
3.	Total taxa richness, Swartz Dominance Index (SDI)	13
4.	Crustacean richness, Pielou's Eveness Index	9
5.	Amphipod richness	8
6.	Polychaete richness	7
7.	Polychaete abundance, Amphipod abundance	5
8.	Total abundance	4
9.	Molluscan abundance, Crustacean abundance	0

8.0 RECOMMENDATIONS

A number of recommendations can be made based on the results of the reference value project. The objective of these recommendations is to suggest strategies for generating and analyzing benthic infaunal data that will yield the most meaningful information regarding the identification of potentially altered benthic communities in Puget Sound.

First, investigators who are interested in comparing their benthic data to reference conditions described in this report should use the benthic endpoint reference ranges that are shown in Table 16. The use of ranges is important because benthic communities are highly variable and comparison of field data to a mean value for a given benthic endpoint in a habitat category will not account for natural variability. Benthic infauna data generated from reference stations sampled as part of a study can be compared to the reference values to determine if their reference stations data fall within that range. This could then be used to determine the suitability of that station as a reference station. As shown in this report, data that fall within a reference range are almost always statistically similar to the reference data whereas data that are outside of the range are typically significantly different from reference.

Second, the benthic endpoints that received the highest scores appear to be those that most consistently identified benthic impacts in the historic Puget Sound benthic database. Measures of species richness and the derived indices generally scored higher than those for abundance. It is recommended that investigators use several endpoints to evaluate benthic communities, and that the endpoints that received high scores be given greater consideration in the evaluation relative to endpoints that received low scores.

Third, because the majority of benthic data used in this project were generated by regional benthic taxonomists who have worked together extensively, there was reason to believe that most of the identifications in the historic database were roughly comparable. In the event that taxonomic expertise from outside of the Puget Sound area is employed, then it is recommended that those taxonomists also provide data in the form of a standardized species list. Use of a standardized list will increase the chance that new data will be comparable to the historic database and that the reference value ranges will be useful to all investigators. Should different taxonomy be used, then it is likely that application of the reference ranges will not be appropriate.

Fourth, because new data are continuously being generated by public agencies and private parties, the reference ranges should be periodically updated (e.g., every five years) using new data from known reference locations. It may be appropriate to update the reference ranges on the same schedule as the chemical SQS and MCUL values are updated in the Sediment Management Standards. Data generated by the Puget Sound Ambient Monitoring Program would be ideally suited to the update process (as long as synoptic chemistry and benthic infauna data are obtained). Most of the data used to calculate the reference ranges originated from the PSAMP sediment task. Data from other programs should also be included as long as chemical data are available to verify that chemical concentrations are below the SQS. Care should be taken when screening any benthic data for use in updating the reference value ranges to ensure that it was generated using comparable taxonomy.

Fifth, it is strongly recommended that all investigators strictly adhere to the Puget Sound Protocols and Guidelines for the sampling and analyzing subtidal benthic macroinvertebrate assemblages (PSEP 1987). Deviations from these guidelines would likely make the application of these reference ranges inappropriate.

Table 16. Reference value ranges for Puget Sound habitats. All values are presented in per $0.1m^2$.

Benthic Endpoint	Habitat Category <150 ft.							
	N	0-20% Fines	N	20-50% Fines	N	50-80% Fines	N	80-100% Fines
Total abundance	184	295-983	69	342-647	79	156-531	97	178-436
Total Taxa	183	47-90	66	50-78	81	38-66	99	24-42
Crustacean Abundance	180	43-198	68	40-167	77	0-104	98	4-148
Crustacean Taxa	181	8-17	66	6-16	80	4-10	103	3-72
Amphipod Abundance	186	8-47	63	0-27	83	1-29	95	0-44
Amphipod Taxa	185	4-10	66	2-7	78	1-5	92	1-3
Polychaete Abundance	178	72-322	67	126-322	82	78-215	97	31-145
Polychaete Taxa	193	21-47	68	28-51	81	21-36	99	9-22
Mollusc Abundance	178	26-150	65	27-192	78	0-232	98	24-104
Mollusc Taxa	185	12-21	66	9-17	82	8-18	100	6-13
Shannon-Wiener Diversity (H')	185	1.12-1.57	69	1.10-1.53	86	1.01-1.45	95	0.88-1.23
Pielou's Eveness Index (J')	182	0.65-0.83	69	0.63-0.82	86	0.59-0.85	99	0.6-0.82
Infaunal Trophic Index (ITI)	183	67.7-81.1	65	65.9-77.3	83	63.2-77.2	101	67.3-87.1
Swartz's Dominance Index (SDI)	186	6.8-21.6	68	8.3-19.2	84	5.5-16.5	98	4.2-9.6

N = Number of samples

9.0 LITERATURE CITED

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APPENDIX A
SURVEYS INCLUDED IN EVALUATION OF CHEMICAL DATA

Survey	Survey Description	Implementing Agency
ALKI	1982 ALKI Survey	Municip. of Metropolitan Seattle (METRO)
2MARINAS	Port Townsend & Cap Sante Marinas Study	EPA, Region X
ARCOCPC2	ARCO Cherry Point Refinery Class 2 Insp.	Department of Ecology, EILS
BCWTACC2	Boise Cascade's West Tacoma Mill Class 2	Department of Ecology, EILS
BPFERNC2	BP Oil Refinery Class II Inspection	Department of Ecology, EILS
BREMWTC2	Bremerton WTP Class II Inspection	Department of Ecology, EILS
CBBLAIR	Commencmnt Bay RI Blair Waterway Dredge	WA Dept. of Ecology, U.S. EPA Region X
CBMSQS	Commencement Bay RI Main Sed. Qual. Sur.	WA Dept. of Ecology, U.S. EPA Region X
CBPRELIM	Commencement Bay RI Prelim. Survey 1984	WA Dept. of Ecology, U.S. EPA Region X
CNKTSPC2	Central Kitsap WTP 1988 Class II Inspec.	Department of Ecology, EILS
CRECI_83	EVRT (EW&PG) Sediment Characterization	EPA, Region X
DNRREC91	Aq. Lands Sediment Qual. Reconnaissance.	Washington Dept. of Natural Resources.
DNRREC92	Aq. Lands Sediment Qual. Reconnaissance.	Washington Dept. of Natural Resources.
DUPONT91	91 City of Dupont DEIS Sediment Analysis	City of Dupont/Ecology
DUWAM84	1984 Duwamish Head Survey	Municip. of Metropolitan Seattle (METRO)
DUWAM85	Duwamish Head Baseline Survey, '85-'86	Municip. of Metropolitan Seattle (METRO)
DUWRIV1	PSDDA Duwamish River I data set.	U.S. Army Corps of Engineers
DUWRIV2	PSDDA Duwamish River II data set.	U.S. Army Corps of Engineers
EBCHEM	1985 Elliott Bay sediment survey	U.S. EPA Region X
EDMDWTC2	Edmonds WTP Class II Inspection	Department of Ecology, EILS
EHCHEM	Eagle Harbor sediment chemistry survey	WA Dept. of Ecology
EIGHTBAY	1985 Puget Sound Eight-Bay survey.	U.S. EPA Region X
EPA8283	1982-83 EPA survey of Duwamish River	U.S. EPA Region X
EVCHEM	1985 Everett Hbr. chem. & biota data.	U.S. EPA Region X
EVRT_CSO	1987 CSO Monitoring for City of Everett	City of Everett
EVWEYCII	Weyerhaeuser, Everett Class II Inspectio	Department of Ecology
GAMPONIA	Gamponia survey of Elliott Bay	Municip. of Metropolitan Seattle (METRO)
GAPAC_C2	NPDES Georgia Pacific - Bellingham.	Department of Ecology/NWRO.
IND_MOXL	Indian/Moxlie Cr. (Olympis) Basin Samp.	Thurston County Health Department
INTALCC2	DOE 88 Intalco C2 Monitoring Inspection	Department of Ecology, EILS
KTSPMON2	Sinclair and Dyes Inlet monitoring 91-92	Bremerton-Kitsap Co. Health District
MALINS	1980 NOAA OMPA-19 survey of Elliott Bay.	NOAA
METAMB88	METRO NPDES & ambient subtidal monitor.	Seattle METRO
METAMB90	METRO NPDES & ambient subtidal monitor.	Seattle METRO
METAMB92	METRO NPDES & ambient subtidal monitor.	Seattle METRO
NAVYHP84	1984 NAVY HP (EVRT) Sediment Character.	Corps of Engineers, Seattle District
NAVYHP85	1985 Navy HP (EVRT) Sediment Character.	Corps of Engineers, Seattle District
NAVYHP87	1987 NAVY HP (EVRT) sediment charater.	Dept. of Navy, Western Division
NOAA84	Benthic Surveillance 1984	NOAA
NOAA86	1986 Benthic Surveillance (NST)	Nat'l Oceanic Atmospheric Administration
OLYTERC2	Olympus Terrace WTP Class II Inspection	Department of Ecology, EILS
PENNWLC2	Pennwalt Class II Inspection Report	Department of Ecology, EILS
PIER53BL	Pier 53-55 Sediment Cap Remediation Proj	Metro Pollution Control Dept., Seattle
POSTPTC2	NPDES B'ham Post Point treatment plant.	Department of Ecology/NWRO.
PSDDA1	PSDDA Phase I baseline survey	Washington Department of Ecology
PSDDA2	PSDDA Phase 2 baseline survey	Washington Department of Ecology
PSDDAM90	1990 PSDDA Post-Disposal Site Monitoring	Department of Natural Resources
PSDDAM91	PSDDA 1991 Monitoring/Port Gardner PGB09	Department of Natural Resources, Aquatic
PSDDAM92	1992 PSDDA full monitoring, Elliott Bay	Department of Natural Resources
PSREF90	Puget Sound Reference Areas Survey	PTI Environmental Services
PTORCHC2	Port Orchard WTP Class II Inspection	Department of Ecology, EILS
PTWNPCC2	Pt. Townsend Paper Company Class 2	Department of Ecology/Pt. Town. Paper Co
PTWNPENR	Port Townsend Pen-Reared Salmon Mortal.	Dept. of Ecology, Water Quality Invest.
SEAHURST	1982-84 Seahurst Baseline Study	Municip. of Metropolitan Seattle (METRO)
SED18804	Puget Sound Reconnaissance Survey	EPA
SED18903	March 18, 1989 Sediment Survey	TTCH
SED19003	Puget Sound Ambient Monitoring - 1990	PTI Environmental Services
SED19103	Puget Sound Ambient Monitoring - 1991	Department of Ecology
SED19203	Puget Sound Ambient Monitoring - 1992	Department of Ecology
SHELLCII	Shell Oil's Anacortes Refinery Class II	Department of Ecology, EILS
SQMMON90	90 Pt. of Port Angeles Sediment Monitoring	Port of Port Angeles/Battelle

Survey	Survey Description	Implementing Agency
SQMMON91	91 Pt. of Port Angeles Sediment Monitoring	Port of Port Angeles/Battelle
SQMMON92	92 Pt. of Port Angeles Sediment Monitoring	Port of Port Angeles/Battelle
SNDREF92	Sound Refining NPDES Sediment Monitoring	Parametrix, Inc. for Sound Refining
SSRECON	South Puget Sound Reconaissance Survey	U.S. EPA
TACCENC2	Tacoma Central WTP Class II Inspection	Department of Ecology, EILS
TEXACOC2	Texaco Inc.'s Anacortes Refinery Class 2	Department of Ecology, EILS
TPPSRECO	TPPS Preliminary survey	Municip. of Metropolitan Seattle (METRO)
MARTPPS	TPPS Phase III A	Municip. of Metropolitan Seattle (METRO)
JULTPPS	TPPS Phase III B	Municip. of Metropolitan Seattle (METRO)
TXNPDS92	Texaco, Anacortes NPDES Sediment Studies	Texaco Puget Sound Plant, Anacortes WA
WBMARINA	Olympia/West Bay marina sampling.	Thurston County Pub. Health & Soc. Svcs.
WYCKO_BL	Wyckoff Effluent Investigation: Baseline	Wyckoff Co.
WYCKO_Q1	Wyckoff Effluent Investigation: 1st Qtr.	Wyckoff Company
WYCKO_Q2	Wyckoff Effluent Investigation: 2nd Qtr.	Wyckoff Company
WYCKO_Q3	Wyckoff Effluent Investigation: 3rd Qtr.	Wyckoff Company
WYCKO_Q4	Wyckoff Effluent Investigation: 4th Qtr.	Wyckoff Company

APPENDIX B
BENTHIC ENDPOINT DATA MATRIX

Appendix B. Summary statistics for Benthic Reference Range Project. MO - refers to metals and organics were analyzed for at that station. S* - refers to the type of sampler. 1= 0.1 m2 and 2 = 0.06 m2. 2** - refers to how TOC was arrived at if it was not analyzed for at the station. VS = volatile solids, FN = percent fines.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
EBCHEM	AB-01	AB-01/1	MO	1	47	35	18.01	122	22	35.72	-11.7	29.4	1.5		958	81	282	290
EBCHEM	AB-01	AB-01/2	MO	1	47	35	18.01	122	22	35.72	-11.7	29.4	1.5		873	89	453	279
EBCHEM	AB-01	AB-01/3	MO	1	47	35	18.01	122	22	35.72	-11.7	29.4	1.5		970	76	560	357
EBCHEM	AB-01	AB-01/4	MO	1	47	35	18.01	122	22	35.72	-11.7	29.4	1.5		609	72	403	87
EBCHEM	AB-01	AB-01/5	MO	1	47	35	18.01	122	22	35.72	-11.7	29.4	1.5		807	82	357	282
EBCHEM	EW-05	EW-05/1	MO	1	47	34	43.6	122	20	35.12	-12.8	40.4	7.4		51	4	47	4
EBCHEM	EW-05	EW-05/2	MO	1	47	34	43.6	122	20	35.12	-12.8	40.4	7.4		111	15	93	16
EBCHEM	EW-05	EW-05/3	MO	1	47	34	43.6	122	20	35.12	-12.8	40.4	7.4		83	10	76	4
EBCHEM	EW-05	EW-05/4	MO	1	47	34	43.6	122	20	35.12	-12.8	40.4	7.4		160	15	153	2
EBCHEM	EW-05	EW-05/5	MO	1	47	34	43.6	122	20	35.12	-12.8	40.4	7.4		111	11	98	10
EBCHEM	EW-11	EW-11/1	MO	1	47	35	2.76	122	20	30.93	-11.3	74.2	3.4		2389	37	2149	205
EBCHEM	EW-11	EW-11/2	MO	1	47	35	2.76	122	20	30.93	-11.3	74.2	3.4		2670	55	2441	112
EBCHEM	EW-11	EW-11/3	MO	1	47	35	2.76	122	20	30.93	-11.3	74.2	3.4		1829	37	1692	108
EBCHEM	EW-11	EW-11/4	MO	1	47	35	2.76	122	20	30.93	-11.3	74.2	3.4		1470	35	1272	178
EBCHEM	EW-11	EW-11/5	MO	1	47	35	2.76	122	20	30.93	-11.3	74.2	3.4		1564	37	1318	175
EBCHEM	KG-01	KG-01/1	MO	1	47	33	24.72	122	20	21.17	-7.6	95	3.13		1345	32	1224	106
EBCHEM	KG-01	KG-01/2	MO	1	47	33	24.72	122	20	21.17	-7.6	95	3.13		843	21	779	51
EBCHEM	KG-01	KG-01/3	MO	1	47	33	24.72	122	20	21.17	-7.6	95	3.13		1695	29	1621	69
EBCHEM	KG-01	KG-01/4	MO	1	47	33	24.72	122	20	21.17	-7.6	95	3.13		1297	21	1230	57
EBCHEM	KG-01	KG-01/5	MO	1	47	33	24.72	122	20	21.17	-7.6	95	3.13		924	21	838	76
EBCHEM	NH-01	NH-01/1	MO	1	47	35	20.86	122	20	57.65	-8.8	18.9	1		421	57	277	30
EBCHEM	NH-01	NH-01/2	MO	1	47	35	20.86	122	20	57.65	-8.8	18.9	1		554	49	310	15
EBCHEM	NH-01	NH-01/3	MO	1	47	35	20.86	122	20	57.65	-8.8	18.9	1		905	67	497	42
EBCHEM	NH-01	NH-01/4	MO	1	47	35	20.86	122	20	57.65	-8.8	18.9	1		319	43	201	32
EBCHEM	NH-01	NH-01/5	MO	1	47	35	20.86	122	20	57.65	-8.8	18.9	1		421	51	268	20
EBCHEM	NH-02	NH-02/1	MO	1	47	35	15.56	122	21	6.32	-9.2	30.9	1.8		598	59	392	76
EBCHEM	NH-02	NH-02/2	MO	1	47	35	15.56	122	21	6.32	-9.2	30.9	1.8		432	55	289	48
EBCHEM	NH-02	NH-02/3	MO	1	47	35	15.56	122	21	6.32	-9.2	30.9	1.8		481	61	298	50
EBCHEM	NH-02	NH-02/4	MO	1	47	35	15.56	122	21	6.32	-9.2	30.9	1.8		810	69	435	80
EBCHEM	NH-02	NH-02/5	MO	1	47	35	15.56	122	21	6.32	-9.2	30.9	1.8		656	62	456	43
EBCHEM	NH-03	NH-03/1	MO	1	47	35	15.14	122	21	22.8	-12.2	73.5	3		15	5	12	1
EBCHEM	NH-03	NH-03/2	MO	1	47	35	15.14	122	21	22.8	-12.2	73.5	3		65	15	51	5
EBCHEM	NH-03	NH-03/3	MO	1	47	35	15.14	122	21	22.8	-12.2	73.5	3		41	5	38	2

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
EBCHEM	AB-01	AB-01/1	383	54	0	3	43	11	16	0	20	2	1.288	0.675	65	11
EBCHEM	AB-01	AB-01/2	135	1	3	3	58	1	15	2	11	3	1.413	0.725	68	13
EBCHEM	AB-01	AB-01/3	50	4	0	3	45	4	14	0	15	2	1.29	0.686	62	10
EBCHEM	AB-01	AB-01/4	116	23	2	1	44	9	9	2	16	1	1.402	0.755	69	14
EBCHEM	AB-01	AB-01/5	167	34	0	1	44	11	17	0	20	1	1.339	0.7	66	10
EBCHEM	EW-05	EW-05/1	0	0	0	0	3	0	1	0	0	0	0.328	0.544	14	1
EBCHEM	EW-05	EW-05/2	2	1	0	0	11	1	2	0	2	0	0.589	0.501	18	2
EBCHEM	EW-05	EW-05/3	3	0	0	0	7	0	1	0	2	0	0.446	0.446	15	1
EBCHEM	EW-05	EW-05/4	5	2	0	0	10	2	1	0	4	0	0.591	0.503	30	2
EBCHEM	EW-05	EW-05/5	3	1	0	0	6	1	2	0	3	0	0.723	0.694	56	3
EBCHEM	EW-11	EW-11/1	35	1	0	0	22	1	6	0	9	0	0.467	0.298	66	1
EBCHEM	EW-11	EW-11/2	95	76	1	1	31	6	7	1	14	1	0.537	0.309	66	1
EBCHEM	EW-11	EW-11/3	28	7	0	1	24	4	4	0	8	1	0.607	0.387	65	2
EBCHEM	EW-11	EW-11/4	19	0	0	1	22	0	9	0	3	1	0.589	0.382	66	2
EBCHEM	EW-11	EW-11/5	70	0	0	1	22	0	10	0	4	1	0.607	0.387	66	2
EBCHEM	KG-01	KG-01/1	14	6	0	1	20	2	6	0	5	1	0.525	0.349	67	2
EBCHEM	KG-01	KG-01/2	12	4	0	1	9	1	7	0	4	1	0.54	0.409	69	2
EBCHEM	KG-01	KG-01/3	5	2	0	0	20	1	5	0	4	0	0.389	0.266	68	1
EBCHEM	KG-01	KG-01/4	10	1	0	0	13	1	6	0	2	0	0.426	0.323	67	1
EBCHEM	KG-01	KG-01/5	10	4	0	0	12	1	5	0	4	0	0.528	0.399	67	2
EBCHEM	NH-01	NH-01/1	114	3	0	0	41	2	7	0	9	0	1.366	0.778	64	13
EBCHEM	NH-01	NH-01/2	228	4	0	1	34	4	5	0	9	1	1.151	0.681	57	7
EBCHEM	NH-01	NH-01/3	361	10	0	1	46	2	10	0	9	1	1.215	0.665	65	9
EBCHEM	NH-01	NH-01/4	84	2	0	2	27	2	8	0	7	1	1.266	0.775	66	10
EBCHEM	NH-01	NH-01/5	129	5	0	1	33	4	7	0	9	1	1.257	0.736	57	9
EBCHEM	NH-02	NH-02/1	83	16	1	33	32	5	13	1	10	2	1.314	0.742	60	10
EBCHEM	NH-02	NH-02/2	88	14	0	6	37	4	5	0	9	3	1.311	0.754	62	12
EBCHEM	NH-02	NH-02/3	123	27	0	8	33	7	8	0	17	2	1.454	0.814	63	17
EBCHEM	NH-02	NH-02/4	206	27	1	54	40	6	11	1	13	3	1.421	0.773	59	13
EBCHEM	NH-02	NH-02/5	58	4	4	36	40	1	9	2	7	3	1.365	0.762	63	12
EBCHEM	NH-03	NH-03/1	2	1	0	0	2	1	1	0	2	0	0.412	0.59	14	2
EBCHEM	NH-03	NH-03/2	7	5	0	0	5	4	4	0	5	0	0.632	0.537	19	3
EBCHEM	NH-03	NH-03/3	1	1	0	0	2	1	2	0	1	0	0.198	0.283	4	1

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
EBCHEM	NH-03	NH-03/4	MO	1	47	35	15.14	122	21	22.8	-12.2	73.5	3		25	5	23	0
EBCHEM	NH-03	NH-03/5	MO	1	47	35	15.14	122	21	22.8	-12.2	73.5	3		15	3	14	0
EBCHEM	NH-04	NH-04/1	MO	1	47	35	8.19	122	21	41.12	-11.9	46.4	2		1323	43	1277	10
EBCHEM	NH-04	NH-04/2	MO	1	47	35	8.19	122	21	41.12	-11.9	46.4	2		849	33	826	5
EBCHEM	NH-04	NH-04/3	MO	1	47	35	8.19	122	21	41.12	-11.9	46.4	2		798	36	753	23
EBCHEM	NH-04	NH-04/4	MO	1	47	35	8.19	122	21	41.12	-11.9	46.4	2		442	21	426	2
EBCHEM	NH-04	NH-04/5	MO	1	47	35	8.19	122	21	41.12	-11.9	46.4	2		1075	27	1043	20
EBCHEM	NH-08	NH-08/1	MO	1	47	35	2.08	122	22	9.35	-9.4	53.2	2		922	61	748	148
EBCHEM	NH-08	NH-08/2	MO	1	47	35	2.08	122	22	9.35	-9.4	53.2	2		669	43	581	68
EBCHEM	NH-08	NH-08/3	MO	1	47	35	2.08	122	22	9.35	-9.4	53.2	2		145	24	122	15
EBCHEM	NH-08	NH-08/4	MO	1	47	35	2.08	122	22	9.35	-9.4	53.2	2		299	38	243	42
EBCHEM	NH-08	NH-08/5	MO	1	47	35	2.08	122	22	9.35	-9.4	53.2	2		428	37	359	52
EBCHEM	NS-03	NS-03/1	MO	1	47	37	25.67	122	22	6.29	-12.3	24.4	0.7		753	61	125	348
EBCHEM	NS-03	NS-03/2	MO	1	47	37	25.67	122	22	6.29	-12.3	24.4	0.7		689	64	137	331
EBCHEM	NS-03	NS-03/3	MO	1	47	37	25.67	122	22	6.29	-12.3	24.4	0.7		1034	73	170	503
EBCHEM	NS-03	NS-03/4	MO	1	47	37	25.67	122	22	6.29	-12.3	24.4	0.7		871	63	173	493
EBCHEM	NS-03	NS-03/5	MO	1	47	37	25.67	122	22	6.29	-12.3	24.4	0.7		880	66	134	451
EBCHEM	NS-08	NS-08/1	MO	1	47	37	57.56	122	22	56.88	-8	83.9	1.3		245	25	103	26
EBCHEM	NS-08	NS-08/2	MO	1	47	37	57.56	122	22	56.88	-8	83.9	1.3		185	19	75	19
EBCHEM	NS-08	NS-08/3	MO	1	47	37	57.56	122	22	56.88	-8	83.9	1.3		300	20	106	20
EBCHEM	NS-08	NS-08/4	MO	1	47	37	57.56	122	22	56.88	-8	83.9	1.3		495	26	388	28
EBCHEM	NS-08	NS-08/5	MO	1	47	37	57.56	122	22	56.88	-8	83.9	1.3		161	19	64	48
EBCHEM	PS-01	PS-01/1	MO	1	48	10	22.74	122	28	1.25	-9.6	88.2	1.5		770	55	395	133
EBCHEM	PS-01	PS-01/2	MO	1	48	10	22.74	122	28	1.25	-9.6	88.2	1.5		581	48	215	160
EBCHEM	PS-01	PS-01/3	MO	1	48	10	22.74	122	28	1.25	-9.6	88.2	1.5		342	34	61	133
EBCHEM	PS-01	PS-01/4	MO	1	48	10	22.74	122	28	1.25	-9.6	88.2	1.5		350	41	74	147
EBCHEM	PS-01	PS-01/5	MO	1	48	10	22.74	122	28	1.25	-9.6	88.2	1.5		536	43	139	198
EBCHEM	PS-02	PS-02/1	MO	1	48	8	11.98	122	26	13.87	-9.2	23.6	0.8		614	48	207	320
EBCHEM	PS-02	PS-02/2	MO	1	48	8	11.98	122	26	13.87	-9.2	23.6	0.8		855	61	419	351
EBCHEM	PS-02	PS-02/3	MO	1	48	8	11.98	122	26	13.87	-9.2	23.6	0.8		680	47	307	301
EBCHEM	PS-02	PS-02/4	MO	1	48	8	11.98	122	26	13.87	-9.2	23.6	0.8		632	50	265	299
EBCHEM	PS-02	PS-02/5	MO	1	48	8	11.98	122	26	13.87	-9.2	23.6	0.8		832	55	361	359
EBCHEM	PS-03	PS-03/1	MO	1	48	7	3.04	122	24	50.65	-8.9	12.2	0.4		545	67	140	279

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
EBCHEM	NH-03	NH-03/4	2	2	0	0	3	2	0	0	2	0	0.287	0.411	3	1
EBCHEM	NH-03	NH-03/5	1	0	0	0	2	0	0	0	1	0	0.211	0.442	5	1
EBCHEM	NH-04	NH-04/1	33	12	0	2	20	7	5	0	14	2	0.343	0.21	63	1
EBCHEM	NH-04	NH-04/2	18	15	0	0	20	9	2	0	11	0	0.423	0.279	61	1
EBCHEM	NH-04	NH-04/3	22	7	0	0	17	6	6	0	13	0	0.389	0.25	62	1
EBCHEM	NH-04	NH-04/4	14	6	0	0	10	5	1	0	10	0	0.31	0.235	65	1
EBCHEM	NH-04	NH-04/5	7	1	0	0	16	1	4	0	5	0	0.298	0.208	63	1
EBCHEM	NH-08	NH-08/1	26	3	0	0	38	2	12	0	10	0	1.026	0.575	69	6
EBCHEM	NH-08	NH-08/2	14	0	0	6	26	0	10	0	4	3	0.954	0.584	68	5
EBCHEM	NH-08	NH-08/3	6	0	0	2	15	0	6	0	2	1	1.015	0.735	68	7
EBCHEM	NH-08	NH-08/4	14	0	0	0	22	0	12	0	4	0	1.131	0.716	69	9
EBCHEM	NH-08	NH-08/5	17	0	0	0	23	0	8	0	6	0	0.925	0.59	67	6
EBCHEM	NS-03	NS-03/1	280	4	0	0	37	3	14	0	10	0	1.148	0.643	61	7
EBCHEM	NS-03	NS-03/2	221	12	0	0	36	6	14	0	14	0	1.247	0.69	63	9
EBCHEM	NS-03	NS-03/3	361	15	0	0	36	7	19	0	18	0	1.256	0.674	64	9
EBCHEM	NS-03	NS-03/4	202	5	1	2	38	4	12	1	11	1	1.235	0.687	60	8
EBCHEM	NS-03	NS-03/5	295	6	0	0	39	4	16	0	11	0	1.216	0.668	63	8
EBCHEM	NS-08	NS-08/1	10	4	0	0	12	2	6	0	4	0	0.805	0.576	17	3
EBCHEM	NS-08	NS-08/2	9	6	0	0	10	1	4	0	3	0	0.802	0.627	26	3
EBCHEM	NS-08	NS-08/3	7	2	0	0	7	1	7	0	5	0	0.68	0.522	28	3
EBCHEM	NS-08	NS-08/4	16	8	1	0	8	2	8	1	7	0	0.532	0.376	64	2
EBCHEM	NS-08	NS-08/5	2	1	0	1	5	1	10	0	2	1	0.946	0.74	36	5
EBCHEM	PS-01	PS-01/1	239	203	0	3	32	8	10	0	11	2	1.132	0.651	73	7
EBCHEM	PS-01	PS-01/2	205	156	0	1	25	6	11	0	11	1	1.189	0.707	72	8
EBCHEM	PS-01	PS-01/3	148	135	0	0	14	5	13	0	7	0	1.066	0.696	70	8
EBCHEM	PS-01	PS-01/4	129	106	0	0	19	5	15	0	7	0	1.154	0.715	67	8
EBCHEM	PS-01	PS-01/5	197	146	0	2	20	6	12	0	9	2	1.104	0.676	73	7
EBCHEM	PS-02	PS-02/1	86	28	0	1	26	5	11	0	10	1	1.23	0.731	74	9
EBCHEM	PS-02	PS-02/2	83	31	0	2	30	10	12	0	17	2	1.181	0.662	75	8
EBCHEM	PS-02	PS-02/3	66	5	0	6	29	3	10	0	7	1	1.134	0.678	68	8
EBCHEM	PS-02	PS-02/4	65	23	0	3	22	7	13	0	13	2	1.169	0.688	67	9
EBCHEM	PS-02	PS-02/5	102	36	0	10	29	5	11	0	11	4	1.194	0.686	70	10
EBCHEM	PS-03	PS-03/1	117	8	1	8	34	4	16	1	13	3	1.196	0.655	72	9

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
EBCHEM	PS-03	PS-03/2	MO	1	48	7	3.04	122	24	50.65	-8.9	12.2	0.4		418	50	86	242
EBCHEM	PS-03	PS-03/3	MO	1	48	7	3.04	122	24	50.65	-8.9	12.2	0.4		435	52	108	252
EBCHEM	PS-03	PS-03/4	MO	1	48	7	3.04	122	24	50.65	-8.9	12.2	0.4		556	48	144	307
EBCHEM	PS-03	PS-03/5	MO	1	48	7	3.04	122	24	50.65	-8.9	12.2	0.4		566	47	124	313
EBCHEM	PS-04	PS-04/1	MO	1	48	6	11.7	122	23	39.81	-8.6	11	0.4		635	51	144	297
EBCHEM	PS-04	PS-04/2	MO	1	48	6	11.7	122	23	39.81	-8.6	11	0.4		443	39	57	231
EBCHEM	PS-04	PS-04/3	MO	1	48	6	11.7	122	23	39.81	-8.6	11	0.4		665	62	166	301
EBCHEM	PS-04	PS-04/4	MO	1	48	6	11.7	122	23	39.81	-8.6	11	0.4		522	73	207	141
EBCHEM	PS-04	PS-04/5	MO	1	48	6	11.7	122	23	39.81	-8.6	11	0.4		610	70	292	139
EBCHEM	SS-04	SS-04/1	MO	1	47	36	4.19	122	20	11.51	-9.4	84.2	6.8		291	34	248	18
EBCHEM	SS-04	SS-04/2	MO	1	47	36	4.19	122	20	11.51	-9.4	84.2	6.8		2946	60	440	135
EBCHEM	SS-04	SS-04/3	MO	1	47	36	4.19	122	20	11.51	-9.4	84.2	6.8		272	32	226	19
EBCHEM	SS-04	SS-04/4	MO	1	47	36	4.19	122	20	11.51	-9.4	84.2	6.8		924	46	247	70
EBCHEM	SS-04	SS-04/5	MO	1	47	36	4.19	122	20	11.51	-9.4	84.2	6.8		1068	48	478	88
EBCHEM	SS-11	SS-11/1	MO	1	47	36	47.8	122	21	7.01	-9.4	67.8	5.1		705	66	287	226
EBCHEM	SS-11	SS-11/2	MO	1	47	36	47.8	122	21	7.01	-9.4	67.8	5.1		366	49	190	87
EBCHEM	SS-11	SS-11/3	MO	1	47	36	47.8	122	21	7.01	-9.4	67.8	5.1		710	59	221	272
EBCHEM	SS-11	SS-11/4	MO	1	47	36	47.8	122	21	7.01	-9.4	67.8	5.1		914	50	174	263
EBCHEM	SS-11	SS-11/5	MO	1	47	36	47.8	122	21	7.01	-9.4	67.8	5.1		544	66	243	127
EBCHEM	WW-09	WW-09/1	MO	1	47	35	8.87	122	21	26.77	-7.6	76.1	2.8		690	45	602	32
EBCHEM	WW-09	WW-09/2	MO	1	47	35	8.87	122	21	26.77	-7.6	76.1	2.8		758	44	486	39
EBCHEM	WW-09	WW-09/3	MO	1	47	35	8.87	122	21	26.77	-7.6	76.1	2.8		1181	60	693	113
EBCHEM	WW-09	WW-09/4	MO	1	47	35	8.87	122	21	26.77	-7.6	76.1	2.8		697	50	459	38
EBCHEM	WW-09	WW-09/5	MO	1	47	35	8.87	122	21	26.77	-7.6	76.1	2.8		473	39	370	47
EBCHEM	WW-11	WW-11/1	MO	1	47	34	40.5	122	21	26.02	-7.3	71.9	5.2		1905	47	762	74
EBCHEM	WW-11	WW-11/2	MO	1	47	34	40.5	122	21	26.02	-7.3	71.9	5.2		1527	41	784	31
EBCHEM	WW-11	WW-11/3	MO	1	47	34	40.5	122	21	26.02	-7.3	71.9	5.2		2086	53	794	33
EBCHEM	WW-11	WW-11/4	MO	1	47	34	40.5	122	21	26.02	-7.3	71.9	5.2		1267	49	755	87
EBCHEM	WW-11	WW-11/5	MO	1	47	34	40.5	122	21	26.02	-7.3	71.9	5.2		1241	44	716	109
EBCHEM	WW-14	WW-14/1	MO	1	47	34	54.48	122	21	25.33	-7.5	62.4	2.5		1964	52	1784	66
EBCHEM	WW-14	WW-14/2	MO	1	47	34	54.48	122	21	25.33	-7.5	62.4	2.5		2646	53	2427	47
EBCHEM	WW-14	WW-14/3	MO	1	47	34	54.48	122	21	25.33	-7.5	62.4	2.5		2235	53	2052	84
EBCHEM	WW-14	WW-14/4	MO	1	47	34	54.48	122	21	25.33	-7.5	62.4	2.5		2068	43	1973	41

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
EBCHEM	PS-03	PS-03/2	88	7	0	2	25	4	14	0	9	2	1.054	0.62	70	6
EBCHEM	PS-03	PS-03/3	66	4	0	4	28	2	11	0	8	4	1.134	0.661	71	9
EBCHEM	PS-03	PS-03/4	100	2	0	5	25	2	15	0	5	3	1.078	0.641	73	7
EBCHEM	PS-03	PS-03/5	127	5	0	2	25	2	13	0	7	2	0.994	0.594	70	5
EBCHEM	PS-04	PS-04/1	194	11	0	0	28	6	11	0	12	0	1.086	0.636	75	8
EBCHEM	PS-04	PS-04/2	155	7	0	0	22	4	10	0	7	0	0.816	0.513	65	3
EBCHEM	PS-04	PS-04/3	193	10	0	3	33	4	12	0	14	2	1.17	0.653	75	9
EBCHEM	PS-04	PS-04/4	158	7	0	16	43	7	14	0	12	4	1.415	0.759	75	15
EBCHEM	PS-04	PS-04/5	178	12	0	1	45	8	11	0	13	1	1.434	0.777	78	13
EBCHEM	SS-04	SS-04/1	25	10	0	0	18	6	4	0	12	0	0.903	0.59	66	5
EBCHEM	SS-04	SS-04/2	2370	0	1	0	38	0	10	1	11	0	0.513	0.288	65	1
EBCHEM	SS-04	SS-04/3	27	13	0	0	19	3	4	0	9	0	1.07	0.711	61	7
EBCHEM	SS-04	SS-04/4	607	13	0	0	23	5	12	0	11	0	0.796	0.479	64	4
EBCHEM	SS-04	SS-04/5	500	10	0	2	27	3	9	0	10	2	0.878	0.522	64	4
EBCHEM	SS-11	SS-11/1	191	72	0	1	33	7	14	0	18	1	1.311	0.721	68	10
EBCHEM	SS-11	SS-11/2	88	44	0	1	22	7	10	0	16	1	1.289	0.763	69	10
EBCHEM	SS-11	SS-11/3	209	71	0	8	27	6	15	0	15	2	1.267	0.716	67	9
EBCHEM	SS-11	SS-11/4	477	83	0	0	24	6	12	0	14	0	1.07	0.63	67	6
EBCHEM	SS-11	SS-11/5	174	50	0	0	38	7	12	0	16	0	1.347	0.74	68	11
EBCHEM	WW-09	WW-09/1	54	26	0	1	27	3	9	0	7	1	0.919	0.556	66	6
EBCHEM	WW-09	WW-09/2	231	93	0	2	25	6	7	0	10	2	1.016	0.618	66	5
EBCHEM	WW-09	WW-09/3	370	101	2	1	33	9	9	1	15	1	1.091	0.614	67	6
EBCHEM	WW-09	WW-09/4	196	62	1	3	22	10	8	1	16	3	1.074	0.632	67	6
EBCHEM	WW-09	WW-09/5	55	10	0	1	28	2	5	0	5	1	1.047	0.658	64	7
EBCHEM	WW-11	WW-11/1	1065	137	3	1	32	5	6	1	7	1	0.773	0.463	65	3
EBCHEM	WW-11	WW-11/2	710	82	2	0	24	6	5	1	11	0	0.676	0.419	66	2
EBCHEM	WW-11	WW-11/3	1200	182	2	4	28	7	6	2	12	4	0.781	0.453	65	3
EBCHEM	WW-11	WW-11/4	419	123	0	1	29	5	9	0	9	1	0.918	0.543	65	4
EBCHEM	WW-11	WW-11/5	415	96	0	1	27	6	5	0	11	1	0.804	0.489	66	3
EBCHEM	WW-14	WW-14/1	113	99	0	1	34	5	10	0	7	1	0.635	0.37	66	2
EBCHEM	WW-14	WW-14/2	158	117	0	11	32	5	8	0	10	2	0.619	0.359	66	2
EBCHEM	WW-14	WW-14/3	87	52	0	10	31	7	8	0	9	4	0.65	0.377	66	2
EBCHEM	WW-14	WW-14/4	49	43	0	5	29	4	6	0	6	2	0.515	0.315	67	1

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
EBCHEM	WW-14	WW-14/5	MO	1	47	34	54.48	122	21	25.33	-7.5	62.4	2.5		2285	51	2165	57
EVCHEM	EW-01	1	MO	1	47	59	19.64	122	12	59	5.1	78.7	10.7		84	4	35	0
EVCHEM	EW-01	2	MO	1	47	59	19.64	122	12	59	5.1	78.7	10.7		143	5	31	0
EVCHEM	EW-01	3	MO	1	47	59	19.64	122	12	59	5.1	78.7	10.7		40	3	25	0
EVCHEM	EW-01	4	MO	1	47	59	19.64	122	12	59	5.1	78.7	10.7		154	3	106	0
EVCHEM	EW-01	5	MO	1	47	59	19.64	122	12	59	5.1	78.7	10.7		160	6	41	2
EVCHEM	EW-04	1	MO	1	47	59	2.64	122	13	6.7	8.7	58.9	29.4		1383	15	1202	2
EVCHEM	EW-04	2	MO	1	47	59	2.64	122	13	6.7	8.7	58.9	29.4		3255	20	1967	8
EVCHEM	EW-04	3	MO	1	47	59	2.64	122	13	6.7	8.7	58.9	29.4		2551	14	1530	4
EVCHEM	EW-04	4	MO	1	47	59	2.64	122	13	6.7	8.7	58.9	29.4		1226	13	909	3
EVCHEM	EW-04	5	MO	1	47	59	2.64	122	13	6.7	8.7	58.9	29.4		1923	18	1623	2
EVCHEM	EW-07	1	MO	1	47	58	58.75	122	13	1.89	3.7	56.7	6		47	10	19	5
EVCHEM	EW-07	2	MO	1	47	58	58.75	122	13	1.89	3.7	56.7	6		97	22	27	1
EVCHEM	EW-07	3	MO	1	47	58	58.75	122	13	1.89	3.7	56.7	6		83	17	18	7
EVCHEM	EW-07	4	MO	1	47	58	58.75	122	13	1.89	3.7	56.7	6		61	18	20	9
EVCHEM	EW-07	5	MO	1	47	58	58.75	122	13	1.89	3.7	56.7	6		80	13	26	7
EVCHEM	EW-10	1	MO	1	47	58	45.87	122	13	14.04	9.1	77.1	11.8		1888	27	1453	23
EVCHEM	EW-10	2	MO	1	47	58	45.87	122	13	14.04	9.1	77.1	11.8		1711	36	959	56
EVCHEM	EW-10	3	MO	1	47	58	45.87	122	13	14.04	9.1	77.1	11.8		978	28	442	9
EVCHEM	EW-10	4	MO	1	47	58	45.87	122	13	14.04	9.1	77.1	11.8		826	28	467	44
EVCHEM	EW-10	5	MO	1	47	58	45.87	122	13	14.04	9.1	77.1	11.8		1386	36	793	60
EVCHEM	EW-12	1	MO	1	47	58	41.75	122	13	20.54	4.7	8.1	2.2		1875	63	135	206
EVCHEM	EW-12	2	MO	1	47	58	41.75	122	13	20.54	4.7	8.1	2.2		758	43	73	57
EVCHEM	EW-12	3	MO	1	47	58	41.75	122	13	20.54	4.7	8.1	2.2		1694	60	83	238
EVCHEM	EW-12	4	MO	1	47	58	41.75	122	13	20.54	4.7	8.1	2.2		1399	50	80	87
EVCHEM	EW-12	5	MO	1	47	58	41.75	122	13	20.54	4.7	8.1	2.2		764	46	67	112
EVCHEM	EW-14	1	MO	1	47	58	31.98	122	13	36.3	9.8	32.2	4.7		793	73	178	122
EVCHEM	EW-14	2	MO	1	47	58	31.98	122	13	36.3	9.8	32.2	4.7		182	43	52	58
EVCHEM	EW-14	3	MO	1	47	58	31.98	122	13	36.3	9.8	32.2	4.7		737	66	231	85
EVCHEM	EW-14	4	MO	1	47	58	31.98	122	13	36.3	9.8	32.2	4.7		754	68	235	55
EVCHEM	EW-14	5	MO	1	47	58	31.98	122	13	36.3	9.8	32.2	4.7		308	47	93	28
EVCHEM	NG-01	1	MO	1	47	58	21.99	122	13	53.82	8.1	4.4	0.2		475	44	90	155

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
EBCHEM	WW-14	WW-14/5	59	33	0	3	30	5	7	0	11	2	0.569	0.333	66	2
EVCHEM	EW-01	1	3	0	0	0	1	0	0	0	2	0	0.363	0.603	0	2
EVCHEM	EW-01	2	25	0	0	0	2	0	0	0	2	0	0.475	0.68	0	2
EVCHEM	EW-01	3	1	0	0	0	1	0	0	0	1	0	0.327	0.686	0	2
EVCHEM	EW-01	4	1	0	0	0	1	0	0	0	1	0	0.283	0.593	0	2
EVCHEM	EW-01	5	1	0	0	0	2	0	2	0	1	0	0.307	0.394	0	2
EVCHEM	EW-04	1	37	14	0	0	10	2	1	0	3	0	0.298	0.253	0	1
EVCHEM	EW-04	2	432	74	0	0	7	4	4	0	7	0	0.486	0.374	0	2
EVCHEM	EW-04	3	162	19	0	0	5	3	2	0	5	0	0.417	0.364	0	2
EVCHEM	EW-04	4	23	7	0	1	3	2	3	0	4	1	0.317	0.285	0	2
EVCHEM	EW-04	5	128	17	0	0	9	3	2	0	5	0	0.301	0.239	0	1
EVCHEM	EW-07	1	7	7	0	0	3	2	3	0	2	0	0.734	0.734	2	3
EVCHEM	EW-07	2	63	27	0	0	5	6	1	0	14	0	1.128	0.84	11	8
EVCHEM	EW-07	3	42	14	0	0	6	3	3	0	6	0	1.047	0.851	23	7
EVCHEM	EW-07	4	8	2	0	0	7	1	3	0	6	0	0.961	0.765	23	6
EVCHEM	EW-07	5	10	6	0	0	4	2	3	0	5	0	0.705	0.633	8	2
EVCHEM	EW-10	1	381	34	0	1	8	8	5	0	12	1	0.444	0.31	5	2
EVCHEM	EW-10	2	672	142	0	1	12	8	3	0	19	1	0.688	0.442	6	2
EVCHEM	EW-10	3	132	65	0	1	10	10	3	0	12	1	0.62	0.428	3	2
EVCHEM	EW-10	4	123	53	0	1	8	7	5	0	13	1	0.695	0.48	4	2
EVCHEM	EW-10	5	417	152	0	0	13	9	4	0	18	0	0.794	0.51	4	3
EVCHEM	EW-12	1	1526	444	0	4	21	12	11	0	26	3	1.04	0.578	71	7
EVCHEM	EW-12	2	623	272	0	3	12	12	9	0	19	2	1.093	0.669	67	8
EVCHEM	EW-12	3	1359	310	1	9	19	10	13	1	20	6	0.87	0.489	69	4
EVCHEM	EW-12	4	1229	280	1	2	15	11	12	1	21	1	0.813	0.479	68	3
EVCHEM	EW-12	5	585	255	0	0	16	8	13	0	17	0	1.132	0.681	67	9
EVCHEM	EW-14	1	297	161	1	27	31	11	12	1	22	6	1.329	0.713	64	11
EVCHEM	EW-14	2	71	20	0	0	16	6	9	0	17	0	1.387	0.849	63	15
EVCHEM	EW-14	3	296	133	0	16	33	9	12	0	15	4	1.386	0.762	66	13
EVCHEM	EW-14	4	420	244	0	5	32	10	10	0	21	3	1.345	0.734	65	11
EVCHEM	EW-14	5	165	107	0	0	21	7	10	0	14	0	1.32	0.789	63	12
EVCHEM	NG-01	1	227	5	0	1	24	3	11	0	7	1	0.943	0.574	68	4

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
EVCHEM	NG-01	2	MO	1	47	58	21.99	122	13	53.82	8.1	4.4	0.2		356	39	64	155
EVCHEM	NG-01	3	MO	1	47	58	21.99	122	13	53.82	8.1	4.4	0.2		706	75	209	228
EVCHEM	NG-01	4	MO	1	47	58	21.99	122	13	53.82	8.1	4.4	0.2		426	49	78	128
EVCHEM	NG-01	5	MO	1	47	58	21.99	122	13	53.82	8.1	4.4	0.2		368	34	55	197
EVCHEM	NG-02	1	MO	1	47	57	56.16	122	14	27.54	8.6	3.1	0.2		228	34	49	44
EVCHEM	NG-02	2	MO	1	47	57	56.16	122	14	27.54	8.6	3.1	0.2		284	40	70	74
EVCHEM	NG-02	3	MO	1	47	57	56.16	122	14	27.54	8.6	3.1	0.2		306	35	51	82
EVCHEM	NG-02	4	MO	1	47	57	56.16	122	14	27.54	8.6	3.1	0.2		292	40	58	97
EVCHEM	NG-02	5	MO	1	47	57	56.16	122	14	27.54	8.6	3.1	0.2		229	31	49	54
EVCHEM	NG-03	1	MO	1	47	57	37.21	122	16	23.09	8.2	2.7	0.2		828	32	17	604
EVCHEM	NG-03	2	MO	1	47	57	37.21	122	16	23.09	8.2	2.7	0.2		1087	52	87	705
EVCHEM	NG-03	3	MO	1	47	57	37.21	122	16	23.09	8.2	2.7	0.2		798	47	72	437
EVCHEM	NG-03	4	MO	1	47	57	37.21	122	16	23.09	8.2	2.7	0.2		895	47	77	559
EVCHEM	NG-03	5	MO	1	47	57	37.21	122	16	23.09	8.2	2.7	0.2		969	47	57	621
EVCHEM	NG-04	1	MO	1	47	57	16.77	122	17	18.06	6.9	3.6	0.3		615	52	37	377
EVCHEM	NG-04	2	MO	1	47	57	16.77	122	17	18.06	6.9	3.6	0.3		549	49	36	359
EVCHEM	NG-04	3	MO	1	47	57	16.77	122	17	18.06	6.9	3.6	0.3		490	48	31	326
EVCHEM	NG-04	4	MO	1	47	57	16.77	122	17	18.06	6.9	3.6	0.3		525	48	42	269
EVCHEM	NG-04	5	MO	1	47	57	16.77	122	17	18.06	6.9	3.6	0.3		507	47	49	241
EVCHEM	NG-06	1	MO	1	47	57	6.47	122	17	36.29	10.2	7.1	0.4		1086	84	300	483
EVCHEM	NG-06	2	MO	1	47	57	6.47	122	17	36.29	10.2	7.1	0.4		986	84	205	517
EVCHEM	NG-06	3	MO	1	47	57	6.47	122	17	36.29	10.2	7.1	0.4		833	69	141	467
EVCHEM	NG-06	4	MO	1	47	57	6.47	122	17	36.29	10.2	7.1	0.4		972	80	313	442
EVCHEM	NG-06	5	MO	1	47	57	6.47	122	17	36.29	10.2	7.1	0.4		1135	89	294	643
EVCHEM	NG-10	1	MO	1	47	57	2.74	122	18	5.86	9	4.2	0.7		931	100	295	289
EVCHEM	NG-10	2	MO	1	47	57	2.74	122	18	5.86	9	4.2	0.7		1617	92	222	590
EVCHEM	NG-10	3	MO	1	47	57	2.74	122	18	5.86	9	4.2	0.7		1088	94	317	368
EVCHEM	NG-10	4	MO	1	47	57	2.74	122	18	5.86	9	4.2	0.7		2857	105	390	1484
EVCHEM	NG-10	5	MO	1	47	57	2.74	122	18	5.86	9	4.2	0.7		1407	88	305	617
EVCHEM	PS-02	1	MO	1	48	8	8.72	122	26	13.18	7.9	11.5	0.4		322	51	76	170
EVCHEM	PS-02	2	MO	1	48	8	8.72	122	26	13.18	7.9	11.5	0.4		508	47	133	301
EVCHEM	PS-02	3	MO	1	48	8	8.72	122	26	13.18	7.9	11.5	0.4		441	37	89	277
EVCHEM	PS-02	4	MO	1	48	8	8.72	122	26	13.18	7.9	11.5	0.4		486	45	90	327

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
EVCHEM	NG-01	2	137	5	0	0	19	3	12	0	8	0	0.963	0.605	67	4
EVCHEM	NG-01	3	263	7	0	6	47	6	13	0	12	3	1.196	0.638	69	9
EVCHEM	NG-01	4	219	7	0	1	23	6	14	0	11	1	0.946	0.56	68	4
EVCHEM	NG-01	5	114	6	0	2	19	3	9	0	4	2	0.94	0.614	68	3
EVCHEM	NG-02	1	129	1	0	6	14	1	12	0	5	3	0.882	0.576	67	4
EVCHEM	NG-02	2	130	4	0	10	14	4	13	0	8	5	1.04	0.649	67	7
EVCHEM	NG-02	3	170	2	0	3	15	2	13	0	5	2	0.851	0.551	67	4
EVCHEM	NG-02	4	130	4	0	7	17	4	13	0	8	2	0.986	0.615	68	4
EVCHEM	NG-02	5	123	1	0	3	14	1	12	0	3	2	0.847	0.568	67	4
EVCHEM	NG-03	1	206	5	0	1	11	1	17	0	3	1	0.734	0.487	75	3
EVCHEM	NG-03	2	284	25	0	11	25	6	16	0	8	3	0.885	0.516	73	4
EVCHEM	NG-03	3	283	32	0	6	18	7	13	0	12	4	0.878	0.525	70	3
EVCHEM	NG-03	4	253	21	0	5	19	7	15	0	11	1	0.864	0.517	73	4
EVCHEM	NG-03	5	291	26	0	0	15	11	16	0	16	0	0.841	0.503	71	3
EVCHEM	NG-04	1	201	16	0	0	17	9	20	0	15	0	1.092	0.636	67	6
EVCHEM	NG-04	2	153	27	0	1	16	8	21	0	11	1	1.152	0.682	68	7
EVCHEM	NG-04	3	131	12	0	2	16	5	22	0	8	2	1.067	0.635	66	5
EVCHEM	NG-04	4	206	21	0	8	19	6	17	0	9	3	0.919	0.547	68	4
EVCHEM	NG-04	5	216	34	0	1	20	7	15	0	11	1	1.001	0.598	69	5
EVCHEM	NG-06	1	275	17	5	23	33	9	24	3	20	4	1.243	0.646	67	9
EVCHEM	NG-06	2	237	11	1	25	37	6	25	1	15	5	1.223	0.636	66	8
EVCHEM	NG-06	3	189	8	4	32	28	4	24	1	12	4	1.174	0.638	65	7
EVCHEM	NG-06	4	181	18	0	36	37	7	25	0	12	6	1.246	0.655	69	9
EVCHEM	NG-06	5	166	16	4	27	43	6	23	2	14	6	1.21	0.621	67	9
EVCHEM	NG-10	1	320	62	9	16	40	14	27	4	23	5	1.487	0.744	64	19
EVCHEM	NG-10	2	791	605	1	11	29	19	23	1	31	6	1.485	0.756	76	15
EVCHEM	NG-10	3	376	95	4	21	40	12	20	4	24	5	1.491	0.756	67	16
EVCHEM	NG-10	4	940	476	3	31	40	19	27	3	27	6	1.347	0.666	67	11
EVCHEM	NG-10	5	456	135	0	26	31	17	22	0	26	8	1.368	0.704	66	11
EVCHEM	PS-02	1	72	14	0	4	20	7	14	0	13	4	1.271	0.744	69	12
EVCHEM	PS-02	2	71	11	0	3	26	4	10	0	9	2	1.047	0.626	67	7
EVCHEM	PS-02	3	70	8	0	5	18	3	8	0	8	3	1.003	0.639	67	6
EVCHEM	PS-02	4	67	3	0	2	21	2	16	0	7	1	0.915	0.553	66	5

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
EVCHEM	PS-02	5	MO	1	48	8	8.72	122	26	13.18	7.9	11.5	0.4		452	53	113	288
EVCHEM	PS-03	1	MO	1	48	6	57.77	122	24	46.36	9.1	8	0.4		416	63	189	93
EVCHEM	PS-03	2	MO	1	48	6	57.77	122	24	46.36	9.1	8	0.4		415	67	179	127
EVCHEM	PS-03	3	MO	1	48	6	57.77	122	24	46.36	9.1	8	0.4		334	53	118	123
EVCHEM	PS-03	4	MO	1	48	6	57.77	122	24	46.36	9.1	8	0.4		398	51	138	152
EVCHEM	PS-03	5	MO	1	48	6	57.77	122	24	46.36	9.1	8	0.4		412	52	154	149
EVCHEM	PS-04	1	MO	1	48	5	59.54	122	23	25.88	8.7	7.4	0.3		375	57	160	68
EVCHEM	PS-04	2	MO	1	48	5	59.54	122	23	25.88	8.7	7.4	0.3		529	69	274	107
EVCHEM	PS-04	3	MO	1	48	5	59.54	122	23	25.88	8.7	7.4	0.3		437	62	242	82
EVCHEM	PS-04	4	MO	1	48	5	59.54	122	23	25.88	8.7	7.4	0.3		373	55	165	71
EVCHEM	PS-04	5	MO	1	48	5	59.54	122	23	25.88	8.7	7.4	0.3		476	72	235	81
EVCHEM	SD-01	1	MO	1	48	1	43.32	122	13	48.97	4.2	4.6	0.2		40	10	0	8
EVCHEM	SD-01	2	MO	1	48	1	43.32	122	13	48.97	4.2	4.6	0.2		14	10	1	3
EVCHEM	SD-01	3	MO	1	48	1	43.32	122	13	48.97	4.2	4.6	0.2		26	8	1	4
EVCHEM	SD-01	4	MO	1	48	1	43.32	122	13	48.97	4.2	4.6	0.2		13	9	1	4
EVCHEM	SD-01	5	MO	1	48	1	43.32	122	13	48.97	4.2	4.6	0.2		57	10	2	14
EVCHEM	SD-02	1	MO	1	47	59	29.95	122	15	4.48	9.6	11.5	0.5		514	50	117	136
EVCHEM	SD-02	2	MO	1	47	59	29.95	122	15	4.48	9.6	11.5	0.5		595	56	134	183
EVCHEM	SD-02	3	MO	1	47	59	29.95	122	15	4.48	9.6	11.5	0.5		487	53	109	125
EVCHEM	SD-02	4	MO	1	47	59	29.95	122	15	4.48	9.6	11.5	0.5		491	52	136	134
EVCHEM	SD-02	5	MO	1	47	59	29.95	122	15	4.48	9.6	11.5	0.5		533	55	120	172
EVCHEM	SR-07	1	MO	1	47	59	52.42	122	12	56.12	1	95.4	3.24		71	14	26	44
EVCHEM	SR-07	2	MO	1	47	59	52.42	122	12	56.12	1	95.4	3.24		62	17	35	26
EVCHEM	SR-07	3	MO	1	47	59	52.42	122	12	56.12	1	95.4	3.24		51	14	23	24
EVCHEM	SR-07	4	MO	1	47	59	52.42	122	12	56.12	1	95.4	3.24		56	17	35	19
EVCHEM	SR-07	5	MO	1	47	59	52.42	122	12	56.12	1	95.4	3.24		63	16	26	32
EVCHEM	SR-08	1	MO	1	47	59	19.45	122	13	36.85	10.9	22.1	1.7		192	44	62	28
EVCHEM	SR-08	2	MO	1	47	59	19.45	122	13	36.85	10.9	22.1	1.7		257	52	69	37
EVCHEM	SR-08	3	MO	1	47	59	19.45	122	13	36.85	10.9	22.1	1.7		531	59	127	95
EVCHEM	SR-08	4	MO	1	47	59	19.45	122	13	36.85	10.9	22.1	1.7		385	57	96	55
EVCHEM	SR-08	5	MO	1	47	59	19.45	122	13	36.85	10.9	22.1	1.7		422	61	128	43
JULTPPS	1230	3	MO	1	47	36	59	122	22	18	92.3	90.5	0.7		200	35	15	10

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
EVCHEM	PS-02	5	45	9	1	4	27	4	13	1	8	3	1.098	0.637	64	8
EVCHEM	PS-03	1	112	3	0	22	32	2	19	0	8	4	1.443	0.802	74	15
EVCHEM	PS-03	2	102	4	0	7	37	3	18	0	8	4	1.378	0.755	75	12
EVCHEM	PS-03	3	90	1	0	3	28	1	18	0	4	3	1.257	0.729	70	9
EVCHEM	PS-03	4	98	2	0	10	25	1	15	0	6	5	1.273	0.746	72	10
EVCHEM	PS-03	5	103	3	0	6	26	2	16	0	6	4	1.272	0.741	73	10
EVCHEM	PS-04	1	142	8	0	4	30	5	13	0	11	2	1.253	0.714	75	9
EVCHEM	PS-04	2	144	3	0	4	37	2	19	0	11	2	1.311	0.713	77	10
EVCHEM	PS-04	3	106	7	0	7	28	4	17	0	12	5	1.343	0.749	82	11
EVCHEM	PS-04	4	133	7	0	4	26	4	17	0	9	3	1.289	0.741	74	10
EVCHEM	PS-04	5	147	9	1	12	32	8	18	1	16	5	1.426	0.768	76	14
EVCHEM	SD-01	1	31	11	0	1	0	2	5	0	4	1	0.694	0.694	97	3
EVCHEM	SD-01	2	7	2	0	3	1	1	2	0	5	2	0.974	0.974	89	7
EVCHEM	SD-01	3	19	3	0	2	1	2	3	0	3	1	0.605	0.669	89	3
EVCHEM	SD-01	4	7	3	0	1	1	2	4	0	3	1	0.882	0.925	78	6
EVCHEM	SD-01	5	32	23	0	9	2	2	3	0	3	2	0.786	0.786	97	4
EVCHEM	SD-02	1	252	47	0	9	28	5	11	0	7	4	1.069	0.629	73	7
EVCHEM	SD-02	2	265	45	0	13	32	5	11	0	10	3	1.124	0.643	72	9
EVCHEM	SD-02	3	240	44	0	12	30	5	11	0	7	4	1.077	0.625	73	7
EVCHEM	SD-02	4	210	40	0	11	29	5	13	0	8	2	1.177	0.686	74	10
EVCHEM	SD-02	5	233	44	0	8	30	6	13	0	10	2	1.112	0.639	74	7
EVCHEM	SR-07	1	1	0	0	0	8	0	5	0	1	0	0.898	0.783	67	6
EVCHEM	SR-07	2	1	1	0	0	7	1	9	0	1	0	1.059	0.861	62	7
EVCHEM	SR-07	3	1	1	0	0	7	1	5	0	1	0	0.954	0.832	48	6
EVCHEM	SR-07	4	2	1	0	0	8	1	7	0	2	0	1.057	0.859	54	7
EVCHEM	SR-07	5	3	1	0	0	5	1	7	0	3	0	1.035	0.86	48	7
EVCHEM	SR-08	1	74	18	0	28	20	8	7	0	15	2	1.297	0.789	67	12
EVCHEM	SR-08	2	132	54	0	19	19	8	9	0	20	4	1.356	0.79	66	13
EVCHEM	SR-08	3	278	93	0	31	24	12	11	0	21	3	1.398	0.789	67	15
EVCHEM	SR-08	4	222	132	0	12	27	13	9	0	20	1	1.45	0.826	67	16
EVCHEM	SR-08	5	210	94	0	41	26	11	11	0	22	2	1.419	0.795	68	15
JULTPPS	1230	3	74	21	110	3	0	0	0.941	0.61	70	5	3		3	2

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
JULTPPS	1406	4	MO	1	47	37	6	122	21	41	18.5	80.4	0.7		1025	75	216	13
JULTPPS	1512	5	MO	1	47	37	2	122	21	51	30.8	78.6	0.5		482	58	37	8
JULTPPS	1603	5	MO	1	47	37	4	122	21	34	9.2	34.2	0.6		867	43	376	9
JULTPPS	1606	2	MO	1	47	37	3	122	21	41	18.5	100	0.6		553	46	92	5
JULTPPS	1612	2	MO	1	47	36	55	122	21	45	30.8	84.8	0.9		388	58	29	7
JULTPPS	1630	5	MO	1	47	36	51	122	22	13	92.3	97.6	0.8		189	34	23	12
JULTPPS	1706	1	MO	1	47	37	0	122	21	37	18.5	56.4	1.2		881	63	83	12
JULTPPS	1810	4	MO	1	47	36	56	122	21	37	30.8	63.5	0.5		495	70	51	10
JULTPPS	1830	3	MO	1	47	36	47	122	22	5	92.3	87.6	0.8		405	54	69	19
JULTPPS	210	1	MO	1	47	40	17	122	25	46	30.8	4.7	0.3		580	102	205	27
JULTPPS	275	2	MO	1	47	41	13	122	27	36	230.8	86.6	0.9		648	43	154	16
JULTPPS	310	1	MO	1	47	40	0	122	25	52	30.8	6.4	0.3		878	90	571	16
JULTPPS	330	3	MO	1	47	40	16	122	26	52	92.3	16.7	0.2		903	112	140	25
JULTPPS	375	1	MO	1	47	40	6	122	27	41	230.8	91.9	0.2		600	64	205	24
JULTPPS	430	5	MO	1	47	240	3	122	26	45	92.3	22.3	0.5		679	127	112	33
JULTPPS	510	1	MO	1	47	39	46	122	26	20	30.8	5.5	0.3		463	75	265	24
JULTPPS	530	5	MO	1	47	39	47	122	26	52	92.3	9.4	0.7		396	93	62	25
JULTPPS	575	2	MO	1	47	39	49	122	27	38	230.8	88.9	0.7		432	39	97	8
JULTPPS	621	4	MO	1	47	39	32	122	26	44	61.5	2.4	0.2		954	152	198	33
JULTPPS	712	3	MO	1	47	39	11	122	26	17	30.8	9.5	0.8		1166	146	411	36
JULTPPS	730	4	MO	1	47	39	12	122	26	43	92.3	5.1	0.2		385	97	38	22
JULTPPS	775	2	MO	1	47	39	14	122	27	14	230.8	97.3	0.6		210	44	58	12
JULTPPS	812	2	MO	1	47	38	37	122	26	7	30.8	6.2	0.2		513	91	181	17
JULTPPS	830	4	MO	1	47	38	30	122	26	22	92.3	19.6	0.3		590	120	70	29
JULTPPS	875	3	MO	1	47	38	30	122	27	22	230.8	96.4	1		219	40	103	16
MARTPPS	1230	2	MO	1	47	36	59	122	22	18	92.3	90.5	0.7		186	56	74	12
MARTPPS	1406	2	MO	1	47	37	6	122	21	41	18.5	80.4	0.7		223	62	15	10
MARTPPS	1512	2	MO	1	47	37	2	122	21	51	30.8	78.6	0.5		255	40	54	13
MARTPPS	1603	2	MO	1	47	37	4	122	21	34	9.2	34.2	0.6		47	19	9	1
MARTPPS	1606	2	MO	1	47	37	3	122	21	41	18.5	100	0.6		549	124	98	26
MARTPPS	1612	2	MO	1	47	36	55	122	21	45	30.8	84.8	0.9		296	88	23	16
MARTPPS	1630	2	MO	1	47	36	51	122	22	13	92.3	97.6	0.8		172	29	31	6

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
JULTPPS	1406	4	263	46	545	15	0	0	1.183	0.631	58	5	4		1	1
JULTPPS	1512	5	173	32	267	15	1	1	1.236	0.701	70	8	5		0	0
JULTPPS	1603	5	213	21	276	12	0	0	0.91	0.557	52	10	4		5	3
JULTPPS	1606	2	100	28	361	13	0	0	0.918	0.552	65	2	2		0	0
JULTPPS	1612	2	185	35	167	14	1	1	1.328	0.753	72	11	3		5	2
JULTPPS	1630	5	61	18	105	4	0	0	0.946	0.618	71	11	7		6	4
JULTPPS	1706	1	468	37	325	11	0	0	1.168	0.649	63	7	5		1	1
JULTPPS	1810	4	256	40	178	17	1	1	1.525	0.826	73	12	4		6	3
JULTPPS	1830	3	135	27	193	6	0	0	1.136	0.656	70	16	10		4	2
JULTPPS	210	1	244	49	118	19	5	2	1.558	0.776	72	30	16		5	2
JULTPPS	275	2	21	13	471	12	0	0	0.768	0.47	44	27	6		1	1
JULTPPS	310	1	183	52	119	19	4	2	1.112	0.569	69	17	7		2	2
JULTPPS	330	3	402	60	173	20	35	3	1.608	0.785	83	105	13		5	2
JULTPPS	375	1	41	20	348	14	2	2	1.093	0.605	49	59	11		7	4
JULTPPS	430	5	411	71	109	14	9	4	1.791	0.852	78	72	20		2	2
JULTPPS	510	1	89	28	102	19	6	3	1.258	0.671	72	60	14		3	2
JULTPPS	530	5	187	46	127	13	5	3	1.649	0.837	73	39	15		1	1
JULTPPS	575	2	37	19	294	8	2	2	0.848	0.533	46	42	5		0	0
JULTPPS	621	4	663	90	56	17	15	5	1.695	0.777	91	137	22		2	2
JULTPPS	712	3	402	69	273	24	32	5	1.533	0.708	78	45	16		2	2
JULTPPS	730	4	194	56	150	16	1	1	1.604	0.807	66	22	14		4	3
JULTPPS	775	2	48	18	99	11	4	2	1.213	0.738	63	13	6		6	3
JULTPPS	812	2	230	49	74	15	18	6	1.521	0.776	77	14	9		5	3
JULTPPS	830	4	270	69	185	15	15	2	1.747	0.84	71	43	17		4	2
JULTPPS	875	3	23	12	89	9	1	1	1.194	0.745	63	31	9		11	3
MARTPPS	1230	2	76	29	29	11	1	1	1.45	0.829	73	18	7		9	3
MARTPPS	1406	2	98	36	98	11	3	2	1.478	0.824	60	4	3		4	1
MARTPPS	1512	2	36	16	160	8	4	2	0.999	0.623	52	18	9		0	0
MARTPPS	1603	2	26	13	11	4	0	0	1.12	0.876	91	9	1		4	1
MARTPPS	1606	2	325	61	77	22	22	6	1.758	0.84	84	49	15		3	1
MARTPPS	1612	2	201	52	46	11	11	5	1.736	0.893	77	12	8		2	2
MARTPPS	1630	2	40	11	97	9	3	2	1.03	0.704	60	8	3		8	1

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
MARTPPS	1706	2	MO	1	47	37	0	122	21	37	18.5	56.4	1.2		300	88	61	17
MARTPPS	1812	2	MO	1	47	36	56	122	21	37	30.8	63.5	0.5		372	94	24	22
MARTPPS	1830	2	MO	1	47	36	47	122	22	5	92.3	87.6	0.8		90	23	48	8
MARTPPS	210	2	MO	1	47	40	17	122	25	46	30.8	4.7	0.3		336	40	15	10
MARTPPS	275	2	MO	1	47	41	13	122	27	36	230.8	86.6	0.9		322	36	82	5
MARTPPS	310	2	MO	1	47	40	0	122	25	52	30.8	6.4	0.3		399	43	13	5
MARTPPS	330	2	MO	1	47	40	16	122	26	52	92.3	16.7	0.2		1230	28	93	5
MARTPPS	375	2	MO	1	47	40	6	122	27	41	230.8	91.9	0.2		390	46	51	3
MARTPPS	430	2	MO	1	47	240	3	122	26	45	92.3	22.3	0.5		290	36	8	5
MARTPPS	510	2	MO	1	47	39	46	122	26	20	30.8	5.5	0.3		160	34	19	12
MARTPPS	530	2	MO	1	47	39	47	122	26	52	92.3	9.4	0.7		647	57	94	7
MARTPPS	575	2	MO	1	47	39	49	122	27	38	230.8	88.9	0.7		293	45	27	4
MARTPPS	621	2	MO	1	47	39	32	122	26	44	61.5	2.4	0.2		277	46	17	11
MARTPPS	712	2	MO	1	47	39	11	122	26	17	30.8	9.5	0.8		393	89	60	13
MARTPPS	730	2	MO	1	47	39	12	122	26	43	92.3	5.1	0.2		291	36	45	12
MARTPPS	775	2	MO	1	47	39	14	122	27	14	230.8	97.3	0.6		694	89	180	18
MARTPPS	812	2	MO	1	47	38	37	122	26	7	30.8	6.2	0.2		546	80	15	8
MARTPPS	830	2	MO	1	47	38	30	122	26	22	92.3	19.6	0.3		321	30	53	10
MARTPPS	875	2	MO	1	47	38	30	122	27	22	230.8	96.4	1		1208	127	91	37
TPPSRECO	1010	5		1	47	37	42	122	24	17	30.5		0.3	VS	235	66	89	49
TPPSRECO	1030	1		1	47	37	35	122	25	48	91.4		0.3	VS	475	61	241	198
TPPSRECO	1060	1		1							182.9		1.3	VS	234	43	39	85
TPPSRECO	1062	1		1							189		1.3	VS	408	63	92	174
TPPSRECO	110	1		1							30.5		0.1	G	269	55	51	49
TPPSRECO	1110	1		1							30.5		0.2	VS	441	62	173	201
TPPSRECO	1115	1		1							45.7		0.9	VS	599	67	182	381
TPPSRECO	1130	1		1							91.4		0.8	VS	588	53	100	408
TPPSRECO	121	1		1							64		0.5	G	325	64	152	126
TPPSRECO	1210	1		1							30.5		0.1	VS	702	63	238	348
TPPSRECO	1215	2		1							45.7		0.2	VS	474	64	192	206
TPPSRECO	1230	1		1	47	36	59	122	22	18	92.3	90.5	0.7		441	50	102	265
TPPSRECO	130	1		1							91.4		0.1	VS	863	110	361	156

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
MARTPPS	1706	2	121	41	73	16	14	5	1.705	0.877	81	22	9		3	1
MARTPPS	1812	2	162	51	134	11	4	3	1.536	0.778	81	13	11		9	3
MARTPPS	1830	2	14	9	25	4	3	2	1.143	0.839	73	20	4		6	3
MARTPPS	210	2	83	23	237	6	0	0	0.759	0.474	68	11	7		42	6
MARTPPS	275	2	188	23	51	7	0	0	1.216	0.781	51	3	1		22	3
MARTPPS	310	2	225	28	159	9	0	0	1.099	0.673	69	7	4		5	3
MARTPPS	330	2	1005	14	97	8	0	0	0.452	0.312	9	1	1		7	3
MARTPPS	375	2	150	31	186	9	1	1	1.224	0.736	60	0	0		22	4
MARTPPS	430	2	146	20	131	9	1	1	1.075	0.691	69	5	4		7	2
MARTPPS	510	2	62	17	79	5	0	0	1.105	0.721	70	11	6		6	4
MARTPPS	530	2	243	31	307	16	1	1	1.139	0.649	64	3	2		26	3
MARTPPS	575	2	93	27	172	13	0	0	1.128	0.682	66	4	2		23	4
MARTPPS	621	2	103	27	157	8	0	0	1.196	0.719	63	9	6		28	4
MARTPPS	712	2	250	54	73	14	2	2	1.626	0.834	72	16	7		10	4
MARTPPS	730	2	30	15	216	9	0	0	0.835	0.536	44	15	6		28	6
MARTPPS	775	2	413	51	96	17	1	1	1.611	0.827	70	42	12		11	3
MARTPPS	812	2	281	52	161	12	12	3	1.555	0.817	69	11	5		1	1
MARTPPS	830	2	31	11	237	9	0	0	0.841	0.569	51	11	5		1	1
MARTPPS	875	2	703	64	77	14	44	4	1.55	0.737	73	34	19		2	2
TPPSRECO	1010	5	89	14	3	5	35	4	12	2	12	4	1.508	0.829	68	21
TPPSRECO	1030	1	25	15	3	8	34	10	7	3	15	2	1.249	0.699	67	11
TPPSRECO	1060	1	106	57	3	1	14	11	8	2	18	1	1.291	0.79	67	11
TPPSRECO	1062	1	135	40	2	4	24	15	6	1	28	3	1.246	0.693	67	10
TPPSRECO	110	1	144	21	4	21	21	8	16	3	14	1	1.168	0.671	74	12
TPPSRECO	1110	1	53	7	0	14	35	4	14	0	10	3	1.408	0.785	62	16
TPPSRECO	1115	1	29	21	1	6	35	7	17	1	12	2	1.256	0.688	63	10
TPPSRECO	1130	1	79	43	0	1	25	8	10	0	17	1	0.806	0.468	69	4
TPPSRECO	121	1	35	23	4	8	29	10	11	2	19	3	1.397	0.773	61	15
TPPSRECO	1210	1	109	5	1	6	37	4	13	1	11	1	1.242	0.69	59	9
TPPSRECO	1215	2	53	8	1	22	34	5	15	1	11	3	1.499	0.83	67	18
TPPSRECO	1230	1	74	51	0	0	26	11	7	0	17	0	0.956	0.563	68	7
TPPSRECO	130	1	90	78	46	210	57	11	18	5	23	7	1.544	0.756	74	20

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
TPPSRECO	1306	1		1							18.5		0.4	VS	782	65	200	388
TPPSRECO	1310	1		1							30.5		0.8	VS	615	60	239	246
TPPSRECO	1403	2		1							9.1		0.9		1206	60	150	125
TPPSRECO	1406	1		1	47	37	6	122	21	41	18.5	80.4	0.7		333	36	61	156
TPPSRECO	1503	1		1							9.1		0.7	VS	235	43	67	82
TPPSRECO	1506	1		1							18.3		1.4	VS	552	52	171	287
TPPSRECO	1510	1		1	47	37	2	122	21	51	30.8	78.6	0.5		541	48	148	298
TPPSRECO	1515	1		1							45.7		1.7	VS	568	44	63	441
TPPSRECO	1530	1		1							91.4		0.8	VS	478	53	84	338
TPPSRECO	1550	1		1							152		1.2	VS	331	52	90	175
TPPSRECO	160	1		1							182.9		0.9	G	290	55	66	136
TPPSRECO	1603	1		1	47	37	4	122	21	34	9.2	34.2	0.6		243	34	51	47
TPPSRECO	1606	1		1	47	37	3	122	21	41	18.5	100	0.6		641	40	130	327
TPPSRECO	166	1		1							201.2		1.2	G	377	41	131	184
TPPSRECO	1706	1		1	47	37	0	122	21	37	18.5	56.4	1.2		700	38	101	379
TPPSRECO	1710	2		1							30.5		3.1	VS	440	54	118	229
TPPSRECO	1810	2		1							30.5		0.5		979	72	273	584
TPPSRECO	1815	2		1							45.7		0.4	VS	363	54	125	192
TPPSRECO	1830	2		1	47	36	47	122	22	5	92.3	87.6	0.8		310	47	80	168
TPPSRECO	1910	1		1							30.5		0.4	VS	408	53	138	241
TPPSRECO	1915	1		1							45.7		0.4	VS	647	52	142	474
TPPSRECO	1930	1		1							91.4		1.4	VS	248	41	88	135
TPPSRECO	210	2		1	47	40	17	122	25	46	30.8	4.7	0.3		645	93	290	137
TPPSRECO	220	2		1							60.9		0.1	VS	589	79	200	224
TPPSRECO	230	1		1							91.4		0.1	VS	762	101	367	316
TPPSRECO	245	1		1							137.2		0.1	VS	445	82	222	123
TPPSRECO	288	1		1							268.2		0.9		421	48	56	277
TPPSRECO	288	2		1							268.2		0.9		360	38	23	285
TPPSRECO	288	3		1							268.2		0.9		532	35	97	345
TPPSRECO	310	2		1							30.5	6.4	0.3		432	99	175	91
TPPSRECO	310	4		1	47	40	0	122	25	52	30.8	6.4	0.3		610	80	133	168
TPPSRECO	320	2		1							60.9		0.1	VS	514	85	164	175
TPPSRECO	330	1		1	47	40	16	122	26	52	92.3	16.7	0.2		667	105	249	122

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
TPPSRECO	1306	1	191	1	0	3	40	1	15	0	9	1	1.132	0.625	62	6
TPPSRECO	1310	1	126	1	2	2	33	1	18	2	5	2	1.287	0.724	66	10
TPPSRECO	1403	2	924	1	0	3	32	1	18	0	7	2	0.785	0.442	64	3
TPPSRECO	1406	1	116	0	0	0	22	0	9	0	5	0	1.061	0.682	60	5
TPPSRECO	1503	1	86	6	0	0	19	3	13	0	11	0	1.233	0.755	63	8
TPPSRECO	1506	1	94	3	0	0	30	2	12	0	9	0	1.158	0.675	61	8
TPPSRECO	1510	1	87	0	2	6	29	0	9	2	6	2	1.096	0.652	63	7
TPPSRECO	1515	1	64	15	0	0	21	5	14	0	9	0	0.823	0.501	62	3
TPPSRECO	1530	1	53	35	0	3	29	9	5	0	17	2	0.812	0.471	68	5
TPPSRECO	1550	1	63	30	1	2	25	8	9	1	16	1	1.218	0.71	64	11
TPPSRECO	160	1	74	50	12	2	21	10	11	3	18	2	1.329	0.764	67	13
TPPSRECO	1603	1	145	0	0	0	18	0	11	0	5	0	0.959	0.626	62	7
TPPSRECO	1606	1	182	0	0	2	24	0	11	0	4	1	0.906	0.565	66	4
TPPSRECO	166	1	48	17	5	9	14	4	11	2	13	1	1.006	0.624	65	5
TPPSRECO	1706	1	220	4	0	0	18	3	12	0	8	0	0.89	0.564	61	3
TPPSRECO	1710	2	85	4	1	7	29	4	12	1	10	2	1.18	0.681	64	8
TPPSRECO	1810	2	118	9	0	3	40	5	18	0	10	3	1.191	0.641	57	9
TPPSRECO	1815	2	46	18	0	0	31	4	13	0	10	0	1.316	0.76	73	12
TPPSRECO	1830	2	59	48	1	2	26	7	5	1	13	2	1.065	0.637	67	8
TPPSRECO	1910	1	26	7	0	3	27	4	15	0	9	2	1.259	0.73	58	12
TPPSRECO	1915	1	21	12	1	9	25	4	14	1	10	2	1.02	0.595	54	7
TPPSRECO	1930	1	24	14	0	1	25	6	4	0	11	1	0.987	0.612	73	8
TPPSRECO	210	2	209	39	9	0	49	12	19	4	21	0	1.507	0.766	70	19
TPPSRECO	220	2	155	16	1	9	38	8	21	1	16	2	1.373	0.723	59	14
TPPSRECO	230	1	62	23	6	6	62	9	14	2	20	1	1.552	0.774	56	23
TPPSRECO	245	1	64	40	7	29	47	12	11	1	19	3	1.662	0.868	76	25
TPPSRECO	288	1	83	18	0	5	15	11	13	0	17	3	1.075	0.639	57	6
TPPSRECO	288	2	51	28	0	1	15	10	10	0	12	1	0.976	0.618	54	5
TPPSRECO	288	3	89	15	1	0	17	4	9	1	8	0	1.011	0.655	55	6
TPPSRECO	310	2	152	40	1	13	46	15	21	1	25	5	1.654	0.829	69	27
TPPSRECO	310	4	302	35	5	2	39	13	16	2	21	2	1.26	0.662	66	9
TPPSRECO	320	2	162	35	4	9	35	10	21	3	23	3	1.413	0.733	58	17
TPPSRECO	330	1	150	124	62	84	53	19	13	5	28	6	1.717	0.849	80	28

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
TPPSRECO	360	1		1							182.9		0.1	VS	570	81	146	247
TPPSRECO	375	1		1	47	40	6	122	27	41	230.8	91.9	0.2		518	43	82	322
TPPSRECO	410	3		1							30.5		0.1	VS	1071	111	309	225
TPPSRECO	410	4		1							30.5		0.1	VS	860	67	123	235
TPPSRECO	421	1		1							61.5		0.1	VS	557	86	113	220
TPPSRECO	430	1		1	47	240	3	122	26	45	92.3	22.3	0.5		977	121	435	83
TPPSRECO	510	3		1	47	39	46	122	26	20	30.8	5.5	0.3		274	32	26	19
TPPSRECO	510	4		1	47	39	46	122	26	20	30.8	5.5	0.3		311	48	52	100
TPPSRECO	521	1		1							61.5		0.7		863	139	610	110
TPPSRECO	530	4		1	47	39	47	122	26	52	92.3	9.4	0.7		402	81	159	141
TPPSRECO	560	1		1							182.9		0.1	VS	604	88	215	196
TPPSRECO	588	1		1	47	39	49	122	27	38	230.8	88.9	0.7		327	33	52	164
TPPSRECO	610	2		1							30.5		0.2	VS	360	123	191	33
TPPSRECO	621	1		1	47	39	32	122	26	44	61.5	2.4	0.2		42	24	13	12
TPPSRECO	630	1		1							91.4		0.2	VS	935	124	390	222
TPPSRECO	712	1		1	47	39	11	122	26	17	30.8	9.5	0.8		936	134	522	114
TPPSRECO	721	1		1							64		0.1	VS	297	81	107	73
TPPSRECO	730	1		1	47	39	12	122	26	43	92.3	5.1	0.2		271	77	124	85
TPPSRECO	760	1		1							182.9		0.8		915	83	365	316
TPPSRECO	780	1		1	47	39	14	122	27	14	230.8	97.3	0.6		359	44	71	169
TPPSRECO	810	2		1	47	38	37	122	26	7	30.8	6.2	0.2		376	95	114	88
TPPSRECO	830	2		1	47	38	30	122	26	22	92.3	19.6	0.3		841	136	403	175
TPPSRECO	860	1		1							182.9		0.1	VS	542	81	133	273
TPPSRECO	880	1		1	47	38	30	122	27	22	230.8	96.4	1		549	55	122	329
TPPSRECO	910	2		1	47	38	9	122	25	10	30.5		0.4	VS	415	73	87	127
TPPSRECO	930	5		1	47	38	1	122	25	25	91.4				396	57	179	206
TPPSRECO	960	1		1							182.9		2.8	VS	182	26	56	105
TPPSRECO	968	1		1							207.3		2.8	VS	376	38	64	289
SEAFEB83	A-600E	A600EXA	MO	1	47	32	16	122	24	22	184.6	93.8	1.9		70	30	26	13
SEAFEB83	A-600E	A600EXB	MO	1	47	32	16	122	24	22	184.6	93.8	1.9		58	31	23	10
SEAFEB83	A-720	A720XA	MO	1	47	31	37	122	26	12	221.5	76.6	2		184	23	21	109
SEAFEB83	A-720	A720XB	MO	1	47	31	37	122	26	12	221.5	76.6	2		405	43	62	279

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
TPPSRECO	360	1	161	20	1	15	36	11	19	1	22	3	1.28	0.671	59	11
TPPSRECO	375	1	113	39	0	1	15	10	9	0	18	1	0.932	0.571	52	5
TPPSRECO	410	3	523	47	5	9	59	11	24	1	22	5	1.405	0.687	68	15
TPPSRECO	410	4	497	29	1	4	29	9	18	1	18	1	1.11	0.608	67	6
TPPSRECO	421	1	219	39	2	3	43	14	17	2	22	2	1.381	0.714	59	17
TPPSRECO	430	1	387	320	9	63	61	25	15	3	38	3	1.749	0.84	80	30
TPPSRECO	510	3	227	38	1	1	12	4	7	1	10	2	0.87	0.578	72	3
TPPSRECO	510	4	159	25	0	0	21	5	14	0	12	1	1.154	0.686	72	9
TPPSRECO	521	1	117	75	8	12	84	17	18	4	26	4	1.668	0.778	77	33
TPPSRECO	530	4	82	58	6	13	37	15	15	2	21	4	1.623	0.85	67	26
TPPSRECO	560	1	168	54	7	16	39	18	13	2	29	4	1.513	0.778	65	20
TPPSRECO	588	1	107	46	2	2	13	6	8	1	9	2	1.096	0.722	60	7
TPPSRECO	610	2	86	59	24	16	59	23	12	5	38	8	1.859	0.89	87	44
TPPSRECO	621	1	12	3	1	4	9	3	4	1	7	3	1.274	0.923	78	14
TPPSRECO	630	1	196	117	26	100	60	21	18	4	36	5	1.674	0.8	79	28
TPPSRECO	712	1	194	70	50	56	60	19	24	7	33	10	1.587	0.746	85	28
TPPSRECO	721	1	102	61	5	9	40	12	15	2	17	6	1.639	0.859	70	27
TPPSRECO	730	1	55	37	4	3	40	12	12	3	19	3	1.684	0.892	70	30
TPPSRECO	760	1	204	38	1	29	38	14	15	1	25	4	1.236	0.644	69	7
TPPSRECO	780	1	116	34	2	1	16	9	10	2	15	1	1.128	0.686	64	6
TPPSRECO	810	2	128	36	20	26	46	15	14	4	22	8	1.604	0.811	74	27
TPPSRECO	830	2	153	117	4	105	66	24	18	3	38	10	1.793	0.84	82	35
TPPSRECO	860	1	103	24	4	28	38	13	14	3	22	3	1.353	0.709	59	16
TPPSRECO	880	1	84	19	0	4	27	5	14	0	11	2	1.033	0.593	56	6
TPPSRECO	910	2	186	60	5	10	30	11	20	1	17	4	1.483	0.796	76	17
TPPSRECO	930	5	6	1	0	5	42	1	10	0	4	1	1.243	0.708	68	11
TPPSRECO	960	1	21	4	0	0	14	1	7	0	5	0	1.034	0.731	63	6
TPPSRECO	968	1	21	5	1	1	18	4	10	1	7	1	0.957	0.606	56	4
SEAFEB83	A-600E	A600EXA	27	11	3	1	14	5	5	2	8	1	1.361	0.921	71	15
SEAFEB83	A-600E	A600EXB	19	10	3	3	14	6	5	2	8	2	1.422	0.953	72	17
SEAFEB83	A-720	A720XA	53	8	0	1	10	5	4	0	8	1	0.8	0.587	51	3
SEAFEB83	A-720	A720XB	61	14	1	2	23	6	8	1	10	1	0.871	0.533	49	4

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEAFEB83	B-600E	B600EXA	MO	1	47	30	46	122	24	25	184.6	90.9	2.7		115	27	17	56
SEAFEB83	B-600E	B600EXC	MO	1	47	30	46	122	24	25	184.6	90.9	2.7		199	32	51	108
SEAFEB83	B-660	B660XB	MO	1	47	30	16	122	25	27	203.1	90	1.8		70	24	38	13
SEAFEB83	B-660	B660XC	MO	1	47	30	16	122	25	27	203.1	90	1.8		72	27	36	17
SEAFEB83	C-600E	C600EXA	MO	1	47	29	38	122	23	40	184.6	90.4	2		199	37	55	114
SEAFEB83	C-600E	C600EXB	MO	1	47	29	38	122	23	40	184.6	90.4	2		214	27	52	148
SEAFEB83	C-640	C640XA	MO	1	47	29	31	122	24	28	184.6	92.5	2		123	30	56	36
SEAFEB83	C-640	C640XC	MO	1	47	29	31	122	24	28	184.6	92.5	2		45	18	21	9
SEAFEB83	D-250E	D250EXA	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		327	63	144	92
SEAFEB83	D-250E	D250EXB	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		379	58	171	124
SEAFEB83	D-250E	D250EXD	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		344	62	217	76
SEAFEB83	D-250E	D250EXE	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		364	61	141	134
SEAFEB83	D-250E	D250EXF	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		461	75	248	74
SEAFEB83	D-660	D660XA	MO	1	47	29	7	122	24	39	203.1	90.8	2.6		189	28	53	116
SEAFEB83	D-660	D660XC	MO	1	47	29	7	122	24	39	203.1	90.8	2.6		377	38	77	259
SEAFEB83	E-600E	E600EXA	MO	1	47	27	35	122	23	11	184.6	40	0.8		402	56	103	262
SEAFEB83	E-600E	E600EXB	MO	1	47	27	35	122	23	11	184.6	40	0.8		431	51	92	280
SEAFEB83	E-750	E750XB	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		428	45	65	280
SEAFEB83	E-750	E750XC	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		487	60	69	316
SEAFEB83	F-600E	F600EXA	MO	1	47	26	53	122	23	41	184.6	23	0.6		346	75	189	69
SEAFEB83	F-600E	F600EXC	MO	1	47	26	53	122	23	41	184.6	23	0.6		531	90	337	72
SEAFEB83	F-780	F780XA	MO	1	47	26	29	122	23	49	240.0	34.4	0.9		442	62	220	145
SEAFEB83	F-780	F780XC	MO	1	47	26	29	122	23	49	240.0	34.4	0.9		454	68	164	196
SEAFEB83	G-600E	G600EXA	MO	1	47	26	28	122	22	56	184.6	38.3	0.8		451	75	284	108
SEAFEB83	G-600E	G600EXB	MO	1	47	26	28	122	22	56	184.6	38.3	0.8		337	63	208	104
SEAFEB83	G-780	G780XA	MO	1	47	26	7	122	23	29	240.0	95.6	2.2		108	26	50	48
SEAFEB83	G-780	G780XC	MO	1	47	26	7	122	23	29	240.0	95.6	2.2		336	45	134	176
SEAFEB83	H-600E	H600EXA	MO	1	47	25	57	122	22	45	184.6	94.5	2.4		70	30	40	20
SEAFEB83	H-600E	H600EXB	MO	1	47	25	57	122	22	45	184.6	94.5	2.4		113	24	70	22
SEAFEB83	H-640	H640XA	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		159	35	68	56
SEAFEB83	H-640	H640XB	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		72	29	43	16
SEAFEB83	H-640	H640XD	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		125	31	43	57
SEAFEB83	H-640	H640XE	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		32	16	16	10

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEAFEB83	B-600E	B600EXA	38	11	2	2	11	5	5	2	8	1	1.068	0.746	66	8
SEAFEB83	B-600E	B600EXC	38	12	1	1	17	4	6	1	7	1	1.084	0.72	65	8
SEAFEB83	B-660	B660XB	13	13	4	2	12	5	4	2	5	1	1.201	0.87	77	10
SEAFEB83	B-660	B660XC	9	6	6	4	16	2	3	2	4	2	1.286	0.899	74	12
SEAFEB83	C-600E	C600EXA	21	17	5	4	21	4	6	3	6	1	1.021	0.651	70	8
SEAFEB83	C-600E	C600EXB	7	4	4	3	13	3	4	3	6	1	0.714	0.499	68	3
SEAFEB83	C-640	C640XA	23	20	6	2	15	5	6	1	7	1	1.239	0.839	73	9
SEAFEB83	C-640	C640XC	7	6	5	3	9	2	4	1	3	1	1.137	0.906	77	8
SEAFEB83	D-250E	D250EXA	88	12	1	2	35	8	13	1	12	2	1.4	0.778	70	15
SEAFEB83	D-250E	D250EXB	80	13	2	2	28	8	13	1	15	1	1.366	0.774	69	13
SEAFEB83	D-250E	D250EXD	50	7	0	1	34	7	16	0	11	1	1.37	0.764	69	14
SEAFEB83	D-250E	D250EXE	83	19	2	4	33	10	9	2	14	3	1.311	0.734	69	12
SEAFEB83	D-250E	D250EXF	130	14	1	8	44	6	12	1	14	4	1.459	0.778	71	19
SEAFEB83	D-660	D660XA	18	3	2	0	13	2	7	2	6	0	0.959	0.662	66	6
SEAFEB83	D-660	D660XC	36	5	2	3	17	4	10	1	8	2	0.868	0.549	65	5
SEAFEB83	E-600E	E600EXA	32	9	5	0	35	5	8	2	11	0	1.024	0.586	65	7
SEAFEB83	E-600E	E600EXB	51	7	3	5	28	4	9	1	11	2	0.941	0.551	67	6
SEAFEB83	E-750	E750XB	79	6	4	0	21	5	13	1	10	0	0.986	0.596	60	4
SEAFEB83	E-750	E750XC	95	14	1	6	27	7	12	1	16	4	1.048	0.589	61	6
SEAFEB83	F-600E	F600EXA	23	18	5	60	37	12	13	2	17	6	1.443	0.77	76	17
SEAFEB83	F-600E	F600EXC	37	27	20	65	58	9	11	2	13	5	1.539	0.787	77	21
SEAFEB83	F-780	F780XA	70	12	2	5	33	6	13	2	11	2	1.393	0.777	74	13
SEAFEB83	F-780	F780XC	89	17	1	4	38	8	11	1	15	3	1.37	0.748	72	12
SEAFEB83	G-600E	G600EXA	46	21	4	9	42	11	9	4	18	2	1.502	0.801	76	17
SEAFEB83	G-600E	G600EXB	16	5	2	7	37	3	10	2	10	4	1.435	0.798	74	13
SEAFEB83	G-780	G780XA	8	3	1	1	14	2	5	1	5	1	0.993	0.702	72	5
SEAFEB83	G-780	G780XC	22	14	1	3	23	8	9	1	10	2	1.016	0.614	70	6
SEAFEB83	H-600E	H600EXA	6	3	3	1	13	3	7	3	6	1	1.339	0.907	67	14
SEAFEB83	H-600E	H600EXB	18	11	1	2	12	4	4	1	6	1	1.148	0.831	69	9
SEAFEB83	H-640	H640XA	26	14	3	6	14	7	5	1	13	2	1.259	0.815	71	11
SEAFEB83	H-640	H640XB	10	6	1	2	16	4	4	1	7	1	1.252	0.856	74	11
SEAFEB83	H-640	H640XD	22	6	3	0	15	4	7	1	7	0	1.223	0.82	68	12
SEAFEB83	H-640	H640XE	6	1	0	0	9	1	4	0	3	0	1.133	0.941	69	8

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEAFEB83	H-640	H640XF	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		57	19	23	13
SEAFEB83	I-600E	I600EXA		1	47	25	8	122	21	26	184.6	58.5	0.8		210	53	107	81
SEAFEB83	I-600E	I600EXC		1	47	25	8	122	21	26	184.6	58.5	0.8		331	74	180	128
SEAFEB83	I-690	I690XA	MO	1	47	24	33	122	22	10	212.3	87.7	1.4		80	30	22	43
SEAFEB83	I-690	I690XB	MO	1	47	24	33	122	22	10	212.3	87.7	1.4		149	49	46	71
SEAFEB83	J-600E	J600EXA		1	47	21	20	122	20	25	161.544		0.2		102	29	32	62
SEAFEB83	J-600E	J600EXC		1	47	21	20	122	20	25	161.544		0.2		93	25	27	57
SEAFEB83	J-690	J690XA		1	47	22	12	122	21	28	182.88		0.2		93	29	30	48
SEAFEB83	J-690	J690XB		1	47	22	12	122	21	28	182.88		0.2		134	32	35	83
SEAFEB83	J5-600	J5600XB	MO	1	47	23	26	122	20	15	184.6	92	1.5		56	26	30	0
SEAFEB83	J5-600	J5600XC	MO	1	47	23	26	122	20	15	184.6	92	1.5		35	21	25	0
SEAFEB83	J5-600E	J5600EXB		1	47	23	13	122	21	20	212.3	88.7	2		107	7	0	106
SEAFEB83	J5-600E	J5600EXC		1	47	23	13	122	21	20	212.3	88.7	2		48	6	0	48
SEAFEB83	OT-1	OT1XA	MO	1	47	29	0	122	23	36	181.0512	95.6	2		143	23	45	86
SEAFEB83	OT-1	OT1XB	MO	1	47	29	0	122	23	36	181.0512	95.6	2		106	32	49	38
SEAFEB83	OT-1	OT1XD	MO	1	47	29	0	122	23	36	181.0512	95.6	2		56	22	20	25
SEAFEB83	OT-1	OT1XE	MO	1	47	29	0	122	23	36	181.0512	95.6	2		68	18	34	19
SEAFEB83	OT-1	OT1XF	MO	1	47	29	0	122	23	36	181.0512	95.6	2		155	35	77	50
SEAFEB83	OT-2	OT2XA	MO	1	47	28	55	122	22	42	179.2224	94.2	1.9		279	38	69	189
SEAFEB83	OT-2	OT2XC	MO	1	47	28	55	122	22	42	179.2224	94.2	1.9		388	39	98	260
SEAFEB83	OT-2	OT2XD	MO	1	47	28	55	122	22	42	179.2224	94.2	1.9		306	34	54	228
SEAFEB83	OT-2	OT2XE	MO	1	47	28	55	122	22	42	179.2224	94.2	1.9		255	32	62	174
SEAFEB83	OT-2	OT2XF	MO	1	47	28	55	122	22	42	179.2224	94.2	1.9		313	40	101	184
SEAJUN82	A-200E	A200EUB	MO	1	47	32	13	122	24	2	61.5	8.2	0.5		574	115	377	86
SEAJUN82	A-200W	A200WUB	MO	1	47	31	12	122	27	52	123.1		0.4		375	107	178	104
SEAJUN82	A-400E	A400EUA	MO	1	47	32	22	122	24	10	123.1	44.4	0.8		646	73	194	215
SEAJUN82	A-400W	A400WUA	MO	1	47	31	18	122	27	18	123.1	42	0.9		252	57	75	144
SEAJUN82	A-50W	A50WUB	MO	1	47	30	57	122	28	10	15.4	2.3	0.2		49	25	14	7
SEAJUN82	A-600E	A600EUA	MO	1	47	32	16	122	24	22	184.6	93.8	1.9		118	34	26	40
SEAJUN82	A-600E	A600EUB	MO	1	47	32	16	122	24	22	184.6	93.8	1.9		67	26	11	12
SEAJUN82	A-720	A720UA	MO	1	47	31	37	122	26	12	221.5	76.6	2		393	42	29	188
SEAJUN82	A-720	A720UB	MO	1	47	31	37	122	26	12	221.5	76.6	2		437	51	45	205

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEAFEB83	H-640	H640XF	21	15	0	0	7	3	6	0	6	0	1.164	0.91	76	10
SEAFEB83	I-600E	I600EXA	17	12	2	3	33	5	6	2	9	3	1.377	0.799	74	14
SEAFEB83	I-600E	I600EXC	18	10	3	2	48	6	10	2	12	2	1.43	0.765	72	17
SEAFEB83	I-690	I690XA	12	5	1	2	14	4	6	1	8	1	1.111	0.752	67	12
SEAFEB83	I-690	I690XB	25	14	3	4	23	7	11	3	10	2	1.302	0.77	71	16
SEAFEB83	J-600E	J600EXA	7	1	0	1	19	1	6	0	3	1	0.948	0.648	69	9
SEAFEB83	J-600E	J600EXC	7	3	0	2	12	2	6	0	5	2	0.898	0.642	65	5
SEAFEB83	J-690	J690XA	10	3	3	2	16	3	5	1	5	2	1.072	0.733	69	9
SEAFEB83	J-690	J690XB	14	6	2	0	18	4	6	1	7	0	1.022	0.679	66	8
SEAFEB83	J5-600	J5600XB	26	6	0	0	18	3	0	0	8	0	1.276	0.902	76	13
SEAFEB83	J5-600	J5600XC	10	7	0	0	15	4	0	0	6	0	1.249	0.944	79	13
SEAFEB83	J5-600E	J5600EXB	0	0	0	1	0	0	6	0	0	1	0.273	0.323	63	1
SEAFEB83	J5-600E	J5600EXC	0	0	0	0	0	0	6	0	0	0	0.279	0.358	64	1
SEAFEB83	OT-1	OT1XA	9	6	1	2	11	3	5	1	5	1	0.894	0.657	68	5
SEAFEB83	OT-1	OT1XB	10	5	3	6	15	4	6	2	7	2	1.228	0.816	68	11
SEAFEB83	OT-1	OT1XD	5	3	4	2	11	2	4	3	3	1	1.195	0.89	68	11
SEAFEB83	OT-1	OT1XE	12	8	0	3	9	2	5	0	3	1	1.102	0.878	47	8
SEAFEB83	OT-1	OT1XF	19	13	3	6	18	5	6	2	7	2	1.255	0.813	74	11
SEAFEB83	OT-2	OT2XA	13	7	5	3	20	6	6	3	8	1	0.807	0.511	68	4
SEAFEB83	OT-2	OT2XC	24	17	2	4	24	4	6	2	6	1	0.78	0.49	69	4
SEAFEB83	OT-2	OT2XD	21	8	1	2	16	3	10	1	6	1	0.689	0.45	69	3
SEAFEB83	OT-2	OT2XE	15	9	2	2	17	7	4	2	8	1	0.819	0.544	67	4
SEAFEB83	OT-2	OT2XF	24	15	1	3	24	7	5	1	9	1	0.93	0.581	70	5
SEAJUN82	A-200E	A200EUB	93	26	4	14	68	13	15	3	23	6	1.638	0.795	71	26
SEAJUN82	A-200W	A200WUB	81	52	5	7	54	17	20	3	25	4	1.772	0.873	72	40
SEAJUN82	A-400E	A400EUA	225	60	1	11	32	13	13	1	23	4	1.391	0.746	67	13
SEAJUN82	A-400W	A400WUA	31	9	2	0	32	6	9	1	15	0	1.245	0.709	68	15
SEAJUN82	A-50W	A50WUB	25	15	1	2	11	3	4	1	7	2	1.191	0.852	81	13
SEAJUN82	A-600E	A600EUA	33	10	6	13	16	4	5	2	8	3	1.291	0.843	61	11
SEAJUN82	A-600E	A600EUB	33	17	8	3	9	5	5	2	9	1	1.246	0.881	71	11
SEAJUN82	A-720	A720UA	169	11	0	7	19	6	9	0	11	3	0.884	0.544	52	3
SEAJUN82	A-720	A720UB	176	35	0	11	17	11	9	0	21	4	1.095	0.641	53	8

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEAJUN82	B-200E	B200EUB	MO	1	47	30	50	122	24	3	61.5	11.3	0.4		659	147	273	133
SEAJUN82	B-200E	B200EUC	MO	1	47	30	50	122	24	3	61.5	11.3	0.4		1227	185	555	308
SEAJUN82	B-400E	B400EUA	MO	1	47	30	46	122	24	13	123.1	35.7	0.1		545	80	292	170
SEAJUN82	B-50E	B50EUA		1	47	30	52	122	23	48	15.4	3.7	0.1		438	52	60	108
SEAJUN82	B-50E	B50EUC		1	47	30	52	122	23	48	15.4	3.7	0.1		474	55	91	159
SEAJUN82	B-50W	B50WUA	MO	1	47	30	15	122	27	0	15.4	4.2	0.1		977	136	504	131
SEAJUN82	B-600E	B600EUA	MO	1	47	30	46	122	24	25	184.6	90.9	2.7		261	52	39	118
SEAJUN82	B-600E	B600EUC	MO	1	47	30	46	122	24	25	184.6	90.9	2.7		384	60	87	219
SEAJUN82	B-660	B660UA	MO	1	47	30	16	122	25	27	203.1	90	1.8		184	44	34	90
SEAJUN82	B-660	B660UB	MO	1	47	30	16	122	25	27	203.1	90	1.8		152	32	23	79
SEAJUN82	B-75W	B75WUC	MO	1	47	30	18	122	26	58	23.1	5.3	0.3		428	87	209	39
SEAJUN82	C-200E	C200EUB	MO	1	47	29	50	122	23	2	61.5	6.5	0.2		321	92	150	84
SEAJUN82	C-200E	C200EUC	MO	1	47	29	50	122	23	2	61.5	6.5	0.2		244	81	101	62
SEAJUN82	C-400E	C400EUA	MO	1	47	29	48	122	23	14	123.1	37.5	0.8		728	81	253	398
SEAJUN82	C-400E	C400EUC	MO	1	47	29	48	122	23	14	123.1	37.5	0.8		737	70	202	478
SEAJUN82	C-50E	C50EUA		1	47	29	51	122	22	47	15.4	2.3	0.1		706	55	40	414
SEAJUN82	C-50E	C50EUC		1	47	29	51	122	22	47	15.4	2.3	0.1		652	55	50	324
SEAJUN82	C-50W	C50WUB		1	47	29	18	122	27	11	15.4	3.9	0.1		500	67	69	212
SEAJUN82	C-50W	C50WUC		1	47	29	18	122	27	11	15.4	3.9	0.1		275	46	101	151
SEAJUN82	C-600E	C600EUA	MO	1	47	29	38	122	23	40	184.6	90.4	2		160	39	26	69
SEAJUN82	C-600E	C600EUC	MO	1	47	29	38	122	23	40	184.6	90.4	2		144	35	20	88
SEAJUN82	C-640	C640UA	MO	1	47	29	31	122	24	28	184.6	92.5	2		145	39	45	38
SEAJUN82	C-640	C640UC	MO	1	47	29	31	122	24	28	184.6	92.5	2		138	40	23	55
SEAJUN82	C-75E	C75EUC	MO	1	47	29	52	122	22	53	23.1	2.6	0.1		729	64	92	314
SEAJUN82	C-75W	C75WUA	MO	1	47	29	19	122	27	6	23.1	4.6	0.1		686	121	393	53
SEAJUN82	D-250E	D250EUB	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		305	61	97	148
SEAJUN82	D-250E	D250EUC	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		322	79	134	132
SEAJUN82	D-250E	D250EUD	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		525	89	163	221
SEAJUN82	D-250E	D250EUE	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		449	92	168	150
SEAJUN82	D-250E	D250EUF	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		593	92	276	222
SEAJUN82	D-400E	D400EUA		1	N/A	N/A	N/A	N/A	N/A	N/A	123.1	26	0.7		452	81	332	73
SEAJUN82	D-50E	D50EUA		1	47	28	23	122	22	6	15.4	3.9	0.2		521	119	240	62
SEAJUN82	D-50W	D50WUC		1	47	28	8	122	25	54	15.4	6	0.2		563	98	163	100

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEAJUN82	B-200E	B200EUB	211	76	24	18	73	20	24	6	35	8	1.907	0.88	75	47
SEAJUN82	B-200E	B200EUC	307	98	25	32	94	29	27	7	45	11	1.821	0.803	72	44
SEAJUN82	B-400E	B400EUA	62	27	3	18	43	8	13	3	17	4	1.464	0.769	72	20
SEAJUN82	B-50E	B50EUA	269	62	0	1	21	12	12	0	18	1	0.948	0.552	71	4
SEAJUN82	B-50E	B50EUC	221	43	0	3	30	8	8	0	15	2	1.036	0.595	69	7
SEAJUN82	B-50W	B50WUA	218	67	80	44	46	26	27	8	42	13	1.476	0.692	88	24
SEAJUN82	B-600E	B600EUA	95	25	3	6	22	11	9	3	17	1	1.287	0.75	61	11
SEAJUN82	B-600E	B600EUC	72	29	2	4	28	11	12	1	18	1	1.209	0.68	63	10
SEAJUN82	B-660	B660UA	49	26	6	5	15	7	11	2	12	3	1.278	0.777	57	12
SEAJUN82	B-660	B660UB	40	18	8	2	10	7	8	2	11	1	1.208	0.802	65	11
SEAJUN82	B-75W	B75WUC	71	27	72	37	40	11	11	10	18	8	1.617	0.834	71	24
SEAJUN82	C-200E	C200EUB	77	26	4	6	48	9	17	4	18	5	1.757	0.894	75	36
SEAJUN82	C-200E	C200EUC	74	16	1	6	39	10	18	1	19	4	1.69	0.885	70	31
SEAJUN82	C-400E	C400EUA	65	28	6	6	43	11	12	3	20	3	1.153	0.604	69	9
SEAJUN82	C-400E	C400EUC	44	27	4	9	33	12	13	1	19	4	1.04	0.564	67	7
SEAJUN82	C-50E	C50EUA	247	43	0	5	23	7	14	0	14	4	0.745	0.428	66	2
SEAJUN82	C-50E	C50EUC	274	47	0	4	24	9	11	0	17	3	0.855	0.491	67	2
SEAJUN82	C-50W	C50WUB	204	81	1	14	26	11	15	1	20	5	1.144	0.627	74	9
SEAJUN82	C-50W	C50WUC	0	0	2	21	28	0	13	1	0	4	1.173	0.706	69	12
SEAJUN82	C-600E	C600EUA	49	32	5	11	14	5	8	2	11	4	1.265	0.795	58	11
SEAJUN82	C-600E	C600EUC	24	15	5	7	12	5	8	3	10	2	1.138	0.737	60	10
SEAJUN82	C-640	C640UA	41	26	6	15	17	8	5	2	13	2	1.394	0.876	63	14
SEAJUN82	C-640	C640UC	44	21	10	6	12	9	8	3	15	2	1.421	0.887	61	16
SEAJUN82	C-75E	C75EUC	317	54	1	5	26	10	16	1	17	4	0.921	0.51	69	3
SEAJUN82	C-75W	C75WUA	199	109	24	17	47	22	19	8	37	9	1.418	0.681	91	27
SEAJUN82	D-250E	D250EUB	26	13	1	33	31	8	11	1	14	4	1.418	0.794	71	18
SEAJUN82	D-250E	D250EUC	36	13	4	16	42	7	14	3	16	4	1.64	0.864	74	25
SEAJUN82	D-250E	D250EUD	50	20	4	87	50	11	12	2	20	5	1.502	0.77	72	17
SEAJUN82	D-250E	D250EUE	51	25	8	72	47	14	14	3	21	7	1.642	0.836	75	25
SEAJUN82	D-250E	D250EUF	78	35	2	15	49	9	19	2	18	3	1.562	0.796	70	20
SEAJUN82	D-400E	D400EUA	29	14	2	16	47	8	13	2	15	4	1.439	0.754	71	20
SEAJUN82	D-50E	D50EUA	181	47	17	21	54	12	22	4	25	13	1.644	0.792	84	32
SEAJUN82	D-50W	D50WUC	237	62	49	14	42	16	19	5	27	5	1.442	0.724	73	21

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEAJUN82	D-660	D660UA	MO	1	47	29	7	122	24	39	203.1	90.8	2.6		186	36	46	89
SEAJUN82	D-660	D660UB	MO	1	47	29	7	122	24	39	203.1	90.8	2.6		145	39	32	71
SEAJUN82	D-75E	D75EUA		1	47	28	25	122	22	9	23.1	4.8	0.1		522	92	99	63
SEAJUN82	D-75W	D75WUC		1	47	28	9	122	25	48	23.1	2.2	0.1		684	118	231	62
SEAJUN82	E-200E	E200EUB	MO	1	47	27	35	122	22	36	61.5	10.6	0.2		360	63	92	151
SEAJUN82	E-200E	E200EUC	MO	1	47	27	35	122	22	36	61.5	10.6	0.2		355	53	86	144
SEAJUN82	E-50E	E50EUA	MO	1	47	27	36	122	22	18	15.4	4	0.2		784	65	103	190
SEAJUN82	E-50E	E50EUB	MO	1	47	27	36	122	22	18	15.4	4	0.2		722	70	95	110
SEAJUN82	E-50W	E50WUA	MO	1	47	27	16	122	26	4	15.4	5	0.2		409	78	126	73
SEAJUN82	E-600E	E600EUA	MO	1	47	27	35	122	23	11	184.6	40	0.8		377	70	149	148
SEAJUN82	E-600E	E600EUB	MO	1	47	27	35	122	23	11	184.6	40	0.8		379	68	126	157
SEAJUN82	E-750	E750UA	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		242	61	90	83
SEAJUN82	E-750	E750UB	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		278	67	111	105
SEAJUN82	E-75E	E75EUA	MO	1	47	27	38	122	22	21	23.1	3.5	0.2		531	91	159	65
SEAJUN82	E-75W	E75WUC	MO	1	47	27	19	122	26	1	23.1	6.5	0.5		506	110	279	61
SEAJUN82	F-200E	F200EUA	MO	1	47	26	58	122	23	15	61.5	8.4	0.5		1154	193	653	146
SEAJUN82	F-200E	F200EUC	MO	1	47	26	58	122	23	15	61.5	8.4	0.5		856	134	578	78
SEAJUN82	F-50W	F50WUC	MO	1	47	26	15	122	26	5	15.4	3.9	0.1		288	62	70	109
SEAJUN82	F-600E	F600EUB	MO	1	47	26	53	122	23	41	184.6	23	0.1		486	84	137	113
SEAJUN82	F-600E	F600EUC	MO	1	47	26	53	122	23	41	184.6	23	0.1		593	107	265	162
SEAJUN82	F-75W	F75WUA	MO	1	47	26	17	122	25	59	23.1	7.6	0.1		661	114	247	66
SEAJUN82	F-780	F780UA	MO	1	47	26	29	122	23	49	240.0	34.4	0.9		291	60	72	137
SEAJUN82	F-780	F780UB	MO	1	47	26	29	122	23	49	240.0	34.4	0.9		282	56	74	148
SEAJUN82	G-200E	G200EUA	MO	1	47	26	47	122	22	36	61.5	47.6	0.3		345	93	154	85
SEAJUN82	G-400E	G400EUA	MO	1	47	26	36	122	22	49	123.1	25.4	0.5		805	107	345	144
SEAJUN82	G-50E	G50EUA	MO	1	47	26	55	122	22	23	15.4	2.7	0.1		654	51	43	278
SEAJUN82	G-50W	G50WUB	MO	1	47	25	23	122	25	30	15.4	3.6	0.3		353	49	44	90
SEAJUN82	G-600E	G600EUA	MO	1	47	26	28	122	22	56	184.6	38.3	0.8		359	80	241	50
SEAJUN82	G-600E	G600EUB	MO	1	47	26	28	122	22	56	184.6	38.3	0.8		287	65	141	66
SEAJUN82	G-75E	G75EUA	MO	1	47	26	54	122	22	25	23.1	3.4	0.1		587	70	113	85
SEAJUN82	G-75W	G75WUA	MO	1	47	25	23	122	25	28	23.1	2.3	0.8		553	92	146	103
SEAJUN82	G-780	G780UA	MO	1	47	26	7	122	23	29	240.0	95.6	2.1		130	44	52	45
SEAJUN82	G-780	G780UB	MO	1	47	26	7	122	23	29	240.0	95.6	2.1		82	31	41	24

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEAJUN82	D-660	D660UA	44	18	7	0	16	7	7	1	12	0	1.138	0.731	69	10
SEAJUN82	D-660	D660UB	35	15	1	6	14	5	8	1	13	3	1.198	0.753	66	11
SEAJUN82	D-75E	D75EUA	339	72	8	13	44	12	17	2	19	10	1.212	0.617	70	15
SEAJUN82	D-75W	D75WUC	253	116	124	14	47	22	19	8	32	12	1.577	0.761	80	24
SEAJUN82	E-200E	E200EUB	111	11	1	5	30	5	14	1	15	3	1.319	0.733	70	15
SEAJUN82	E-200E	E200EUC	114	10	0	11	21	5	18	0	11	3	1.306	0.757	68	13
SEAJUN82	E-50E	E50EUA	483	77	0	8	29	14	11	0	21	4	1.019	0.562	69	6
SEAJUN82	E-50E	E50EUB	505	95	1	11	31	10	15	1	18	5	1.039	0.563	68	9
SEAJUN82	E-50W	E50WUA	180	44	11	19	32	10	17	1	20	7	1.402	0.741	76	17
SEAJUN82	E-600E	E600EUA	64	10	2	14	42	6	12	1	12	3	1.446	0.784	69	16
SEAJUN82	E-600E	E600EUB	82	16	1	13	35	9	11	1	15	5	1.418	0.774	69	17
SEAJUN82	E-750	E750UA	51	11	2	16	30	9	12	2	13	4	1.484	0.831	66	21
SEAJUN82	E-750	E750UB	57	13	1	4	35	9	13	1	16	2	1.511	0.827	74	19
SEAJUN82	E-75E	E75EUA	286	45	10	11	39	11	18	4	22	8	1.318	0.673	74	16
SEAJUN82	E-75W	E75WUC	141	40	4	21	52	14	24	2	24	7	1.608	0.788	84	30
SEAJUN82	F-200E	F200EUA	225	161	50	80	100	21	26	11	38	16	1.933	0.846	87	49
SEAJUN82	F-200E	F200EUC	105	47	37	58	69	10	18	11	21	14	1.441	0.677	94	28
SEAJUN82	F-50W	F50WUC	102	17	3	4	27	7	13	2	16	4	1.259	0.702	74	13
SEAJUN82	F-600E	F600EUB	117	111	17	102	45	14	10	5	19	5	1.483	0.771	81	19
SEAJUN82	F-600E	F600EUC	74	50	22	70	57	14	14	2	27	6	1.691	0.833	76	29
SEAJUN82	F-75W	F75WUA	301	76	32	15	48	19	17	4	37	7	1.545	0.751	78	27
SEAJUN82	F-780	F780UA	79	25	1	2	26	10	14	1	17	2	1.344	0.756	63	16
SEAJUN82	F-780	F780UB	49	11	0	11	23	10	12	0	17	4	1.318	0.754	69	11
SEAJUN82	G-200E	G200EUA	72	35	4	30	50	12	13	4	20	5	1.759	0.894	78	33
SEAJUN82	G-400E	G400EUA	155	130	25	136	56	18	14	3	26	8	1.582	0.78	84	21
SEAJUN82	G-50E	G50EUA	327	71	0	6	18	10	14	0	17	2	0.84	0.492	69	3
SEAJUN82	G-50W	G50WUB	213	53	1	5	20	6	10	1	13	5	0.983	0.582	74	4
SEAJUN82	G-600E	G600EUA	49	10	6	13	45	7	10	3	17	5	1.602	0.842	72	25
SEAJUN82	G-600E	G600EUB	67	13	5	8	36	6	10	2	14	3	1.532	0.845	69	21
SEAJUN82	G-75E	G75EUA	387	47	0	2	33	11	14	0	21	2	1.036	0.562	68	10
SEAJUN82	G-75W	G75WUA	281	63	3	20	44	13	14	3	24	7	1.393	0.709	74	18
SEAJUN82	G-780	G780UA	26	13	5	2	24	6	6	2	10	2	1.413	0.86	65	17
SEAJUN82	G-780	G780UB	13	6	0	4	13	6	8	0	9	1	1.333	0.894	68	13

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

[illegible]	-400E	H400EUA	MO	1	47	26	27	122	22	2	123.1	54.5	1.3		255	62	101	130
SEAJUN82	H-50E	H50EUB	MO	1	47	26	31	122	21	40	15.4	1.6	0.1		667	77	112	126
SEAJUN82	H-600E	H600EUA	MO	1	47	25	57	122	22	45	184.6	94.5	2.4		119	40	44	19
SEAJUN82	H-600E	H600EUB	MO	1	47	25	57	122	22	45	184.6	94.5	2.4		72	34	25	14
SEAJUN82	H-640	H640UA	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		119	42	32	37
SEAJUN82	H-640	H640UB	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		97	34	34	21
SEAJUN82	H-640	H640UC	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		141	45	61	31
SEAJUN82	H-640	H640UD	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		119	36	54	22
SEAJUN82	H-640	H640UE	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		123	45	36	26
SEAJUN82	H-75E	H75EUA	MO	1	47	26	26	122	21	45	23.1	1.8	0.1		397	56	78	33
SEAJUN82	H-75W	H75WUA		1	47	24	36	122	25	40	23.1	5.4	0.05		389	88	68	43
SEAJUN82	I-200E	I200EUB		1	47	25	16	122	21	14	61.5	12.6	0.3		612	121	278	68
SEAJUN82	I-400E	I400EUB		1	47	25	15	122	21	20	123.1	18.6	0.4		565	88	362	108
SEAJUN82	I-50W	I50WUB		1	47	24	4	122	23	24	15.4	3.3	0.1		296	69	71	47
SEAJUN82	I-600E	I600EUA		1	47	25	8	122	21	26	184.6	58.5	0.8		233	70	102	68
SEAJUN82	I-600E	I600EUB		1	47	25	8	122	21	26	184.6	58.5	0.8		290	84	148	65
SEAJUN82	I-690	I690UA	MO	1	47	24	33	122	22	10	212.3	87.7	1.4		185	58	49	62
SEAJUN82	I-690	I690UB	MO	1	47	24	33	122	22	10	212.3	87.7	1.4		178	60	57	47
SEAJUN82	I-75W	I75WUB		1	47	24	6	122	23	21	23.1	2.1	0.9		307	70	131	39
SEAJUN82	J-200E	J200EUA		1	N/A	N/A	N/A	N/A	N/A	N/A	61.5	10	0.3	FN	278	105	132	46
SEAJUN82	J-400E	J400EUB		1	47	23	27	122	20	5	123.1	27.3	1		278	63	175	75
SEAJUN82	J-50E	J50EUA	MO	1	47	23	29	122	19	42	15.4	2.3	0.8		698	56	49	81
SEAJUN82	J-50E	J50EUB	MO	1	47	23	29	122	19	42	15.4	2.3	0.8		664	53	75	153
SEAJUN82	J-50W	J50WUA		1	N/A	N/A	N/A	N/A	N/A	N/A	15.4	1.8	0.6		474	65	120	35
SEAJUN82	J-600E	J600EUA	MO	1	47	23	26	122	20	15	184.6	92	1.5		155	47	84	43
SEAJUN82	J-600E	J600EUB	MO	1	47	23	26	122	20	15	184.6	92	1.5		165	46	82	37
SEAJUN82	J-690	J690UA		1	47	23	13	122	21	20	212.3	88.7	2		128	40	51	21
SEAJUN82	J-690	J690UB		1	47	23	13	122	21	20	212.3	88.7	2		171	55	65	41
SEAJUN82	J-75E	J75EUA	MO	1	47	23	30	122	19	45	23.1	2.1	0.1		687	88	187	67
SEAJUN82	J-75W	J75WUA		1	47	23	26	122	22	17	23.1	2.3	0.1		346	82	171	30
SEAJUN82	K-200E	K200EUB	MO	1	47	20	28	122	22	0	61.5	9.2	0.2		380	83	166	96
SEAJUN82	K-400E	K400EUA	MO	1	47	20	33	122	22	3	123.1	72.5	0.9		379	58	99	220
SEAJUN82	K-50E	K50EUA	MO	1	47	20	15	122	21	52	15.4	1.8	0.7		635	65	112	83

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEAJUN82	H-400E	H400EUA	17	8	2	5	39	5	10	1	9	3	1.31	0.731	68	17
SEAJUN82	H-50E	H50EUB	421	59	0	8	33	12	13	0	25	6	1.058	0.561	65	9
SEAJUN82	H-600E	H600EUA	48	25	2	6	18	6	5	2	12	3	1.479	0.923	74	18
SEAJUN82	H-600E	H600EUB	23	21	6	4	12	7	8	2	9	3	1.428	0.933	72	16
SEAJUN82	H-640	H640UA	43	26	2	5	17	9	8	1	15	1	1.466	0.903	74	18
SEAJUN82	H-640	H640UB	35	15	4	3	16	4	4	2	10	2	1.404	0.917	73	15
SEAJUN82	H-640	H640UC	41	14	6	2	22	7	8	2	12	1	1.475	0.892	67	16
SEAJUN82	H-640	H640UD	32	16	7	4	16	6	6	3	9	2	1.395	0.897	73	15
SEAJUN82	H-640	H640UE	53	21	5	3	14	10	7	2	21	1	1.544	0.934	72	21
SEAJUN82	H-75E	H75EUA	282	16	0	4	30	6	11	0	11	4	0.818	0.468	66	4
SEAJUN82	H-75W	H75WUA	257	56	4	17	32	13	16	3	29	8	1.357	0.698	74	21
SEAJUN82	I-200E	I200EUB	192	37	12	62	59	15	22	2	28	10	1.666	0.8	71	31
SEAJUN82	I-400E	I400EUB	64	45	8	23	48	11	14	1	19	6	1.6	0.823	80	22
SEAJUN82	I-50W	I50WUB	156	58	6	16	26	14	10	3	24	6	1.372	0.746	76	15
SEAJUN82	I-600E	I600EUA	52	20	3	8	34	7	12	2	19	3	1.663	0.901	68	30
SEAJUN82	I-600E	I600EUB	51	27	2	24	39	12	13	2	23	6	1.675	0.87	79	27
SEAJUN82	I-690	I690UA	60	21	4	10	23	13	9	1	22	3	1.52	0.862	64	22
SEAJUN82	I-690	I690UB	62	23	2	10	28	10	12	2	16	2	1.582	0.89	68	24
SEAJUN82	I-75W	I75WUB	126	40	0	11	24	13	14	0	24	8	1.377	0.746	85	18
SEAJUN82	J-200E	J200EUA	87	37	4	9	51	17	11	3	34	6	1.861	0.921	75	45
SEAJUN82	J-400E	J400EUB	15	8	2	11	36	4	11	2	9	5	1.488	0.827	74	17
SEAJUN82	J-50E	J50EUA	563	49	0	5	24	10	10	0	20	2	0.671	0.384	67	2
SEAJUN82	J-50E	J50EUB	431	29	0	5	22	7	13	0	15	3	0.799	0.463	66	3
SEAJUN82	J-50W	J50WUA	314	39	0	5	33	11	11	0	17	4	1.006	0.555	70	8
SEAJUN82	J-600E	J600EUA	24	11	2	2	27	5	7	1	11	1	1.411	0.844	60	17
SEAJUN82	J-600E	J600EUB	32	20	4	10	24	3	8	1	11	2	1.516	0.912	64	19
SEAJUN82	J-690	J690UA	53	8	2	1	20	6	5	2	12	1	1.335	0.834	67	14
SEAJUN82	J-690	J690UB	54	23	4	7	27	7	8	1	14	5	1.485	0.853	61	18
SEAJUN82	J-75E	J75EUA	406	27	5	22	45	9	14	4	18	7	1.14	0.586	70	14
SEAJUN82	J-75W	J75WUA	116	46	16	13	39	12	9	6	21	7	1.576	0.824	77	25
SEAJUN82	K-200E	K200EUB	102	16	1	15	42	7	17	1	18	5	1.628	0.849	71	27
SEAJUN82	K-400E	K400EUA	49	15	3	8	31	4	10	2	12	3	1.133	0.643	62	8
SEAJUN82	K-50E	K50EUA	435	60	1	4	28	12	14	1	20	2	0.967	0.533	68	7

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEAJUN82	K-50E	K50EUB	MO	1	47	20	15	122	21	52	15.4	1.8	0.7		617	82	149	95
SEAJUN82	K-50W	K50WUA	MO	1	47	22	15	122	25	13	15.4	2.4	0.6		389	82	145	30
SEAJUN82	K-590	K590UA	MO	1	47	21	9	122	23	42	184.6	91.9	1.3		109	37	41	32
SEAJUN82	K-590	K590UB	MO	1	47	21	9	122	23	42	184.6	91.9	1.3		76	32	29	25
SEAJUN82	K-75E	K75EUA	MO	1	47	20	18	122	21	54	23.1	2.9	0.8		471	82	136	29
SEAJUN82	K-75E	K75EUB	MO	1	47	20	18	122	21	54	23.1	2.9	0.8		302	63	94	35
SEAJUN82	K-75W	K75WUB	MO	1	47	22	12	122	25	9	23.1	2.6	1		423	90	189	34
SEAJUN82	L-200E	L200EUB	MO	1	47	18	46	122	26	15	61.5	64.4	1.1		921	57	204	609
SEAJUN82	L-400E	L400EUB	MO	1	47	19	0	122	26	16	123.1	85.3	1.2		631	69	226	296
SEAJUN82	L-50E	L50EUB	MO	1	47	18	33	122	26	6	15.4	17.3	0.2		679	113	461	60
SEAJUN82	L-50W	L50WUA	MO	1	47	20	45	122	27	3	15.4	3.4	0.2		443	104	200	56
SEAJUN82	L-570	L570UA		1	47	19	43	122	26	42	184.6	62	1.5		499	106	282	95
SEAJUN82	L-570	L570UB		1	47	19	43	122	26	42	184.6	62	1.5		347	87	209	74
SEAJUN82	L-75E	L75EUB	MO	1	47	18	36	122	26	9	23.1	8	0.2		313	70	104	70
SEAJUN82	L-75W	L75WUB	MO	1	47	20	43	122	27	1	23.1	3.1	0.9		314	100	118	35
SEAJUN82	M-200	M200UA	MO	1	47	19	54	122	31	45	61.5	2	0.8		1008	109	456	36
SEAJUN82	N-200E	N200EUA	MO	1	47	29	19	122	29	24	61.5	10.9	0.2		385	112	230	48
SEAJUN82	N-50E	N50EUA	MO	1	47	29	11	122	29	7	15.4	1.9	0.1		623	81	145	78
SEAJUN82	N-50W	N50WUB	MO	1	47	29	24	122	30	38	15.4	9.9	0.2		444	68	108	65
SEAJUN82	N-75E	N75EUA	MO	1	47	29	14	122	29	9	23.1	3.5	0.1		509	90	166	63
SEAJUN82	N-75W	N75WUA	MO	1	47	29	23	122	30	33	23.1	3.3	0.1		441	88	144	49
SEAJUN82	OT-1	OT1UA	MO	1	47	29	0	122	23	36	184.6	95.6	2		119	37	44	35
SEAJUN82	OT-1	OT1UC	MO	1	47	29	0	122	23	36	184.6	95.6	2		114	34	40	37
SEAJUN82	OT-1	OT1UD	MO	1	47	29	0	122	23	36	184.6	95.6	2		71	25	10	22
SEAJUN82	OT-1	OT1UE	MO	1	47	29	0	122	23	36	184.6	95.6	2		73	27	21	24
SEAJUN82	OT-1	OT1UF	MO	1	47	29	0	122	23	36	184.6	95.6	2		87	34	35	24
SEAJUN82	OT-2	OT2UA	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		178	36	26	123
SEAJUN82	OT-2	OT2UB	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		184	29	21	149
SEAJUN82	OT-2	OT2UC	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		221	39	29	171
SEAJUN82	OT-2	OT2UE	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		350	41	35	286
SEAJUN82	OT-2	OT2UF	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		167	37	36	108
SEAJUN82	QM-1	QM1UA	MO	1	47	23	57	122	27	29	7.1		1.9		745	30	663	18
SEAJUN82	QM-1	QM1UB	MO	1	47	23	57	122	27	29	7.1		1.9		667	10	573	23

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEAJUN82	K-50E	K50EUB	338	60	6	29	38	9	14	2	16	12	1.216	0.635	69	12
SEAJUN82	K-50W	K50WUA	197	26	12	5	46	10	14	3	16	3	1.352	0.706	70	18
SEAJUN82	K-590	K590UA	30	15	5	1	18	5	7	2	9	1	1.385	0.883	68	16
SEAJUN82	K-590	K590UB	14	11	2	6	14	5	5	1	8	4	1.362	0.905	64	15
SEAJUN82	K-75E	K75EUA	298	70	2	6	44	13	10	2	23	3	1.277	0.667	71	17
SEAJUN82	K-75E	K75EUB	171	45	0	2	33	10	11	0	17	2	1.3	0.723	72	14
SEAJUN82	K-75W	K75WUB	175	14	14	11	48	4	13	4	18	7	1.422	0.728	75	22
SEAJUN82	L-200E	L200EUB	100	12	0	8	32	5	11	0	12	2	0.857	0.488	67	4
SEAJUN82	L-400E	L400EUB	103	19	3	3	37	9	10	2	19	1	1.238	0.673	67	11
SEAJUN82	L-50E	L50EUB	146	35	6	6	63	10	17	6	21	5	1.544	0.752	78	25
SEAJUN82	L-50W	L50WUA	170	49	7	10	50	17	14	4	31	5	1.661	0.824	70	31
SEAJUN82	L-570	L570UA	70	41	11	41	64	12	10	2	26	4	1.681	0.83	75	27
SEAJUN82	L-570	L570UB	42	21	5	17	52	11	9	3	19	4	1.668	0.86	73	28
SEAJUN82	L-75E	L75EUB	134	16	0	5	35	8	17	0	13	5	1.451	0.786	74	18
SEAJUN82	L-75W	L75WUB	96	34	57	8	43	12	20	7	20	8	1.673	0.837	75	30
SEAJUN82	M-200	M200UA	95	74	14	407	58	15	9	6	23	10	1.26	0.618	89	11
SEAJUN82	N-200E	N200EUA	83	64	7	17	56	19	15	4	28	8	1.763	0.86	79	38
SEAJUN82	N-50E	N50EUA	390	56	5	5	39	10	16	4	18	4	1.093	0.573	73	11
SEAJUN82	N-50W	N50WUB	268	59	0	3	30	12	15	0	20	3	1.151	0.628	71	10
SEAJUN82	N-75E	N75EUA	269	50	2	9	43	10	21	2	17	7	1.302	0.666	71	14
SEAJUN82	N-75W	N75WUA	243	123	2	3	41	18	17	2	26	2	1.383	0.711	78	17
SEAJUN82	OT-1	OT1UA	29	14	2	9	18	6	6	1	10	2	1.36	0.867	66	14
SEAJUN82	OT-1	OT1UC	30	22	1	6	11	9	6	1	14	2	1.293	0.844	66	13
SEAJUN82	OT-1	OT1UD	29	11	0	10	8	5	5	0	9	3	1.192	0.853	68	10
SEAJUN82	OT-1	OT1UE	14	10	4	10	11	6	4	1	9	2	1.297	0.906	70	13
SEAJUN82	OT-1	OT1UF	22	16	2	4	16	6	5	1	10	2	1.399	0.913	71	17
SEAJUN82	OT-2	OT2UA	22	11	4	3	16	5	7	2	10	1	0.857	0.551	69	7
SEAJUN82	OT-2	OT2UB	6	2	4	4	16	1	6	2	3	2	0.692	0.473	62	2
SEAJUN82	OT-2	OT2UC	17	11	1	3	17	7	9	1	10	2	0.752	0.473	66	3
SEAJUN82	OT-2	OT2UE	17	10	2	10	16	7	8	2	12	3	0.707	0.439	62	2
SEAJUN82	OT-2	OT2UF	16	5	3	4	18	5	7	2	9	1	0.952	0.607	67	8
SEAJUN82	QM-1	QM1UA	62	10	0	2	9	6	9	0	10	2	0.386	0.261	65	1
SEAJUN82	QM-1	QM1UB	71	2	0	0	5	1	2	0	3	0	0.336	0.336	69	1

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEAJUN82	QM-2	QM2UA	MO	1	47	22	28	122	28	18	16.3		1.3		172	33	57	70
SEAJUN83	A.5	A5YA	MO	1	47	31	12	122	26	3	201.168				121	25	18	55
SEAJUN83	A.5	A5YB	MO	1	47	31	12	122	26	3	201.168				119	34	31	45
SEAJUN83	B.5	B5YA	MO	1	47	30	19	122	24	54	192.024				74	30	39	8
SEAJUN83	B.5	B5YC	MO	1	47	30	19	122	24	54	192.024				74	31	30	20
SEAJUN83	D-250E	D250EYB	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		270	67	106	111
SEAJUN83	D-250E	D250EYC	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		466	94	275	110
SEAJUN83	D-250E	D250EYD	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		519	89	233	174
SEAJUN83	D-250E	D250EYE	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		549	86	238	234
SEAJUN83	D-250E	D250EYF	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		585	87	204	207
SEAJUN83	DP-1	DP1YA	MO	1	47	18	58	122	28	2	179.2224	25	0.6	FN	332	68	186	61
SEAJUN83	DP-1	DP1YB	MO	1	47	18	58	122	28	2	179.2224	25	0.6	FN	504	90	265	65
SEAJUN83	DP-2	DP2YA	MO	1	47	21	0	122	24	25	172.8216	95	2	FN	177	38	37	101
SEAJUN83	DP-2	DP2YB	MO	1	47	21	0	122	24	25	172.8216	95	2	FN	138	27	29	89
SEAJUN83	DP-3	DP3YA	MO	1	47	22	33	122	22	28	183.7944	50	1	FN	214	42	84	91
SEAJUN83	DP-3	DP3YB	MO	1	47	22	33	122	22	28	183.7944	50	1	FN	208	48	67	106
SEAJUN83	DP-4	DP4YA	MO	1	47	24	8	122	21	33	208.4832	95	2	FN	101	37	19	27
SEAJUN83	DP-4	DP4YC	MO	1	47	24	8	122	21	33	208.4832	95	2	FN	240	47	70	66
SEAJUN83	E-750	E750YA	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		225	48	54	106
SEAJUN83	E-750	E750YB	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		274	48	42	155
SEAJUN83	E-750	E750YD	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		256	44	66	117
SEAJUN83	E-750	E750YE	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		284	38	55	146
SEAJUN83	E-750	E750YF	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		188	38	24	101
SEAJUN83	H-50W	H50WYA		1	47	24	32	122	25	47	15.2		0.2	VS	831	68	97	277
SEAJUN83	H-640	H640YA	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		80	27	32	12
SEAJUN83	H-640	H640YB	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		83	24	40	15
SEAJUN83	H-640	H640YD	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		86	27	39	5
SEAJUN83	H-640	H640YE	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		103	37	46	21
SEAJUN83	H-640	H640YF	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		43	19	20	10
SEAJUN83	J5-250E	J5250EYB		1	47	20	46	122	20	12	79.248	6.8	0.2		454	67	147	261
SEAJUN83	J5-400E	J5400EYB		1	47	20	54	122	20	16	121.92	54.2	1.2		566	61	228	314
SEAJUN83	J5-50E	J550EYB		1	47	20	34	122	20	8	15.5448		0.1		994	63	82	285

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEAJUN82	QM-2	QM2UA	33	1	11	1	15	1	10	2	5	1	1.189	0.783	55	9
SEAJUN83	A.5	A5YA	44	12	2	2	7	3	8	2	7	1	1.05	0.751	70	7
SEAJUN83	A.5	A5YB	40	17	1	2	15	4	9	1	8	1	1.276	0.833	71	11
SEAJUN83	B.5	B5YA	22	12	4	1	14	5	4	2	9	1	1.355	0.918	79	15
SEAJUN83	B.5	B5YC	16	7	6	2	12	4	7	2	9	1	1.353	0.907	74	15
SEAJUN83	D-250E	D250EYB	49	17	0	4	32	9	14	0	18	3	1.454	0.796	71	21
SEAJUN83	D-250E	D250EYC	70	24	4	7	52	11	14	4	19	5	1.581	0.801	75	21
SEAJUN83	D-250E	D250EYD	99	31	0	13	42	14	15	0	25	7	1.477	0.758	70	19
SEAJUN83	D-250E	D250EYE	71	20	0	6	49	10	15	0	18	4	1.412	0.73	71	19
SEAJUN83	D-250E	D250EYF	163	26	2	9	42	13	15	2	23	5	1.384	0.714	67	15
SEAJUN83	DP-1	DP1YA	81	31	2	2	33	15	8	2	24	1	1.471	0.803	72	17
SEAJUN83	DP-1	DP1YB	169	54	1	4	46	15	13	1	28	2	1.579	0.808	73	22
SEAJUN83	DP-2	DP2YA	36	15	1	2	13	8	6	1	16	2	1.079	0.683	66	7
SEAJUN83	DP-2	DP2YB	18	11	2	0	12	7	3	2	10	0	0.782	0.546	68	4
SEAJUN83	DP-3	DP3YA	39	1	0	0	25	1	9	0	8	0	1.17	0.721	71	9
SEAJUN83	DP-3	DP3YB	32	13	1	2	21	7	12	1	12	2	1.238	0.737	70	12
SEAJUN83	DP-4	DP4YA	53	17	1	1	15	8	6	1	14	1	1.313	0.837	74	14
SEAJUN83	DP-4	DP4YC	98	18	0	6	23	7	10	0	12	2	1.301	0.778	70	13
SEAJUN83	E-750	E750YA	60	9	1	4	19	7	9	1	17	2	1.201	0.714	68	12
SEAJUN83	E-750	E750YB	64	8	5	8	20	4	9	4	12	3	1.098	0.653	65	8
SEAJUN83	E-750	E750YD	71	12	0	2	22	5	9	0	11	2	1.149	0.699	68	9
SEAJUN83	E-750	E750YE	81	15	0	2	17	7	6	0	14	1	1.08	0.684	67	6
SEAJUN83	E-750	E750YF	59	13	2	2	15	6	8	1	12	2	1.083	0.685	67	7
SEAJUN83	H-50W	H50WYA	445	86	2	10	34	11	12	2	17	3	0.981	0.536	71	5
SEAJUN83	H-640	H640YA	31	25	4	1	14	5	3	2	7	1	1.284	0.897	85	11
SEAJUN83	H-640	H640YB	26	15	1	1	11	6	3	1	8	1	1.161	0.841	72	9
SEAJUN83	H-640	H640YD	35	21	2	5	11	6	3	1	11	1	1.311	0.916	79	13
SEAJUN83	H-640	H640YE	30	18	3	3	15	6	8	1	11	2	1.417	0.904	76	15
SEAJUN83	H-640	H640YF	11	4	0	2	10	3	3	0	5	1	1.136	0.889	73	9
SEAJUN83	J5-250E	J5250EYB	34	4	5	7	35	3	17	2	10	3	1.166	0.639	69	11
SEAJUN83	J5-400E	J5400EYB	22	15	1	1	37	8	9	1	13	1	0.99	0.555	68	6
SEAJUN83	J5-50E	J550EYB	622	45	1	4	30	9	14	1	16	2	0.727	0.404	68	2

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEAJUN83	J5-75E	J575EYB		1	47	20	39	122	20	9	24.384	3.3	0.05		561	47	108	76
SEAJUN83	J5-75W	J575WYA		1	47	22	43	122	24	3	21.9456	3	0.5		542	91	136	22
SEAJUN83	K5-200E	K5200EYB	MO	1	47	19	50	122	25	10	58.5216	45	1.1	FN	532	85	284	142
SEAJUN83	K5-400E	K5400EYC	MO	1	47	19	56	122	25	2	121.92	50	1.1	FN	448	68	257	160
SEAJUN83	K5-50E	K550EYA	MO	1	47	19	31	122	24	53	14.3256	1.8	0.1	FN	546	68	98	68
SEAJUN83	K5-50W	K550WYA	MO	1	47	21	34	122	26	31	16.764	2.5	0.2	FN	683	76	113	86
SEAJUN83	K5-75E	K575EYB	MO	1	47	19	36	122	24	50	21.336	3	0.2	FN	431	74	125	47
SEAJUN83	K5-75W	K575WYC	MO	1	47	21	34	122	26	30	22.86	3	0.2	FN	604	81	139	38
SEAJUN83	L5-200E	L5200EYA	MO	1	47	18	25	122	26	43	64.008	37.9	0.8		915	79	394	381
SEAJUN83	L5-400E	L5400EYA	MO	1	47	18	26	122	27	0	124.968	28.8	0.5		559	79	242	188
SEAJUN83	L5-400W	L5400WYB	MO	1	47	17	52	122	29	9	128.016		0.7		559	82	261	196
SEAJUN83	L5-550	L5550YA	MO	1	47	18	20	122	27	43	166.4208	90.6	1.6		297	53	71	157
SEAJUN83	O-200	O200YA	MO	1	47	31	15	122	29	18	60.96				708	122	251	27
SEAJUN83	OT-1	OT1YA	MO	1	47	29	0	122	23	36	181.0512	95.6	2		53	22	13	20
SEAJUN83	OT-1	OT1YC	MO	1	47	29	0	122	23	36	181.0512	95.6	2		75	31	31	24
SEAJUN83	OT-2	OT2YB	MO	1	47	28	55	122	22	42	179.2224	94.2	1.9		180	33	44	124
SEAJUN83	OT-2	OT2YC	MO	1	47	28	55	122	22	42	179.2224	94.2	1.9		223	29	54	154
SEAJUN83	PB-1	PB1YC	MO	1	47	21	22	122	19	46	56.6928	5.3	0.1		336	77	126	138
SEAJUN83	PB-2	PB2YB	MO	1	47	20	58	122	19	35	57.6072	5.5	0.2		521	57	82	306
SEAJUN83	PB-3	PB3YB	MO	1	47	20	42	122	21	4	57.6072	5.1	0.1		353	68	106	142
SEAJUN83	PB-4	PB4YA	MO	1	47	20	28	122	21	33	60.96	6.3	0.1		698	76	112	480
SEAJUN83	QM-3	QM3YC	MO	1	47	21	18	122	28	56	14.9352				489	84	156	48
SEANOV82	A-600E	A600EWA	MO	1	47	32	16	122	24	22	184.6	93.8	1.9		86	28	25	41
SEANOV82	A-600E	A600EWB	MO	1	47	32	16	122	24	22	184.6	93.8	1.9		54	26	17	23
SEANOV82	A-720	A720WA	MO	1	47	31	37	122	26	12	221.5	76.6	2		381	39	48	257
SEANOV82	A-720	A720WB	MO	1	47	31	37	122	26	12	221.5	76.6	2		917	55	114	671
SEANOV82	B-600E	B600EWB	MO	1	47	30	46	122	24	25	184.6	90.9	2.7		137	36	21	86
SEANOV82	B-600E	B600EWC	MO	1	47	30	46	122	24	25	184.6	90.9	2.7		274	37	52	163
SEANOV82	B-660	B660WA	MO	1	47	30	16	122	25	27	203.1	90	1.8		164	38	23	106
SEANOV82	B-660	B660WB	MO	1	47	30	16	122	25	27	203.1	90	1.8		83	31	22	23
SEANOV82	C-600E	C600EWB	MO	1	47	29	38	122	23	40	184.6	90.4	2		237	27	61	148
SEANOV82	C-600E	C600EWC	MO	1	47	29	38	122	23	40	184.6	90.4	2		243	35	50	161

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEAJUN83	J5-75E	J575EYB	368	17	1	8	26	2	12	1	4	4	0.826	0.494	67	5
SEAJUN83	J5-75W	J575WYA	283	34	48	53	44	13	15	4	23	5	1.392	0.711	72	17
SEAJUN83	K5-200E	K5200EYB	51	20	14	41	38	10	16	6	18	6	1.593	0.826	77	22
SEAJUN83	K5-400E	K5400EYC	28	13	0	3	40	8	11	0	15	2	1.352	0.738	74	13
SEAJUN83	K5-50E	K550EYA	366	52	4	10	29	13	14	2	20	3	0.982	0.536	69	7
SEAJUN83	K5-50W	K550WYA	451	65	25	8	33	14	11	3	25	4	1.06	0.564	67	10
SEAJUN83	K5-75E	K575EYB	247	25	6	6	42	8	13	2	12	5	1.114	0.596	71	11
SEAJUN83	K5-75W	K575WYC	382	50	24	21	38	18	10	3	26	4	1.182	0.619	69	14
SEAJUN83	L5-200E	L5200EYA	121	14	5	14	40	8	13	4	18	4	1.249	0.658	69	11
SEAJUN83	L5-400E	L5400EYA	123	51	3	3	37	13	14	3	23	2	1.435	0.756	71	14
SEAJUN83	L5-400W	L5400WYB	90	23	3	9	40	10	12	3	23	4	1.339	0.7	70	13
SEAJUN83	L5-550	L5550YA	65	15	1	3	26	10	5	1	19	2	1.045	0.606	69	7
SEAJUN83	O-200	O200YA	358	295	42	30	67	19	16	2	26	9	1.504	0.721	90	20
SEAJUN83	OT-1	OT1YA	18	15	1	1	6	6	5	1	9	1	1.188	0.885	72	9
SEAJUN83	OT-1	OT1YC	14	12	5	1	15	4	7	2	6	1	1.374	0.921	69	15
SEAJUN83	OT-2	OT2YB	10	5	2	0	19	3	6	1	7	0	0.788	0.519	67	4
SEAJUN83	OT-2	OT2YC	15	6	0	0	16	4	7	0	6	0	0.753	0.515	70	3
SEAJUN83	PB-1	PB1YC	63	8	1	8	41	8	15	1	16	4	1.412	0.749	74	19
SEAJUN83	PB-2	PB2YB	127	6	3	3	30	3	14	2	9	2	0.928	0.529	69	4
SEAJUN83	PB-3	PB3YB	92	17	4	9	32	7	13	2	17	4	1.421	0.775	71	20
SEAJUN83	PB-4	PB4YA	97	9	1	8	35	7	18	1	17	5	1.006	0.535	69	8
SEAJUN83	QM-3	QM3YC	266	50	14	5	38	16	15	2	26	3	1.341	0.697	76	14
SEANOV82	A-600E	A600EWA	14	8	5	1	14	3	6	3	4	1	1.198	0.828	65	11
SEANOV82	A-600E	A600EWB	10	5	4	0	13	2	7	2	4	0	1.295	0.915	63	13
SEANOV82	A-720	A720WA	74	11	0	2	18	3	11	0	8	2	0.895	0.562	50	4
SEANOV82	A-720	A720WB	128	6	0	4	25	5	14	0	14	2	0.825	0.474	51	3
SEANOV82	B-600E	B600EWB	26	12	1	3	14	7	7	1	11	3	1.019	0.655	65	8
SEANOV82	B-600E	B600EWC	52	22	2	5	16	6	9	2	9	1	1.058	0.674	63	6
SEANOV82	B-660	B660WA	26	12	6	3	16	5	10	2	8	2	1.07	0.677	61	7
SEANOV82	B-660	B660WB	30	12	5	3	13	4	7	2	8	1	1.314	0.881	75	14
SEANOV82	C-600E	C600EWB	22	16	3	3	15	2	4	2	5	1	0.889	0.621	68	4
SEANOV82	C-600E	C600EWC	27	22	2	3	19	4	7	1	7	1	0.906	0.587	69	5

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEANOV82	C-640	C640WA	MO	1	47	29	31	122	24	28	184.6	92.5	2		130	34	26	77
SEANOV82	C-640	C640WB	MO	1	47	29	31	122	24	28	184.6	92.5	2		103	34	33	49
SEANOV82	D-250E	D250EWA	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		535	82	191	194
SEANOV82	D-250E	D250EWB	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		658	92	285	223
SEANOV82	D-250E	D250EWD	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		126	39	28	79
SEANOV82	D-250E	D250EWE	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		351	67	142	147
SEANOV82	D-250E	D250EWF	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		634	64	159	388
SEANOV82	D-660	D660WA	MO	1	47	29	7	122	24	39	203.1	90.8	2.6		151	33	44	86
SEANOV82	D-660	D660WB	MO	1	47	29	7	122	24	39	203.1	90.8	2.6		163	28	26	118
SEANOV82	E-600E	E600EWA	MO	1	47	27	35	122	23	11	184.6	40	0.8		333	45	54	248
SEANOV82	E-600E	E600EWB	MO	1	47	27	35	122	23	11	184.6	40	0.8		287	45	42	221
SEANOV82	E-750	E750WA	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		370	40	44	268
SEANOV82	E-750	E750WB	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		409	47	69	300
SEANOV82	F-600E	F600EWA	MO	1	47	26	53	122	23	41	184.6	23	0.1		373	101	184	90
SEANOV82	F-600E	F600EWB	MO	1	47	26	53	122	23	41	184.6	23	0.1		447	106	179	71
SEANOV82	F-780	F780WA	MO	1	47	26	29	122	23	49	240.0	34.4	0.9		292	56	110	144
SEANOV82	F-780	F780WB	MO	1	47	26	29	122	23	49	240.0	34.4	0.9		560	61	238	263
SEANOV82	G-600E	G600EWA	MO	1	47	26	28	122	22	56	184.6	38.3	0.8		262	71	144	86
SEANOV82	G-600E	G600EWB	MO	1	47	26	28	122	22	56	184.6	38.3	0.8		217	57	133	68
SEANOV82	G-780	G780WA	MO	1	47	26	7	122	23	29	240.0	95.6	2.1		269	33	31	213
SEANOV82	G-780	G780WB	MO	1	47	26	7	122	23	29	240.0	95.6	2.1		212	45	58	129
SEANOV82	H-600E	H600EWA	MO	1	47	25	57	122	22	45	184.6	94.5	2.4		101	36	51	36
SEANOV82	H-600E	H600EWB	MO	1	47	25	57	122	22	45	184.6	94.5	2.4		88	32	42	29
SEANOV82	H-640	H640WA	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		154	36	49	46
SEANOV82	H-640	H640WC	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		71	21	30	27
SEANOV82	H-640	H640WD	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		107	23	31	61
SEANOV82	H-640	H640WE	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		109	29	51	42
SEANOV82	H-640	H640WF	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		92	30	26	49
SEANOV82	I-600E	I600EWA		1	47	25	8	122	21	26	184.6	58.5	0.8		289	59	201	68
SEANOV82	I-600E	I600EWB		1	47	25	8	122	21	26	184.6	58.5	0.8		234	57	82	106
SEANOV82	I-690	I690WA	MO	1	47	24	33	122	22	10	212.3	87.7	1.4		207	43	71	105
SEANOV82	I-690	I690WB	MO	1	47	24	33	122	22	10	212.3	87.7	1.4		171	37	57	77
SEANOV82	J-600E	J600EWA		1	47	21	20	122	20	25	161.5		0.2		144	32	57	78

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEANOV82	C-640	C640WA	21	15	3	3	16	7	6	1	9	2	1.098	0.717	67	9
SEANOV82	C-640	C640WB	11	7	8	2	16	5	8	2	7	1	1.219	0.796	70	12
SEANOV82	D-250E	D250EWA	143	44	1	6	45	11	11	1	21	4	1.409	0.736	68	16
SEANOV82	D-250E	D250EWB	135	15	1	14	54	6	15	1	16	6	1.427	0.727	69	17
SEANOV82	D-250E	D250EWD	18	8	0	1	16	5	12	0	10	1	1.275	0.801	70	13
SEANOV82	D-250E	D250EWE	59	22	1	2	36	6	14	1	14	2	1.524	0.835	71	20
SEANOV82	D-250E	D250EWF	82	24	2	3	28	7	17	2	14	3	1.171	0.648	67	12
SEANOV82	D-660	D660WA	15	5	3	3	17	2	8	2	4	2	1.043	0.687	66	9
SEANOV82	D-660	D660WB	15	1	1	3	15	1	6	1	4	2	0.856	0.591	61	4
SEANOV82	E-600E	E600EWA	26	10	3	2	23	5	9	2	9	2	0.821	0.496	66	4
SEANOV82	E-600E	E600EWB	20	10	2	2	23	5	10	2	9	1	0.816	0.493	64	4
SEANOV82	E-750	E750WA	57	8	0	1	19	5	8	0	12	1	0.875	0.546	58	3
SEANOV82	E-750	E750WB	37	6	1	2	29	3	8	1	7	2	0.935	0.559	61	5
SEANOV82	F-600E	F600EWA	41	28	22	36	58	14	11	4	22	6	1.733	0.865	75	31
SEANOV82	F-600E	F600EWB	103	86	19	75	57	17	14	4	24	7	1.647	0.813	81	27
SEANOV82	F-780	F780WA	30	10	3	5	30	4	13	3	8	2	1.36	0.778	75	13
SEANOV82	F-780	F780WB	44	11	4	11	33	9	10	3	14	1	1.343	0.752	75	11
SEANOV82	G-600E	G600EWA	25	12	1	6	41	9	12	1	14	3	1.522	0.822	72	22
SEANOV82	G-600E	G600EWB	9	3	6	1	37	3	10	3	6	1	1.483	0.844	73	19
SEANOV82	G-780	G780WA	20	13	3	2	12	6	11	1	8	1	0.746	0.492	66	4
SEANOV82	G-780	G780WB	16	7	4	5	20	5	10	2	10	3	1.092	0.66	69	11
SEANOV82	H-600E	H600EWA	10	3	3	1	20	3	7	1	7	1	1.327	0.852	68	15
SEANOV82	H-600E	H600EWB	7	5	4	6	16	5	4	2	7	3	1.28	0.85	71	12
SEANOV82	H-640	H640WA	53	47	1	5	14	8	7	1	12	2	1.193	0.766	78	10
SEANOV82	H-640	H640WC	10	7	3	1	10	4	3	1	6	1	1.1	0.832	74	9
SEANOV82	H-640	H640WD	12	4	3	0	11	2	7	1	4	0	1.093	0.803	64	8
SEANOV82	H-640	H640WE	11	4	2	3	13	3	7	2	6	1	1.158	0.792	71	9
SEANOV82	H-640	H640WF	13	7	4	0	12	4	7	3	8	0	1.173	0.794	69	10
SEANOV82	I-600E	I600EWA	15	8	0	5	40	6	6	0	10	3	1.375	0.776	75	15
SEANOV82	I-600E	I600EWB	39	27	3	4	31	8	8	3	14	1	1.368	0.779	74	16
SEANOV82	I-690	I690WA	22	7	1	8	23	5	8	1	8	3	1.193	0.73	68	12
SEANOV82	I-690	I690WB	35	21	1	1	18	6	7	1	10	1	1.239	0.79	70	11
SEANOV82	J-600E	J600EWA	8	4	0	1	22	3	4	0	5	1	1.065	0.708	66	9

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEANOV82	J-600E	J600EWB		1	47	21	20	122	20	25	161.5		0.2		125	31	51	60
SEANOV82	J-690	J690WA		1	47	22	12	122	21	28	182.9		0.2		207	47	71	87
SEANOV82	J-690	J690WC		1	47	22	12	122	21	28	182.9		0.2		179	43	54	100
SEANOV82	J5-520E	J5520EWA	MO	1	47	23	26	122	20	15	184.6	92	1.5		214	30	38	158
SEANOV82	J5-520E	J5520EWB	MO	1	47	23	26	122	20	15	184.6	92	1.5		192	32	37	139
SEANOV82	J5-600E	J5600EWA		1	47	23	13	122	21	20	212.3	88.7	2		148	31	25	86
SEANOV82	J5-600E	J5600EWB		1	47	23	13	122	21	20	212.3	88.7	2		130	33	30	88
SEANOV82	K-590	K590WA	MO	1	47	21	9	122	23	42	184.6	91.9	1.3		125	30	46	62
SEANOV82	K-590	K590WB	MO	1	47	21	9	122	23	42	184.6	91.9	1.3		211	36	54	131
SEANOV82	OT-1	OT1WA	MO	1	47	29	0	122	23	36	184.6	95.6	2		135	31	35	82
SEANOV82	OT-1	OT1WB	MO	1	47	29	0	122	23	36	184.6	95.6	2		83	24	21	44
SEANOV82	OT-1	OT1WC	MO	1	47	29	0	122	23	36	184.6	95.6	2		112	29	24	69
SEANOV82	OT-1	OT1WD	MO	1	47	29	0	122	23	36	184.6	95.6	2		146	40	26	85
SEANOV82	OT-1	OT1WE	MO	1	47	29	0	122	23	36	184.6	95.6	2		158	33	32	98
SEANOV82	OT-2	OT2WA	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		325	44	58	242
SEANOV82	OT-2	OT2WB	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		308	32	41	248
SEANOV82	OT-2	OT2WC	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		348	37	69	263
SEANOV82	OT-2	OT2WD	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		241	32	39	180
SEANOV82	OT-2	OT2WE	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		443	43	82	323
SEASEP82	A-600E	A600EVA	MO	1	47	32	16	122	24	22	184.6	93.8	1.9		117	34	16	63
SEASEP82	A-600E	A600EVB	MO	1	47	32	16	122	24	22	184.6	93.8	1.9		108	27	16	67
SEASEP82	A-720	A720VA	MO	1	47	31	37	122	26	12	221.5	76.6	2		329	34	38	146
SEASEP82	A-720	A720VC	MO	1	47	31	37	122	26	12	221.5	76.6	2		543	52	65	251
SEASEP82	B-600E	B600EVA	MO	1	47	30	46	122	24	25	184.6	90.9	2.7		214	34	28	144
SEASEP82	B-600E	B600EVC	MO	1	47	30	46	122	24	25	184.6	90.9	2.7		162	34	27	86
SEASEP82	B-660	B660VA	MO	1	47	30	16	122	25	27	203.1	90	1.8		161	29	22	111
SEASEP82	B-660	B660VB	MO	1	47	30	16	122	25	27	203.1	90	1.8		194	31	29	120
SEASEP82	C-50E	C50EVB		1	47	29	51	122	22	47	15.4	2.3	0.1		513	48	61	119
SEASEP82	C-600E	C600EVA	MO	1	47	29	38	122	23	40	184.6	90.4	2		276	39	43	194
SEASEP82	C-600E	C600EVB	MO	1	47	29	38	122	23	40	184.6	90.4	2		192	32	21	143
SEASEP82	C-640	C640VA	MO	1	47	29	31	122	24	28	184.6	92.5	2		109	23	18	72
SEASEP82	C-640	C640VB	MO	1	47	29	31	122	24	28	184.6	92.5	2		117	27	22	74

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEANOV82	J-600E	J600EWB	13	9	1	0	19	5	5	1	6	0	1.125	0.755	69	10
SEANOV82	J-690	J690WA	46	21	1	2	24	9	6	1	15	1	1.267	0.757	71	12
SEANOV82	J-690	J690WC	18	7	4	3	20	4	8	2	10	3	1.143	0.7	68	12
SEANOV82	J5-520E	J5520EWA	13	5	3	2	15	3	7	1	5	2	0.82	0.555	63	4
SEANOV82	J5-520E	J5520EWB	15	7	0	1	20	4	5	0	6	1	0.823	0.547	66	5
SEANOV82	J5-600E	J5600EWA	35	19	2	0	15	6	5	1	10	0	0.996	0.668	66	6
SEANOV82	J5-600E	J5600EWB	10	5	1	1	19	4	6	1	6	1	0.951	0.626	65	8
SEANOV82	K-590	K590WA	15	5	1	1	16	4	5	1	7	1	1.019	0.69	66	7
SEANOV82	K-590	K590WB	22	11	2	2	16	8	5	1	13	1	0.95	0.61	69	7
SEANOV82	OT-1	OT1WA	14	6	3	1	14	2	8	3	5	1	1.002	0.672	72	8
SEANOV82	OT-1	OT1WB	13	9	3	2	10	4	6	2	5	1	1.103	0.8	72	9
SEANOV82	OT-1	OT1WC	14	7	3	2	12	3	7	2	7	1	0.989	0.676	69	7
SEANOV82	OT-1	OT1WD	23	14	7	5	14	8	9	3	12	2	1.156	0.721	67	10
SEANOV82	OT-1	OT1WE	25	21	2	1	14	6	7	2	9	1	0.962	0.633	72	6
SEANOV82	OT-2	OT2WA	19	17	4	2	25	8	5	3	9	2	0.735	0.447	68	3
SEANOV82	OT-2	OT2WB	13	7	3	3	18	5	4	2	7	1	0.632	0.42	65	2
SEANOV82	OT-2	OT2WC	12	7	2	2	19	3	9	2	6	1	0.653	0.416	70	2
SEANOV82	OT-2	OT2WD	18	13	1	3	16	5	6	1	8	1	0.739	0.491	67	3
SEANOV82	OT-2	OT2WE	32	26	4	2	21	7	7	3	11	1	0.748	0.458	70	3
SEASEP82	A-600E	A600EVA	34	19	3	1	13	7	8	2	10	1	1.132	0.739	69	10
SEASEP82	A-600E	A600EVB	23	11	1	1	10	6	6	1	9	1	0.964	0.674	66	7
SEASEP82	A-720	A720VA	141	18	2	2	15	4	7	1	10	1	1.005	0.656	57	5
SEASEP82	A-720	A720VC	227	26	0	0	22	8	13	0	17	0	1.105	0.644	60	6
SEASEP82	B-600E	B600EVA	39	23	3	0	16	4	8	2	8	0	0.901	0.588	68	5
SEASEP82	B-600E	B600EVC	41	23	4	4	13	6	7	1	10	3	1.188	0.775	65	10
SEASEP82	B-660	B660VA	20	10	6	2	8	5	9	2	8	2	0.871	0.595	67	6
SEASEP82	B-660	B660VB	41	9	4	0	14	2	9	2	6	0	0.998	0.669	63	6
SEASEP82	C-50E	C50EVB	332	65	0	1	23	7	14	0	10	1	0.912	0.543	70	5
SEASEP82	C-600E	C600EVA	31	16	7	1	18	5	7	3	10	1	0.883	0.555	66	5
SEASEP82	C-600E	C600EVB	24	17	4	0	13	6	6	1	12	0	0.78	0.518	68	4
SEASEP82	C-640	C640VA	14	3	3	2	10	3	5	1	6	1	0.941	0.691	64	6
SEASEP82	C-640	C640VB	20	15	1	0	8	5	9	1	9	0	1.064	0.743	67	8

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEASEP82	D-250E	D250EVA	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		541	78	134	192
SEASEP82	D-250E	D250EVC	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		382	76	106	141
SEASEP82	D-250E	D250EVD	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		521	75	123	244
SEASEP82	D-250E	D250EVE	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		246	59	124	85
SEASEP82	D-250E	D250EVF	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		454	72	128	214
SEASEP82	D-660	D660VA	MO	1	47	29	7	122	24	39	203.1	90.8	2.6		161	37	30	112
SEASEP82	D-660	D660VB	MO	1	47	29	7	122	24	39	203.1	90.8	2.6		209	38	34	146
SEASEP82	E-200E	E200EVA	MO	1	47	27	35	122	22	36	61.5	10.6	0.5		550	63	72	238
SEASEP82	E-50E	E50EVA	MO	1	47	27	36	122	22	18	15.4	4	0.2		412	59	75	107
SEASEP82	E-600E	E600EVA	MO	1	47	27	35	122	23	11	184.6	40	0.8		457	56	68	303
SEASEP82	E-600E	E600EVC	MO	1	47	27	35	122	23	11	184.6	40	0.8		295	45	61	190
SEASEP82	E-750	E750VA	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		344	50	53	210
SEASEP82	E-750	E750VB	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		246	53	55	150
SEASEP82	F-600E	F600EVA	MO	1	47	26	53	122	23	41	184.6	23	0.1		365	97	158	73
SEASEP82	F-600E	F600EVB	MO	1	47	26	53	122	23	41	184.6	23	0.1		418	96	177	95
SEASEP82	F-780	F780VB	MO	1	47	26	29	122	23	49	240.0	34.4	0.9		333	58	123	145
SEASEP82	F-780	F780VC	MO	1	47	26	29	122	23	49	240.0	34.4	0.9		337	50	83	159
SEASEP82	G-600E	G600EVA	MO	1	47	26	28	122	22	56	184.6	38.3	0.8		231	60	110	78
SEASEP82	G-600E	G600EVB	MO	1	47	26	28	122	22	56	184.6	38.3	0.8		163	57	114	25
SEASEP82	G-780	G780VA	MO	1	47	26	7	122	23	29	240.0	95.6	2.1		276	42	59	188
SEASEP82	G-780	G780VB	MO	1	47	26	7	122	23	29	240.0	95.6	2.1		269	38	48	192
SEASEP82	H-600E	H600EVA	MO	1	47	25	57	122	22	45	184.6	94.5	2.4		128	33	36	63
SEASEP82	H-600E	H600EVB	MO	1	47	25	57	122	22	45	184.6	94.5	2.4		188	30	40	91
SEASEP82	H-640	H640VA	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		155	39	32	89
SEASEP82	H-640	H640VB	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		213	40	51	107
SEASEP82	H-640	H640VC	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		107	25	30	66
SEASEP82	H-640	H640VE	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		124	27	34	75
SEASEP82	H-640	H640VF	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		141	36	38	78
SEASEP82	I-600E	I600EVA		1	47	25	8	122	21	26	184.6	58.5	0.8		180	42	69	95
SEASEP82	I-600E	I600EVC		1	47	25	8	122	21	26	184.6	58.5	0.8		124	52	65	39
SEASEP82	I-690	I690VA	MO	1	47	24	33	122	22	10	212.3	87.7	1.4		176	51	54	75
SEASEP82	I-690	I690VC	MO	1	47	24	33	122	22	10	212.3	87.7	1.4		244	52	65	110
SEASEP82	J5-520E	J5520EVA		1	47	21	20	122	20	25	161.5		0.2		207	35	56	113

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEASEP82	D-250E	D250EVA	214	23	0	1	38	11	16	0	23	1	1.263	0.668	66	12
SEASEP82	D-250E	D250EVC	128	52	2	5	40	8	13	2	18	3	1.485	0.789	70	20
SEASEP82	D-250E	D250EVD	150	23	0	4	35	8	22	0	16	2	1.172	0.625	66	9
SEASEP82	D-250E	D250EVE	33	17	1	3	35	9	8	1	13	2	1.495	0.844	65	20
SEASEP82	D-250E	D250EVF	102	16	0	10	38	8	16	0	14	4	1.247	0.672	67	14
SEASEP82	D-660	D660VA	13	9	2	4	17	6	7	1	10	2	0.95	0.606	67	7
SEASEP82	D-660	D660VB	25	10	3	1	17	5	8	2	10	1	0.91	0.576	67	6
SEASEP82	E-200E	E200EVA	234	28	2	4	24	10	18	1	17	3	1.106	0.615	67	7
SEASEP82	E-50E	E50EVA	228	66	0	2	27	10	16	0	14	2	1.235	0.697	73	11
SEASEP82	E-600E	E600EVA	78	18	4	4	26	8	10	2	16	2	0.997	0.57	65	7
SEASEP82	E-600E	E600EVC	38	15	4	2	23	4	8	3	9	2	0.945	0.572	68	9
SEASEP82	E-750	E750VA	77	37	1	3	27	6	10	1	11	1	1.056	0.622	61	5
SEASEP82	E-750	E750VB	36	8	3	2	27	7	9	2	14	1	1.151	0.667	61	11
SEASEP82	F-600E	F600EVA	60	33	9	65	49	16	10	3	25	8	1.692	0.851	77	32
SEASEP82	F-600E	F600EVB	54	38	21	71	52	16	12	2	24	5	1.694	0.855	83	31
SEASEP82	F-780	F780VB	57	6	6	2	27	5	13	4	13	1	1.334	0.756	67	13
SEASEP82	F-780	F780VC	92	9	1	2	21	7	12	1	15	1	1.268	0.747	65	10
SEASEP82	G-600E	G600EVA	34	12	1	8	27	9	12	1	16	4	1.508	0.848	68	20
SEASEP82	G-600E	G600EVB	9	2	5	10	35	1	10	3	6	3	1.543	0.879	73	25
SEASEP82	G-780	G780VA	21	9	6	2	20	6	7	3	10	2	0.852	0.525	70	4
SEASEP82	G-780	G780VB	24	5	5	0	18	3	7	2	11	0	0.847	0.536	65	4
SEASEP82	H-600E	H600EVA	21	10	5	3	16	3	6	2	8	1	1.189	0.783	68	12
SEASEP82	H-600E	H600EVB	54	40	1	2	14	6	3	1	11	1	1.159	0.785	68	10
SEASEP82	H-640	H640VA	29	12	4	1	17	5	9	2	10	1	1.131	0.711	68	12
SEASEP82	H-640	H640VB	50	26	4	1	17	5	11	2	9	1	1.211	0.756	72	12
SEASEP82	H-640	H640VC	9	3	1	1	11	3	5	1	7	1	0.97	0.694	66	7
SEASEP82	H-640	H640VE	14	6	1	0	15	3	6	1	5	0	1.017	0.711	68	8
SEASEP82	H-640	H640VF	18	9	5	2	17	6	7	2	9	1	1.112	0.715	68	11
SEASEP82	I-600E	I600EVA	11	2	3	2	24	2	7	3	7	1	1.21	0.746	72	10
SEASEP82	I-600E	I600EVC	14	9	3	3	29	6	9	2	9	3	1.518	0.885	76	22
SEASEP82	I-690	I690VA	36	9	4	7	27	7	8	2	12	2	1.366	0.8	66	18
SEASEP82	I-690	I690VC	60	18	2	7	25	6	10	2	13	2	1.281	0.746	70	13
SEASEP82	J5-520E	J5520EVA	35	27	1	2	19	4	7	1	7	1	1.096	0.71	65	7

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEASEP82	J5-520E	J5520EVB		1	47	21	20	122	20	25	161.5		0.2		238	33	64	150
SEASEP82	J5-600E	J5600EVA		1	47	22	12	122	21	28	182.9		0.2		106	34	36	54
SEASEP82	J5-600E	J5600EVB		1	47	22	12	122	21	28	182.9		0.2		103	35	28	48
SEASEP82	J-600E	J600EVA	MO	1	47	23	26	122	20	15	184.6	92	1.5		149	39	40	98
SEASEP82	J-600E	J600EVB	MO	1	47	23	26	122	20	15	184.6	92	1.5		141	38	42	77
SEASEP82	J-690	J690VA		1	47	23	13	122	21	20	212.3	88.7	2		221	40	47	109
SEASEP82	J-690	J690VC		1	47	23	13	122	21	20	212.3	88.7	2		257	52	62	122
SEASEP82	K-590	K590VA	MO	1	47	21	9	122	23	42	184.6	91.9	1.3		109	35	43	49
SEASEP82	K-590	K590VC	MO	1	47	21	9	122	23	42	184.6	91.9	1.3		108	31	37	53
SEASEP82	OT-1	OT1VA	MO	1	47	29	0	122	23	36	184.6	95.6	2		110	31	24	64
SEASEP82	OT-1	OT1VB	MO	1	47	29	0	122	23	36	184.6	95.6	2		175	27	18	132
SEASEP82	OT-1	OT1VD	MO	1	47	29	0	122	23	36	184.6	95.6	2		128	23	19	93
SEASEP82	OT-1	OT1VE	MO	1	47	29	0	122	23	36	184.6	95.6	2		133	30	17	90
SEASEP82	OT-1	OT1VF	MO	1	47	29	0	122	23	36	184.6	95.6	2		151	28	21	111
SEASEP82	OT-2	OT2VA	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		262	39	53	185
SEASEP82	OT-2	OT2VB	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		308	40	56	212
SEASEP82	OT-2	OT2VC	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		155	27	27	112
SEASEP82	OT-2	OT2VD	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		287	33	36	232
SEASEP82	OT-2	OT2VE	MO	1	47	28	55	122	22	42	184.6	94.2	1.9		236	38	35	181
SEASEP83	D-250E	D250EZA	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		867	68	152	557
SEASEP83	D-250E	D250EZB	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		686	99	215	220
SEASEP83	D-250E	D250EZC	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		396	99	202	116
SEASEP83	D-250E	D250EZE	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		488	77	120	239
SEASEP83	D-250E	D250EZF	MO	1	47	28	11	122	22	36	61.5	12.9	0.3		448	80	168	189
SEASEP83	E-750	E750ZA	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		350	51	84	175
SEASEP83	E-750	E750ZB	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		323	49	57	190
SEASEP83	E-750	E750ZC	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		363	48	72	231
SEASEP83	E-750	E750ZD	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		325	47	50	196
SEASEP83	E-750	E750ZF	MO	1	47	27	24	122	23	58	230.8	66.5	1.3		439	57	71	285
SEASEP83	H-640	H640ZA	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		196	37	51	99
SEASEP83	H-640	H640ZC	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		171	43	47	88
SEASEP83	H-640	H640ZD	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		207	32	60	108

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEASEP82	J5-520E	J5520EVB	19	9	3	2	19	4	4	2	7	1	0.942	0.62	63	6
SEASEP82	J5-600E	J5600EVA	11	5	5	0	18	3	8	1	7	0	1.195	0.78	67	13
SEASEP82	J5-600E	J5600EVB	22	11	3	2	14	5	7	1	11	2	1.29	0.835	64	13
SEASEP82	J-600E	J600EVA	7	3	3	1	22	3	8	2	6	1	1.048	0.659	67	10
SEASEP82	J-600E	J600EVB	15	8	6	1	20	3	7	3	7	1	1.208	0.765	65	13
SEASEP82	J-690	J690VA	60	19	2	3	20	7	6	2	11	1	1.17	0.73	67	10
SEASEP82	J-690	J690VC	63	18	5	5	25	9	7	1	17	2	1.267	0.739	64	11
SEASEP82	K-590	K590VA	12	6	3	2	22	2	6	1	5	1	1.267	0.82	63	14
SEASEP82	K-590	K590VC	14	6	3	1	15	3	4	3	8	1	1.148	0.769	64	10
SEASEP82	OT-1	OT1VA	19	16	3	0	16	8	5	1	9	0	1.039	0.696	69	9
SEASEP82	OT-1	OT1VB	20	8	5	0	12	5	5	1	9	0	0.731	0.511	65	3
SEASEP82	OT-1	OT1VD	13	4	2	1	10	3	5	1	6	1	0.795	0.583	63	3
SEASEP82	OT-1	OT1VE	20	14	5	1	12	7	6	1	10	1	0.872	0.59	68	5
SEASEP82	OT-1	OT1VF	18	7	1	0	12	4	8	1	7	0	0.807	0.558	67	4
SEASEP82	OT-2	OT2VA	20	11	4	0	19	7	10	2	8	0	0.815	0.512	68	4
SEASEP82	OT-2	OT2VB	36	15	0	4	23	6	5	0	11	1	0.808	0.504	68	4
SEASEP82	OT-2	OT2VC	12	10	4	0	12	7	4	2	9	0	0.725	0.507	69	4
SEASEP82	OT-2	OT2VD	15	9	1	3	15	5	9	1	7	1	0.681	0.448	64	2
SEASEP82	OT-2	OT2VE	17	6	3	0	19	5	7	3	9	0	0.72	0.456	66	3
SEASEP83	D-250E	D250EZA	152	26	0	6	34	8	14	0	16	4	1.083	0.591	62	8
SEASEP83	D-250E	D250EZB	243	42	0	8	51	15	17	0	25	6	1.394	0.698	67	16
SEASEP83	D-250E	D250EZC	53	17	3	22	60	8	12	2	18	7	1.673	0.838	72	30
SEASEP83	D-250E	D250EZE	120	29	0	9	43	11	12	0	18	4	1.31	0.694	63	14
SEASEP83	D-250E	D250EZF	78	22	1	12	48	9	11	1	17	3	1.393	0.732	67	18
SEASEP83	E-750	E750ZA	79	10	2	10	30	4	8	2	9	2	1.179	0.691	65	9
SEASEP83	E-750	E750ZB	74	15	1	1	24	7	10	1	13	1	1.139	0.674	62	8
SEASEP83	E-750	E750ZC	58	14	1	1	27	5	8	1	11	1	1.008	0.599	66	8
SEASEP83	E-750	E750ZD	74	11	2	3	22	5	11	1	11	2	1.102	0.659	62	7
SEASEP83	E-750	E750ZF	78	15	1	4	25	9	10	1	18	3	1.083	0.617	62	8
SEASEP83	H-640	H640ZA	41	22	2	3	15	9	7	1	13	1	1.14	0.727	68	11
SEASEP83	H-640	H640ZC	27	19	3	6	20	6	8	2	10	3	1.213	0.743	69	13
SEASEP83	H-640	H640ZD	31	19	2	6	14	4	6	2	9	1	1.09	0.724	68	10

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SEASEP83	H-640	H640ZE	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		105	32	31	47
SEASEP83	H-640	H640ZF	MO	1	47	25	45	122	23	36	184.6	96.3	2.1		156	28	30	96
SEASEP83	OT-1	OT1ZA	MO	1	47	29	0	122	23	36	181.0512	95.6	2		218	30	32	162
SEASEP83	OT-1	OT1ZB	MO	1	47	29	0	122	23	36	181.0512	95.6	2		293	37	50	214
SEASEP83	OT-2	OT2ZA	MO	1	47	28	55	122	22	42	179.2224	94.2	1.9		436	46	45	353
SEASEP83	OT-2	OT2ZB	MO	1	47	28	55	122	22	42	179.2224	94.2	1.9		428	45	71	315
SEASEP83	SS-1	SS1ZB		1	47	34	20	122	27	44	237.744		1.7	VS	647	65	90	384
SEASEP83	SS-10	SS10ZC	MO	1	47	33	22	122	30	32	82.296	9.7	0.3	FN	159	56	81	34
SEASEP83	SS-11	SS11ZC	MO	1	47	34	0	122	29	1	87.7824	69.1	1.5	FN	815	53	127	635
SEASEP83	SS-12	SS12ZA		1	47	33	32	122	28	44	146.304		1.2	VS	368	36	29	233
SEASEP83	SS-2	SS2ZB		1	47	34	7	122	26	32	239.5728		1.7	VS	650	68	102	345
SEASEP83	SS-3	SS3ZB		1	47	33	46	122	25	15	184.7088	66.1	1.4	FN	324	44	57	163
SEASEP83	SS-4	SS4ZC	MO	1	47	32	42	122	25	32	182.88	84.3	1.8		209	29	11	142
SEASEP83	SS-5	SS5ZB	MO	1	47	32	38	122	26	29	234.0864	66	1.4		684	55	86	329
SEASEP83	SS-6	SS6ZB	MO	1	47	32	33	122	27	3	137.16	32	0.7		439	108	176	46
SEASEP83	SS-7	SS7ZA	MO	1	47	32	5	122	27	53	54.864	13.6	0.4		744	141	349	44
SEASEP83	SS-8	SS8ZB		1	47	32	6	122	30	33	123.444		1	VS	387	84	326	13
SEASEP83	SS-9	SS9ZA		1	47	32	20	122	31	9	106.0704	14.4	0.4		329	50	95	144
SED18903	1	1	MO	1	48	59	30	122	51	26	-22	93.3	1.5		385	29	122	13
SED18903	1	3	MO	1	48	59	30	122	51	26	-22	93.3	1.5		299	25	50	35
SED18903	1	5	MO	1	48	59	30	122	51	26	-22	93.3	1.5		574	33	148	68
SED18903	2	1	MO	1	48	50	5	122	43	50	-20	60.7	0.68		252	45	153	68
SED18903	2	3	MO	1	48	50	5	122	43	50	-20	60.7	0.68		496	59	356	76
SED18903	2	5	MO	1	48	50	5	122	43	50	-20	60.7	0.68		469	72	346	76
SED18903	3	1	MO	1	48	52	16	122	58	20	-218	32.7	1.2		428	27	346	60
SED18903	3	3	MO	1	48	52	16	122	58	20	-218	32.7	1.2		97	17	82	9
SED18903	3	5	MO	1	48	52	16	122	58	20	-218	32.7	1.2		237	36	219	14
SED18903	4	1	MO	1	48	41	6	122	32	10	-24	93.3	2		325	52	210	55
SED18903	4	3	MO	1	48	41	6	122	32	10	-24	93.3	2		296	45	179	65
SED18903	4	5	MO	1	48	41	6	122	32	10	-24	93.3	2		287	43	137	40
SED18903	5	1	MO	1	48	35	49	122	32	7	-20	95.7	1.8		248	42	26	84
SED18903	5	3	MO	1	48	35	49	122	32	7	-20	95.7	1.8		208	37	35	58

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SEASEP83	H-640	H640ZE	20	12	3	4	16	6	4	1	10	1	1.238	0.822	65	11
SEASEP83	H-640	H640ZF	29	21	1	0	12	6	4	1	11	0	0.963	0.665	69	7
SEASEP83	OT-1	OT1ZA	21	18	1	2	12	6	8	1	7	2	0.781	0.529	66	4
SEASEP83	OT-1	OT1ZB	25	18	3	1	17	4	8	3	8	1	0.765	0.488	67	4
SEASEP83	OT-2	OT2ZA	34	20	3	1	24	9	5	2	14	1	0.704	0.423	62	2
SEASEP83	OT-2	OT2ZB	38	24	0	4	25	7	7	0	11	2	0.781	0.472	66	3
SEASEP83	SS-1	SS1ZB	163	35	1	9	26	14	13	1	23	2	1.043	0.576	63	6
SEASEP83	SS-10	SS10ZC	36	26	0	8	29	7	10	0	11	6	1.554	0.889	70	22
SEASEP83	SS-11	SS11ZC	48	18	1	4	27	6	11	1	12	2	0.759	0.44	65	3
SEASEP83	SS-12	SS12ZA	104	10	0	2	13	5	10	0	11	2	0.95	0.61	60	4
SEASEP83	SS-2	SS2ZB	188	40	1	14	27	13	16	1	21	3	1.111	0.606	64	8
SEASEP83	SS-3	SS3ZB	92	6	0	12	24	5	8	0	9	3	1.093	0.665	63	7
SEASEP83	SS-4	SS4ZC	55	22	1	0	7	9	8	1	13	0	0.801	0.548	67	4
SEASEP83	SS-5	SS5ZB	254	40	1	14	22	14	9	1	21	2	1.048	0.602	62	5
SEASEP83	SS-6	SS6ZB	92	56	42	83	54	19	10	6	31	6	1.731	0.851	77	33
SEASEP83	SS-7	SS7ZA	143	132	173	35	73	24	17	11	30	8	1.738	0.809	87	34
SEASEP83	SS-8	SS8ZB	25	23	5	18	61	10	6	3	11	3	1.604	0.834	80	28
SEASEP83	SS-9	SS9ZA	77	30	0	13	27	5	6	0	14	3	1.238	0.729	53	10
SED18903	1	1	138	42	111	1	12	3	6	4	6	1	1.043	0.713	78	6
SED18903	1	3	98	44	115	1	8	3	6	4	6	1	1.134	0.811	81	8
SED18903	1	5	130	35	226	0	13	3	8	4	7	0	1.135	0.747	86	8
SED18903	2	1	30	8	1	0	19	3	18	1	7	0	1.401	0.848	70	15
SED18903	2	3	50	13	3	4	28	4	18	1	8	2	1.248	0.705	72	11
SED18903	2	5	33	11	7	6	30	5	21	5	12	3	1.309	0.705	80	13
SED18903	3	1	0	0	0	0	20	0	6	0	0	0	0.953	0.666	60	5
SED18903	3	3	6	3	0	0	10	3	2	0	5	0	0.738	0.599	63	3
SED18903	3	5	4	1	0	0	30	1	4	0	2	0	1.175	0.755	82	9
SED18903	4	1	46	25	6	8	29	3	13	2	5	3	1.395	0.813	72	16
SED18903	4	3	40	26	5	7	25	4	10	2	6	2	1.344	0.813	71	13
SED18903	4	5	102	86	5	3	27	2	9	2	4	1	1.275	0.781	74	11
SED18903	5	1	109	27	28	1	12	8	15	3	11	1	1.299	0.801	74	11
SED18903	5	3	72	8	39	3	12	2	12	4	7	1	1.253	0.799	74	10

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED18903	5	5	MO	1	48	35	49	122	32	7	-20	95.7	1.8		234	34	33	79
SED18903	6	1	MO	1	48	31	1	122	34	29	-20	7.1	0.2		316	54	85	197
SED18903	6	3	MO	1	48	31	1	122	34	29	-20	7.1	0.2		400	56	117	251
SED18903	6	5	MO	1	48	31	1	122	34	29	-20	7.1	0.2		139	41	52	76
SED18903	7	1	MO	1	48	12	16	123	14	14	-133	6.1	0.3		327	37	265	28
SED18903	7	3	MO	1	48	12	16	123	14	14	-133	6.1	0.3		382	64	287	16
SED18903	7	5	MO	1	48	12	16	123	14	14	-133	6.1	0.3		517	80	408	16
SED18903	8	1	MO	1	48	7	58	123	26	50	-21	65.8	3.9		381	72	236	63
SED18903	8	3	MO	1	48	7	58	123	26	50	-21	65.8	3.9		406	56	219	101
SED18903	8	5	MO	1	48	7	58	123	26	50	-21	65.8	3.9		377	71	195	96
SED18903	9	1	MO	1	48	8	13	123	17	1	-21	1.3	0.06		436	47	89	105
SED18903	9	3	MO	1	48	8	13	123	17	1	-21	1.3	0.06		476	58	106	106
SED18903	9	5	MO	1	48	8	13	123	17	1	-21	1.3	0.06		534	47	121	100
SED18903	10	1	MO	1	48	10	13	123	5	56	-20	37.2	0.61		603	64	449	54
SED18903	10	3	MO	1	48	10	13	123	5	56	-20	37.2	0.61		756	75	551	95
SED18903	10	5	MO	1	48	10	13	123	5	56	-20	37.2	0.61		579	61	412	65
SED18903	11	1	MO	1	48	3	19	122	53	31	-20	24.3	0.64		1003	93	483	1
SED18903	11	3	MO	1	48	3	19	122	53	31	-20	24.3	0.64		929	99	444	82
SED18903	11	5	MO	1	48	3	19	122	53	31	-20	24.3	0.64		1011	81	618	99
SED18903	12	1	MO	1	48	5	8	122	46	20	-20	90.3	1.5		366	48	77	111
SED18903	12	3	MO	1	48	5	8	122	46	20	-20	90.3	1.5		348	47	75	72
SED18903	12	5	MO	1	48	5	8	122	46	20	-20	90.3	1.5		336	42	69	69
SED18903	13	1	MO	1	47	50	25	122	37	29	-20	9.7	0.18		1441	69	134	1130
SED18903	13	3	MO	1	47	50	25	122	37	29	-20	9.7	0.18		1601	60	258	1180
SED18903	13	5	MO	1	47	50	25	122	37	29	-20	9.7	0.18		1632	85	325	1154
SED18903	14	1	MO	1	47	47	4	122	43	46	-115	27.6	0.35		291	61	71	156
SED18903	14	3	MO	1	47	47	4	122	43	46	-115	27.6	0.35		235	53	70	139
SED18903	14	5	MO	1	47	47	4	122	43	46	-115	27.6	0.35		246	56	85	117
SED18903	15	1	MO	1	47	43	2	122	48	50	-20	8.2	0.24		538	85	191	291
SED18903	15	3	MO	1	47	43	2	122	48	50	-20	8.2	0.24		404	85	178	182
SED18903	15	5	MO	1	47	43	2	122	48	50	-20	8.2	0.24		372	84	140	196
SED18903	16	1	MO	1	47	22	49	123	6	52	-20	3.9	0.18		216	52	109	60
SED18903	16	3	MO	1	47	22	49	123	6	52	-20	3.9	0.18		293	61	180	70

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED18903	5	5	77	15	42	3	13	2	10	4	5	2	1.175	0.767	77	8
SED18903	6	1	11	3	18	5	22	2	23	3	5	1	1.435	0.828	58	15
SED18903	6	3	13	2	12	4	23	2	20	4	6	2	1.45	0.83	62	16
SED18903	6	5	6	2	3	2	21	1	15	2	2	1	1.411	0.875	63	18
SED18903	7	1	24	23	1	8	22	5	4	1	6	3	0.715	0.456	68	3
SED18903	7	3	50	45	10	19	32	12	10	5	14	3	1.186	0.657	72	14
SED18903	7	5	67	53	3	20	38	16	12	3	22	3	1.159	0.609	73	13
SED18903	8	1	75	46	3	3	42	4	16	2	9	2	1.534	0.826	86	19
SED18903	8	3	84	66	0	2	27	4	18	0	9	2	1.388	0.794	85	14
SED18903	8	5	81	64	5	0	38	8	18	3	12	0	1.459	0.788	80	16
SED18903	9	1	229	229	11	2	22	5	14	4	5	2	1.132	0.677	89	7
SED18903	9	3	258	253	2	4	29	5	17	1	8	3	1.233	0.699	90	9
SED18903	9	5	302	301	9	1	23	7	12	2	8	1	1.064	0.637	91	6
SED18903	10	1	99	64	1	0	36	7	11	1	16	0	1.214	0.672	85	9
SED18903	10	3	104	71	0	5	40	12	9	0	23	2	1.257	0.671	85	10
SED18903	10	5	96	64	4	2	36	5	10	1	13	1	1.224	0.686	86	10
SED18903	11	1	483	451	2	32	63	12	1	1	24	2	1.278	0.649	94	10
SED18903	11	3	371	351	0	31	56	10	18	0	21	3	1.428	0.716	86	16
SED18903	11	5	271	244	1	22	40	14	13	1	24	3	1.317	0.69	90	13
SED18903	12	1	63	16	109	4	16	2	19	5	5	2	1.315	0.782	78	12
SED18903	12	3	73	32	127	0	22	4	15	3	6	0	1.201	0.718	84	9
SED18903	12	5	48	11	149	1	16	2	17	4	4	1	1.163	0.717	86	10
SED18903	13	1	176	33	0	1	29	14	16	0	23	1	0.728	0.396	69	3
SED18903	13	3	157	14	0	6	27	7	17	0	14	2	0.771	0.433	67	3
SED18903	13	5	138	11	1	14	45	4	24	1	13	2	0.906	0.47	69	5
SED18903	14	1	50	6	2	8	31	4	13	1	12	3	1.306	0.732	63	15
SED18903	14	3	19	10	2	5	26	6	10	2	12	3	1.276	0.74	68	13
SED18903	14	5	13	10	0	30	33	5	11	0	8	3	1.299	0.743	64	12
SED18903	15	1	35	20	8	13	42	7	25	3	11	4	1.49	0.772	72	21
SED18903	15	3	35	13	2	7	45	7	24	1	12	3	1.654	0.857	70	25
SED18903	15	5	26	9	1	9	42	6	27	1	11	3	1.654	0.86	67	29
SED18903	16	1	9	1	0	38	25	1	18	0	4	5	1.515	0.883	68	21
SED18903	16	3	10	10	0	33	33	3	21	0	3	4	1.498	0.839	73	17

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED18903	16	5	MO	1	47	22	49	123	6	52	-20	3.9	0.18		225	64	129	57
SED18903	17	1	MO	1	47	22	8	123	7	40	-79	92.5	1.5		150	22	66	69
SED18903	17	3	MO	1	47	22	8	123	7	40	-79	92.5	1.5		101	18	29	67
SED18903	17	5	MO	1	47	22	8	123	7	40	-79	92.5	1.5		142	26	75	53
SED18903	18	1	MO	1	48	15	27	122	37	13	-20	60.2	0.93		418	32	121	285
SED18903	18	3	MO	1	48	15	27	122	37	13	-20	60.2	0.93		514	41	189	288
SED18903	18	5	MO	1	48	15	27	122	37	13	-20	60.2	0.93		170	29	98	63
SED18903	19	1	MO	1	48	5	57	122	28	15	-121	81.3	1.9		47	22	29	10
SED18903	19	3	MO	1	48	5	57	122	28	15	-121	81.3	1.9		42	20	24	10
SED18903	19	5	MO	1	48	5	57	122	28	15	-121	81.3	1.9		51	23	24	9
SED18903	20	1	MO	1	48	10	32	122	27	5	-11	94.1	1		375	36	188	96
SED18903	20	3	MO	1	48	10	32	122	27	5	-11	94.1	1		499	44	298	84
SED18903	20	5	MO	1	48	10	32	122	27	5	-11	94.1	1		456	38	215	108
SED18903	21	1	MO	1	47	59	7.8	122	14	34.5	-20	52.2	1.3		894	58	164	457
SED18903	21	3	MO	1	47	59	7.8	122	14	34.5	-20	52.2	1.3		864	49	155	439
SED18903	21	5	MO	1	47	59	7.8	122	14	34.5	-20	52.2	1.3		1116	51	148	659
SED18903	22	1	MO	1	47	57	20.4	122	17	10.8	-21	4.2	0.15		307	33	37	176
SED18903	22	3	MO	1	47	57	20.4	122	17	10.8	-21	4.2	0.15		343	37	49	204
SED18903	22	5	MO	1	47	57	20.4	122	17	10.8	-21	4.2	0.15		270	41	24	146
SED18903	23	1	MO	1	47	52	14	122	20	5	-20	2.1	0.12		542	55	67	355
SED18903	23	3	MO	1	47	52	14	122	20	5	-20	2.1	0.12		468	62	86	283
SED18903	23	5	MO	1	47	52	14	122	20	5	-20	2.1	0.12		367	59	60	216
SED18903	24	1	MO	1	47	51	53	122	21	52	-180	87.1	1.7		94	45	35	28
SED18903	24	3	MO	1	47	51	53	122	21	52	-180	87.1	1.7		130	35	50	28
SED18903	24	5	MO	1	47	51	53	122	21	52	-180	87.1	1.7		100	40	36	31
SED18903	25	1	MO	1	47	51	22	122	30	1	-20	1.9	0.1		302	45	74	73
SED18903	25	3	MO	1	47	51	22	122	30	1	-20	1.9	0.1		247	37	132	54
SED18903	25	5	MO	1	47	51	22	122	30	1	-20	1.9	0.1		425	42	111	125
SED18903	26	1	MO	1	47	51	5	122	27	22	-262	15.7	0.42		355	61	94	143
SED18903	26	3	MO	1	47	51	5	122	27	22	-262	15.7	0.42		386	73	146	100
SED18903	26	5	MO	1	47	51	5	122	27	22	-262	15.7	0.42		361	65	141	108
SED18903	27	1	MO	1	47	45	35	122	23	8	-20	3.2	0.12		545	91	191	118
SED18903	27	3	MO	1	47	45	35	122	23	8	-20	3.2	0.12		673	97	267	66

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED18903	16	5	12	6	1	25	34	4	20	1	5	3	1.642	0.909	72	25
SED18903	17	1	13	0	0	2	15	0	4	0	2	1	0.899	0.67	67	5
SED18903	17	3	5	2	0	0	12	2	3	0	3	0	0.7	0.558	67	4
SED18903	17	5	14	6	0	0	17	4	3	0	6	0	1.061	0.75	67	7
SED18903	18	1	0	0	0	12	20	0	10	0	0	2	0.894	0.594	66	5
SED18903	18	3	8	0	0	29	27	0	9	0	3	2	0.957	0.594	67	5
SED18903	18	5	1	0	0	8	18	0	8	0	1	2	1.152	0.788	67	9
SED18903	19	1	2	1	2	4	13	1	5	1	2	1	1.221	0.91	71	11
SED18903	19	3	4	3	2	2	12	2	3	1	3	1	1.208	0.929	68	11
SED18903	19	5	12	10	5	1	11	4	4	1	6	1	1.249	0.917	81	11
SED18903	20	1	87	34	0	4	12	3	17	0	6	1	1.207	0.775	79	8
SED18903	20	3	114	41	0	3	23	6	12	0	8	1	1.169	0.711	77	8
SED18903	20	5	129	54	0	4	13	3	16	0	7	2	1.186	0.751	77	7
SED18903	21	1	271	12	1	1	27	7	12	1	17	1	1.058	0.6	62	5
SED18903	21	3	267	11	0	2	27	3	12	0	8	1	1.028	0.608	61	4
SED18903	21	5	308	11	0	1	24	5	15	0	11	1	0.94	0.55	61	4
SED18903	22	1	93	21	0	1	11	4	12	0	9	1	1.058	0.697	70	6
SED18903	22	3	89	3	0	1	16	2	14	0	6	1	0.978	0.624	67	5
SED18903	22	5	98	23	1	1	14	6	15	1	10	1	1.074	0.666	70	5
SED18903	23	1	116	16	0	4	21	5	24	0	8	2	1.15	0.661	73	6
SED18903	23	3	95	20	1	3	26	5	23	1	10	2	1.265	0.705	75	10
SED18903	23	5	88	20	1	2	15	8	27	1	14	2	1.321	0.746	72	12
SED18903	24	1	29	11	2	0	22	6	11	2	10	0	1.531	0.926	77	22
SED18903	24	3	43	12	6	3	18	3	7	2	7	1	1.396	0.904	69	14
SED18903	24	5	29	17	2	2	18	5	12	1	8	1	1.458	0.91	80	18
SED18903	25	1	150	15	2	3	17	5	16	1	9	2	1.023	0.619	70	5
SED18903	25	3	58	15	3	0	15	4	12	2	8	0	1.003	0.64	71	6
SED18903	25	5	186	47	3	0	16	4	15	3	8	0	1.057	0.651	72	5
SED18903	26	1	116	50	1	1	27	6	20	1	12	1	1.358	0.761	57	15
SED18903	26	3	134	54	2	3	33	7	22	2	14	1	1.494	0.802	67	18
SED18903	26	5	111	48	1	0	30	10	17	1	17	0	1.538	0.848	72	20
SED18903	27	1	215	36	3	18	41	11	25	2	20	3	1.465	0.748	75	22
SED18903	27	3	292	44	20	28	46	10	22	7	17	4	1.357	0.683	76	18

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED18903	27	5	MO	1	47	45	35	122	23	8	-20	3.2	0.12		655	84	206	100
SED18903	28	1	MO	1	47	43	59	122	29	22	-20	4.9	0.15		427	86	238	106
SED18903	28	3	MO	1	47	43	59	122	29	22	-20	4.9	0.15		780	93	530	120
SED18903	28	5	MO	1	47	43	59	122	29	22	-20	4.9	0.15		538	99	311	110
SED18903	29	1	MO	1	47	42	7	122	27	6	-195	83.1	1.6		75	24	55	7
SED18903	29	3	MO	1	47	42	7	122	27	6	-195	83.1	1.6		197	42	58	59
SED18903	29	5	MO	1	47	42	7	122	27	6	-195	83.1	1.6		192	39	62	64
SED18903	30	1	MO	1	47	37	25	122	30	10	-13	56.0	1.4		978	52	738	93
SED18903	30	3	MO	1	47	37	25	122	30	10	-13	56.0	1.4		782	45	504	122
SED18903	30	5	MO	1	47	37	25	122	30	10	-13	56.0	1.4		368	41	255	0
SED18903	31	1	MO	1	47	39	17	122	26	7	-22	1.7	0.15		290	80	116	33
SED18903	31	3	MO	1	47	39	17	122	26	7	-22	1.7	0.15		337	76	184	25
SED18903	31	5	MO	1	47	39	17	122	26	7	-22	1.7	0.15		587	87	271	64
SED18903	32	1	MO	1	47	37	57	122	24	29	-20	7.2	0.17		696	89	508	53
SED18903	32	3	MO	1	47	37	57	122	24	29	-20	7.2	0.17		703	103	520	39
SED18903	32	5	MO	1	47	37	57	122	24	29	-20	7.2	0.17		732	96	527	46
SED18903	33	1	MO	1	47	35	16	122	22	30	-20	24.0	0.64		632	63	336	92
SED18903	33	3	MO	1	47	35	16	122	22	30	-20	24.0	0.64		644	66	341	135
SED18903	33	5	MO	1	47	35	16	122	22	30	-20	24.0	0.64		643	70	320	149
SED18903	34	1	MO	1	47	32	48	122	39	43	-9	91.6	2.2		606	55	337	49
SED18903	34	3	MO	1	47	32	48	122	39	43	-9	91.6	2.2		447	47	261	63
SED18903	34	5	MO	1	47	32	48	122	39	43	-9	91.6	2.2		416	42	218	49
SED18903	35	1	MO	1	47	36	49	122	41	53	-14	78.9	2.3		337	39	106	12
SED18903	35	3	MO	1	47	36	49	122	41	53	-14	78.9	2.3		1214	38	737	0
SED18903	35	5	MO	1	47	36	49	122	41	53	-14	78.9	2.3		385	37	118	13
SED18903	36	1	MO	1	47	30	50	122	23	53	-15	2.2	0.13		356	56	149	68
SED18903	36	3	MO	1	47	30	50	122	23	53	-15	2.2	0.13		480	62	158	96
SED18903	36	5	MO	1	47	30	50	122	23	53	-15	2.2	0.13		384	52	138	87
SED18903	37	1	MO	1	47	29	14	122	27	19	-20	5.9	0.21		590	110	386	50
SED18903	37	3	MO	1	47	29	14	122	27	19	-20	5.9	0.21		391	92	201	53
SED18903	37	5	MO	1	47	29	14	122	27	19	-20	5.9	0.21		620	92	419	63
SED18903	38	1	MO	1	47	25	43	122	23	34	-195	93.3	2.1		162	30	37	17
SED18903	38	3	MO	1	47	25	43	122	23	34	-195	93.3	2.1		95	25	28	11

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED18903	27	5	332	26	6	11	34	12	26	4	18	2	1.181	0.614	74	15
SED18903	28	1	77	20	1	5	49	6	20	1	15	1	1.529	0.79	83	24
SED18903	28	3	99	24	7	24	42	6	27	3	15	6	1.172	0.595	92	12
SED18903	28	5	104	41	3	10	54	8	23	3	16	3	1.502	0.752	88	21
SED18903	29	1	6	1	3	4	15	1	2	2	3	2	1.068	0.774	68	10
SED18903	29	3	77	22	1	2	21	6	7	1	12	1	1.248	0.769	63	10
SED18903	29	5	61	5	3	2	18	3	10	2	8	1	1.157	0.727	57	9
SED18903	30	1	128	7	15	4	25	6	10	3	12	2	0.859	0.501	68	4
SED18903	30	3	150	8	4	2	22	5	11	2	9	1	0.874	0.529	66	4
SED18903	30	5	104	1	6	3	30	1	0	3	6	2	0.933	0.578	68	4
SED18903	31	1	119	44	9	13	38	11	18	6	16	2	1.5	0.788	75	24
SED18903	31	3	95	30	17	16	38	10	15	7	14	2	1.547	0.823	78	23
SED18903	31	5	202	51	27	23	45	10	19	6	14	3	1.501	0.774	77	22
SED18903	32	1	111	25	6	18	49	10	18	3	15	3	1.235	0.634	87	12
SED18903	32	3	109	23	13	22	52	9	20	6	19	6	1.409	0.7	83	16
SED18903	32	5	126	19	16	17	59	5	17	5	11	4	1.42	0.717	86	19
SED18903	33	1	201	2	1	2	38	2	13	1	9	2	1.212	0.674	67	9
SED18903	33	3	167	1	1	0	38	1	15	1	12	0	1.264	0.695	68	10
SED18903	33	5	160	1	4	10	39	1	14	4	10	3	1.308	0.709	68	11
SED18903	34	1	212	52	7	1	34	4	9	3	8	1	1.291	0.742	77	10
SED18903	34	3	123	13	0	0	27	3	14	0	6	0	1.229	0.735	71	9
SED18903	34	5	146	13	1	2	26	3	7	1	6	2	1.155	0.711	69	8
SED18903	35	1	176	4	40	3	21	3	9	3	5	1	1.093	0.687	78	7
SED18903	35	3	434	20	40	3	27	5	0	3	7	1	0.828	0.524	92	3
SED18903	35	5	200	2	43	11	21	2	6	3	4	3	1.078	0.687	76	8
SED18903	36	1	128	34	3	8	23	9	15	3	12	3	1.361	0.778	69	15
SED18903	36	3	220	41	0	6	31	8	15	0	14	2	1.183	0.66	66	9
SED18903	36	5	153	43	1	5	24	7	14	1	12	1	1.302	0.759	66	13
SED18903	37	1	123	46	17	14	59	12	20	8	17	5	1.577	0.772	81	28
SED18903	37	3	92	25	38	7	45	9	19	9	16	3	1.609	0.82	80	28
SED18903	37	5	88	24	17	33	46	8	21	8	14	3	1.318	0.671	87	17
SED18903	38	1	104	29	2	2	13	3	4	2	10	1	1.119	0.757	72	7
SED18903	38	3	51	12	4	1	9	3	7	1	7	1	1.171	0.838	70	8

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED18903	38	5	MO	1	47	25	43	122	23	34	-195	93.3	2.1		127	24	30	10
SED18903	39	1	MO	1	47	20	15	122	21	48	-14	1.7	0.09		199	40	66	63
SED18903	39	3	MO	1	47	20	15	122	21	48	-14	1.7	0.09		341	48	123	80
SED18903	39	5	MO	1	47	20	15	122	21	48	-14	1.7	0.09		206	39	58	45
SED18903	40	1	MO	1	47	15	43	122	26	9	-10	15.6	0.7		691	51	255	306
SED18903	40	3	MO	1	47	15	43	122	26	9	-10	15.6	0.7		661	58	439	162
SED18903	40	5	MO	1	47	15	43	122	26	9	-10	15.6	0.7		611	46	420	126
SED18903	41	1	MO	1	47	16	32	122	25	13	-20	81.1	0.8		3039	43	1779	1121
SED18903	41	3	MO	1	47	16	32	122	25	13	-20	81.1	0.8		2294	37	772	1419
SED18903	41	5	MO	1	47	16	32	122	25	13	-20	81.1	0.8		788	37	414	320
SED18903	42	1	MO	1	47	18	14	122	29	57	-39	3.2	0.1		81	27	47	16
SED18903	42	3	MO	1	47	18	14	122	29	57	-39	3.2	0.1		95	41	55	11
SED18903	42	5	MO	1	47	18	14	122	29	57	-39	3.2	0.1		91	26	62	21
SED18903	43	1	MO	1	47	17	53	122	44	28	-20	6.3	0.14		467	48	130	42
SED18903	43	3	MO	1	47	17	53	122	44	28	-20	6.3	0.14		544	57	137	34
SED18903	43	5	MO	1	47	17	53	122	44	28	-20	6.3	0.14		616	49	159	48
SED18903	44	1	MO	1	47	9	45	122	40	16	-20	14.7	0.42		650	103	470	65
SED18903	44	3	MO	1	47	9	45	122	40	16	-20	14.7	0.42		265	58	160	58
SED18903	44	5	MO	1	47	9	45	122	40	16	-20	14.7	0.42		484	90	373	30
SED18903	45	1	MO	1	47	9	55	122	45	1	-53	55.3	0.96		289	57	208	18
SED18903	45	3	MO	1	47	9	55	122	45	1	-53	55.3	0.96		291	45	196	17
SED18903	45	5	MO	1	47	9	55	122	45	1	-53	55.3	0.96		309	48	247	16
SED18903	46	1	MO	1	47	7	57	122	46	46	-22	9.5	0.42		342	55	108	41
SED18903	46	3	MO	1	47	7	57	122	46	46	-22	9.5	0.42		502	76	279	42
SED18903	46	5	MO	1	47	7	57	122	46	46	-22	9.5	0.42		445	68	201	67
SED18903	47	1	MO	1	47	14	7	122	50	49	-20	23.5	0.29		609	75	184	65
SED18903	47	3	MO	1	47	14	7	122	50	49	-20	23.5	0.29		398	63	175	38
SED18903	47	5	MO	1	47	14	7	122	50	49	-20	23.5	0.29		345	63	108	51
SED18903	48	1	MO	1	47	7	30	122	55	3	-20	81.3	2.5		327	28	91	35
SED18903	48	3	MO	1	47	7	30	122	55	3	-20	81.3	2.5		313	31	80	35
SED18903	48	5	MO	1	47	7	30	122	55	3	-20	81.3	2.5		192	30	53	34
SED18903	49	1	MO	1	47	4	53	122	54	43	-6	88.1	2.7		133	23	78	9
SED18903	49	3	MO	1	47	4	53	122	54	43	-6	88.1	2.7		131	21	58	8

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED18903	38	5	82	19	3	2	10	3	4	1	8	1	1.05	0.761	71	8
SED18903	39	1	70	31	0	0	17	3	15	0	8	0	1.277	0.797	69	11
SED18903	39	3	134	33	0	4	18	7	14	0	13	3	1.13	0.672	65	7
SED18903	39	5	101	41	1	1	11	6	15	1	11	1	1.167	0.734	69	8
SED18903	40	1	116	1	11	3	24	1	15	2	7	3	1.143	0.669	68	8
SED18903	40	3	47	1	7	6	33	1	13	3	7	2	1.15	0.652	67	8
SED18903	40	5	46	0	5	14	25	0	11	2	6	2	1.104	0.664	67	8
SED18903	41	1	102	17	31	6	17	4	12	3	10	1	0.52	0.318	67	2
SED18903	41	3	92	8	6	5	15	1	12	2	7	1	0.525	0.335	67	2
SED18903	41	5	40	2	13	1	15	2	10	2	9	1	0.835	0.532	67	3
SED18903	42	1	14	11	1	3	15	3	5	1	5	1	1.14	0.796	79	10
SED18903	42	3	24	23	2	3	20	8	8	2	9	2	1.32	0.818	80	18
SED18903	42	5	8	7	0	0	15	5	5	0	6	0	0.996	0.704	70	7
SED18903	43	1	169	58	118	8	22	6	10	3	11	2	1.325	0.788	84	12
SED18903	43	3	252	52	118	3	30	7	11	3	11	2	1.187	0.676	82	9
SED18903	43	5	242	59	167	0	23	8	13	3	10	0	1.145	0.677	87	7
SED18903	44	1	61	23	7	47	63	9	16	6	14	4	1.514	0.752	79	21
SED18903	44	3	33	14	8	6	30	6	11	4	11	2	1.439	0.816	77	19
SED18903	44	5	47	22	12	21	48	10	13	7	18	3	1.513	0.774	80	22
SED18903	45	1	47	6	11	4	35	3	8	5	6	2	1.275	0.726	72	12
SED18903	45	3	56	2	10	12	24	1	7	5	3	6	1.077	0.652	67	8
SED18903	45	5	36	8	7	3	31	3	8	2	5	2	1.18	0.702	73	9
SED18903	46	1	148	65	38	7	23	7	13	2	13	4	1.44	0.828	76	15
SED18903	46	3	143	53	24	13	44	7	12	2	14	3	1.517	0.807	80	21
SED18903	46	5	135	40	28	14	38	6	15	2	10	3	1.495	0.816	75	19
SED18903	47	1	91	38	31	238	37	8	18	5	12	3	1.33	0.71	76	17
SED18903	47	3	32	18	67	86	33	7	14	4	9	3	1.439	0.8	82	15
SED18903	47	5	41	10	73	72	29	5	15	5	10	4	1.44	0.8	83	17
SED18903	48	1	197	5	0	4	16	3	6	0	5	1	0.755	0.522	65	3
SED18903	48	3	191	8	0	7	17	2	8	0	4	2	0.817	0.548	65	4
SED18903	48	5	97	8	1	6	14	3	7	1	5	2	0.969	0.656	64	5
SED18903	49	1	33	1	6	7	11	1	5	2	4	1	1.053	0.773	69	7
SED18903	49	3	50	1	9	6	9	1	5	3	2	2	0.983	0.743	72	7

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED18903	49	5	MO	1	47	4	53	122	54	43	-6	88.1	2.7		143	22	93	11
SED18903	50	1	MO	1	47	12	47	123	4	28	-7	3.8	0.2		640	56	104	313
SED18903	50	3	MO	1	47	12	47	123	4	28	-7	3.8	0.2		440	60	96	177
SED18903	50	5	MO	1	47	12	47	123	4	28	-7	3.8	0.2		381	58	83	189
SED19003	0001	1	MO	1	48	59	30	122	51	26	-22.5	97	1.8		582	31	160	47
SED19003	0001	2	MO	1	48	59	30	122	51	26	-22.5	97	1.8		832	31	207	60
SED19003	0001	3	MO	1	48	59	30	122	51	26	-22.5	97	1.8		864	26	96	135
SED19003	0003	1	MO	1	48	52	16	122	58	20	-223.2	45	0.81		90	17	62	14
SED19003	0003	2	MO	1	48	52	16	122	58	20	-223.2	45	0.81		14	7	1	10
SED19003	0003	3	MO	1	48	52	16	122	58	20	-223.2	45	0.81		94	19	37	35
SED19003	0004	1	MO	1	48	41	6	122	52	10	-24	98	1.9		497	54	223	111
SED19003	0004	2	MO	1	48	41	6	122	52	10	-24	98	1.9		671	53	260	191
SED19003	0004	3	MO	1	48	41	6	122	52	10	-24	98	1.9		397	51	212	72
SED19003	0005	1	MO	1	48	35	49	122	32	7	-19.9	97.3	1.99		502	48	175	142
SED19003	0005	2	MO	1	48	35	49	122	32	7	-19.9	97.3	1.99		477	53	155	148
SED19003	0005	3	MO	1	48	35	49	122	32	7	-19.9	97.3	1.99		480	40	130	159
SED19003	0005	4	MO	1	48	35	49	122	32	7	-19.9	97.3	1.99		516	42	133	198
SED19003	0005	5	MO	1	48	35	49	122	32	7	-19.9	97.3	1.99		547	49	250	105
SED19003	0008	1	MO	1	48	7	58	123	26	50	-21.1	64	3.4		393	65	208	99
SED19003	0008	2	MO	1	48	7	58	123	26	50	-21.1	64	3.4		354	68	234	64
SED19003	0008	3	MO	1	48	7	58	123	26	50	-21.1	64	3.4		388	67	287	53
SED19003	0012	1	MO	1	48	5	8	122	46	21	-21.1	93	1.8		500	54	109	142
SED19003	0012	2	MO	1	48	5	8	122	46	21	-21.1	93	1.8		495	49	106	171
SED19003	0012	3	MO	1	48	5	8	122	46	21	-21.1	93	1.8		466	50	100	107
SED19003	0014	1	MO	1	47	47	4	122	43	46	-112.8	37	0.72		126	38	32	46
SED19003	0014	2	MO	1	47	47	4	122	43	46	-112.8	37	0.72		429	85	199	109
SED19003	0014	3	MO	1	47	47	4	122	43	46	-112.8	37	0.72		264	82	146	43
SED19003	0015	1	MO	1	47	43	3	122	48	50	-19.4	5	0.18		289	72	153	83
SED19003	0015	2	MO	1	47	43	3	122	48	50	-19.4	5	0.18		288	63	148	86
SED19003	0015	3	MO	1	47	43	3	122	48	50	-19.4	5	0.18		358	77	224	96
SED19003	0017	1	MO	1	47	22	8	123	7	40	-80.8	98	1.7		110	22	44	51
SED19003	0017	2	MO	1	47	22	8	123	7	40	-80.8	98	1.7		285	24	156	103

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED18903	49	5	29	0	2	8	12	0	5	1	3	1	1.097	0.817	66	7
SED18903	50	1	198	124	10	6	22	6	16	2	11	2	1.38	0.789	70	13
SED18903	50	3	152	98	7	1	24	7	17	3	14	1	1.432	0.805	71	13
SED18903	50	5	89	50	9	2	20	6	18	4	12	2	1.432	0.812	66	14
SED19003	0001	1	150	93	221	4	11	3	8	3	6	3	0.939	0.63	88	5
SED19003	0001	2	192	93	366	2	13	3	8	3	5	1	0.885	0.594	88	4
SED19003	0001	3	168	68	465	0	10	2	10	2	4	0	0.759	0.537	93	4
SED19003	0003	1	14	11	0	0	8	3	5	0	4	0	0.961	0.781	65	6
SED19003	0003	2	3	2	0	0	1	1	4	0	2	0	0.786	0.93	40	4
SED19003	0003	3	22	11	0	0	8	5	5	0	6	0	1.009	0.789	55	6
SED19003	0004	1	103	51	50	10	27	4	16	1	6	4	1.286	0.743	76	10
SED19003	0004	2	141	77	68	11	26	4	13	1	9	4	1.218	0.706	76	8
SED19003	0004	3	77	42	31	3	29	3	11	2	6	2	1.255	0.735	76	9
SED19003	0005	1	102	36	61	22	24	5	12	1	8	3	1.296	0.771	75	10
SED19003	0005	2	109	19	52	13	25	4	15	1	9	3	1.343	0.779	72	12
SED19003	0005	3	134	46	53	4	18	4	13	1	7	1	1.236	0.772	74	9
SED19003	0005	4	139	44	37	9	22	3	10	1	7	2	1.239	0.764	71	8
SED19003	0005	5	109	30	61	22	22	4	14	2	7	4	1.25	0.739	74	10
SED19003	0008	1	79	46	5	2	32	8	18	1	12	2	1.515	0.836	84	18
SED19003	0008	2	47	25	5	4	31	9	16	2	17	2	1.542	0.841	79	21
SED19003	0008	3	41	29	2	5	37	4	14	2	10	4	1.479	0.81	79	18
SED19003	0012	1	65	26	179	5	28	6	15	1	8	2	1.1	0.635	84	7
SED19003	0012	2	60	10	152	6	23	4	14	1	9	2	1.039	0.615	81	5
SED19003	0012	3	68	13	189	2	25	5	13	1	9	2	1.076	0.633	85	7
SED19003	0014	1	47	7	0	1	19	5	10	0	8	1	1.272	0.805	72	12
SED19003	0014	2	101	60	9	11	41	11	16	2	21	5	1.568	0.813	79	20
SED19003	0014	3	40	10	13	21	49	3	13	3	9	7	1.728	0.903	80	31
SED19003	0015	1	36	9	1	16	37	5	19	1	13	2	1.614	0.869	70	23
SED19003	0015	2	36	15	0	18	34	4	15	0	11	3	1.502	0.835	72	17
SED19003	0015	3	25	9	0	13	42	6	19	0	13	3	1.613	0.855	75	24
SED19003	0017	1	15	2	0	0	15	1	3	0	4	0	1	0.745	66	7
SED19003	0017	2	26	1	0	0	15	1	5	0	4	0	0.934	0.677	66	5

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19003	0017	3	MO	1	47	22	8	123	7	40	-80.8	98	1.7		242	28	130	82
SED19003	0018	1	MO	1	48	15	27	122	37	13	-19.1	92	1.5		324	39	71	225
SED19003	0018	2	MO	1	48	15	27	122	37	13	-19.1	92	1.5		290	27	60	212
SED19003	0018	3	MO	1	48	15	27	122	37	13	-19.1	92	1.5		248	24	70	159
SED19003	0019	1	MO	1	48	5	57	122	28	15	-121.5	83	1.8		68	21	56	2
SED19003	0019	2	MO	1	48	5	57	122	28	15	-121.5	83	1.8		83	21	61	10
SED19003	0019	3	MO	1	48	5	57	122	28	15	-121.5	83	1.8		50	22	40	7
SED19003	0020	1	MO	1	48	10	32	122	27	5	-10.3	97	1.2		388	33	245	64
SED19003	0020	2	MO	1	48	10	32	122	27	5	-10.3	97	1.2		369	39	211	77
SED19003	0020	3	MO	1	48	10	32	122	27	5	-10.3	97	1.2		404	47	266	63
SED19003	0021	1	MO	1	47	59	7	122	14	31	-52.7	61	1.5		839	49	183	423
SED19003	0021	2	MO	1	47	59	7	122	14	31	-52.7	61	1.5		935	51	145	440
SED19003	0021	3	MO	1	47	59	7	122	14	31	-52.7	61	1.5		520	43	127	250
SED19003	0022	1	MO	1	47	57	21	122	17	8	-20.5	5.5	0.2		397	40	51	179
SED19003	0022	2	MO	1	47	57	21	122	17	8	-20.5	5.5	0.2		370	45	58	73
SED19003	0022	3	MO	1	47	57	21	122	17	8	-20.5	5.5	0.2		447	44	52	223
SED19003	0026	1	MO	1	47	51	5	122	27	22	-267.9	21	0.54		235	63	111	52
SED19003	0026	2	MO	1	47	51	5	122	27	22	-267.9	21	0.54		271	71	114	67
SED19003	0026	3	MO	1	47	51	5	122	27	22	-267.9	21	0.54		287	62	123	62
SED19003	0029	1	MO	1	47	42	7	122	27	6	-199.3	93	1.8		254	34	47	168
SED19003	0029	2	MO	1	47	42	7	122	27	6	-199.3	93	1.8		340	43	40	227
SED19003	0029	3	MO	1	47	42	7	122	27	6	-199.3	93	1.8		265	31	19	190
SED19003	0030	1	MO	1	47	37	25	122	30	10	-13.3	62	1.4		514	60	345	86
SED19003	0030	2	MO	1	47	37	25	122	30	10	-13.3	62	1.4		499	54	333	47
SED19003	0030	3	MO	1	47	37	25	122	30	10	-13.3	62	1.4		422	42	249	49
SED19003	0032	1	MO	1	47	37	57	122	24	29	-20.4	7.5	0.22		783	92	518	45
SED19003	0032	2	MO	1	47	37	57	122	24	29	-20.4	7.5	0.22		696	88	501	53
SED19003	0032	3	MO	1	47	37	57	122	24	29	-20.4	7.5	0.22		770	88	535	43
SED19003	0033	1	MO	1	47	35	16	122	22	30	-19.8	34	1.1		509	76	230	176
SED19003	0033	2	MO	1	47	35	16	122	22	30	-19.8	34	1.1		498	81	230	118
SED19003	0033	3	MO	1	47	35	16	122	22	30	-19.8	34	1.1		335	65	151	62
SED19003	0034	1	MO	1	47	32	47	122	39	43	-6.6	95	2.7		604	52	405	48
SED19003	0034	2	MO	1	47	32	47	122	39	43	-6.6	95	2.7		398	47	271	25

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19003	0017	3	29	1	0	1	17	1	5	0	5	1	0.972	0.672	67	5
SED19003	0018	1	25	15	0	3	22	1	8	0	7	2	0.902	0.567	66	5
SED19003	0018	2	14	9	0	4	11	1	10	0	5	1	0.77	0.538	66	4
SED19003	0018	3	13	4	0	6	12	1	8	0	3	1	0.841	0.609	66	5
SED19003	0019	1	8	6	2	0	11	4	2	2	5	0	0.86	0.65	61	5
SED19003	0019	2	6	3	3	3	10	2	3	1	5	2	0.849	0.642	70	6
SED19003	0019	3	2	2	1	0	17	2	2	1	2	0	0.979	0.729	71	10
SED19003	0020	1	79	43	0	0	16	2	13	0	4	0	1.235	0.813	80	9
SED19003	0020	2	81	41	0	0	22	4	11	0	6	0	1.305	0.82	77	10
SED19003	0020	3	73	36	0	2	29	3	11	0	6	1	1.316	0.787	81	11
SED19003	0021	1	232	13	0	1	27	4	13	0	8	1	1.087	0.643	63	6
SED19003	0021	2	347	4	0	3	29	2	13	0	6	3	1.017	0.595	60	4
SED19003	0021	3	140	10	0	3	25	4	9	0	8	1	1.107	0.678	63	6
SED19003	0022	1	167	25	0	0	12	6	17	0	11	0	1.013	0.632	68	5
SED19003	0022	2	239	3	0	0	24	2	14	0	7	0	1.007	0.609	58	6
SED19003	0022	3	172	14	0	0	18	2	21	0	5	0	1.029	0.626	67	5
SED19003	0026	1	67	40	0	5	33	8	13	0	14	3	1.569	0.872	68	22
SED19003	0026	2	82	36	0	8	39	9	13	0	16	3	1.546	0.835	64	21
SED19003	0026	3	100	71	0	2	27	13	13	0	20	2	1.553	0.867	70	20
SED19003	0029	1	35	7	1	3	16	4	8	1	8	1	0.836	0.546	46	5
SED19003	0029	2	68	22	5	0	18	7	10	2	13	0	0.874	0.535	46	5
SED19003	0029	3	51	14	3	2	11	6	7	1	11	1	0.73	0.489	45	3
SED19003	0030	1	82	4	0	1	37	3	12	0	10	1	1.209	0.68	68	9
SED19003	0030	2	112	1	0	7	37	1	8	0	6	3	1.178	0.68	70	9
SED19003	0030	3	124	5	0	0	26	4	8	0	8	0	1.08	0.666	69	7
SED19003	0032	1	146	38	27	47	49	10	20	3	16	3	1.429	0.728	79	16
SED19003	0032	2	111	32	7	24	47	8	19	3	15	4	1.33	0.684	85	14
SED19003	0032	3	116	34	27	49	48	10	13	6	17	4	1.393	0.716	81	15
SED19003	0033	1	98	4	3	2	45	4	12	3	14	2	1.402	0.745	67	14
SED19003	0033	2	145	12	4	1	50	3	16	2	12	1	1.487	0.779	68	19
SED19003	0033	3	111	7	7	4	42	4	12	2	7	2	1.364	0.753	66	16
SED19003	0034	1	144	32	3	4	30	6	9	1	9	3	1.298	0.757	70	12
SED19003	0034	2	98	11	2	2	29	4	7	1	8	2	1.234	0.738	71	9

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19003	0034	3	MO	1	47	32	47	122	39	43	-6.6	95	2.7		341	46	230	26
SED19003	0035	1	MO	1	47	36	49	122	41	53	-11.3	82.3	3.07		611	40	250	23
SED19003	0035	2	MO	1	47	36	49	122	41	53	-11.3	82.3	3.07		962	50	585	90
SED19003	0035	3	MO	1	47	36	49	122	41	53	-11.3	82.3	3.07		894	38	528	34
SED19003	0038	1	MO	1	47	25	43	122	23	34	-198.7	98	2.5		72	26	28	11
SED19003	0038	2	MO	1	47	25	43	122	23	34	-198.7	98	2.5		86	26	27	9
SED19003	0038	3	MO	1	47	25	43	122	23	34	-198.7	98	2.5		93	27	34	6
SED19003	0039	1	MO	1	47	20	15	122	21	48	-14.8	2	0.15		160	34	55	42
SED19003	0039	2	MO	1	47	20	15	122	21	48	-14.8	2	0.15		293	53	93	69
SED19003	0039	3	MO	1	47	20	15	122	21	48	-14.8	2	0.15		235	46	107	55
SED19003	0040	1	MO	1	47	15	42	122	26	9	-9.4	28	1.1		356	44	162	62
SED19003	0040	2	MO	1	47	15	42	122	26	9	-9.4	28	1.1		406	68	243	57
SED19003	0040	3	MO	1	47	15	42	122	26	9	-9.4	28	1.1		297	54	142	64
SED19003	0041	1	MO	1	47	16	32	122	25	13	-19.1	66	1.5		2089	45	819	1149
SED19003	0041	2	MO	1	47	16	32	122	25	13	-19.1	66	1.5		2211	53	953	1150
SED19003	0041	3	MO	1	47	16	32	122	25	13	-19.1	66	1.5		2256	45	1111	1050
SED19003	0043	1	MO	1	47	17	53	122	44	28	-19.8	7	0.26		754	64	153	63
SED19003	0043	2	MO	1	47	17	53	122	44	28	-19.8	7	0.26		630	58	178	90
SED19003	0043	3	MO	1	47	17	53	122	44	28	-19.8	7	0.26		634	63	163	63
SED19003	0044	1	MO	1	47	9	45	122	40	16	-19.5	14.5	0.51		994	109	796	61
SED19003	0044	2	MO	1	47	9	45	122	40	16	-19.5	14.5	0.51		759	103	566	55
SED19003	0044	3	MO	1	47	9	45	122	40	16	-19.5	14.5	0.51		624	97	449	41
SED19003	0045	1	MO	1	47	9	53	122	45	3	-51.9	60	1.2		229	38	143	16
SED19003	0045	2	MO	1	47	9	53	122	45	3	-51.9	60	1.2		242	46	171	14
SED19003	0045	3	MO	1	47	9	53	122	45	3	-51.9	60	1.2		304	41	222	8
SED19003	0046R	1	MO	1	47	7	57	122	46	46	-19.8	19	0.39		442	63	266	46
SED19003	0046R	2	MO	1	47	7	57	122	46	46	-19.8	19	0.39		514	69	317	35
SED19003	0046R	3	MO	1	47	7	57	122	46	46	-19.8	19	0.39		586	69	359	62
SED19003	0047	1	MO	1	47	14	7	122	50	49	-19.5	12	0.32		553	91	233	74
SED19003	0047	2	MO	1	47	14	7	122	50	49	-19.5	12	0.32		562	90	287	118
SED19003	0047	3	MO	1	47	14	7	122	50	49	-19.5	12	0.32		532	95	285	81
SED19003	0048	1	MO	1	47	7	30	122	55	3	-20	92	2.2		361	36	67	33
SED19003	0048	2	MO	1	47	7	30	122	55	3	-20	92	2.2		316	39	54	51

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19003	0034	3	83	18	2	0	29	2	10	2	5	0	1.2	0.721	73	8
SED19003	0035	1	293	3	42	3	25	3	6	1	6	2	0.902	0.563	72	4
SED19003	0035	2	250	27	35	2	31	6	7	1	9	2	1.017	0.599	86	5
SED19003	0035	3	280	3	45	7	22	2	5	1	5	5	0.911	0.577	71	4
SED19003	0038	1	26	14	7	0	11	5	4	2	9	0	1.264	0.893	70	10
SED19003	0038	2	49	27	1	0	12	5	4	1	9	0	1.203	0.85	76	8
SED19003	0038	3	51	39	2	0	12	5	4	2	9	0	1.182	0.826	85	9
SED19003	0039	1	61	27	1	1	15	5	8	1	9	1	1.213	0.792	72	8
SED19003	0039	2	126	27	1	4	25	8	12	1	13	2	1.189	0.689	68	7
SED19003	0039	3	69	17	0	4	21	4	12	0	9	4	1.258	0.756	63	9
SED19003	0040	1	129	2	1	2	24	1	12	1	5	2	1.257	0.765	70	9
SED19003	0040	2	97	6	4	5	41	3	15	1	8	3	1.372	0.749	72	14
SED19003	0040	3	82	5	4	5	28	2	16	2	6	2	1.39	0.803	72	14
SED19003	0041	1	112	5	5	4	26	2	10	2	6	1	0.632	0.382	65	2
SED19003	0041	2	98	7	2	8	30	1	14	1	7	1	0.676	0.392	65	2
SED19003	0041	3	90	22	0	5	29	2	8	0	6	2	0.584	0.354	66	2
SED19003	0043	1	247	63	287	4	32	7	16	2	11	3	1.163	0.644	88	7
SED19003	0043	2	238	71	123	1	30	7	16	2	9	1	1.202	0.681	83	8
SED19003	0043	3	175	43	227	6	33	4	17	2	8	3	1.197	0.665	87	9
SED19003	0044	1	95	45	14	28	65	9	19	2	18	5	1.415	0.694	85	20
SED19003	0044	2	94	47	13	31	62	11	15	3	20	3	1.499	0.745	88	25
SED19003	0044	3	105	55	13	16	58	11	12	2	21	4	1.526	0.768	85	22
SED19003	0045	1	50	6	13	7	23	3	6	1	7	1	1.156	0.732	71	8
SED19003	0045	2	43	5	5	9	27	3	7	2	7	3	1.191	0.716	67	10
SED19003	0045	3	58	10	6	10	25	3	5	1	8	2	1.139	0.706	75	8
SED19003	0046R	1	115	43	4	11	30	10	15	1	15	2	1.335	0.742	81	12
SED19003	0046R	2	112	43	39	11	36	9	11	1	17	4	1.378	0.749	78	12
SED19003	0046R	3	104	39	28	33	37	9	13	2	13	4	1.399	0.761	82	13
SED19003	0047	1	38	14	48	160	55	5	18	3	10	5	1.5	0.766	77	18
SED19003	0047	2	29	16	23	105	57	8	13	2	13	5	1.563	0.8	74	19
SED19003	0047	3	57	12	51	58	58	6	18	2	13	4	1.617	0.817	74	23
SED19003	0048	1	148	14	0	4	21	2	7	0	4	2	0.934	0.6	67	5
SED19003	0048	2	150	18	1	10	16	2	12	1	4	4	1.072	0.674	66	8

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19003	0048	3	212	22	0	5	13	2	12	0	5	3	0.907	0.592	66	5
SED19003	0049	1	51	1	3	3	8	1	5	1	4	1	0.888	0.695	68	5
SED19003	0049	2	32	0	2	3	9	0	5	1	4	1	1.005	0.773	67	6
SED19003	0049	3	66	3	13	7	14	1	6	1	3	1	1.074	0.769	73	7
SED19003	0069	1	140	34	0	2	29	7	15	0	15	1	1.459	0.821	78	15
SED19003	0069	2	137	30	3	12	38	5	13	1	14	2	1.531	0.836	81	20
SED19003	0069	3	121	19	9	6	43	3	16	2	9	3	1.599	0.856	76	23
SED19003	0070	1	7	2	1	2	10	1	5	1	4	1	0.832	0.63	66	3
SED19003	0070	2	10	1	2	5	10	1	6	2	4	1	1.066	0.783	66	7
SED19003	0070	3	3	0	2	0	10	0	6	1	2	0	1.017	0.796	60	6
SED19003	0071	1	134	43	31	21	43	6	19	2	12	4	1.577	0.828	74	20
SED19003	0071	2	134	32	28	12	39	7	17	4	11	2	1.554	0.834	74	19
SED19003	0071	3	111	45	28	15	34	6	15	1	9	3	1.568	0.875	78	22
SED19003	R101	1	16	2	7	2	6	1	7	2	6	1	1.014	0.755	77	7
SED19003	R101	2	3	1	4	12	8	1	5	1	3	1	0.525	0.41	64	2
SED19003	R101	3	13	0	1	10	10	0	4	1	4	1	0.681	0.515	63	3
SED19003	R102	1	39	0	4	3	11	0	6	1	5	1	1.188	0.861	62	9
SED19003	R102	2	43	0	3	1	9	0	4	1	3	1	1.056	0.841	58	6
SED19003	R102	3	56	1	4	2	14	1	4	1	5	1	1.062	0.76	52	6
SED19003	R103	1	26	11	2	6	14	5	12	1	10	3	1.41	0.868	62	14
SED19003	R103	2	26	18	0	6	22	6	13	0	11	2	1.448	0.861	66	16
SED19003	R103	3	33	12	3	7	23	6	10	1	9	3	1.413	0.85	66	14
SED19003	R104	2	61	9	1	11	11	2	7	1	4	1	1.014	0.735	70	6
SED19003	R104	3	39	1	7	9	12	1	4	1	4	1	1.075	0.801	70	7
SED19003	R105	1	108	7	177	7	23	3	15	2	6	2	1.107	0.658	83	6
SED19003	R105	2	155	7	147	6	21	3	8	1	9	2	1.065	0.661	80	6
SED19003	R105	3	100	7	95	9	16	2	9	1	4	4	1.041	0.68	80	6
SED19003	R106	1	159	31	54	5	12	2	5	2	4	2	1.051	0.752	83	6
SED19003	R106	2	216	20	82	8	14	2	6	2	4	1	0.976	0.682	84	4
SED19003	R106	3	133	8	47	9	10	3	7	2	5	2	1.084	0.758	74	6
SED19003	R108	1	78	39	95	178	39	8	12	1	16	3	1.362	0.736	78	13
SED19003	R108	2	53	36	75	109	43	5	16	1	11	3	1.402	0.75	77	14
SED19003	R108	3	64	47	59	100	33	11	14	1	15	3	1.438	0.787	80	17

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19003	0048	3	MO	1	47	7	30	122	55	3	-20	92	2.2		388	34	112	55
SED19003	0049	1	MO	1	47	4	52	122	54	43	-4.7	97	3		102	19	34	11
SED19003	0049	2	MO	1	47	4	52	122	54	43	-4.7	97	3		98	20	50	11
SED19003	0049	3	MO	1	47	4	52	122	54	43	-4.7	97	3		207	25	90	31
SED19003	0069	1	MO	1	47	44	11	122	32	2	-32.4	15	0.47		385	60	172	71
SED19003	0069	2	MO	1	47	44	11	122	32	2	-32.4	15	0.47		414	68	205	57
SED19003	0069	3	MO	1	47	44	11	122	32	2	-32.4	15	0.47		338	74	128	72
SED19003	0070	1	MO	1	47	12	32	123	5	0	-5.2	64	3.1		135	21	44	81
SED19003	0070	2	MO	1	47	12	32	123	5	0	-5.2	64	3.1		114	23	60	37
SED19003	0070	3	MO	1	47	12	32	123	5	0	-5.2	64	3.1		84	19	32	47
SED19003	0071	1	MO	1	48	30	35	122	35	7	-6.1	46	1.4		617	80	318	113
SED19003	0071	2	MO	1	48	30	35	122	35	7	-6.1	46	1.4		544	73	297	73
SED19003	0071	3	MO	1	48	30	35	122	35	7	-6.1	46	1.4		490	62	259	77
SED19003	R101	1	MO	1	47	13	58	123	3	5	-2.1	90	4		111	22	22	64
SED19003	R101	2	MO	1	47	13	58	123	3	5	-2.1	90	4		226	19	19	185
SED19003	R101	3	MO	1	47	13	58	123	3	5	-2.1	90	4		217	21	31	160
SED19003	R102	1	MO	1	47	7	5	123	1	5	-11.6	88	2.6		132	24	51	35
SED19003	R102	2	MO	1	47	7	5	123	1	5	-11.6	88	2.6		130	18	41	42
SED19003	R102	3	MO	1	47	7	5	123	1	5	-11.6	88	2.6		273	25	72	139
SED19003	R103	1	MO	1	47	10	5	122	57	23	-20.5	8	0.5		181	42	70	75
SED19003	R103	2	MO	1	47	10	5	122	57	23	-20.5	8	0.5		212	48	111	69
SED19003	R103	3	MO	1	47	10	5	122	57	23	-20.5	8	0.5		233	46	115	75
SED19003	R104	2	MO	1	47	5	48	122	58	24	-7	98	3		253	24	157	23
SED19003	R104	3	MO	1	47	5	48	122	58	24	-7	98	3		150	22	90	5
SED19003	R105	1	MO	1	47	8	4	122	56	42	-14	75	2.2		552	48	205	55
SED19003	R105	2	MO	1	47	8	4	122	56	42	-14	75	2.2		564	41	216	40
SED19003	R105	3	MO	1	47	8	4	122	56	42	-14	75	2.2		336	34	116	16
SED19003	R106	1	MO	1	47	5	51	122	55	18	-11.2	86	2.8		353	25	125	10
SED19003	R106	2	MO	1	47	5	51	122	55	18	-11.2	86	2.8		445	27	129	10
SED19003	R106	3	MO	1	47	5	51	122	55	18	-11.2	86	2.8		324	27	103	26
SED19003	R108	1	MO	1	47	8	52	122	53	58	-18.9	5	0.2		725	71	175	199
SED19003	R108	2	MO	1	47	8	52	122	53	58	-18.9	5	0.2		779	74	244	298
SED19003	R108	3	MO	1	47	8	52	122	53	58	-18.9	5	0.2		541	67	163	155

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19003	R109	1	MO	1	47	9	16	122	49	51	-22.7	91	2.5		612	33	173	11
SED19003	R109	2	MO	1	47	9	16	122	49	51	-22.7	91	2.5		585	29	162	8
SED19003	R109	3	MO	1	47	9	16	122	49	51	-22.7	91	2.5		536	25	139	9
SED19003	R110	1	MO	1	47	20	25	122	46	24	-18.2	91	3.4		397	27	115	22
SED19003	R110	2	MO	1	47	20	25	122	46	24	-18.2	91	3.4		181	32	86	17
SED19003	R110	3	MO	1	47	20	25	122	46	24	-18.2	91	3.4		212	26	87	17
SED19003	R111	1	MO	1	47	18	16	122	46	26	-20.1	36	1.3		241	58	129	38
SED19003	R111	3	MO	1	47	18	16	122	46	26	-20.1	36	1.3		328	58	184	58
SED19003	R112	1	MO	1	47	6	10	122	42	18	-19.4	1	0.1		142	33	79	22
SED19003	R112	2	MO	1	47	6	10	122	42	18	-19.4	1	0.1		241	23	172	23
SED19003	R112	3	MO	1	47	6	10	122	42	18	-19.4	1	0.1		175	37	100	37
SED19103	1	1	MO	1	48	59	28	122	51	41	-23.5	95.8	1.7		272	22	38	5
SED19103	1	2	MO	1	48	59	28	122	51	41	-23.5	95.8	1.7		303	24	80	22
SED19103	1	3	MO	1	48	59	28	122	51	41	-23.5	95.8	1.7		376	21	22	10
SED19103	1	4	MO	1	48	59	28	122	51	41	-23.5	95.8	1.7		543	24	45	35
SED19103	1	5	MO	1	48	59	28	122	51	41	-23.5	95.8	1.7		482	25	34	14
SED19103	3	1	MO	1	48	52	16	122	58	20	-223.2	63.8	1.3		138	20	85	28
SED19103	3	2	MO	1	48	52	16	122	58	20	-223.2	63.8	1.3		78	18	38	23
SED19103	3	3	MO	1	48	52	16	122	58	20	-223.2	63.8	1.3		376	27	248	62
SED19103	3	4	MO	1	48	52	16	122	58	20	-223.2	63.8	1.3		161	22	108	20
SED19103	3	5	MO	1	48	52	16	122	58	20	-223.2	63.8	1.3		112	20	76	25
SED19103	4	1	MO	1	48	41	4	122	32	18	-25.4	97.6	2		215	31	42	91
SED19103	4	2	MO	1	48	41	4	122	32	18	-25.4	97.6	2		202	30	39	56
SED19103	4	3	MO	1	48	41	4	122	32	18	-25.4	97.6	2		238	21	16	78
SED19103	4	4	MO	1	48	41	4	122	32	18	-25.4	97.6	2		253	27	23	68
SED19103	4	5	MO	1	48	41	4	122	32	18	-25.4	97.6	2		219	34	46	89
SED19103	5	1	MO	1	48	35	51	122	32	6	-20.2	95.6	1.8		345	43	92	164
SED19103	5	2	MO	1	48	35	51	122	32	6	-20.2	95.6	1.8		239	38	46	116
SED19103	5	3	MO	1	48	35	51	122	32	6	-20.2	95.6	1.8		301	41	108	137
SED19103	5	4	MO	1	48	35	51	122	32	6	-20.2	95.6	1.8		238	39	80	85
SED19103	5	5	MO	1	48	35	51	122	32	6	-20.2	95.6	1.8		291	39	79	131
SED19103	8	1	MO	1	48	7	53	123	26	57	-22.1	63.7	2.9		319	64	216	62

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19003	R109	1	228	7	181	18	16	2	6	1	5	4	0.867	0.571	84	4
SED19003	R109	2	245	7	151	18	14	3	5	1	5	3	0.864	0.591	80	4
SED19003	R109	3	196	1	185	7	13	1	5	1	4	2	0.799	0.572	86	4
SED19003	R110	1	81	44	158	21	15	1	5	2	3	2	1.019	0.712	90	7
SED19003	R110	2	18	1	52	8	16	1	8	2	4	2	1.056	0.702	84	7
SED19003	R110	3	45	22	58	5	13	1	6	2	4	1	1.074	0.759	87	7
SED19003	R111	1	27	4	15	24	36	2	10	2	6	3	1.533	0.869	66	19
SED19003	R111	3	64	18	18	4	28	4	15	5	8	2	1.434	0.813	76	14
SED19003	R112	1	38	29	0	3	16	6	5	0	10	2	1.234	0.813	73	9
SED19003	R112	2	45	45	0	1	14	4	4	0	4	1	0.817	0.6	67	4
SED19003	R112	3	37	33	0	1	18	9	7	0	11	1	1.3	0.829	73	12
SED19103	1	1	201	179	28	0	10	3	3	2	7	0	0.686	0.511	82	3
SED19103	1	2	133	105	67	1	8	2	8	2	5	1	0.922	0.668	82	4
SED19103	1	3	249	202	92	3	8	3	4	2	6	1	0.769	0.581	90	3
SED19103	1	4	248	139	214	1	11	3	5	2	5	1	0.8	0.579	93	3
SED19103	1	5	260	198	172	2	12	3	5	2	5	1	0.773	0.553	96	3
SED19103	3	1	21	5	1	0	7	3	4	1	7	0	1.087	0.835	58	8
SED19103	3	2	13	4	3	0	10	2	3	1	3	0	1.142	0.91	61	8
SED19103	3	3	37	4	3	1	15	2	6	1	3	1	0.977	0.683	57	5
SED19103	3	4	17	2	1	0	12	1	4	1	4	0	1.089	0.811	56	7
SED19103	3	5	11	6	0	0	11	3	4	0	5	0	1.054	0.81	61	6
SED19103	4	1	41	24	38	3	16	1	9	2	2	2	1.176	0.789	80	8
SED19103	4	2	38	21	68	1	14	3	9	2	4	1	1.068	0.723	87	6
SED19103	4	3	36	22	106	2	9	1	7	1	3	1	0.859	0.65	89	5
SED19103	4	4	46	24	114	2	10	2	10	2	4	1	0.92	0.643	90	5
SED19103	4	5	39	14	43	2	15	2	11	2	5	1	1.251	0.817	76	9
SED19103	5	1	34	15	50	5	18	2	16	2	5	2	1.271	0.778	74	10
SED19103	5	2	26	8	48	2	15	3	14	1	5	2	1.249	0.791	77	10
SED19103	5	3	19	5	26	2	17	1	12	5	3	2	1.311	0.813	67	12
SED19103	5	4	24	8	47	0	19	2	11	3	5	0	1.301	0.818	76	11
SED19103	5	5	22	6	45	3	16	1	14	2	4	2	1.261	0.793	71	10
SED19103	8	1	31	13	8	0	37	4	13	3	10	0	1.555	0.861	76	20

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19103	8	2	MO	1	48	7	53	123	26	57	-22.1	63.7	2.9		309	61	241	40
SED19103	8	3	MO	1	48	7	53	123	26	57	-22.1	63.7	2.9		230	51	193	26
SED19103	8	4	MO	1	48	7	53	123	26	57	-22.1	63.7	2.9		185	49	153	11
SED19103	8	5	MO	1	48	7	53	123	26	57	-22.1	63.7	2.9		302	62	213	51
SED19103	12	1	MO	1	48	5	5	122	46	31	-21.1	91.4	1.5		334	43	83	82
SED19103	12	2	MO	1	48	5	5	122	46	31	-21.1	91.4	1.5		447	50	99	110
SED19103	12	3	MO	1	48	5	5	122	46	31	-21.1	91.4	1.5		378	44	74	83
SED19103	12	4	MO	1	48	5	5	122	46	31	-21.1	91.4	1.5		368	49	95	84
SED19103	12	5	MO	1	48	5	5	122	46	31	-21.1	91.4	1.5		361	43	50	97
SED19103	14	1	MO	1	47	47	4	122	43	46	-113.4	37.8	0.7		145	46	89	29
SED19103	14	2	MO	1	47	47	4	122	43	46	-113.4	37.8	0.7		170	65	98	35
SED19103	14	3	MO	1	47	47	4	122	43	46	-113.4	37.8	0.7		201	75	92	46
SED19103	14	4	MO	1	47	47	4	122	43	46	-113.4	37.8	0.7		199	74	116	36
SED19103	14	5	MO	1	47	47	4	122	43	46	-113.4	37.8	0.7		275	83	127	79
SED19103	15	1	MO	1	47	43	2	122	48	50	-21.8	5.8	0.2		669	69	180	92
SED19103	15	2	MO	1	47	43	2	122	48	50	-21.8	5.8	0.2		625	67	171	87
SED19103	15	3	MO	1	47	43	2	122	48	50	-21.8	5.8	0.2		604	67	158	72
SED19103	15	4	MO	1	47	43	2	122	48	50	-21.8	5.8	0.2		663	64	163	51
SED19103	15	5	MO	1	47	43	2	122	48	50	-21.8	5.8	0.2		648	61	123	99
SED19103	17	1	MO	1	47	22	11	123	7	46	-82.7	93.7	1.9		412	17	48	362
SED19103	17	2	MO	1	47	22	11	123	7	46	-82.7	93.7	1.9		387	19	31	356
SED19103	17	3	MO	1	47	22	11	123	7	46	-82.7	93.7	1.9		351	17	26	322
SED19103	17	4	MO	1	47	22	11	123	7	46	-82.7	93.7	1.9		413	26	82	329
SED19103	17	5	MO	1	47	22	11	123	7	46	-82.7	93.7	1.9		361	24	80	280
SED19103	18	1	MO	1	48	15	22	122	37	25	-19	41.8	0.6		626	39	217	392
SED19103	18	2	MO	1	48	15	22	122	37	25	-19	41.8	0.6		759	51	302	422
SED19103	18	3	MO	1	48	15	22	122	37	25	-19	41.8	0.6		274	35	82	174
SED19103	18	4	MO	1	48	15	22	122	37	25	-19	41.8	0.6		655	30	152	483
SED19103	18	5	MO	1	48	15	22	122	37	25	-19	41.8	0.6		491	36	184	286
SED19103	19	1	MO	1	48	5	52	122	28	16	-122.6	82.0	1.8		47	24	30	7
SED19103	19	2	MO	1	48	5	52	122	28	16	-122.6	82.0	1.8		51	24	31	6
SED19103	19	3	MO	1	48	5	52	122	28	16	-122.6	82.0	1.8		44	26	25	9
SED19103	19	4	MO	1	48	5	52	122	28	16	-122.6	82.0	1.8		37	21	19	5

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19103	8	2	28	14	0	0	40	4	12	0	9	0	1.454	0.814	72	16
SED19103	8	3	11	3	0	0	38	2	9	0	4	0	1.387	0.812	73	17
SED19103	8	4	19	14	0	0	28	8	9	0	11	0	1.358	0.803	71	15
SED19103	8	5	36	24	2	0	35	7	14	2	11	0	1.526	0.852	77	20
SED19103	12	1	35	15	132	1	22	5	11	1	7	1	1.034	0.633	86	6
SED19103	12	2	31	5	203	0	26	2	15	2	5	0	1.041	0.612	85	6
SED19103	12	3	23	10	192	1	23	3	12	2	5	1	0.946	0.576	87	6
SED19103	12	4	24	13	161	1	24	4	14	2	7	1	1.064	0.63	86	7
SED19103	12	5	35	15	177	2	14	5	18	2	7	2	0.954	0.584	88	5
SED19103	14	1	25	15	0	2	26	3	10	0	9	1	1.493	0.898	78	18
SED19103	14	2	24	12	2	8	33	4	14	2	12	3	1.65	0.91	76	27
SED19103	14	3	48	34	4	10	35	10	14	3	16	5	1.714	0.914	81	31
SED19103	14	4	36	15	3	7	41	6	10	2	16	4	1.699	0.909	77	31
SED19103	14	5	58	42	2	8	41	11	14	2	20	4	1.672	0.871	79	29
SED19103	15	1	26	9	0	371	29	6	25	0	12	3	0.988	0.537	71	6
SED19103	15	2	15	8	2	350	34	4	20	1	9	3	0.955	0.523	72	5
SED19103	15	3	18	5	1	355	37	4	18	1	8	3	0.951	0.521	72	6
SED19103	15	4	16	6	0	433	31	5	24	0	7	2	0.829	0.459	69	4
SED19103	15	5	15	5	0	411	32	5	18	0	9	2	0.832	0.466	65	4
SED19103	17	1	2	2	0	0	11	2	4	0	2	0	0.34	0.276	66	1
SED19103	17	2	0	0	0	0	13	0	6	0	0	0	0.275	0.215	67	1
SED19103	17	3	3	0	0	0	11	0	5	0	1	0	0.354	0.288	66	1
SED19103	17	4	2	1	0	0	18	1	6	0	2	0	0.534	0.377	66	2
SED19103	17	5	0	0	0	1	20	0	3	0	0	1	0.538	0.39	66	2
SED19103	18	1	7	0	0	10	24	0	10	0	3	2	0.775	0.487	67	3
SED19103	18	2	4	0	1	30	34	0	11	1	3	2	0.925	0.542	67	4
SED19103	18	3	8	2	0	10	22	2	5	0	5	3	0.836	0.541	67	4
SED19103	18	4	2	0	0	18	19	0	7	0	1	3	0.622	0.421	67	2
SED19103	18	5	5	2	1	15	20	1	10	1	3	2	0.847	0.544	66	3
SED19103	19	1	5	1	5	0	15	1	4	3	2	0	1.279	0.927	74	13
SED19103	19	2	9	2	2	3	16	2	2	1	4	1	1.276	0.925	72	12
SED19103	19	3	7	2	3	0	15	2	4	1	6	0	1.338	0.946	71	15
SED19103	19	4	9	3	4	0	13	2	3	2	3	0	1.234	0.934	80	12

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19103	19	5	MO	1	48	5	52	122	28	16	-122.6	82.0	1.8		69	30	43	10
SED19103	20	1	MO	1	48	10	23	122	27	21	-11.8	96.2	1		186	38	141	44
SED19103	20	2	MO	1	48	10	23	122	27	21	-11.8	96.2	1		215	37	174	33
SED19103	20	3	MO	1	48	10	23	122	27	21	-11.8	96.2	1		173	26	128	43
SED19103	20	4	MO	1	48	10	23	122	27	21	-11.8	96.2	1		197	38	130	56
SED19103	20	5	MO	1	48	10	23	122	27	21	-11.8	96.2	1		145	27	120	23
SED19103	21	1	MO	1	47	59	7	122	14	34	-20.7	80.3	1.3		506	35	142	252
SED19103	21	2	MO	1	47	59	7	122	14	34	-20.7	80.3	1.3		575	43	193	278
SED19103	21	3	MO	1	47	59	7	122	14	34	-20.7	80.3	1.3		483	39	127	248
SED19103	21	4	MO	1	47	59	7	122	14	34	-20.7	80.3	1.3		663	45	187	364
SED19103	21	5	MO	1	47	59	7	122	14	34	-20.7	80.3	1.3		639	39	137	391
SED19103	22	1	MO	1	47	57	20	122	17	10	-22.5	12.9	0.2		284	43	24	163
SED19103	22	2	MO	1	47	57	20	122	17	10	-22.5	12.9	0.2		334	59	47	178
SED19103	22	3	MO	1	47	57	20	122	17	10	-22.5	12.9	0.2		511	48	71	318
SED19103	22	4	MO	1	47	57	20	122	17	10	-22.5	12.9	0.2		480	47	61	267
SED19103	22	5	MO	1	47	57	20	122	17	10	-22.5	12.9	0.2		350	39	24	212
SED19103	26	1	MO	1	47	51	8	122	27	30	-266.9	16.9	0.8		886	125	664	91
SED19103	26	2	MO	1	47	51	8	122	27	30	-266.9	16.9	0.8		510	121	356	96
SED19103	26	3	MO	1	47	51	8	122	27	30	-266.9	16.9	0.8		1124	132	840	136
SED19103	26	4	MO	1	47	51	8	122	27	30	-266.9	16.9	0.8		540	109	367	119
SED19103	26	5	MO	1	47	51	8	122	27	30	-266.9	16.9	0.8		2622	141	2109	197
SED19103	29	1	MO	1	47	42	6	122	27	13	-199.9	83.9	1.4		322	36	53	225
SED19103	29	2	MO	1	47	42	6	122	27	13	-199.9	83.9	1.4		358	37	50	270
SED19103	29	3	MO	1	47	42	6	122	27	13	-199.9	83.9	1.4		273	30	34	209
SED19103	29	4	MO	1	47	42	6	122	27	13	-199.9	83.9	1.4		309	34	70	214
SED19103	29	5	MO	1	47	42	6	122	27	13	-199.9	83.9	1.4		261	29	31	197
SED19103	30	1	MO	1	47	37	26	122	30	10	-13.3	23.5	0.7		470	61	335	26
SED19103	30	2	MO	1	47	37	26	122	30	10	-13.3	23.5	0.7		311	64	146	59
SED19103	30	3	MO	1	47	37	26	122	30	10	-13.3	23.5	0.7		321	61	174	34
SED19103	30	4	MO	1	47	37	26	122	30	10	-13.3	23.5	0.7		300	54	125	48
SED19103	30	5	MO	1	47	37	26	122	30	10	-13.3	23.5	0.7		278	61	162	44
SED19103	32	1	MO	1	47	37	55	122	24	30	-20.4	6.8	0.1		585	99	282	114
SED19103	32	2	MO	1	47	37	55	122	24	30	-20.4	6.8	0.1		513	88	306	50

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19103	19	5	10	8	4	2	19	4	3	2	5	1	1.364	0.923	75	14
SED19103	20	1	0	0	0	1	27	0	10	0	0	1	1.268	0.803	76	11
SED19103	20	2	5	2	0	3	25	2	8	0	3	1	1.303	0.831	76	12
SED19103	20	3	1	0	0	1	15	0	9	0	1	1	1.049	0.741	73	6
SED19103	20	4	5	3	0	6	25	2	8	0	4	1	1.328	0.84	77	12
SED19103	20	5	1	1	0	1	19	1	6	0	1	1	1.143	0.799	75	8
SED19103	21	1	110	4	0	2	19	2	10	0	4	2	1.112	0.72	63	7
SED19103	21	2	103	6	0	0	25	2	13	0	4	0	1.113	0.681	65	7
SED19103	21	3	97	2	0	11	21	2	12	0	4	2	1.139	0.716	63	7
SED19103	21	4	109	2	0	3	26	2	14	0	4	1	1.089	0.659	64	7
SED19103	21	5	109	4	0	2	18	1	17	0	3	1	0.991	0.623	63	5
SED19103	22	1	96	9	0	1	14	4	21	0	7	1	1.076	0.659	63	6
SED19103	22	2	104	8	0	5	27	3	20	0	9	3	1.155	0.652	66	8
SED19103	22	3	119	4	0	3	21	3	17	0	8	2	1.056	0.628	57	6
SED19103	22	4	150	5	0	2	20	3	18	0	8	1	1.063	0.636	55	5
SED19103	22	5	112	9	1	1	12	4	17	1	8	1	1.057	0.664	60	6
SED19103	26	1	87	73	15	18	80	8	20	3	13	4	1.71	0.815	82	30
SED19103	26	2	38	25	8	11	72	8	25	3	14	4	1.843	0.885	75	39
SED19103	26	3	65	48	14	25	70	11	25	6	22	5	1.697	0.8	77	26
SED19103	26	4	39	28	9	3	64	11	22	3	15	3	1.768	0.868	73	34
SED19103	26	5	138	121	30	75	78	11	31	3	17	8	1.377	0.64	93	14
SED19103	29	1	38	13	3	3	17	5	7	2	9	1	0.798	0.513	47	4
SED19103	29	2	34	18	3	1	15	6	10	1	10	1	0.737	0.47	44	4
SED19103	29	3	25	8	5	0	11	5	8	3	8	0	0.74	0.501	43	4
SED19103	29	4	24	8	1	0	16	6	7	1	10	0	0.768	0.502	49	4
SED19103	29	5	29	10	2	2	9	5	8	2	9	1	0.705	0.482	43	3
SED19103	30	1	103	6	4	2	42	4	8	1	8	2	1.29	0.722	82	12
SED19103	30	2	105	29	1	0	39	10	9	1	15	0	1.431	0.792	79	16
SED19103	30	3	106	6	2	1	37	3	12	1	9	1	1.341	0.751	74	15
SED19103	30	4	125	14	2	0	30	7	11	1	12	0	1.3	0.75	75	14
SED19103	30	5	71	9	0	0	38	6	11	0	11	0	1.407	0.788	76	16
SED19103	32	1	145	29	21	23	48	9	25	6	14	6	1.617	0.81	64	27
SED19103	32	2	115	31	27	15	48	8	16	6	14	4	1.495	0.769	66	20

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19103	32	3	124	21	9	8	41	7	20	3	10	3	1.511	0.801	69	24
SED19103	32	4	104	15	19	8	54	8	20	7	15	3	1.63	0.817	70	28
SED19103	32	5	113	16	13	14	52	7	17	3	11	5	1.556	0.8	69	24
SED19103	33	1	218	5	3	4	45	5	21	2	15	2	1.389	0.72	66	14
SED19103	33	2	189	8	6	6	49	5	19	4	13	3	1.46	0.751	67	20
SED19103	33	3	150	9	6	1	49	4	19	3	13	1	1.454	0.754	67	18
SED19103	33	4	183	3	17	6	59	3	18	4	12	4	1.548	0.777	67	23
SED19103	33	5	153	2	7	5	50	2	18	4	8	2	1.485	0.776	68	20
SED19103	34	1	176	51	4	0	34	5	8	1	8	0	0.809	0.474	92	5
SED19103	34	2	108	40	5	5	44	5	9	3	10	3	0.913	0.497	90	6
SED19103	34	3	89	37	5	0	28	4	7	1	8	0	1.321	0.804	77	11
SED19103	34	4	88	27	2	1	23	3	7	2	9	1	0.439	0.27	97	1
SED19103	34	5	121	46	10	3	26	4	7	2	7	2	0.835	0.508	92	6
SED19103	35	1	168	23	46	11	30	3	10	4	10	3	1.13	0.644	88	6
SED19103	35	2	163	2	15	4	28	2	3	2	5	2	1.165	0.727	70	9
SED19103	35	3	175	24	40	5	29	2	9	2	6	3	1.156	0.684	88	8
SED19103	35	4	186	17	56	6	29	2	6	4	5	3	1.115	0.667	90	6
SED19103	35	5	214	10	47	4	21	2	4	2	5	3	0.982	0.636	77	5
SED19103	38	1	33	15	2	2	12	8	4	1	12	2	1.279	0.857	59	12
SED19103	38	2	65	13	2	2	9	5	6	2	11	2	1.015	0.687	53	6
SED19103	38	3	43	19	0	0	12	6	6	0	13	0	1.076	0.722	54	9
SED19103	38	4	36	18	3	1	6	5	5	1	9	1	0.869	0.648	50	5
SED19103	38	5	50	16	5	3	8	5	6	2	8	2	0.996	0.704	53	6
SED19103	39	1	35	21	0	2	19	5	9	0	8	2	1.3	0.823	66	12
SED19103	39	2	36	25	0	7	18	6	10	0	9	4	1.362	0.844	64	15
SED19103	39	3	99	22	1	5	21	6	9	1	9	2	1.253	0.767	69	14
SED19103	39	4	67	23	0	2	17	4	9	0	8	2	1.246	0.801	68	11
SED19103	39	5	78	27	0	1	23	8	15	0	12	1	1.357	0.791	68	15
SED19103	40	1	147	5	2	5	39	3	17	1	7	2	1.351	0.742	68	15
SED19103	40	2	123	2	2	6	53	2	14	2	7	3	1.475	0.777	68	18
SED19103	40	3	138	2	0	9	45	1	17	0	6	3	1.395	0.754	70	17
SED19103	40	4	167	1	3	3	37	1	18	2	6	1	1.337	0.74	69	13
SED19103	40	5	178	4	2	8	45	3	13	2	10	1	1.366	0.738	69	14

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19103	32	3	MO	1	47	37	55	122	24	30	-20.4	6.8	0.1		365	77	167	57
SED19103	32	4	MO	1	47	37	55	122	24	30	-20.4	6.8	0.1		470	99	274	65
SED19103	32	5	MO	1	47	37	55	122	24	30	-20.4	6.8	0.1		542	88	332	70
SED19103	33	1	MO	1	47	35	14	122	22	33	-20.8	31.5	0.9		686	85	234	227
SED19103	33	2	MO	1	47	35	14	122	22	33	-20.8	31.5	0.9		546	88	199	146
SED19103	33	3	MO	1	47	35	14	122	22	33	-20.8	31.5	0.9		539	85	223	159
SED19103	33	4	MO	1	47	35	14	122	22	33	-20.8	31.5	0.9		782	98	356	219
SED19103	33	5	MO	1	47	35	14	122	22	33	-20.8	31.5	0.9		507	82	234	108
SED19103	34	1	MO	1	47	32	47	122	39	43	-10.6	92.7	2.3		1526	51	1302	44
SED19103	34	2	MO	1	47	32	47	122	39	43	-10.6	92.7	2.3		933	69	774	41
SED19103	34	3	MO	1	47	32	47	122	39	43	-10.6	92.7	2.3		368	44	250	24
SED19103	34	4	MO	1	47	32	47	122	39	43	-10.6	92.7	2.3		1359	42	1242	26
SED19103	34	5	MO	1	47	32	47	122	39	43	-10.6	92.7	2.3		897	44	726	37
SED19103	35	1	MO	1	47	36	48	122	41	55	-13.3	79.8	2.4		723	57	466	32
SED19103	35	2	MO	1	47	36	48	122	41	55	-13.3	79.8	2.4		391	40	172	37
SED19103	35	3	MO	1	47	36	48	122	41	55	-13.3	79.8	2.4		531	49	269	42
SED19103	35	4	MO	1	47	36	48	122	41	55	-13.3	79.8	2.4		625	47	335	42
SED19103	35	5	MO	1	47	36	48	122	41	55	-13.3	79.8	2.4		363	35	73	25
SED19103	38	1	MO	1	47	25	42	122	23	35	-198.7	94.3	2.1		86	31	21	28
SED19103	38	2	MO	1	47	25	42	122	23	35	-198.7	94.3	2.1		153	30	17	67
SED19103	38	3	MO	1	47	25	42	122	23	35	-198.7	94.3	2.1		139	31	30	66
SED19103	38	4	MO	1	47	25	42	122	23	35	-198.7	94.3	2.1		116	22	12	64
SED19103	38	5	MO	1	47	25	42	122	23	35	-198.7	94.3	2.1		143	26	19	66
SED19103	39	1	MO	1	47	20	13	122	22	18	-14.8	2.4	0.1		118	38	41	40
SED19103	39	2	MO	1	47	20	13	122	22	18	-14.8	2.4	0.1		116	41	33	40
SED19103	39	3	MO	1	47	20	13	122	22	18	-14.8	2.4	0.1		211	43	69	36
SED19103	39	4	MO	1	47	20	13	122	22	18	-14.8	2.4	0.1		142	36	46	27
SED19103	39	5	MO	1	47	20	13	122	22	18	-14.8	2.4	0.1		197	52	73	43
SED19103	40	1	MO	1	47	15	41	122	26	13	-10.4	33.2	0.9		485	66	141	190
SED19103	40	2	MO	1	47	15	41	122	26	13	-10.4	33.2	0.9		596	79	276	189
SED19103	40	3	MO	1	47	15	41	122	26	13	-10.4	33.2	0.9		628	71	235	246
SED19103	40	4	MO	1	47	15	41	122	26	13	-10.4	33.2	0.9		529	64	178	178
SED19103	40	5	MO	1	47	15	41	122	26	13	-10.4	33.2	0.9		787	71	379	220

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19103	41	1	MO	1	47	16	32	122	25	13	-21.1	70.0	1		1311	45	277	955
SED19103	41	2	MO	1	47	16	32	122	25	13	-21.1	70.0	1		1816	43	366	1390
SED19103	41	3	MO	1	47	16	32	122	25	13	-21.1	70.0	1		1750	49	465	1198
SED19103	41	4	MO	1	47	16	32	122	25	13	-21.1	70.0	1		1662	46	461	1133
SED19103	41	5	MO	1	47	16	32	122	25	13	-21.1	70.0	1		1930	42	525	1332
SED19103	43	1	MO	1	47	17	53	122	44	32	-20.8	5.9	0.1		699	66	250	51
SED19103	43	2	MO	1	47	17	53	122	44	32	-20.8	5.9	0.1		761	69	269	67
SED19103	43	3	MO	1	47	17	53	122	44	32	-20.8	5.9	0.1		573	54	144	66
SED19103	43	4	MO	1	47	17	53	122	44	32	-20.8	5.9	0.1		609	66	242	63
SED19103	43	5	MO	1	47	17	53	122	44	32	-20.8	5.9	0.1		693	61	212	52
SED19103	44	1	MO	1	47	9	41	122	40	25	-21.5	17.1	0.5		635	106	434	91
SED19103	44	2	MO	1	47	9	41	122	40	25	-21.5	17.1	0.5		385	83	258	71
SED19103	44	3	MO	1	47	9	41	122	40	25	-21.5	17.1	0.5		496	111	319	57
SED19103	44	4	MO	1	47	9	41	122	40	25	-21.5	17.1	0.5		394	97	249	48
SED19103	44	5	MO	1	47	9	41	122	40	25	-21.5	17.1	0.5		271	78	159	48
SED19103	45	1	MO	1	47	9	53	122	45	5	-51.3	59.8	1.1		130	43	78	19
SED19103	45	2	MO	1	47	9	53	122	45	5	-51.3	59.8	1.1		140	46	85	10
SED19103	45	3	MO	1	47	9	53	122	45	5	-51.3	59.8	1.1		261	46	171	18
SED19103	45	4	MO	1	47	9	53	122	45	5	-51.3	59.8	1.1		213	37	136	26
SED19103	45	5	MO	1	47	9	53	122	45	5	-51.3	59.8	1.1		185	41	112	24
SED19103	47	1	MO	1	47	14	0	122	50	52	-21.5	9.4	0.3		676	92	393	126
SED19103	47	2	MO	1	47	14	0	122	50	52	-21.5	9.4	0.3		505	95	335	66
SED19103	47	3	MO	1	47	14	0	122	50	52	-21.5	9.4	0.3		565	86	331	72
SED19103	47	4	MO	1	47	14	0	122	50	52	-21.5	9.4	0.3		656	81	242	83
SED19103	47	5	MO	1	47	14	0	122	50	52	-21.5	9.4	0.3		516	81	260	59
SED19103	48	1	MO	1	47	7	26	122	55	9	-21.3	89.8	2.3		176	24	14	45
SED19103	48	2	MO	1	47	7	26	122	55	9	-21.3	89.8	2.3		187	28	31	49
SED19103	48	3	MO	1	47	7	26	122	55	9	-21.3	89.8	2.3		161	24	14	42
SED19103	48	4	MO	1	47	7	26	122	55	9	-21.3	89.8	2.3		196	31	36	52
SED19103	48	5	MO	1	47	7	26	122	55	9	-21.3	89.8	2.3		118	25	11	33
SED19103	49	1	MO	1	47	4	49	122	54	49	-5.6	84.0	3.3		128	20	80	24
SED19103	49	2	MO	1	47	4	49	122	54	49	-5.6	84.0	3.3		111	16	59	16
SED19103	49	3	MO	1	47	4	49	122	54	49	-5.6	84.0	3.3		129	24	60	30

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19103	41	1	73	20	4	2	22	1	16	1	4	2	0.729	0.441	66	3
SED19103	41	2	52	11	5	3	25	1	12	1	4	1	0.694	0.425	64	3
SED19103	41	3	68	16	15	4	27	2	14	2	5	1	0.683	0.404	67	2
SED19103	41	4	56	12	12	0	24	1	17	1	4	0	0.731	0.44	65	2
SED19103	41	5	58	13	11	4	19	1	17	1	4	1	0.649	0.4	65	2
SED19103	43	1	188	43	201	9	36	6	13	3	11	3	1.213	0.667	85	10
SED19103	43	2	230	80	193	2	34	9	19	2	12	2	1.218	0.662	86	10
SED19103	43	3	137	37	225	1	23	6	19	2	9	1	1.09	0.629	89	7
SED19103	43	4	175	40	128	1	32	10	16	3	14	1	1.209	0.665	83	10
SED19103	43	5	191	53	227	11	30	8	15	2	11	3	1.147	0.642	88	8
SED19103	44	1	68	28	14	28	62	10	19	3	16	6	1.722	0.85	77	31
SED19103	44	2	41	9	5	10	49	6	18	3	9	4	1.666	0.868	75	26
SED19103	44	3	75	35	17	28	69	11	17	4	16	4	1.795	0.878	79	37
SED19103	44	4	65	20	9	23	56	7	20	3	13	4	1.78	0.896	75	34
SED19103	44	5	26	2	11	26	52	2	16	1	5	3	1.666	0.881	73	26
SED19103	45	1	24	2	3	6	24	1	8	2	5	4	1.338	0.819	67	15
SED19103	45	2	34	3	2	7	31	1	6	2	4	2	1.414	0.851	73	17
SED19103	45	3	44	9	5	22	23	4	9	1	8	4	1.225	0.736	73	10
SED19103	45	4	35	5	9	7	19	2	8	2	5	3	1.216	0.775	71	9
SED19103	45	5	37	2	7	5	23	1	9	1	5	3	1.23	0.762	71	11
SED19103	47	1	71	55	64	22	53	6	20	3	13	3	1.562	0.796	70	20
SED19103	47	2	35	21	25	42	50	9	18	2	18	6	1.602	0.81	75	22
SED19103	47	3	41	24	89	28	46	6	18	2	13	5	1.547	0.8	81	23
SED19103	47	4	35	21	267	29	45	8	15	3	13	4	1.259	0.66	85	14
SED19103	47	5	32	19	130	35	48	7	12	3	12	6	1.46	0.765	84	17
SED19103	48	1	103	21	8	4	8	2	8	1	4	2	0.933	0.676	70	6
SED19103	48	2	76	7	8	9	12	2	8	1	4	2	1.057	0.731	65	7
SED19103	48	3	95	18	5	2	5	3	12	1	4	1	0.901	0.653	69	5
SED19103	48	4	96	18	9	3	13	2	12	1	3	2	1.04	0.697	69	7
SED19103	48	5	63	17	7	2	8	2	11	1	3	1	0.979	0.7	68	5
SED19103	49	1	19	1	0	5	8	1	6	0	5	1	0.996	0.765	67	5
SED19103	49	2	30	0	3	3	8	0	5	1	1	1	0.927	0.77	69	5
SED19103	49	3	34	5	1	4	10	3	6	1	6	1	1.03	0.746	68	5

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19103	49	4	MO	1	47	4	49	122	54	49	-5.6	84.0	3.3		176	25	102	13
SED19103	49	5	MO	1	47	4	49	122	54	49	-5.6	84.0	3.3		158	25	97	29
SED19103	69	1	MO	1	47	44	9	122	32	7	-34.4	21.4	0.6		603	89	358	55
SED19103	69	2	MO	1	47	44	9	122	32	7	-34.4	21.4	0.6		527	75	260	56
SED19103	69	3	MO	1	47	44	9	122	32	7	-34.4	21.4	0.6		485	69	280	39
SED19103	69	4	MO	1	47	44	9	122	32	7	-34.4	21.4	0.6		499	69	304	53
SED19103	69	5	MO	1	47	44	9	122	32	7	-34.4	21.4	0.6		401	72	182	56
SED19103	70	1	MO	1	47	12	42	123	4	100	-6.5	67.2	3.2		96	15	32	62
SED19103	70	2	MO	1	47	12	42	123	4	100	-6.5	67.2	3.2		93	20	28	59
SED19103	70	3	MO	1	47	12	42	123	4	100	-6.5	67.2	3.2		111	22	65	35
SED19103	70	4	MO	1	47	12	42	123	4	100	-6.5	67.2	3.2		87	18	23	58
SED19103	70	5	MO	1	47	12	42	123	4	100	-6.5	67.2	3.2		79	16	25	54
SED19103	71	1	MO	1	48	30	33	122	35	13	-7.1	55.8	1.2		213	52	118	28
SED19103	71	2	MO	1	48	30	33	122	35	13	-7.1	55.8	1.2		253	53	160	47
SED19103	71	3	MO	1	48	30	33	122	35	13	-7.1	55.8	1.2		222	49	121	36
SED19103	71	4	MO	1	48	30	33	122	35	13	-7.1	55.8	1.2		299	53	156	52
SED19103	71	5	MO	1	48	30	33	122	35	13	-7.1	55.8	1.2		211	45	100	51
SED19103	R 2	1	MO	1	48	50	5	122	44	7	-21.3	57.7	0.8		310	55	235	44
SED19103	R 2	2	MO	1	48	50	5	122	44	7	-21.3	57.7	0.8		204	48	115	72
SED19103	R 2	3	MO	1	48	50	5	122	44	7	-21.3	57.7	0.8		300	50	129	156
SED19103	R 2	4	MO	1	48	50	5	122	44	7	-21.3	57.7	0.8		197	57	112	66
SED19103	R 2	5	MO	1	48	50	5	122	44	7	-21.3	57.7	0.8		256	62	149	77
SED19103	R 9	1	MO	1	48	8	2	123	14	57	-16.5	0.9	0.1		493	28	344	45
SED19103	R 9	2	MO	1	48	8	2	123	14	57	-16.5	0.9	0.1		817	33	549	65
SED19103	R 9	3	MO	1	48	8	2	123	14	57	-16.5	0.9	0.1		551	26	402	44
SED19103	R 9	4	MO	1	48	8	2	123	14	57	-16.5	0.9	0.1		716	25	428	69
SED19103	R 9	5	MO	1	48	8	2	123	14	57	-16.5	0.9	0.1		724	25	534	30
SED19103	R10	1	MO	1	48	10	10	123	6	3	-20.7	32.8	0.6		469	78	344	48
SED19103	R10	2	MO	1	48	10	10	123	6	3	-20.7	32.8	0.6		486	74	382	75
SED19103	R10	3	MO	1	48	10	10	123	6	3	-20.7	32.8	0.6		864	99	662	131
SED19103	R10	4	MO	1	48	10	10	123	6	3	-20.7	32.8	0.6		370	72	301	16
SED19103	R10	5	MO	1	48	10	10	123	6	3	-20.7	32.8	0.6		483	84	382	56
SED19103	R11	1	MO	1	48	3	15	122	53	41	-22.5	29.1	1.2		1114	79	545	89

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19103	49	4	41	5	11	9	12	2	6	2	4	1	1.116	0.798	71	8
SED19103	49	5	22	6	4	6	13	3	6	1	4	1	1.213	0.867	68	10
SED19103	69	1	176	10	12	1	55	8	15	2	15	1	1.51	0.775	80	17
SED19103	69	2	142	12	65	4	45	6	13	1	14	2	1.476	0.787	81	17
SED19103	69	3	118	15	43	5	42	5	12	1	11	3	1.494	0.812	81	17
SED19103	69	4	110	12	27	5	44	3	14	1	9	1	1.483	0.806	80	16
SED19103	69	5	137	18	24	2	37	9	14	2	17	2	1.498	0.807	78	18
SED19103	70	1	2	1	0	0	8	1	5	0	2	0	0.905	0.769	67	4
SED19103	70	2	5	1	0	1	7	1	8	0	4	1	1.062	0.816	52	6
SED19103	70	3	6	1	0	5	9	1	8	0	3	2	1.015	0.756	66	6
SED19103	70	4	5	1	1	0	7	1	8	1	2	0	1.03	0.82	57	6
SED19103	70	5	0	0	0	0	7	0	9	0	0	0	0.944	0.784	62	6
SED19103	71	1	44	24	16	7	33	2	10	2	6	1	1.492	0.87	74	18
SED19103	71	2	34	15	7	5	29	3	15	2	6	1	1.51	0.876	71	20
SED19103	71	3	38	21	21	6	28	3	11	2	7	1	1.462	0.865	76	17
SED19103	71	4	74	33	10	7	31	3	13	2	6	1	1.447	0.839	73	16
SED19103	71	5	44	25	13	3	21	2	14	2	7	1	1.482	0.897	74	18
SED19103	R 2	1	18	4	9	3	28	4	12	2	9	3	1.242	0.714	80	11
SED19103	R 2	2	10	5	3	4	24	3	16	1	6	1	1.419	0.844	64	17
SED19103	R 2	3	8	1	2	5	24	1	19	1	4	2	1.217	0.716	64	9
SED19103	R 2	4	9	2	4	6	31	2	19	1	4	2	1.558	0.887	69	21
SED19103	R 2	5	18	11	6	6	34	4	18	1	6	3	1.52	0.848	76	20
SED19103	R 9	1	6	4	88	6	15	2	3	2	4	3	0.9	0.622	73	5
SED19103	R 9	2	25	25	116	59	14	4	7	2	4	5	0.833	0.549	69	4
SED19103	R 9	3	8	8	65	30	12	3	6	1	3	3	0.794	0.561	69	4
SED19103	R 9	4	19	19	161	38	12	2	6	1	2	3	0.856	0.612	69	4
SED19103	R 9	5	8	8	85	47	12	2	5	1	2	3	0.727	0.52	66	3
SED19103	R10	1	69	59	0	5	47	9	11	0	15	3	1.331	0.703	86	17
SED19103	R10	2	26	19	0	0	48	7	12	0	13	0	1.229	0.658	81	12
SED19103	R10	3	62	47	0	8	68	8	11	0	17	2	1.33	0.667	83	16
SED19103	R10	4	52	41	0	1	49	11	6	0	16	1	1.465	0.789	83	20
SED19103	R10	5	40	23	0	4	55	11	11	0	15	2	1.298	0.674	84	17
SED19103	R11	1	464	455	0	16	56	6	8	0	12	3	1.203	0.634	88	9

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19103	R11	2	MO	1	48	3	15	122	53	41	-22.5	29.1	1.2		2061	97	1057	89
SED19103	R11	3	MO	1	48	3	15	122	53	41	-22.5	29.1	1.2		1281	88	516	193
SED19103	R11	4	MO	1	48	3	15	122	53	41	-22.5	29.1	1.2		1304	80	488	106
SED19103	R11	5	MO	1	48	3	15	122	53	41	-22.5	29.1	1.2		1485	93	822	174
SED19103	R13	1	MO	1	47	50	27	122	37	43	-19.3	9.8	0.2		685	40	46	461
SED19103	R13	2	MO	1	47	50	27	122	37	43	-19.3	9.8	0.2		1146	67	94	910
SED19103	R13	3	MO	1	47	50	27	122	37	43	-19.3	9.8	0.2		783	52	62	609
SED19103	R13	4	MO	1	47	50	27	122	37	43	-19.3	9.8	0.2		1216	36	50	1049
SED19103	R13	5	MO	1	47	50	27	122	37	43	-19.3	9.8	0.2		1715	70	197	1359
SED19103	R201	1	MO	1	48	59	28	123	12	25	-121.3	21.9	0.6		912	75	334	22
SED19103	R201	2	MO	1	48	59	28	123	12	25	-121.3	21.9	0.6		764	66	311	19
SED19103	R201	3	MO	1	48	59	28	123	12	25	-121.3	21.9	0.6		946	69	405	16
SED19103	R201	4	MO	1	48	59	28	123	12	25	-121.3	21.9	0.6		701	71	217	15
SED19103	R201	5	MO	1	48	59	28	123	12	25	-121.3	21.9	0.6		1153	62	387	18
SED19103	R202	1	MO	1	48	55	54	123	5	35	-118.6	24.4	0.5		142	40	114	13
SED19103	R202	2	MO	1	48	55	54	123	5	35	-118.6	24.4	0.5		189	38	152	14
SED19103	R202	3	MO	1	48	55	54	123	5	35	-118.6	24.4	0.5		221	44	180	18
SED19103	R202	4	MO	1	48	55	54	123	5	35	-118.6	24.4	0.5		212	65	155	23
SED19103	R202	5	MO	1	48	55	54	123	5	35	-118.6	24.4	0.5		215	45	162	23
SED19103	R203	1	MO	1	48	45	0	122	31	100	-12.5	98.7	1.7		260	49	158	15
SED19103	R203	2	MO	1	48	45	0	122	31	100	-12.5	98.7	1.7		335	49	241	16
SED19103	R203	3	MO	1	48	45	0	122	31	100	-12.5	98.7	1.7		231	45	139	17
SED19103	R203	4	MO	1	48	45	0	122	31	100	-12.5	98.7	1.7		263	52	179	12
SED19103	R203	5	MO	1	48	45	0	122	31	100	-12.5	98.7	1.7		206	47	119	16
SED19103	R204	1	MO	1	48	38	18	122	52	34	-31.7	94.1	2.4		288	25	147	51
SED19103	R204	2	MO	1	48	38	18	122	52	34	-31.7	94.1	2.4		225	26	96	71
SED19103	R204	3	MO	1	48	38	18	122	52	34	-31.7	94.1	2.4		147	24	56	44
SED19103	R204	4	MO	1	48	38	18	122	52	34	-31.7	94.1	2.4		163	23	62	47
SED19103	R204	5	MO	1	48	38	18	122	52	34	-31.7	94.1	2.4		276	27	112	57
SED19103	R205	1	MO	1	48	35	22	122	50	57	-31.9	62.1	1.1		373	46	83	252
SED19103	R205	2	MO	1	48	35	22	122	50	57	-31.9	62.1	1.1		391	52	127	202
SED19103	R205	3	MO	1	48	35	22	122	50	57	-31.9	62.1	1.1		425	54	105	234
SED19103	R205	4	MO	1	48	35	22	122	50	57	-31.9	62.1	1.1		381	53	87	249

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19103	R11	2	895	889	0	19	65	13	11	0	17	3	1.176	0.592	86	9
SED19103	R11	3	543	535	1	28	54	13	12	1	18	3	1.267	0.651	89	13
SED19103	R11	4	688	678	1	21	54	9	9	1	14	2	1.079	0.567	92	9
SED19103	R11	5	452	433	9	21	56	10	12	1	18	4	1.272	0.646	91	10
SED19103	R13	1	174	61	0	4	18	4	13	0	8	1	0.694	0.433	76	2
SED19103	R13	2	132	67	0	9	30	10	18	0	15	3	0.862	0.472	74	4
SED19103	R13	3	106	11	1	5	22	6	12	1	14	3	0.677	0.394	68	2
SED19103	R13	4	111	7	0	6	15	3	12	0	7	2	0.382	0.245	68	1
SED19103	R13	5	156	33	3	0	37	10	13	2	18	0	0.688	0.373	68	3
SED19103	R201	1	34	15	66	454	42	7	13	4	10	3	1.03	0.55	73	7
SED19103	R201	2	25	4	52	357	43	3	10	3	7	3	1.026	0.564	72	6
SED19103	R201	3	43	32	82	400	37	10	8	5	15	4	1.109	0.603	79	8
SED19103	R201	4	14	6	68	387	44	6	9	4	11	3	0.943	0.509	71	5
SED19103	R201	5	19	8	77	652	39	5	6	6	8	3	0.866	0.483	74	4
SED19103	R202	1	12	12	1	2	24	4	10	1	4	1	1.288	0.804	76	11
SED19103	R202	2	20	18	1	2	22	4	8	1	6	1	1.266	0.801	76	10
SED19103	R202	3	20	16	0	3	26	4	9	0	7	2	1.392	0.847	78	14
SED19103	R202	4	22	20	7	5	39	7	12	2	9	3	1.525	0.841	77	20
SED19103	R202	5	18	16	7	5	26	4	10	1	6	2	1.344	0.813	79	15
SED19103	R203	1	57	34	24	5	30	4	6	2	7	3	1.468	0.869	83	16
SED19103	R203	2	65	52	11	2	30	2	8	2	7	2	1.247	0.738	73	11
SED19103	R203	3	49	24	18	8	27	2	5	2	6	5	1.471	0.89	85	17
SED19103	R203	4	62	44	6	4	37	3	4	2	7	2	1.475	0.86	82	16
SED19103	R203	5	41	20	19	11	29	2	7	2	6	3	1.479	0.885	81	18
SED19103	R204	1	75	57	13	2	15	1	6	1	2	1	1.096	0.784	75	7
SED19103	R204	2	28	14	20	10	14	2	7	1	3	1	1.222	0.864	69	10
SED19103	R204	3	35	15	3	9	11	2	8	1	3	1	1.154	0.836	56	8
SED19103	R204	4	39	20	8	7	12	1	6	1	3	1	1.145	0.841	58	8
SED19103	R204	5	85	71	13	9	16	2	6	1	3	1	1.08	0.755	66	8
SED19103	R205	1	19	5	17	2	24	2	16	1	4	1	1.013	0.609	75	7
SED19103	R205	2	26	10	33	3	33	3	11	1	5	2	1.132	0.66	80	10
SED19103	R205	3	19	3	61	6	34	3	13	2	4	1	1.084	0.625	83	7
SED19103	R205	4	20	7	22	1	27	3	15	1	8	1	0.97	0.563	82	6

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19103	R205	5	MO	1	48	35	22	122	50	57	-31.9	62.1	1.1		406	54	84	272
SED19103	R206	1	MO	1	48	32	34	123	0	47	-19.4	35.6	0.8		349	72	134	170
SED19103	R206	2	MO	1	48	32	34	123	0	47	-19.4	35.6	0.8		649	82	222	346
SED19103	R206	3	MO	1	48	32	34	123	0	47	-19.4	35.6	0.8		421	87	180	209
SED19103	R206	4	MO	1	48	32	34	123	0	47	-19.4	35.6	0.8		727	101	262	406
SED19103	R206	5	MO	1	48	32	34	123	0	47	-19.4	35.6	0.8		472	74	192	241
SED19103	R207	1	MO	1	48	23	57	122	40	15	-29.9	73.4	1.5		352	51	139	192
SED19103	R207	2	MO	1	48	23	57	122	40	15	-29.9	73.4	1.5		453	55	145	294
SED19103	R207	3	MO	1	48	23	57	122	40	15	-29.9	73.4	1.5		453	60	165	266
SED19103	R207	4	MO	1	48	23	57	122	40	15	-29.9	73.4	1.5		531	71	233	253
SED19103	R207	5	MO	1	48	23	57	122	40	15	-29.9	73.4	1.5		504	51	146	333
SED19103	R208	1	MO	1	48	2	31	123	0	22	-13.7	90.1	2.8		102	2	101	0
SED19103	R208	2	MO	1	48	2	31	123	0	22	-13.7	90.1	2.8		125	4	123	0
SED19103	R208	3	MO	1	48	2	31	123	0	22	-13.7	90.1	2.8		153	2	153	0
SED19103	R208	4	MO	1	48	2	31	123	0	22	-13.7	90.1	2.8		135	2	134	0
SED19103	R208	5	MO	1	48	2	31	123	0	22	-13.7	90.1	2.8		125	2	124	0
SED19103	R209	1	MO	1	48	17	43	122	29	18	-19.6	34.0	0.5		354	71	124	70
SED19103	R209	2	MO	1	48	17	43	122	29	18	-19.6	34.0	0.5		441	50	203	66
SED19103	R209	3	MO	1	48	17	43	122	29	18	-19.6	34.0	0.5		402	48	142	81
SED19103	R209	4	MO	1	48	17	43	122	29	18	-19.6	34.0	0.5		381	41	104	80
SED19103	R209	5	MO	1	48	17	43	122	29	18	-19.6	34.0	0.5		405	50	150	78
SED19203	1	1	MO	1	48	59	28	122	51	42	-22.5	94.1	1.7421		794	32	115	45
SED19203	1	2	MO	1	48	59	28	122	51	42	-22.5	94.1	1.7421		923	35	114	65
SED19203	1	3	MO	1	48	59	28	122	51	42	-22.5	94.1	1.7421		920	31	79	53
SED19203	1	4	MO	1	48	59	28	122	51	42	-22.5	94.1	1.7421		644	22	29	36
SED19203	3	1	MO	1	48	52	14	122	58	42	-223.2	50.8	0.886		288	29	66	188
SED19203	3	2	MO	1	48	52	14	122	58	42	-223.2	50.8	0.886		198	23	19	164
SED19203	3	3	MO	1	48	52	14	122	58	42	-223.2	50.8	0.886		315	25	45	233
SED19203	3	4	MO	1	48	52	14	122	58	42	-223.2	50.8	0.886		300	34	86	170
SED19203	4	1	MO	1	48	41	3	122	32	17	-24	96.8	2.4931		178	34	40	71
SED19203	4	2	MO	1	48	41	3	122	32	17	-24	96.8	2.4931		216	36	92	26
SED19203	4	3	MO	1	48	41	3	122	32	17	-24	96.8	2.4931		190	41	83	53

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19103	R205	5	23	7	24	2	28	4	16	1	7	1	1.057	0.61	81	7
SED19103	R206	1	30	13	0	15	41	5	20	0	9	2	1.556	0.838	70	24
SED19103	R206	2	30	16	36	15	47	5	22	4	7	2	1.49	0.779	69	20
SED19103	R206	3	23	9	1	7	53	6	20	1	10	2	1.594	0.822	70	26
SED19103	R206	4	40	14	1	15	60	6	26	1	11	2	1.519	0.758	68	22
SED19103	R206	5	20	6	2	15	41	3	22	1	8	1	1.525	0.816	68	20
SED19103	R207	1	18	11	1	2	27	5	14	1	8	1	1.093	0.64	65	9
SED19103	R207	2	8	3	2	2	34	1	15	1	3	1	1.002	0.576	64	7
SED19103	R207	3	16	6	1	5	35	3	16	1	6	2	1.12	0.63	64	9
SED19103	R207	4	34	24	2	8	40	8	14	2	12	2	1.179	0.637	65	11
SED19103	R207	5	20	12	3	2	26	5	15	1	8	1	0.968	0.567	65	6
SED19103	R208	1	1	1	0	0	1	1	0	0	1	0	0.024	0.079	67	1
SED19103	R208	2	1	0	0	1	2	0	0	0	1	1	0.102	0.169	67	1
SED19103	R208	3	0	0	0	0	2	0	0	0	0	0	0.089	0.296	67	1
SED19103	R208	4	1	0	0	0	1	0	0	0	1	0	0.019	0.063	67	1
SED19103	R208	5	1	0	0	0	1	0	0	0	1	0	0.02	0.067	67	1
SED19103	R209	1	147	11	5	8	41	6	15	2	11	1	1.294	0.699	70	15
SED19103	R209	2	165	19	1	6	27	4	14	1	7	1	1.09	0.642	69	6
SED19103	R209	3	169	18	3	7	22	6	14	1	10	1	1.11	0.66	69	7
SED19103	R209	4	185	11	6	6	19	4	12	2	7	1	1.016	0.63	69	6
SED19103	R209	5	171	7	3	3	27	4	13	2	6	2	1.093	0.643	68	8
SED19203	1	1	302	222	329	1	13	3	7	3	7	1	0.858	0.57	92	4
SED19203	1	2	388	292	353	3	15	5	9	2	8	1	0.858	0.555	92	4
SED19203	1	3	432	351	352	4	11	3	8	3	7	2	0.79	0.53	95	3
SED19203	1	4	252	170	327	0	8	4	5	3	6	0	0.691	0.515	95	3
SED19203	3	1	31	8	0	1	13	5	8	0	6	1	0.89	0.609	41	4
SED19203	3	2	14	3	0	1	6	2	10	0	6	1	0.822	0.604	39	4
SED19203	3	3	37	7	0	0	10	4	8	0	7	0	0.776	0.555	38	3
SED19203	3	4	44	8	0	0	16	5	8	0	10	0	1.001	0.653	49	5
SED19203	4	1	6	2	59	2	18	2	10	2	3	1	1.16	0.757	84	10
SED19203	4	2	13	7	81	4	22	2	6	2	4	2	1.136	0.73	88	10
SED19203	4	3	19	12	28	7	28	2	7	1	3	2	1.33	0.825	77	11

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19203	4	4	MO	1	48	41	3	122	32	17	-24	96.8	2.4931		200	37	41	96
SED19203	5	1	MO	1	48	35	51	122	32	4	-21	94.8	1.9311		266	38	37	183
SED19203	5	2	MO	1	48	35	51	122	32	4	-21	94.8	1.9311		286	41	67	131
SED19203	5	3	MO	1	48	35	51	122	32	4	-21	94.8	1.9311		241	37	44	99
SED19203	5	4	MO	1	48	35	51	122	32	4	-21	94.8	1.9311		263	35	53	115
SED19203	8	1	MO	1	48	7	53	123	26	55	-21.1	71.8	2.2161		426	78	281	71
SED19203	8	2	MO	1	48	7	53	123	26	55	-21.1	71.8	2.2161		296	63	182	52
SED19203	8	3	MO	1	48	7	53	123	26	55	-21.1	71.8	2.2161		227	60	157	39
SED19203	8	4	MO	1	48	7	53	123	26	55	-21.1	71.8	2.2161		401	71	243	80
SED19203	12	1	MO	1	48	5	4	122	46	35	-21.1	93.1	1.1471		376	34	88	64
SED19203	12	2	MO	1	48	5	4	122	46	35	-21.1	93.1	1.1471		350	40	91	76
SED19203	12	3	MO	1	48	5	4	122	46	35	-21.1	93.1	1.1471		293	40	82	45
SED19203	12	4	MO	1	48	5	4	122	46	35	-21.1	93.1	1.1471		349	41	95	48
SED19203	14	1	MO	1	47	46	57	122	44	4	-112.8	48.0	0.903		325	57	167	99
SED19203	14	2	MO	1	47	46	57	122	44	4	-112.8	48.0	0.903		275	60	139	88
SED19203	14	3	MO	1	47	46	57	122	44	4	-112.8	48.0	0.903		440	92	221	129
SED19203	14	4	MO	1	47	46	57	122	44	4	-112.8	48.0	0.903		279	61	151	79
SED19203	15	1	MO	1	47	42	54	122	49	8	-19.4	5.2	0.2149		276	57	126	44
SED19203	15	2	MO	1	47	42	54	122	49	8	-19.4	5.2	0.2149		412	77	179	63
SED19203	15	3	MO	1	47	42	54	122	49	8	-19.4	5.2	0.2149		474	76	272	98
SED19203	15	4	MO	1	47	42	54	122	49	8	-19.4	5.2	0.2149		368	66	187	54
SED19203	17	1	MO	1	47	22	11	123	7	46	-81.8	96.3	1.2451		217	14	37	172
SED19203	17	2	MO	1	47	22	11	123	7	46	-81.8	96.3	1.2451		236	21	71	157
SED19203	17	3	MO	1	47	22	11	123	7	46	-81.8	96.3	1.2451		250	17	71	173
SED19203	17	4	MO	1	47	22	11	123	7	46	-81.8	96.3	1.2451		287	22	95	179
SED19203	18	1	MO	1	48	15	21	122	37	29	-19.1	42.8	1.3271		672	54	299	321
SED19203	18	2	MO	1	48	15	21	122	37	29	-19.1	42.8	1.3271		620	58	192	338
SED19203	18	3	MO	1	48	15	21	122	37	29	-19.1	42.8	1.3271		565	53	259	246
SED19203	18	4	MO	1	48	15	21	122	37	29	-19.1	42.8	1.3271		394	33	90	262
SED19203	19	1	MO	1	48	5	52	122	28	17	-123.4	81.3	2.2198		108	33	63	25
SED19203	19	2	MO	1	48	5	52	122	28	17	-123.4	81.3	2.2198		81	32	53	8
SED19203	19	3	MO	1	48	5	52	122	28	17	-123.4	81.3	2.2198		86	27	48	21
SED19203	19	4	MO	1	48	5	52	122	28	17	-123.4	81.3	2.2198		80	25	50	13

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19203	4	4	14	7	45	4	17	3	11	3	4	2	1.211	0.772	80	9
SED19203	5	1	26	8	20	0	19	5	11	1	7	0	1.21	0.766	63	9
SED19203	5	2	26	12	59	3	17	4	15	2	6	1	1.294	0.802	75	12
SED19203	5	3	28	8	64	6	16	3	13	1	5	2	1.192	0.76	77	10
SED19203	5	4	27	11	65	3	12	3	13	1	6	3	1.228	0.795	75	10
SED19203	8	1	71	45	0	0	44	10	16	0	16	0	1.532	0.81	73	23
SED19203	8	2	61	36	1	0	36	6	16	1	10	0	1.521	0.845	78	19
SED19203	8	3	28	23	1	1	35	6	12	1	10	1	1.535	0.863	78	21
SED19203	8	4	69	47	8	1	39	7	16	2	13	1	1.586	0.857	81	22
SED19203	12	1	37	12	184	3	16	2	11	1	4	2	0.933	0.609	90	5
SED19203	12	2	41	8	141	1	19	2	13	1	6	1	1.075	0.671	87	8
SED19203	12	3	62	18	102	2	19	2	13	1	6	1	1.129	0.705	85	8
SED19203	12	4	54	17	150	2	20	3	12	1	7	1	1.048	0.65	86	7
SED19203	14	1	49	24	3	7	25	6	13	2	14	3	1.356	0.772	72	14
SED19203	14	2	46	18	1	0	27	7	14	1	17	0	1.405	0.79	71	16
SED19203	14	3	65	43	3	22	48	12	14	3	23	4	1.594	0.812	77	23
SED19203	14	4	48	31	1	0	30	11	11	1	19	0	1.447	0.811	74	17
SED19203	15	1	17	9	0	89	28	3	19	0	7	3	1.25	0.712	85	11
SED19203	15	2	33	12	0	137	45	6	19	0	10	3	1.399	0.741	88	20
SED19203	15	3	47	26	0	57	40	8	22	0	13	1	1.507	0.801	87	19
SED19203	15	4	25	10	0	102	32	6	21	0	11	2	1.376	0.756	84	19
SED19203	17	1	8	0	0	0	9	0	3	0	2	0	0.457	0.398	66	1
SED19203	17	2	8	0	0	0	14	0	6	0	1	0	0.663	0.502	66	2
SED19203	17	3	6	0	0	0	9	0	7	0	1	0	0.608	0.494	66	2
SED19203	17	4	13	1	0	0	11	1	6	0	5	0	0.661	0.493	66	2
SED19203	18	1	10	5	0	42	34	4	11	0	6	3	0.948	0.547	71	4
SED19203	18	2	27	12	1	62	34	5	13	1	9	1	0.985	0.559	72	5
SED19203	18	3	9	1	0	51	37	1	10	0	4	2	1.106	0.641	73	8
SED19203	18	4	34	1	0	8	20	1	9	0	2	2	0.771	0.508	68	4
SED19203	19	1	19	13	1	0	15	6	8	1	9	0	1.244	0.819	82	10
SED19203	19	2	14	5	2	4	16	4	3	2	10	1	1.337	0.888	80	13
SED19203	19	3	12	2	2	3	14	2	7	1	4	1	1.249	0.873	78	11
SED19203	19	4	15	7	2	0	13	5	4	1	7	0	1.224	0.875	78	10

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19203	34	2	MO	1	47	32	48	122	39	43	-13	89.4	2.1808		528	53	428	29
SED19203	34	3	MO	1	47	32	48	122	39	43	-13	89.4	2.1808		488	43	373	20
SED19203	34	4	MO	1	47	32	48	122	39	43	-13	89.4	2.1808		1234	48	1091	39
SED19203	35	1	MO	1	47	36	49	122	41	53	-14.3	80.5	2.3923		1111	47	652	10
SED19203	35	2	MO	1	47	36	49	122	41	53	-14.3	80.5	2.3923		1141	47	722	14
SED19203	35	3	MO	1	47	36	49	122	41	53	-14.3	80.5	2.3923		434	29	134	7
SED19203	35	4	MO	1	47	36	49	122	41	53	-14.3	80.5	2.3923		452	39	112	10
SED19203	38	1	MO	1	47	25	43	122	23	35	-198.7	93.1	2.03305		99	21	16	42
SED19203	38	2	MO	1	47	25	43	122	23	35	-198.7	93.1	2.03305		155	32	32	57
SED19203	38	3	MO	1	47	25	43	122	23	35	-198.7	93.1	2.03305		194	27	23	95
SED19203	38	4	MO	1	47	25	43	122	23	35	-198.7	93.1	2.03305		181	20	23	96
SED19203	39	1	MO	1	47	20	14	122	22	18	-15.8	2.7	0.1453		191	49	109	33
SED19203	39	2	MO	1	47	20	14	122	22	18	-15.8	2.7	0.1453		165	43	105	27
SED19203	39	3	MO	1	47	20	14	122	22	18	-15.8	2.7	0.1453		145	41	71	35
SED19203	39	4	MO	1	47	20	14	122	22	18	-15.8	2.7	0.1453		163	40	92	23
SED19203	40	1	MO	1	47	15	41	122	26	14	-9.4	32.2	2.1687		573	82	206	189
SED19203	40	2	MO	1	47	15	41	122	26	14	-9.4	32.2	2.1687		595	79	337	83
SED19203	40	3	MO	1	47	15	41	122	26	14	-9.4	32.2	2.1687		769	78	439	132
SED19203	40	4	MO	1	47	15	41	122	26	14	-9.4	32.2	2.1687		716	70	389	164
SED19203	41	1	MO	1	47	16	31	122	25	14	-19.1	75.1	1.1428		1013	63	171	720
SED19203	41	2	MO	1	47	16	31	122	25	14	-19.1	75.1	1.1428		668	45	139	460
SED19203	41	3	MO	1	47	16	31	122	25	14	-19.1	75.1	1.1428		1021	49	176	757
SED19203	41	4	MO	1	47	16	31	122	25	14	-19.1	75.1	1.1428		862	60	193	593
SED19203	43	1	MO	1	47	17	53	122	44	31	-19.8	6.0	0.2859		767	69	271	54
SED19203	43	2	MO	1	47	17	53	122	44	31	-19.8	6.0	0.2859		973	71	325	61
SED19203	43	3	MO	1	47	17	53	122	44	31	-19.8	6.0	0.2859		852	76	263	68
SED19203	43	4	MO	1	47	17	53	122	44	31	-19.8	6.0	0.2859		844	58	286	37
SED19203	44	1	MO	1	47	9	41	122	40	25	-20.5	17.9	0.519675		200	51	10	64
SED19203	44	2	MO	1	47	9	41	122	40	25	-20.5	17.9	0.519675		484	100	339	46
SED19203	44	3	MO	1	47	9	41	122	40	25	-20.5	17.9	0.519675		483	104	299	85
SED19203	44	4	MO	1	47	9	41	122	40	25	-20.5	17.9	0.519675		644	113	443	60
SED19203	45	1	MO	1	47	9	54	122	45	4	-51.9	55.7	0.6382		199	47	137	27
SED19203	45	2	MO	1	47	9	54	122	45	4	-51.9	55.7	0.6382		277	46	212	24

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19203	20	1	16	15	0	0	27	5	15	0	6	0	1.245	0.737	84	10
SED19203	20	2	22	19	0	0	20	5	15	0	8	0	1.127	0.69	84	8
SED19203	20	3	20	17	0	3	33	5	16	0	6	2	1.29	0.732	79	10
SED19203	20	4	16	15	0	1	40	2	16	0	3	1	1.274	0.717	82	12
SED19203	21	1	298	7	0	4	26	2	20	0	4	2	1.15	0.67	64	7
SED19203	21	2	364	3	0	4	24	3	14	0	5	3	0.99	0.595	62	5
SED19203	21	3	395	16	0	7	24	5	18	0	10	3	1.042	0.599	59	5
SED19203	21	4	352	12	0	5	24	4	20	0	7	2	1.092	0.633	60	6
SED19203	22	1	215	10	0	45	38	5	23	0	10	2	1.256	0.674	70	9
SED19203	22	2	415	9	0	13	42	7	25	0	13	3	1.227	0.64	65	8
SED19203	22	3	297	10	0	4	29	8	26	0	12	3	1.079	0.585	65	6
SED19203	22	4	217	7	0	22	27	5	23	0	10	4	1.138	0.63	68	7
SED19203	26	1	114	86	1	4	34	11	22	1	19	2	1.607	0.849	67	24
SED19203	26	2	173	136	0	8	35	12	14	0	18	5	1.507	0.812	66	17
SED19203	26	3	91	78	0	24	50	13	17	0	19	3	1.526	0.781	61	21
SED19203	26	4	237	184	0	5	35	16	17	0	24	2	1.429	0.755	59	17
SED19203	29	1	56	3	1	0	16	2	8	1	5	0	0.551	0.373	41	2
SED19203	29	2	75	46	3	0	11	6	9	2	9	0	0.726	0.487	45	4
SED19203	29	3	54	5	3	1	11	2	11	2	6	1	0.638	0.428	43	3
SED19203	29	4	41	3	2	0	11	3	9	2	5	0	0.663	0.463	44	3
SED19203	30	1	152	10	1	6	38	4	11	1	10	3	1.273	0.708	67	14
SED19203	30	2	46	6	0	0	35	5	11	0	8	0	1.41	0.814	68	15
SED19203	30	3	144	5	2	8	26	4	14	1	9	3	1.26	0.731	67	13
SED19203	30	4	146	5	2	6	33	3	15	1	7	2	1.266	0.715	68	14
SED19203	32	1	93	18	7	7	46	8	18	2	14	4	1.546	0.803	76	24
SED19203	32	2	120	30	3	6	51	10	15	2	16	3	1.559	0.804	72	26
SED19203	32	3	109	19	4	4	51	9	17	2	14	3	1.548	0.796	72	24
SED19203	32	4	118	27	9	5	48	11	19	3	17	4	1.565	0.799	72	25
SED19203	33	1	130	9	4	6	54	3	13	2	12	3	1.523	0.791	68	17
SED19203	33	2	168	2	4	11	49	2	16	2	11	1	1.44	0.757	68	17
SED19203	33	3	174	9	0	11	51	3	15	0	13	4	1.421	0.738	67	18
SED19203	33	4	147	2	7	5	56	2	24	3	12	4	1.584	0.794	70	24
SED19203	34	1	131	68	1	2	33	6	15	1	8	2	0.811	0.458	93	4

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19203	20	1	MO	1	48	10	23	122	27	28	-10.3	95.7	1.0068		463	49	342	104
SED19203	20	2	MO	1	48	10	23	122	27	28	-10.3	95.7	1.0068		421	43	289	110
SED19203	20	3	MO	1	48	10	23	122	27	28	-10.3	95.7	1.0068		488	58	363	101
SED19203	20	4	MO	1	48	10	23	122	27	28	-10.3	95.7	1.0068		507	60	421	69
SED19203	21	1	MO	1	47	59	8	122	14	34	-21.7	62.2	1.2178		1038	52	233	503
SED19203	21	2	MO	1	47	59	8	122	14	34	-21.7	62.2	1.2178		1211	46	155	688
SED19203	21	3	MO	1	47	59	8	122	14	34	-21.7	62.2	1.2178		1150	55	176	572
SED19203	21	4	MO	1	47	59	8	122	14	34	-21.7	62.2	1.2178		1244	53	227	660
SED19203	22	1	MO	1	47	57	20	122	17	10	-20.5	8.0	0.2596		724	73	202	262
SED19203	22	2	MO	1	47	57	20	122	17	10	-20.5	8.0	0.2596		1135	83	273	434
SED19203	22	3	MO	1	47	57	20	122	17	10	-20.5	8.0	0.2596		686	70	105	280
SED19203	22	4	MO	1	47	57	20	122	17	10	-20.5	8.0	0.2596		586	64	123	224
SED19203	26	1	MO	1	47	51	4	122	27	27	-267.9	27.3	0.8255		356	78	154	83
SED19203	26	2	MO	1	47	51	4	122	27	27	-267.9	27.3	0.8255		470	72	186	103
SED19203	26	3	MO	1	47	51	4	122	27	27	-267.9	27.3	0.8255		460	90	205	140
SED19203	26	4	MO	1	47	51	4	122	27	27	-267.9	27.3	0.8255		566	78	165	159
SED19203	29	1	MO	1	47	42	5	122	27	15	-199.3	87.9	1.6638		503	30	41	405
SED19203	29	2	MO	1	47	42	5	122	27	15	-199.3	87.9	1.6638		435	31	42	315
SED19203	29	3	MO	1	47	42	5	122	27	15	-199.3	87.9	1.6638		526	31	51	417
SED19203	29	4	MO	1	47	42	5	122	27	15	-199.3	87.9	1.6638		390	27	46	301
SED19203	30	1	MO	1	47	37	26	122	30	13	-13.3	36.3	1.0317		366	63	167	40
SED19203	30	2	MO	1	47	37	26	122	30	13	-13.3	36.3	1.0317		260	54	167	47
SED19203	30	3	MO	1	47	37	26	122	30	13	-13.3	36.3	1.0317		331	53	105	72
SED19203	30	4	MO	1	47	37	26	122	30	13	-13.3	36.3	1.0317		349	59	142	52
SED19203	32	1	MO	1	47	37	54	122	24	31	-20.4	5.7	0.329525		383	84	236	40
SED19203	32	2	MO	1	47	37	54	122	24	31	-20.4	5.7	0.329525		395	87	234	32
SED19203	32	3	MO	1	47	37	54	122	24	31	-20.4	5.7	0.329525		399	88	249	33
SED19203	32	4	MO	1	47	37	54	122	24	31	-20.4	5.7	0.329525		409	91	225	52
SED19203	33	1	MO	1	47	35	14	122	22	32	-20.8	32.9	0.1856		679	84	461	78
SED19203	33	2	MO	1	47	35	14	122	22	32	-20.8	32.9	0.1856		580	80	247	149
SED19203	33	3	MO	1	47	35	14	122	22	32	-20.8	32.9	0.1856		580	84	344	49
SED19203	33	4	MO	1	47	35	14	122	22	32	-20.8	32.9	0.1856		580	99	297	124
SED19203	34	1	MO	1	47	32	48	122	39	43	-13	89.4	2.1808		1447	59	1236	77

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19203	34	2	63	16	3	5	35	2	10	2	4	2	1.113	0.645	72	7
SED19203	34	3	78	34	14	3	26	4	9	1	6	1	1.136	0.695	79	7
SED19203	34	4	98	46	2	4	29	6	8	1	8	2	0.859	0.511	91	4
SED19203	35	1	374	74	66	9	24	4	8	4	7	4	0.811	0.485	91	4
SED19203	35	2	325	57	70	10	23	5	7	3	9	5	0.817	0.489	92	4
SED19203	35	3	233	21	56	4	14	5	5	1	7	2	0.948	0.648	85	4
SED19203	35	4	265	35	55	10	20	4	7	2	6	4	1.002	0.63	81	5
SED19203	38	1	37	14	3	1	5	7	5	1	9	1	1.084	0.82	59	7
SED19203	38	2	60	24	5	1	11	6	7	1	12	1	1.216	0.808	61	9
SED19203	38	3	71	21	3	2	8	6	6	1	11	1	1.008	0.704	53	6
SED19203	38	4	62	23	0	0	9	4	3	0	8	0	0.849	0.653	53	5
SED19203	39	1	41	31	0	8	25	7	10	0	13	1	1.375	0.813	67	15
SED19203	39	2	32	28	0	1	22	6	10	0	10	1	1.222	0.748	71	11
SED19203	39	3	36	31	0	3	19	5	12	0	8	2	1.287	0.798	69	12
SED19203	39	4	44	39	0	4	16	8	10	0	12	2	1.218	0.761	72	12
SED19203	40	1	164	6	7	7	47	3	21	3	9	2	1.456	0.761	68	17
SED19203	40	2	164	2	6	5	50	2	14	3	10	2	1.436	0.757	68	16
SED19203	40	3	187	6	6	4	45	3	17	2	11	2	1.427	0.754	70	15
SED19203	40	4	150	3	6	7	38	2	18	3	9	2	1.268	0.687	69	11
SED19203	41	1	85	34	23	14	33	3	20	3	6	1	1.015	0.564	66	7
SED19203	41	2	54	25	9	6	24	2	14	1	5	1	0.958	0.58	65	5
SED19203	41	3	57	23	23	8	24	1	17	2	5	1	0.921	0.545	66	5
SED19203	41	4	43	19	20	13	31	3	20	1	7	1	1.094	0.615	67	9
SED19203	43	1	229	61	206	7	36	9	13	2	13	5	1.237	0.673	86	12
SED19203	43	2	340	58	223	24	38	8	15	2	12	4	1.261	0.681	85	10
SED19203	43	3	292	73	222	7	38	10	17	2	16	3	1.25	0.665	85	9
SED19203	43	4	298	77	223	0	27	10	14	2	15	0	1.107	0.628	87	6
SED19203	44	1	94	42	12	20	6	12	19	3	18	5	1.419	0.831	74	15
SED19203	44	2	84	26	13	2	59	9	21	4	14	2	1.615	0.807	74	25
SED19203	44	3	82	31	6	11	62	9	22	1	15	4	1.785	0.885	74	35
SED19203	44	4	104	37	18	19	70	13	20	2	18	3	1.632	0.795	77	31
SED19203	45	1	24	3	4	7	27	2	9	1	6	4	1.41	0.843	70	16
SED19203	45	2	23	2	17	1	30	1	11	1	3	1	1.195	0.719	72	8

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19203	45	3	MO	1	47	9	54	122	45	4	-51.9	55.7	0.6382		206	42	152	19
SED19203	45	4	MO	1	47	9	54	122	45	4	-51.9	55.7	0.6382		248	45	195	25
SED19203	47	1	MO	1	47	13	59	122	50	58	-19.5	13.2	0.5249		1010	123	766	76
SED19203	47	2	MO	1	47	13	59	122	50	58	-19.5	13.2	0.5249		1029	115	745	110
SED19203	47	3	MO	1	47	13	59	122	50	58	-19.5	13.2	0.5249		717	105	497	84
SED19203	47	4	MO	1	47	13	59	122	50	58	-19.5	13.2	0.5249		523	96	387	46
SED19203	48	1	MO	1	47	7	27	122	55	9	-20.5	88.7	1.5201		262	25	22	38
SED19203	48	2	MO	1	47	7	27	122	55	9	-20.5	88.7	1.5201		291	29	27	68
SED19203	48	3	MO	1	47	7	27	122	55	9	-20.5	88.7	1.5201		266	27	23	41
SED19203	48	4	MO	1	47	7	27	122	55	9	-20.5	88.7	1.5201		373	36	84	34
SED19203	49	1	MO	1	47	4	49	122	54	47	-4.7	88.1	2.1381		90	19	30	44
SED19203	49	2	MO	1	47	4	49	122	54	47	-4.7	88.1	2.1381		153	30	56	74
SED19203	49	3	MO	1	47	4	49	122	54	47	-4.7	88.1	2.1381		109	19	43	54
SED19203	49	4	MO	1	47	4	49	122	54	47	-4.7	88.1	2.1381		117	22	54	44
SED19203	69	1	MO	1	47	44	8	122	32	5	-35.4	18.1	0.4569		549	86	214	109
SED19203	69	2	MO	1	47	44	8	122	32	5	-35.4	18.1	0.4569		614	92	199	155
SED19203	69	3	MO	1	47	44	8	122	32	5	-35.4	18.1	0.4569		378	72	113	98
SED19203	69	4	MO	1	47	44	8	122	32	5	-35.4	18.1	0.4569		541	79	186	134
SED19203	70	1	MO	1	47	12	45	123	4	58	-7.2	66.5	2.1101		119	26	81	17
SED19203	70	2	MO	1	47	12	45	123	4	58	-7.2	66.5	2.1101		62	16	34	23
SED19203	70	3	MO	1	47	12	45	123	4	58	-7.2	66.5	2.1101		112	25	79	23
SED19203	70	4	MO	1	47	12	45	123	4	58	-7.2	66.5	2.1101		43	18	16	19
SED19203	71	1	MO	1	48	30	34	122	35	13	-6.1	53.0	1.2331		359	53	213	61
SED19203	71	2	MO	1	48	30	34	122	35	13	-6.1	53.0	1.2331		404	65	194	120
SED19203	71	3	MO	1	48	30	34	122	35	13	-6.1	53.0	1.2331		365	59	196	86
SED19203	71	4	MO	1	48	30	34	122	35	13	-6.1	53.0	1.2331		449	72	246	133
SED19203	R23	1	MO	1	48	30	34	122	35	13	-6.1	53.0	1.2331		729	68	101	157
SED19203	R23	2	MO	1	48	30	34	122	35	13	-6.1	53.0	1.2331		1021	80	193	575
SED19203	R23	3	MO	1	48	30	34	122	35	13	-6.1	53.0	1.2331		424	63	161	0
SED19203	R23	4	MO	1	48	30	34	122	35	13	-6.1	53.0	1.2331		783	69	120	382
SED19203	R24	1	MO	1	47	51	52	122	21	56	-182.7	90.1	2.1108		345	45	52	264
SED19203	R24	2	MO	1	47	51	52	122	21	56	-182.7	90.1	2.1108		223	41	64	95
SED19203	R24	3	MO	1	47	51	52	122	21	56	-182.7	90.1	2.1108		244	42	40	167

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19203	45	3	15	2	13	7	27	2	9	1	4	1	1.306	0.804	72	12
SED19203	45	4	20	2	6	2	25	1	11	1	6	2	1.142	0.691	69	8
SED19203	47	1	87	75	34	46	78	8	20	1	18	5	1.678	0.803	81	27
SED19203	47	2	67	63	60	44	71	8	25	3	10	4	1.645	0.798	74	24
SED19203	47	3	67	23	62	7	68	7	18	4	12	3	1.593	0.788	72	20
SED19203	47	4	50	24	15	25	65	5	13	1	12	5	1.688	0.851	77	31
SED19203	48	1	198	9	2	2	8	2	10	1	4	2	0.603	0.431	67	2
SED19203	48	2	190	1	1	5	10	1	12	1	4	2	0.723	0.495	65	4
SED19203	48	3	197	15	0	3	11	1	11	0	2	2	0.662	0.463	66	3
SED19203	48	4	252	8	0	3	19	1	11	0	3	3	0.749	0.481	67	3
SED19203	49	1	14	1	0	2	6	1	8	0	4	1	1.119	0.875	59	8
SED19203	49	2	14	2	3	6	14	2	10	1	4	1	1.248	0.845	64	10
SED19203	49	3	10	1	0	2	7	1	8	0	3	1	1.089	0.852	63	7
SED19203	49	4	16	2	0	3	8	1	9	0	4	1	1.137	0.847	67	8
SED19203	69	1	134	25	84	8	49	6	20	2	13	2	1.537	0.795	81	20
SED19203	69	2	169	22	85	6	50	7	23	2	13	4	1.495	0.761	73	18
SED19203	69	3	119	27	38	10	33	6	19	2	13	5	1.567	0.844	79	23
SED19203	69	4	129	16	83	9	38	6	21	2	13	5	1.483	0.781	78	17
SED19203	70	1	19	5	0	2	14	2	6	0	5	1	1.13	0.799	67	9
SED19203	70	2	5	4	0	0	9	1	5	0	2	0	1.089	0.905	67	8
SED19203	70	3	7	4	0	3	15	3	5	0	4	1	1.153	0.825	66	8
SED19203	70	4	4	1	4	0	6	1	7	2	3	0	1.157	0.922	56	9
SED19203	71	1	68	28	14	3	28	4	15	1	7	2	1.395	0.809	70	13
SED19203	71	2	63	32	22	5	34	6	17	1	11	2	1.523	0.84	74	19
SED19203	71	3	49	16	26	8	32	3	16	1	8	2	1.483	0.838	73	18
SED19203	71	4	58	24	9	3	36	4	24	1	10	1	1.5	0.808	70	16
SED19203	R23	1	465	35	3	3	28	7	20	3	15	2	1.071	0.585	72	6
SED19203	R23	2	249	46	0	4	33	7	31	0	13	3	1.172	0.616	71	6
SED19203	R23	3	250	46	4	9	40	10	0	2	18	3	1.171	0.651	75	9
SED19203	R23	4	280	62	0	1	28	10	24	0	16	1	1.155	0.628	71	7
SED19203	R24	1	23	15	3	3	15	6	15	2	12	1	0.865	0.523	45	5
SED19203	R24	2	61	40	2	1	17	5	12	2	9	1	1.345	0.834	65	13
SED19203	R24	3	28	11	5	4	14	7	14	2	11	1	1.062	0.654	50	7

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19203	R24	4	MO	1	47	51	52	122	21	56	-182.7	90.1	2.1108		219	29	37	164
SED19203	R25	1	MO	1	47	51	19	122	30	13	-20.4	3.0	0.1481		853	53	98	494
SED19203	R25	2	MO	1	47	51	19	122	30	13	-20.4	3.0	0.1481		901	97	200	432
SED19203	R25	3	MO	1	47	51	19	122	30	13	-20.4	3.0	0.1481		789	50	82	591
SED19203	R25	4	MO	1	47	51	19	122	30	13	-20.4	3.0	0.1481		1125	54	85	628
SED19203	R27	1	MO	1	47	45	36	122	23	11	-20.7	2.6	0.1656		730	110	367	70
SED19203	R27	2	MO	1	47	45	36	122	23	11	-20.7	2.6	0.1656		533	92	235	78
SED19203	R27	3	MO	1	47	45	36	122	23	11	-20.7	2.6	0.1656		668	113	332	85
SED19203	R27	4	MO	1	47	45	36	122	23	11	-20.7	2.6	0.1656		694	106	339	74
SED19203	R301	1	MO	1	47	59	7	122	29	30	-22.1	5.9	0.2959		122	38	51	48
SED19203	R301	2	MO	1	47	59	7	122	29	30	-22.1	5.9	0.2959		557	66	192	92
SED19203	R301	3	MO	1	47	59	7	122	29	30	-22.1	5.9	0.2959		222	52	134	47
SED19203	R301	4	MO	1	47	59	7	122	29	30	-22.1	5.9	0.2959		271	60	154	75
SED19203	R302	1	MO	1	48	1	11	122	42	53	-20.6	68.5	0.9448		151	44	57	40
SED19203	R302	2	MO	1	48	1	11	122	42	53	-20.6	68.5	0.9448		282	52	57	94
SED19203	R302	3	MO	1	48	1	11	122	42	53	-20.6	68.5	0.9448		218	67	107	71
SED19203	R302	4	MO	1	48	1	11	122	42	53	-20.6	68.5	0.9448		163	48	57	58
SED19203	R303	1	MO	1	47	22	28	122	28	16	-14.5	76.8	1.2708		230	41	69	5
SED19203	R303	2	MO	1	47	22	28	122	28	16	-14.5	76.8	1.2708		225	39	99	3
SED19203	R303	3	MO	1	47	22	28	122	28	16	-14.5	76.8	1.2708		299	34	107	7
SED19203	R303	4	MO	1	47	22	28	122	28	16	-14.5	76.8	1.2708		329	47	129	9
SED19203	R304	1	MO	1	47	35	16	122	58	44	-175	96.5	1.8881		37	12	6	26
SED19203	R304	2	MO	1	47	35	16	122	58	44	-175	96.5	1.8881		96	24	19	55
SED19203	R304	3	MO	1	47	35	16	122	58	44	-175	96.5	1.8881		64	20	11	46
SED19203	R304	4	MO	1	47	35	16	122	58	44	-175	96.5	1.8881		50	13	8	35
SED19203	R305	1	MO	1	47	23	50	122	55	52	-21	93.9	2.4501		40	10	35	3
SED19203	R305	2	MO	1	47	23	50	122	55	52	-21	93.9	2.4501		128	13	126	0
SED19203	R305	3	MO	1	47	23	50	122	55	52	-21	93.9	2.4501		114	7	113	1
SED19203	R305	4	MO	1	47	23	50	122	55	52	-21	93.9	2.4501		106	8	106	0
SED19203	R306	1	MO	1	47	28	14	122	22	33	-75.2	9.0	0.3965		136	41	74	36
SED19203	R306	2	MO	1	47	28	14	122	22	33	-75.2	9.0	0.3965		313	64	189	70
SED19203	R306	3	MO	1	47	28	14	122	22	33	-75.2	9.0	0.3965		132	41	70	40
SED19203	R306	4	MO	1	47	28	14	122	22	33	-75.2	9.0	0.3965		359	59	229	54

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19203	R24	4	16	3	1	1	10	2	10	1	6	1	0.845	0.578	49	5
SED19203	R25	1	252	50	7	2	18	10	15	2	16	2	0.786	0.456	71	3
SED19203	R25	2	261	75	5	3	45	15	24	3	23	2	1.227	0.617	74	9
SED19203	R25	3	109	55	6	1	17	10	16	1	15	1	0.669	0.394	74	2
SED19203	R25	4	406	68	6	0	23	11	16	1	14	0	0.74	0.427	71	2
SED19203	R27	1	242	51	11	40	57	12	21	3	23	5	1.577	0.772	67	26
SED19203	R27	2	200	35	3	17	51	11	19	2	15	5	1.475	0.751	70	22
SED19203	R27	3	237	36	6	8	55	16	23	2	25	7	1.547	0.753	71	26
SED19203	R27	4	271	45	6	4	58	14	21	2	21	4	1.494	0.738	73	23
SED19203	R301	1	21	3	0	2	22	2	9	0	6	1	1.346	0.852	70	14
SED19203	R301	2	247	8	4	21	39	6	9	1	12	4	1.172	0.644	69	10
SED19203	R301	3	26	11	3	9	24	5	12	1	10	4	1.33	0.775	69	16
SED19203	R301	4	34	5	3	5	32	4	16	1	10	1	1.425	0.801	68	19
SED19203	R302	1	46	17	8	0	21	5	12	2	9	0	1.461	0.889	69	17
SED19203	R302	2	122	24	9	0	26	5	16	1	9	0	1.306	0.761	63	14
SED19203	R302	3	33	13	5	2	36	5	19	1	9	2	1.638	0.897	70	27
SED19203	R302	4	36	12	11	1	24	4	13	1	9	1	1.454	0.865	70	17
SED19203	R303	1	138	34	13	5	21	4	4	3	9	4	1.221	0.757	74	9
SED19203	R303	2	110	21	5	8	27	4	2	1	8	1	1.268	0.797	73	11
SED19203	R303	3	167	36	11	7	20	4	3	2	8	1	1.187	0.775	72	9
SED19203	R303	4	174	48	7	10	29	5	4	2	9	3	1.297	0.776	74	11
SED19203	R304	1	2	2	3	0	5	2	4	1	2	0	0.785	0.728	70	5
SED19203	R304	2	22	4	0	0	10	2	9	0	5	0	1.164	0.843	64	9
SED19203	R304	3	5	3	0	2	8	2	8	0	3	1	1.031	0.792	64	8
SED19203	R304	4	4	4	3	0	5	2	5	1	2	0	0.934	0.839	56	6
SED19203	R305	1	0	0	0	2	7	0	2	0	0	1	0.717	0.717	68	4
SED19203	R305	2	1	0	0	1	11	0	0	0	1	1	0.428	0.384	64	1
SED19203	R305	3	0	0	0	0	6	0	1	0	0	0	0.324	0.383	67	1
SED19203	R305	4	0	0	0	0	8	0	0	0	0	0	0.403	0.446	67	2
SED19203	R306	1	22	8	0	4	25	5	6	0	8	2	1.449	0.898	76	17
SED19203	R306	2	46	14	0	8	36	6	15	0	10	2	1.481	0.82	80	16
SED19203	R306	3	20	10	1	1	24	5	5	1	10	1	1.443	0.895	70	16
SED19203	R306	4	71	26	0	5	31	9	9	0	17	2	1.248	0.705	74	13

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
SED19203	R307	1	MO	1	48	5	17	122	33	2	-58.4	96.1	1.8258		88	16	74	3
SED19203	R307	2	MO	1	48	5	17	122	33	2	-58.4	96.1	1.8258		95	18	79	5
SED19203	R307	3	MO	1	48	5	17	122	33	2	-58.4	96.1	1.8258		51	18	31	8
SED19203	R307	4	MO	1	48	5	17	122	33	2	-58.4	96.1	1.8258		122	17	105	3
SED19203	R308	1	MO	1	47	43	4	122	38	10	-18.9	11.0	0.388		619	59	522	62
SED19203	R308	2	MO	1	47	43	4	122	38	10	-18.9	11.0	0.388		497	65	393	22
SED19203	R308	3	MO	1	47	43	4	122	38	10	-18.9	11.0	0.388		489	49	395	37
SED19203	R308	4	MO	1	47	43	4	122	38	10	-18.9	11.0	0.388		369	53	278	18
SED19203	R36	1	MO	1	47	30	49	122	23	51	-17.7	2.3	0.2236		149	46	46	31
SED19203	R36	2	MO	1	47	30	49	122	23	51	-17.7	2.3	0.2236		212	57	90	28
SED19203	R36	3	MO	1	47	30	49	122	23	51	-17.7	2.3	0.2236		264	73	128	37
SED19203	R36	4	MO	1	47	30	49	122	23	51	-17.7	2.3	0.2236		264	72	145	28
SED19203	R37	1	MO	1	47	29	15	122	27	21	-21.2	3.2	0.1817		881	135	557	122
SED19203	R37	2	MO	1	47	29	15	122	27	21	-21.2	3.2	0.1817		391	99	269	27
SED19203	R37	3	MO	1	47	29	15	122	27	21	-21.2	3.2	0.1817		828	125	610	47
SED19203	R37	4	MO	1	47	29	15	122	27	21	-21.2	3.2	0.1817		787	119	560	73
CBBLAIR	BO9		MO	2	47	16	31	122	24	30	11.2	47.5	0.7		11683	500	6720.8	4300
CBBLAIR	BO4		MO	2	47	16	15	122	23	52	11.4	64	1.7		13433	695.8	6362.5	6420.8
CBBLAIR	BO3		MO	2	47	15	54	122	23	25	11.4	64	2.2		10558	566.7	4000	5820.8
CBBLAIR	B15		MO	2	47	16	15	122	23	52	11.2	61.5	1.5		10671	562.5	4250	5558.3
CBBLAIR	B12		MO	2	47	15	44	122	23	9	12.9	84	1.4		15050	625	7620.8	6945.8
CBBLAIR	B10		MO	2	47	16	47	122	25	2	12.3	72.5	1.3		33888	600	14846	17138
CBMSQS	BL-11	B1	MO	2	47	15	22	122	22	39	11.1	55.202	1.3		811	31	139	607
CBMSQS	BL-11	B2	MO	2	47	15	22	122	22	39	11.1	55.202	1.3		891	44	160	640
CBMSQS	BL-11	B3	MO	2	47	15	22	122	22	39	11.1	55.202	1.3		841	26	112	675
CBMSQS	BL-11	B4	MO	2	47	15	22	122	22	39	11.1	55.202	1.3		928	39	230	631
CBMSQS	BL-13	B1	MO	2	47	15	42	122	23	5	13.0	84.005	2		815	28	302	501
CBMSQS	BL-13	B2	MO	2	47	15	42	122	23	5	13.0	84.005	2		850	32	311	515
CBMSQS	BL-13	B3	MO	2	47	15	42	122	23	5	13.0	84.005	2		423	29	230	184
CBMSQS	BL-13	B4	MO	2	47	15	42	122	23	5	13.0	84.005	2		457	34	213	224
CBMSQS	BL-21	B1	MO	2	47	15	56	122	23	27	11.4	64.099	1.1		599	23	312	250

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
SED19203	R307	1	8	4	0	3	9	1	3	0	3	1	0.78	0.648	67	3
SED19203	R307	2	6	1	0	5	12	1	3	0	2	1	0.723	0.576	69	3
SED19203	R307	3	9	4	0	3	8	1	5	0	4	1	1.08	0.86	65	8
SED19203	R307	4	12	8	0	2	11	1	3	0	2	1	0.691	0.562	58	3
SED19203	R308	1	30	7	0	5	37	6	11	0	10	1	1.042	0.589	67	7
SED19203	R308	2	31	5	37	14	37	4	14	3	8	3	1.236	0.682	69	10
SED19203	R308	3	30	1	24	3	28	1	13	2	4	2	1.083	0.641	69	7
SED19203	R308	4	31	8	0	28	31	4	8	0	8	4	1.342	0.778	67	13
SED19203	R36	1	72	50	0	0	21	11	10	0	15	0	1.43	0.86	77	16
SED19203	R36	2	92	57	1	1	29	11	10	1	16	1	1.581	0.9	74	23
SED19203	R36	3	91	55	1	6	36	12	15	1	17	3	1.596	0.856	75	25
SED19203	R36	4	80	59	2	6	33	14	16	2	19	1	1.551	0.835	77	22
SED19203	R37	1	128	49	10	61	69	15	24	4	26	10	1.608	0.755	81	25
SED19203	R37	2	58	28	7	30	60	10	14	2	17	5	1.737	0.87	76	31
SED19203	R37	3	118	57	11	30	78	11	19	3	18	5	1.726	0.823	76	31
SED19203	R37	4	99	44	14	35	68	11	18	6	21	5	1.73	0.834	78	30
CBBLAIR	BO9		620.8	29.2	20.8		258.3		158.3	8.3	62.5					
CBBLAIR	BO4		612.5	0	29.2	1	420.8		166.7	16.7	83.3	1				
CBBLAIR	BO3		675	0	54.2	6	333.3		129.2	16.7	83.3	2				
CBBLAIR	B15		825	8.3	25	14	258.3		212.5	16.7	66.7	2				
CBBLAIR	B12		433.3	8.3	37.5	8	408.3		104.2	20.8	79.2	3				
CBBLAIR	B10		1795.8	41.7	58.3	5	308.3		187.5	25	62.5	3				
CBMSQS	BL-11	B1	64	1	1	0	14	1	11	1	5	0	0.668	0.448	66	3
CBMSQS	BL-11	B2	90	0	1	0	27	0	12	1	4	0	0.749	0.456	67	4
CBMSQS	BL-11	B3	52	0	2	0	13	0	9	1	3	0	0.495	0.35	67	1
CBMSQS	BL-11	B4	66	0	0	1	23	0	12	0	3	1	0.692	0.435	67	3
CBMSQS	BL-13	B1	11	2	0	1	17	1	5	0	5	1	0.621	0.429	66	2
CBMSQS	BL-13	B2	24	0	0	0	19	0	8	0	5	0	0.628	0.417	67	2
CBMSQS	BL-13	B3	3	1	2	2	18	1	5	1	3	1	0.739	0.505	67	3
CBMSQS	BL-13	B4	14	0	3	3	21	0	7	1	4	1	0.81	0.529	66	3
CBMSQS	BL-21	B1	27	0	8	2	16	0	4	1	1	1	0.777	0.57	66	3

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
CBMSQS	BL-21	B2	MO	2	47	15	56	122	23	27	11.4	64.099	1.1		363	26	192	107
CBMSQS	BL-21	B3	MO	2	47	15	56	122	23	27	11.4	64.099	1.1		417	30	201	196
CBMSQS	BL-21	B4	MO	2	47	15	56	122	23	27	11.4	64.099	1.1		894	32	238	627
CBMSQS	BL-25	B1	MO	2	47	16	3	122	23	43	11.1	87.82	1.5		362	29	160	171
CBMSQS	BL-25	B2	MO	2	47	16	3	122	23	43	11.1	87.82	1.5		682	32	254	400
CBMSQS	BL-25	B3	MO	2	47	16	3	122	23	43	11.1	87.82	1.5		693	25	249	381
CBMSQS	BL-25	B4	MO	2	47	16	3	122	23	43	11.1	87.82	1.5		829	30	373	406
CBMSQS	BL-28	B1	MO	2	47	16	21	122	24	5	11.4	36.505	0.7		186	25	57	98
CBMSQS	BL-28	B2	MO	2	47	16	21	122	24	5	11.4	36.505	0.7		277	23	116	146
CBMSQS	BL-28	B3	MO	2	47	16	21	122	24	5	11.4	36.505	0.7		113	17	25	75
CBMSQS	BL-28	B4	MO	2	47	16	21	122	24	5	11.4	36.505	0.7		168	25	53	107
CBMSQS	BL-31	B1	MO	2	47	16	40	122	24	43	11.0	59.897	1.1		511	18	372	131
CBMSQS	BL-31	B2	MO	2	47	16	40	122	24	43	11.0	59.897	1.1		411	21	306	91
CBMSQS	BL-31	B3	MO	2	47	16	40	122	24	43	11.0	59.897	1.1		243	27	93	137
CBMSQS	BL-31	B4	MO	2	47	16	40	122	24	43	11.0	59.897	1.1		998	26	707	263
CBMSQS	CI-11	B1	MO	2	47	14	33	122	25	50	1.8	39.352	8.9		3676	15	701	0
CBMSQS	CI-11	B2	MO	2	47	14	33	122	25	50	1.8	39.352	8.9		2011	12	364	1
CBMSQS	CI-11	B3	MO	2	47	14	33	122	25	50	1.8	39.352	8.9		2264	8	209	0
CBMSQS	CI-11	B4	MO	2	47	14	33	122	25	50	1.8	39.352	8.9		1724	8	196	0
CBMSQS	CI-13	B1	MO	2	47	14	46	122	25	51	4.8	78.305	6.5		108	20	91	14
CBMSQS	CI-13	B2	MO	2	47	14	46	122	25	51	4.8	78.305	6.5		78	15	59	18
CBMSQS	CI-13	B3	MO	2	47	14	46	122	25	51	4.8	78.305	6.5		81	22	61	17
CBMSQS	CI-13	B4	MO	2	47	14	46	122	25	51	4.8	78.305	6.5		68	16	55	13
CBMSQS	CI-16	B1	MO	2	47	15	6	122	25	45	1.9	73.65	10.9		63	4	63	0
CBMSQS	CI-16	B2	MO	2	47	15	6	122	25	45	1.9	73.65	10.9		123	12	53	5
CBMSQS	CI-16	B3	MO	2	47	15	6	122	25	45	1.9	73.65	10.9		108	19	44	43
CBMSQS	CI-16	B4	MO	2	47	15	6	122	25	45	1.9	73.65	10.9		94	17	60	12
CBMSQS	CI-17	B1	MO	2	47	15	7	122	25	54	7.1	72.313	5.6		560	30	464	79
CBMSQS	CI-17	B2	MO	2	47	15	7	122	25	54	7.1	72.313	5.6		834	35	716	80
CBMSQS	CI-17	B3	MO	2	47	15	7	122	25	54	7.1	72.313	5.6		991	37	834	107
CBMSQS	CI-17	B4	MO	2	47	15	7	122	25	54	7.1	72.313	5.6		1041	41	870	135
CBMSQS	CI-20	B1	MO	2	47	15	22	122	25	58	8.5	79.718	4.6		609	36	165	377
CBMSQS	CI-20	B2	MO	2	47	15	22	122	25	58	8.5	79.718	4.6		457	30	123	286

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
CBMSQS	BL-21	B2	61	0	1	2	12	0	8	1	3	2	0.853	0.603	66	3
CBMSQS	BL-21	B3	16	0	2	2	14	0	10	1	4	1	0.789	0.534	67	3
CBMSQS	BL-21	B4	28	0	0	1	19	0	9	0	3	1	0.671	0.446	63	3
CBMSQS	BL-25	B1	27	0	2	0	16	0	8	1	3	0	0.847	0.579	62	3
CBMSQS	BL-25	B2	26	0	2	0	18	0	11	1	2	0	0.837	0.556	60	3
CBMSQS	BL-25	B3	62	0	1	0	13	0	8	1	3	0	0.752	0.538	63	3
CBMSQS	BL-25	B4	49	1	0	1	16	1	8	0	5	1	0.701	0.475	63	3
CBMSQS	BL-28	B1	22	2	4	5	11	2	6	1	5	2	0.932	0.667	62	5
CBMSQS	BL-28	B2	12	0	3	0	12	0	5	2	4	0	0.816	0.599	64	4
CBMSQS	BL-28	B3	11	5	1	1	7	2	5	1	3	1	0.8	0.65	61	4
CBMSQS	BL-28	B4	6	1	2	0	14	1	8	1	2	0	0.908	0.65	61	4
CBMSQS	BL-31	B1	8	0	0	0	11	0	6	0	1	0	0.521	0.415	67	2
CBMSQS	BL-31	B2	13	1	0	1	10	1	7	0	3	1	0.578	0.437	66	2
CBMSQS	BL-31	B3	7	0	3	1	11	0	9	2	3	1	0.856	0.598	64	4
CBMSQS	BL-31	B4	25	0	1	2	13	0	6	1	5	1	0.501	0.354	66	2
CBMSQS	CI-11	B1	1	1	0	3	11	1	0	0	1	2	0.242	0.206	1	1
CBMSQS	CI-11	B2	5	1	0	8	6	1	1	0	2	2	0.248	0.229	0	1
CBMSQS	CI-11	B3	0	0	0	8	5	0	0	0	0	2	0.158	0.176	5	1
CBMSQS	CI-11	B4	2	0	0	4	4	0	0	0	1	2	0.176	0.195	2	1
CBMSQS	CI-13	B1	3	0	0	0	13	0	4	0	3	0	0.816	0.627	60	4
CBMSQS	CI-13	B2	1	0	0	0	10	0	4	0	1	0	0.897	0.763	59	6
CBMSQS	CI-13	B3	3	1	0	0	13	1	6	0	3	0	0.989	0.737	65	6
CBMSQS	CI-13	B4	0	0	0	0	11	0	5	0	0	0	0.948	0.787	66	5
CBMSQS	CI-16	B1	0	0	0	0	4	0	0	0	0	0	0.131	0.218	1	1
CBMSQS	CI-16	B2	0	0	0	0	7	0	4	0	0	0	0.595	0.551	7	2
CBMSQS	CI-16	B3	21	0	0	0	12	0	4	0	3	0	0.963	0.753	66	5
CBMSQS	CI-16	B4	4	0	0	0	10	0	4	0	2	0	0.834	0.678	47	4
CBMSQS	CI-17	B1	17	0	0	0	20	0	5	0	5	0	0.835	0.565	66	4
CBMSQS	CI-17	B2	38	1	0	0	20	1	7	0	8	0	0.857	0.555	66	4
CBMSQS	CI-17	B3	49	0	1	0	18	0	10	1	8	0	0.886	0.565	66	4
CBMSQS	CI-17	B4	35	0	0	1	28	0	6	0	6	1	0.897	0.556	67	5
CBMSQS	CI-20	B1	62	0	4	1	18	0	9	1	7	1	0.837	0.538	64	4
CBMSQS	CI-20	B2	48	0	0	0	17	0	8	0	5	0	0.793	0.537	64	4

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
CBMSQS	CI-20	B3	MO	2	47	15	22	122	25	58	8.5	79.718	4.6		570	36	128	380
CBMSQS	CI-20	B4	MO	2	47	15	22	122	25	58	8.5	79.718	4.6		519	34	129	335
CBMSQS	CI-22	B1	MO	2	47	15	37	122	26	8	9.3	28.025	1.2		512	43	259	203
CBMSQS	CI-22	B2	MO	2	47	15	37	122	26	8	9.3	28.025	1.2		619	40	246	293
CBMSQS	CI-22	B3	MO	2	47	15	37	122	26	8	9.3	28.025	1.2		557	42	242	245
CBMSQS	CI-22	B4	MO	2	47	15	37	122	26	8	9.3	28.025	1.2		543	31	235	247
CBMSQS	CR-11	B1	MO	2	47	17	1	122	24	22	5.1	4.34	0.4		429	48	275	93
CBMSQS	CR-11	B2	MO	2	47	17	1	122	24	22	5.1	4.34	0.4		298	39	46	86
CBMSQS	CR-11	B3	MO	2	47	17	1	122	24	22	5.1	4.34	0.4		306	54	94	87
CBMSQS	CR-11	B4	MO	2	47	17	1	122	24	22	5.1	4.34	0.4		394	60	159	66
CBMSQS	CR-12	B1	MO	2	47	17	30	122	41	3	19.3	12.814	0.3		191	56	86	45
CBMSQS	CR-12	B2	MO	2	47	17	30	122	41	3	19.3	12.814	0.3		215	49	109	66
CBMSQS	CR-12	B3	MO	2	47	17	30	122	41	3	19.3	12.814	0.3		205	47	91	76
CBMSQS	CR-12	B4	MO	2	47	17	30	122	41	3	19.3	12.814	0.3		204	44	77	76
CBMSQS	CR-13	B1	MO	2	47	18	1	122	40	57	2.7	7.662	0.2		197	37	121	57
CBMSQS	CR-13	B2	MO	2	47	18	1	122	40	57	2.7	7.662	0.2		172	44	97	51
CBMSQS	CR-13	B3	MO	2	47	18	1	122	40	57	2.7	7.662	0.2		144	33	66	66
CBMSQS	CR-13	B4	MO	2	47	18	1	122	40	57	2.7	7.662	0.2		117	31	72	36
CBMSQS	CR-14	B1	MO	2	47	16	27	122	45	25	2.2	23.891	0.4		141	32	68	42
CBMSQS	CR-14	B2	MO	2	47	16	27	122	45	25	2.2	23.891	0.4		278	31	88	40
CBMSQS	CR-14	B3	MO	2	47	16	27	122	45	25	2.2	23.891	0.4		118	30	65	36
CBMSQS	CR-14	B4	MO	2	47	16	27	122	45	25	2.2	23.891	0.4		127	41	64	52
CBMSQS	HY-12	B1	MO	2	47	15	46	122	21	37	9.2	78.527	5.7		504	23	310	183
CBMSQS	HY-12	B2	MO	2	47	15	46	122	21	37	9.2	78.527	5.7		720	27	473	220
CBMSQS	HY-12	B3	MO	2	47	15	46	122	21	37	9.2	78.527	5.7		835	27	388	371
CBMSQS	HY-12	B4	MO	2	47	15	46	122	21	37	9.2	78.527	5.7		536	23	307	203
CBMSQS	HY-14	B1	MO	2	47	15	51	122	21	51	11.6	47.935	4.5		413	36	392	13
CBMSQS	HY-14	B2	MO	2	47	15	51	122	21	51	11.6	47.935	4.5		355	26	336	14
CBMSQS	HY-14	B3	MO	2	47	15	51	122	21	51	11.6	47.935	4.5		516	26	482	28
CBMSQS	HY-14	B4	MO	2	47	15	51	122	21	51	11.6	47.935	4.5		113	19	101	10
CBMSQS	HY-17	B1	MO	2	47	15	57	122	22	0	8.6	66.934	5.2		100	20	88	9
CBMSQS	HY-17	B2	MO	2	47	15	57	122	22	0	8.6	66.934	5.2		671	24	649	17
CBMSQS	HY-17	B3	MO	2	47	15	57	122	22	0	8.6	66.934	5.2		327	24	317	6

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
CBMSQS	CI-20	B3	60	0	0	2	18	0	12	0	5	1	0.813	0.522	63	3
CBMSQS	CI-20	B4	46	2	5	4	17	1	8	1	7	1	0.835	0.545	63	3
CBMSQS	CI-22	B1	47	0	3	0	28	0	8	2	5	0	0.856	0.524	67	3
CBMSQS	CI-22	B2	74	1	5	1	23	1	9	1	6	1	0.9	0.562	62	4
CBMSQS	CI-22	B3	69	1	1	0	26	1	9	1	6	0	0.937	0.577	63	4
CBMSQS	CI-22	B4	57	0	4	0	16	0	9	2	4	0	0.846	0.567	63	3
CBMSQS	CR-11	B1	55	13	1	1	27	2	12	1	6	1	1.093	0.65	91	7
CBMSQS	CR-11	B2	165	5	0	1	15	4	14	0	9	1	0.94	0.591	76	6
CBMSQS	CR-11	B3	124	33	0	0	32	6	14	0	7	0	1.281	0.74	69	12
CBMSQS	CR-11	B4	166	15	1	1	30	10	14	1	13	1	1.181	0.664	76	10
CBMSQS	CR-12	B1	40	5	17	3	33	3	15	1	5	2	1.418	0.811	73	17
CBMSQS	CR-12	B2	34	2	4	2	29	2	11	1	6	2	1.305	0.772	69	12
CBMSQS	CR-12	B3	19	3	18	1	30	3	9	1	6	1	1.24	0.742	71	10
CBMSQS	CR-12	B4	32	4	17	2	23	4	9	2	8	2	1.231	0.749	71	10
CBMSQS	CR-13	B1	19	11	0	0	20	5	9	0	8	0	1.178	0.751	67	9
CBMSQS	CR-13	B2	22	16	0	1	20	7	9	0	13	1	1.304	0.794	65	11
CBMSQS	CR-13	B3	12	6	0	0	15	5	9	0	9	0	1.19	0.783	67	9
CBMSQS	CR-13	B4	9	6	0	0	16	4	9	0	6	0	1.211	0.812	67	10
CBMSQS	CR-14	B1	26	11	0	2	15	3	8	0	6	2	1.288	0.856	68	11
CBMSQS	CR-14	B2	150	140	0	0	17	4	9	0	5	0	1.063	0.712	93	6
CBMSQS	CR-14	B3	15	10	0	2	16	3	8	0	5	1	1.295	0.877	71	13
CBMSQS	CR-14	B4	9	6	0	2	20	4	14	0	6	1	1.319	0.818	73	15
CBMSQS	HY-12	B1	11	0	0	0	16	0	4	0	3	0	0.836	0.614	70	3
CBMSQS	HY-12	B2	27	0	0	0	20	0	3	0	4	0	0.792	0.553	69	3
CBMSQS	HY-12	B3	76	0	0	0	18	0	5	0	4	0	0.811	0.567	68	4
CBMSQS	HY-12	B4	26	0	0	0	16	0	4	0	3	0	0.777	0.57	68	3
CBMSQS	HY-14	B1	6	0	0	1	27	0	4	0	3	1	0.851	0.547	67	3
CBMSQS	HY-14	B2	5	0	0	0	20	0	3	0	3	0	0.816	0.576	73	3
CBMSQS	HY-14	B3	6	0	0	0	19	0	4	0	3	0	0.759	0.537	68	3
CBMSQS	HY-14	B4	2	0	0	0	13	0	4	0	2	0	0.89	0.696	72	4
CBMSQS	HY-17	B1	3	0	0	0	13	0	5	0	2	0	0.917	0.705	66	7
CBMSQS	HY-17	B2	5	1	0	0	17	1	3	0	4	0	0.404	0.293	68	1
CBMSQS	HY-17	B3	4	0	0	0	19	0	3	0	2	0	0.447	0.324	67	1

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
CBMSQS	HY-17	B4	MO	2	47	15	57	122	22	0	8.6	66.934	5.2		517	22	500	11
CBMSQS	HY-22	B1	MO	2	47	16	9	122	22	23	9.5	75.527	4.4		454	30	427	18
CBMSQS	HY-22	B2	MO	2	47	16	9	122	22	23	9.5	75.527	4.4		370	22	353	12
CBMSQS	HY-22	B3	MO	2	47	16	9	122	22	23	9.5	75.527	4.4		22	11	20	2
CBMSQS	HY-22	B4	MO	2	47	16	9	122	22	23	9.5	75.527	4.4		56	13	43	9
CBMSQS	HY-23	B1	MO	2	47	16	11	122	22	21	9.8	86.45	3.8		60	9	24	27
CBMSQS	HY-23	B2	MO	2	47	16	11	122	22	21	9.8	86.45	3.8		15	7	5	8
CBMSQS	HY-23	B3	MO	2	47	16	11	122	22	21	9.8	86.45	3.8		25	11	6	17
CBMSQS	HY-23	B4	MO	2	47	16	11	122	22	21	9.8	86.45	3.8		26	7	5	19
CBMSQS	HY-24	B1	MO	2	47	16	13	122	22	21	9.1	81.516	5.1		390	27	177	168
CBMSQS	HY-24	B2	MO	2	47	16	13	122	22	21	9.1	81.516	5.1		403	21	292	94
CBMSQS	HY-24	B3	MO	2	47	16	13	122	22	21	9.1	81.516	5.1		436	22	339	77
CBMSQS	HY-24	B4	MO	2	47	16	13	122	22	21	9.1	81.516	5.1		401	23	230	145
CBMSQS	HY-28	B1	MO	2	47	16	25	122	22	49	7.8	61.099	3.1		1044	44	948	49
CBMSQS	HY-28	B2	MO	2	47	16	25	122	22	49	7.8	61.099	3.1		832	37	764	45
CBMSQS	HY-28	B3	MO	2	47	16	25	122	22	49	7.8	61.099	3.1		927	54	665	141
CBMSQS	HY-28	B4	MO	2	47	16	25	122	22	49	7.8	61.099	3.1		855	39	719	93
CBMSQS	HY-32	B1	MO	2	47	16	33	122	23	6	9.6	61.148	3.8		53	8	50	2
CBMSQS	HY-32	B2	MO	2	47	16	33	122	23	6	9.6	61.148	3.8		386	25	367	16
CBMSQS	HY-32	B3	MO	2	47	16	33	122	23	6	9.6	61.148	3.8		204	22	194	7
CBMSQS	HY-32	B4	MO	2	47	16	33	122	23	6	9.6	61.148	3.8		109	17	97	8
CBMSQS	HY-37	B1	MO	2	47	16	41	122	23	41	10.2	77.486	2.5		313	24	233	54
CBMSQS	HY-37	B2	MO	2	47	16	41	122	23	41	10.2	77.486	2.5		290	28	256	28
CBMSQS	HY-37	B3	MO	2	47	16	41	122	23	41	10.2	77.486	2.5		36	16	19	9
CBMSQS	HY-37	B4	MO	2	47	16	41	122	23	41	10.2	77.486	2.5		358	29	301	36
CBMSQS	HY-42	B1	MO	2	47	16	45	122	24	2	8.9	78.065	2.4		795	26	661	119
CBMSQS	HY-42	B2	MO	2	47	16	45	122	24	2	8.9	78.065	2.4		781	24	648	96
CBMSQS	HY-42	B3	MO	2	47	16	45	122	24	2	8.9	78.065	2.4		725	24	629	64
CBMSQS	HY-42	B4	MO	2	47	16	45	122	24	2	8.9	78.065	2.4		770	27	633	103
CBMSQS	HY-43	B1	MO	2	47	16	45	122	24	1	9.4	57.154	2.9		601	33	396	172
CBMSQS	HY-43	B2	MO	2	47	16	45	122	24	1	9.4	57.154	2.9		504	41	454	37
CBMSQS	HY-43	B3	MO	2	47	16	45	122	24	1	9.4	57.154	2.9		532	30	473	51
CBMSQS	HY-43	B4	MO	2	47	16	45	122	24	1	9.4	57.154	2.9		507	31	345	120

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
CBMSQS	HY-17	B4	6	0	0	0	17	0	3	0	2	0	0.48	0.357	68	1
CBMSQS	HY-22	B1	8	2	1	0	20	1	5	1	4	0	0.534	0.361	66	2
CBMSQS	HY-22	B2	5	2	0	0	15	2	3	0	4	0	0.466	0.347	66	1
CBMSQS	HY-22	B3	0	0	0	0	9	0	2	0	0	0	0.887	0.852	68	6
CBMSQS	HY-22	B4	3	2	0	0	6	2	3	0	3	0	0.714	0.641	64	4
CBMSQS	HY-23	B1	9	0	0	0	5	0	2	0	2	0	0.706	0.74	66	3
CBMSQS	HY-23	B2	1	0	1	0	3	0	2	1	1	0	0.729	0.863	61	4
CBMSQS	HY-23	B3	2	0	0	0	4	0	5	0	2	0	0.933	0.896	58	5
CBMSQS	HY-23	B4	2	0	0	0	3	0	3	0	1	0	0.612	0.724	64	3
CBMSQS	HY-24	B1	44	0	1	0	14	0	10	1	2	0	0.727	0.508	66	3
CBMSQS	HY-24	B2	17	0	0	0	13	0	6	0	2	0	0.572	0.433	67	2
CBMSQS	HY-24	B3	20	3	0	0	11	1	6	0	5	0	0.565	0.421	66	2
CBMSQS	HY-24	B4	26	0	0	0	13	0	7	0	3	0	0.739	0.542	66	3
CBMSQS	HY-28	B1	46	0	0	1	31	0	7	0	5	1	0.52	0.316	66	1
CBMSQS	HY-28	B2	19	1	2	2	21	1	6	1	8	1	0.504	0.321	65	1
CBMSQS	HY-28	B3	102	6	10	3	29	3	9	3	11	1	0.956	0.552	66	6
CBMSQS	HY-28	B4	37	3	1	1	23	1	8	1	5	1	0.651	0.409	65	3
CBMSQS	HY-32	B1	1	1	0	0	6	1	1	0	1	0	0.632	0.7	67	3
CBMSQS	HY-32	B2	3	0	0	0	18	0	5	0	2	0	0.412	0.295	67	1
CBMSQS	HY-32	B3	3	1	0	0	16	1	4	0	2	0	0.446	0.332	66	1
CBMSQS	HY-32	B4	4	0	0	0	10	0	6	0	1	0	0.556	0.452	66	2
CBMSQS	HY-37	B1	23	2	1	2	11	2	7	1	4	1	0.681	0.494	67	3
CBMSQS	HY-37	B2	4	0	1	1	19	0	5	1	2	1	0.589	0.407	67	2
CBMSQS	HY-37	B3	7	0	0	1	8	0	3	0	4	1	1.018	0.846	58	7
CBMSQS	HY-37	B4	19	0	2	0	16	0	9	1	3	0	0.548	0.374	67	2
CBMSQS	HY-42	B1	15	0	0	0	10	0	14	0	2	0	0.423	0.299	66	1
CBMSQS	HY-42	B2	34	0	1	2	11	0	9	1	2	1	0.437	0.317	66	1
CBMSQS	HY-42	B3	28	0	1	3	11	0	8	1	3	1	0.438	0.317	66	1
CBMSQS	HY-42	B4	34	1	0	0	12	1	12	0	3	0	0.428	0.299	66	1
CBMSQS	HY-43	B1	32	4	1	0	15	3	11	1	6	0	0.679	0.447	66	2
CBMSQS	HY-43	B2	7	1	2	4	25	1	8	2	5	1	0.6	0.372	65	2
CBMSQS	HY-43	B3	5	0	2	1	16	0	10	2	1	1	0.536	0.363	66	2
CBMSQS	HY-43	B4	42	0	0	0	18	0	10	0	3	0	0.7	0.47	66	3

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
CBMSQS	HY-44	B1	MO	2	47	16	46	122	23	57	1.8	5.617	0.3		83	20	46	26
CBMSQS	HY-44	B2	MO	2	47	16	46	122	23	57	1.8	5.617	0.3		195	25	96	75
CBMSQS	HY-44	B3	MO	2	47	16	46	122	23	57	1.8	5.617	0.3		101	25	38	50
CBMSQS	HY-44	B4	MO	2	47	16	46	122	23	57	1.8	5.617	0.3		206	28	96	92
CBMSQS	HY-47	B1	MO	2	47	16	52	122	24	9	7.1	78.288	1.8		646	23	614	18
CBMSQS	HY-47	B2	MO	2	47	16	52	122	24	9	7.1	78.288	1.8		577	27	524	39
CBMSQS	HY-47	B3	MO	2	47	16	52	122	24	9	7.1	78.288	1.8		492	27	418	52
CBMSQS	HY-47	B4	MO	2	47	16	52	122	24	9	7.1	78.288	1.8		394	26	354	19
CBMSQS	HY-50	B1	MO	2	47	17	18	122	24	58	17.8	85.723	2.3		904	37	384	464
CBMSQS	HY-50	B2	MO	2	47	17	18	122	24	58	17.8	85.723	2.3		1398	41	826	504
CBMSQS	HY-50	B3	MO	2	47	17	18	122	24	58	17.8	85.723	2.3		1212	41	716	437
CBMSQS	HY-50	B4	MO	2	47	17	18	122	24	58	17.8	85.723	2.3		936	34	516	380
CBMSQS	MD-12	B1	MO	2	47	15	44	122	25	49	5.5	56.142	4		105	16	74	17
CBMSQS	MD-12	B2	MO	2	47	15	44	122	25	49	5.5	56.142	4		660	40	572	85
CBMSQS	MD-12	B3	MO	2	47	15	44	122	25	49	5.5	56.142	4		74	17	60	14
CBMSQS	MD-12	B4	MO	2	47	15	44	122	25	49	5.5	56.142	4		873	53	698	153
CBMSQS	MI-11	B1	MO	2	47	15	46	122	24	59	7.2	86.001	2.3		868	37	505	317
CBMSQS	MI-11	B2	MO	2	47	15	46	122	24	59	7.2	86.001	2.3		677	32	180	477
CBMSQS	MI-11	B3	MO	2	47	15	46	122	24	59	7.2	86.001	2.3		26	12	9	13
CBMSQS	MI-11	B4	MO	2	47	15	46	122	24	59	7.2	86.001	2.3		705	33	332	338
CBMSQS	MI-13	B1	MO	2	47	15	55	122	25	3	11.6	89.465	2.2		855	34	457	339
CBMSQS	MI-13	B2	MO	2	47	15	55	122	25	3	11.6	89.465	2.2		843	28	391	416
CBMSQS	MI-13	B3	MO	2	47	15	55	122	25	3	11.6	89.465	2.2		805	32	477	294
CBMSQS	MI-13	B4	MO	2	47	15	55	122	25	3	11.6	89.465	2.2		860	29	443	371
CBMSQS	MI-15	B1	MO	2	47	16	9	122	25	17	10.2	85.108	1.5		834	26	557	242
CBMSQS	MI-15	B2	MO	2	47	16	9	122	25	17	10.2	85.108	1.5		895	32	499	360
CBMSQS	MI-15	B3	MO	2	47	16	9	122	25	17	10.2	85.108	1.5		981	31	578	373
CBMSQS	MI-15	B4	MO	2	47	16	9	122	25	17	10.2	85.108	1.5		643	29	227	393
CBMSQS	RS-12	B1	MO	2	47	16	7	122	26	44	8.0	29.28	2.6		383	37	251	57
CBMSQS	RS-12	B2	MO	2	47	16	7	122	26	44	8.0	29.28	2.6		361	33	169	145
CBMSQS	RS-12	B3	MO	2	47	16	7	122	26	44	8.0	29.28	2.6		420	45	269	91
CBMSQS	RS-12	B4	MO	2	47	16	7	122	26	44	8.0	29.28	2.6		649	58	364	181
CBMSQS	RS-13	B1	MO	2	47	16	37	122	27	54	5.7	12.569	0.7		988	88	513	84

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
CBMSQS	HY-44	B1	11	1	0	0	10	1	7	0	3	0	0.994	0.764	69	6
CBMSQS	HY-44	B2	22	2	0	0	12	2	7	0	5	0	0.98	0.701	67	5
CBMSQS	HY-44	B3	12	2	0	0	12	2	8	0	4	0	1.037	0.742	66	7
CBMSQS	HY-44	B4	17	1	0	0	13	1	10	0	4	0	1.039	0.718	64	6
CBMSQS	HY-47	B1	11	0	0	3	15	0	3	0	4	1	0.36	0.264	67	1
CBMSQS	HY-47	B2	13	0	0	1	15	0	7	0	4	1	0.438	0.306	67	1
CBMSQS	HY-47	B3	22	0	0	0	13	0	11	0	3	0	0.55	0.384	66	2
CBMSQS	HY-47	B4	19	1	0	2	11	1	7	0	7	1	0.557	0.394	66	2
CBMSQS	HY-50	B1	40	2	11	5	14	2	12	2	7	2	0.71	0.453	63	2
CBMSQS	HY-50	B2	45	0	19	4	22	0	13	2	3	1	0.669	0.415	62	2
CBMSQS	HY-50	B3	44	3	10	3	19	1	11	3	6	1	0.639	0.396	64	2
CBMSQS	HY-50	B4	31	1	8	1	17	1	9	3	4	1	0.651	0.425	65	2
CBMSQS	MD-12	B1	14	0	0	0	11	0	2	0	3	0	0.967	0.803	62	6
CBMSQS	MD-12	B2	1	0	0	2	24	0	13	0	1	2	0.732	0.457	65	3
CBMSQS	MD-12	B3	0	0	0	0	10	0	7	0	0	0	0.789	0.641	59	4
CBMSQS	MD-12	B4	18	0	1	3	35	0	13	1	3	1	0.843	0.489	65	5
CBMSQS	MI-11	B1	43	0	2	1	23	0	7	1	5	1	0.742	0.473	65	2
CBMSQS	MI-11	B2	19	1	0	1	14	1	12	0	5	1	0.597	0.396	66	2
CBMSQS	MI-11	B3	4	0	0	0	4	0	5	0	3	0	0.994	0.921	49	6
CBMSQS	MI-11	B4	35	1	0	0	18	1	9	0	6	0	0.781	0.514	66	3
CBMSQS	MI-13	B1	58	0	1	0	18	0	10	1	5	0	0.685	0.447	65	2
CBMSQS	MI-13	B2	34	0	1	1	13	0	9	1	4	1	0.647	0.447	64	2
CBMSQS	MI-13	B3	30	1	2	2	14	1	10	1	6	1	0.652	0.433	65	2
CBMSQS	MI-13	B4	40	0	5	1	12	0	7	2	7	1	0.661	0.452	65	2
CBMSQS	MI-15	B1	34	1	1	0	14	1	7	1	4	0	0.646	0.457	64	2
CBMSQS	MI-15	B2	35	1	1	0	15	1	11	1	5	0	0.701	0.466	63	3
CBMSQS	MI-15	B3	28	1	1	1	11	1	14	1	4	1	0.677	0.454	63	2
CBMSQS	MI-15	B4	22	0	1	0	12	0	13	1	3	0	0.749	0.512	63	3
CBMSQS	RS-12	B1	73	7	0	2	19	3	8	0	8	2	0.992	0.633	41	5
CBMSQS	RS-12	B2	45	1	0	2	16	1	13	0	3	1	1.011	0.666	63	5
CBMSQS	RS-12	B3	50	2	0	10	25	1	13	0	5	2	1.137	0.688	65	7
CBMSQS	RS-12	B4	92	6	1	11	34	4	10	1	10	3	1.042	0.591	64	5
CBMSQS	RS-13	B1	333	88	0	47	51	11	16	0	18	2	1.374	0.706	64	14

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
CBMSQS	RS-13	B2	MO	2	47	16	37	122	27	54	5.7	12.569	0.7		512	59	199	122
CBMSQS	RS-13	B3	MO	2	47	16	37	122	27	54	5.7	12.569	0.7		594	73	247	172
CBMSQS	RS-13	B4	MO	2	47	16	37	122	27	54	5.7	12.569	0.7		435	46	88	165
CBMSQS	RS-14	B1	MO	2	47	17	1	122	28	43	9.4	23.777	15.1		705	91	518	35
CBMSQS	RS-14	B2	MO	2	47	17	1	122	28	43	9.4	23.777	15.1		446	82	296	57
CBMSQS	RS-14	B3	MO	2	47	17	1	122	28	43	9.4	23.777	15.1		706	84	507	43
CBMSQS	RS-14	B4	MO	2	47	17	1	122	28	43	9.4	23.777	15.1		861	68	724	19
CBMSQS	RS-18	B1	MO	2	47	18	4	122	30	12	8.0	33.343	8.8		3	3	0	0
CBMSQS	RS-19	B1	MO	2	47	18	5	122	30	9	9.9	3.192	0.6		263	31	108	2
CBMSQS	RS-19	B2	MO	2	47	18	5	122	30	9	9.9	3.192	0.6		175	30	115	4
CBMSQS	RS-19	B3	MO	2	47	18	5	122	30	9	9.9	3.192	0.6		51	14	24	0
CBMSQS	RS-19	B4	MO	2	47	18	5	122	30	9	9.9	3.192	0.6		148	21	87	2
CBMSQS	RS-20	B1	MO	2	47	18	8	122	30	3	20.7	5.814	0.3		80	45	56	6
CBMSQS	RS-20	B2	MO	2	47	18	8	122	30	3	20.7	5.814	0.3		109	43	55	15
CBMSQS	RS-20	B3	MO	2	47	18	8	122	30	3	20.7	5.814	0.3		161	51	116	15
CBMSQS	RS-20	B4	MO	2	47	18	8	122	30	3	20.7	5.814	0.3		229	57	192	6
CBMSQS	SI-11	B1	MO	2	47	15	59	122	24	44	12.9	79.873	2.1		1063	19	648	410
CBMSQS	SI-11	B2	MO	2	47	15	59	122	24	44	12.9	79.873	2.1		1175	21	624	545
CBMSQS	SI-11	B3	MO	2	47	15	59	122	24	44	12.9	79.873	2.1		790	21	393	390
CBMSQS	SI-11	B4	MO	2	47	15	59	122	24	44	12.9	79.873	2.1		656	14	323	331
CBMSQS	SI-12	B1	MO	2	47	16	5	122	24	53	12.3	76.081	1.6		501	22	362	132
CBMSQS	SI-12	B2	MO	2	47	16	5	122	24	53	12.3	76.081	1.6		895	23	679	210
CBMSQS	SI-12	B3	MO	2	47	16	5	122	24	53	12.3	76.081	1.6		725	14	530	193
CBMSQS	SI-12	B4	MO	2	47	16	5	122	24	53	12.3	76.081	1.6		629	21	477	147
CBMSQS	SI-15	B1	MO	2	47	16	17	122	25	7	11.4	80.517	2.5		1395	33	1041	327
CBMSQS	SI-15	B2	MO	2	47	16	17	122	25	7	11.4	80.517	2.5		737	23	520	202
CBMSQS	SI-15	B3	MO	2	47	16	17	122	25	7	11.4	80.517	2.5		1024	27	894	111
CBMSQS	SI-15	B4	MO	2	47	16	17	122	25	7	11.4	80.517	2.5		493	23	406	79
CBMSQS	SP-11	B1	MO	2	47	15	49	122	25	43	2.3	28.098	3.5		542	42	195	72
CBMSQS	SP-11	B2	MO	2	47	15	49	122	25	43	2.3	28.098	3.5		147	30	66	40
CBMSQS	SP-11	B3	MO	2	47	15	49	122	25	43	2.3	28.098	3.5		200	29	95	26
CBMSQS	SP-11	B4	MO	2	47	15	49	122	25	43	2.3	28.098	3.5		314	33	179	49
CBMSQS	SP-12	B1	MO	2	47	15	52	122	25	45	4.1	49.314	4.6		218	38	118	71

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'.	ITI	SDI
CBMSQS	RS-13	B2	184	64	0	7	30	8	13	0	13	3	1.423	0.804	67	14
CBMSQS	RS-13	B3	158	25	1	5	37	9	14	1	16	4	1.521	0.816	65	18
CBMSQS	RS-13	B4	180	23	0	1	22	6	14	0	8	1	1.181	0.71	64	10
CBMSQS	RS-14	B1	130	10	1	18	61	5	9	1	16	3	1.515	0.774	67	20
CBMSQS	RS-14	B2	82	11	3	8	50	9	10	3	16	3	1.613	0.843	67	22
CBMSQS	RS-14	B3	119	25	0	23	57	8	6	0	17	3	1.577	0.82	62	22
CBMSQS	RS-14	B4	52	26	2	41	43	7	5	2	14	3	1.353	0.738	67	13
CBMSQS	RS-18	B1	2	0	1	0	0	0	0	1	2	0	0.477	1	83	3
CBMSQS	RS-19	B1	127	10	1	15	16	4	2	1	9	2	0.937	0.628	59	5
CBMSQS	RS-19	B2	49	4	0	2	17	2	4	0	6	2	1.153	0.781	80	7
CBMSQS	RS-19	B3	16	2	0	7	8	2	0	0	4	1	0.948	0.827	35	5
CBMSQS	RS-19	B4	49	13	0	10	11	5	2	0	6	2	0.982	0.743	65	5
CBMSQS	RS-20	B1	12	6	2	4	27	5	5	2	8	3	1.538	0.93	72	25
CBMSQS	RS-20	B2	35	16	3	1	23	10	5	1	13	1	1.479	0.906	75	18
CBMSQS	RS-20	B3	23	8	1	6	30	4	7	1	9	3	1.427	0.836	83	18
CBMSQS	RS-20	B4	25	15	1	5	40	7	4	1	9	3	1.449	0.825	77	19
CBMSQS	SI-11	B1	5	1	0	0	11	1	6	0	2	0	0.577	0.451	63	2
CBMSQS	SI-11	B2	4	0	2	0	8	0	10	1	2	0	0.649	0.491	62	3
CBMSQS	SI-11	B3	6	0	0	1	11	0	6	0	3	1	0.625	0.473	63	3
CBMSQS	SI-11	B4	2	0	0	0	6	0	6	0	2	0	0.595	0.519	63	2
CBMSQS	SI-12	B1	6	0	0	1	10	0	8	0	3	1	0.633	0.471	66	2
CBMSQS	SI-12	B2	6	0	0	0	10	0	9	0	4	0	0.526	0.387	65	2
CBMSQS	SI-12	B3	2	0	0	0	5	0	7	0	2	0	0.511	0.446	66	2
CBMSQS	SI-12	B4	4	2	1	0	11	2	6	1	3	0	0.577	0.436	66	2
CBMSQS	SI-15	B1	26	1	1	0	17	1	11	1	4	0	0.444	0.292	66	2
CBMSQS	SI-15	B2	15	1	0	0	12	1	7	0	4	0	0.495	0.363	66	2
CBMSQS	SI-15	B3	17	1	0	2	12	1	11	0	3	1	0.358	0.25	66	1
CBMSQS	SI-15	B4	8	1	0	0	14	1	6	0	3	0	0.511	0.375	65	2
CBMSQS	SP-11	B1	237	7	0	2	28	2	8	0	4	1	1.037	0.639	64	6
CBMSQS	SP-11	B2	41	8	0	0	20	2	6	0	4	0	1.203	0.815	59	10
CBMSQS	SP-11	B3	65	5	0	11	17	3	4	0	6	1	1.127	0.771	62	8
CBMSQS	SP-11	B4	79	5	1	0	19	1	7	1	5	0	1.147	0.755	63	7
CBMSQS	SP-12	B1	27	1	2	0	22	1	10	2	4	0	1.351	0.855	61	13

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
CBMSQS	SP-12	B2	MO	2	47	15	52	122	25	45	4.1	49.314	4.6		377	46	230	106
CBMSQS	SP-12	B3	MO	2	47	15	52	122	25	45	4.1	49.314	4.6		399	49	293	63
CBMSQS	SP-12	B4	MO	2	47	15	52	122	25	45	4.1	49.314	4.6		167	37	93	63
CBMSQS	SP-14	B1	MO	2	47	16	5	122	25	43	4.3	66.6	16		5	3	5	0
CBMSQS	SP-14	B2	MO	2	47	16	5	122	25	43	4.3	66.6	16		4	4	1	0
CBMSQS	SP-14	B3	MO	2	47	16	5	122	25	43	4.3	66.6	16		8	2	1	0
CBMSQS	SP-14	B4	MO	2	47	16	5	122	25	43	4.3	66.6	16		9	5	1	0
CBMSQS	SP-15	B1	MO	2	47	16	6	122	25	47	4.8	25.901	2.1		1166	13	287	3
CBMSQS	SP-15	B2	MO	2	47	16	6	122	25	47	4.8	25.901	2.1		321	11	257	2
CBMSQS	SP-15	B3	MO	2	47	16	6	122	25	47	4.8	25.901	2.1		346	10	245	4
CBMSQS	SP-15	B4	MO	2	47	16	6	122	25	47	4.8	25.901	2.1		534	11	213	3
CBMSQS	SP-16	B1	MO	2	47	16	6	122	25	53	15.4	54.851	1.5		270	28	129	105
CBMSQS	SP-16	B2	MO	2	47	16	6	122	25	53	15.4	54.851	1.5		186	32	69	93
CBMSQS	SP-16	B3	MO	2	47	16	6	122	25	53	15.4	54.851	1.5		186	27	83	90
CBMSQS	SP-16	B4	MO	2	47	16	6	122	25	53	15.4	54.851	1.5		226	29	131	86
PSDDAM90	PG_T11XX	1		2	47	59	3	122	17	27.3	137	91	1.8		39	18	15	16
PSDDAM90	PG_T11XX	2		2	47	59	3	122	17	27.3	137	91	1.8		46	22	11	26
PSDDAM90	PG_T11XX	3		2	47	59	3	122	17	27.3	137	91	1.8		31	18	9	18
PSDDAM90	PG_T11XX	4		2	47	59	3	122	17	27.3	137	91	1.8		49	24	13	27
PSDDAM90	PG_T11XX	5		2	47	59	3	122	17	27.3	137	91	1.8		45	17	9	29
PSDDAM90	PG_T13XX	1		2	47	59	7.1	122	17	43.8	139	94.7	1.8		68	31	16	32
PSDDAM90	PG_T13XX	2		2	47	59	7.1	122	17	43.8	139	94.7	1.8		31	17	6	20
PSDDAM90	PG_T13XX	3		2	47	59	7.1	122	17	43.8	139	94.7	1.8		32	20	9	16
PSDDAM90	PG_T13XX	4		2	47	59	7.1	122	17	43.8	139	94.7	1.8		57	23	7	39
PSDDAM90	PG_T13XX	5		2	47	59	7.1	122	17	43.8	139	94.7	1.8		39	18	8	20
PSDDAM90	PG_T15XX	1		2	47	59	11.4	122	18	2.9	144	96.1	2.1		40	22	10	15
PSDDAM90	PG_T15XX	2		2	47	59	11.4	122	18	2.9	144	96.1	2.1		36	23	11	9
PSDDAM90	PG_T15XX	3		2	47	59	11.4	122	18	2.9	144	96.1	2.1		32	18	13	9
PSDDAM90	PG_T15XX	4		2	47	59	11.4	122	18	2.9	144	96.1	2.1		42	20	13	21
PSDDAM90	PG_T15XX	5		2	47	59	11.4	122	18	2.9	144	96.1	2.1		43	24	18	15
PSDDA1	PGT15	1		2	47	59	11.4	122	18	2.9	-142	99	2		50	24	29	10

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
CBMSQS	SP-12	B2	36	2	0	3	25	1	13	0	6	1	1.369	0.824	61	12
CBMSQS	SP-12	B3	31	11	1	1	31	3	8	1	7	1	1.322	0.782	60	13
CBMSQS	SP-12	B4	9	3	0	1	20	3	10	0	5	1	1.27	0.81	53	10
CBMSQS	SP-14	B1	0	0	0	0	3	0	0	0	0	0	0.458	0.96	67	2
CBMSQS	SP-14	B2	2	1	0	0	1	1	0	0	2	0	0.602	1	67	3
CBMSQS	SP-14	B3	0	0	0	0	1	0	0	0	0	0	0.164	0.544	67	1
CBMSQS	SP-14	B4	5	0	0	0	1	0	0	0	3	0	0.661	0.946	67	3
CBMSQS	SP-15	B1	4	1	0	1	6	1	1	0	4	1	0.336	0.301	8	2
CBMSQS	SP-15	B2	1	0	0	1	6	0	2	0	1	1	0.474	0.455	15	2
CBMSQS	SP-15	B3	0	0	1	0	5	0	3	1	0	0	0.476	0.476	11	2
CBMSQS	SP-15	B4	1	0	0	2	7	0	1	0	1	1	0.446	0.428	10	2
CBMSQS	SP-16	B1	33	2	0	3	16	1	8	0	3	1	1.165	0.805	46	8
CBMSQS	SP-16	B2	23	0	0	1	18	0	11	0	2	1	1.141	0.758	41	9
CBMSQS	SP-16	B3	11	1	0	1	12	1	7	0	6	1	1.081	0.755	36	7
CBMSQS	SP-16	B4	8	1	0	1	17	1	8	0	3	1	1.072	0.733	38	6
PSDDAM90	PG_T11XX	1	4	1	2	1	7	1	6	1	2	1	1.106	0.881	74	9
PSDDAM90	PG_T11XX	2	7	1	1	1	9	1	7	1	4	1	1.145	0.853	65	11
PSDDAM90	PG_T11XX	3	1	1	2	1	8	1	7	1	1	1	1.157	0.922	67	11
PSDDAM90	PG_T11XX	4	8	4	0	1	8	4	9	0	6	1	1.176	0.852	65	12
PSDDAM90	PG_T11XX	5	5	2	1	1	5	1	7	1	3	1	0.95	0.772	80	7
PSDDAM90	PG_T13XX	1	16	7	1	3	11	3	9	1	8	2	1.285	0.862	74	14
PSDDAM90	PG_T13XX	2	4	0	1	0	5	0	9	1	2	0	1.151	0.936	67	10
PSDDAM90	PG_T13XX	3	2	1	2	3	7	1	8	1	2	2	1.185	0.911	72	12
PSDDAM90	PG_T13XX	4	8	4	2	1	7	4	7	2	6	1	1.032	0.758	70	9
PSDDAM90	PG_T13XX	5	8	7	2	1	6	3	6	1	4	1	1.141	0.909	72	9
PSDDAM90	PG_T15XX	1	12	7	1	1	6	5	6	1	7	1	1.247	0.929	71	12
PSDDAM90	PG_T15XX	2	12	6	1	2	9	3	6	1	4	2	1.274	0.935	69	14
PSDDAM90	PG_T15XX	3	8	7	1	1	8	1	6	1	2	1	1.156	0.921	86	10
PSDDAM90	PG_T15XX	4	6	3	1	1	7	2	6	1	5	1	1.167	0.897	82	10
PSDDAM90	PG_T15XX	5	8	6	0	2	9	5	7	0	7	1	1.282	0.929	69	14
PSDDA1	PGT15	1	9	5	1		12	4	4	1	6		1.296	0.939	89	

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SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
PSDDA1	PGT15	2		2	47	59	11.4	122	18	2.9	-142	99	2		63	27	38	12
PSDDA1	PGT15	3		2	47	59	11.4	122	18	2.9	-142	99	2		44	22	22	13
PSDDA1	PGT15	4		2	47	59	11.4	122	18	2.9	-142	99	2		69	28	29	22
PSDDA1	PGT15	5		2	47	59	11.4	122	18	2.9	-142	99	2		67	29	33	19
PSDDA1	PGT13	1		2	47	59	7.1	122	17	43.8	-139	99	2		75	27	22	33
PSDDA1	PGT13	2		2	47	59	7.1	122	17	43.8	-139	99	2		81	28	29	38
PSDDA1	PGT13	3		2	47	59	7.1	122	17	43.8	-139	99	2		72	30	25	19
PSDDA1	PGT13	4		2	47	59	7.1	122	17	43.8	-139	99	2		72	23	25	28
PSDDA1	PGT13	5		2	47	59	7.1	122	17	43.8	-139	99	2		63	26	34	22
PSDDA1	PGT11	1		2	47	59	3	122	17	27.3	-139	98	2		116	35	37	54
PSDDA1	PGT11	2		2	47	59	3	122	17	27.3	-139	98	2		72	30	24	28
PSDDA1	PGT11	3		2	47	59	3	122	17	27.3	-139	98	2		97	31	33	40
PSDDA1	PGT11	4		2	47	59	3	122	17	27.3	-139	98	2		98	32	39	35
PSDDA1	PGT11	5		2	47	59	3	122	17	27.3	-139	98	2		144	24	33	19
PSDDA1	PGB02	1		2	47	58	30	122	20	0	-163	98	1.7		45	21	23	11
PSDDA1	PGB02	2		2	47	58	30	122	20	0	-163	98	1.7		63	31	29	11
PSDDA1	PGB02	3		2	47	58	30	122	20	0	-163	98	1.7		59	25	29	10
PSDDA1	PGB02	4		2	47	58	30	122	20	0	-163	98	1.7		80	35	33	16
PSDDA1	PGB02	5		2	47	58	30	122	20	0	-163	98	1.7		58	24	28	13
PSDDA1	PGB01	1		2	47	58	19.8	122	16	17.6	-132	86	1.5		187	40	51	115
PSDDA1	PGB01	2		2	47	58	19.8	122	16	17.6	-132	86	1.5		104	30	49	44
PSDDA1	PGB01	3		2	47	58	19.8	122	16	17.6	-132	86	1.5		143	33	51	80
PSDDA1	PGB01	4		2	47	58	19.8	122	16	17.6	-132	86	1.5		187	40	44	107
PSDDA1	PGB01	5		2	47	58	19.8	122	16	17.6	-132	86	1.5		220	39	47	151
PSDDA1	EBB04	1		2	47	36	7.06	122	23	50.02	-125	85	1.7		229	31	30	111
PSDDA1	EBB04	2		2	47	36	7.06	122	23	50.02	-125	85	1.7		206	34	31	74
PSDDA1	EBB04	3		2	47	36	7.06	122	23	50.02	-125	85	1.7		220	37	40	116
PSDDA1	EBB04	4		2	47	36	7.06	122	23	50.02	-125	85	1.7		222	32	34	114
PSDDA1	EBB04	5		2	47	36	7.06	122	23	50.02	-125	85	1.7		218	40	38	90
PSDDA1	EBB03	2		2	47	36	46.12	122	21	41.17	-43	83	1.5		177	23	50	122
PSDDA1	EBB03	3		2	47	36	46.12	122	21	41.17	-43	83	1.5		154	32	58	88
PSDDA1	EBB03	4		2	47	36	46.12	122	21	41.17	-43	83	1.5		250	32	53	190
PSDDA1	EBB03	5		2	47	36	46.12	122	21	41.17	-43	83	1.5		178	38	58	112

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
PSDDA1	PGT15	2	6	4	2	28	15	2	4	2	3	5	1.333	0.931	94	
PSDDA1	PGT15	3	7	2	1	29	11	1	7	1	2	4	1.244	0.927	85	
PSDDA1	PGT15	4	13	4	4	35	17	2	4	1	5	6	1.234	0.853	83	
PSDDA1	PGT15	5	8	2	1	4	13	2	6	1	5	2	1.336	0.913	80	
PSDDA1	PGT13	1	16	6	0	9	10	4	7	0	9	2	1.268	0.886	73	
PSDDA1	PGT13	2	7	5	4	2	11	4	9	1	5	1	1.233	0.852	75	
PSDDA1	PGT13	3	26	22	2	3	13	7	8	1	8	2	1.367	0.925	88	
PSDDA1	PGT13	4	14	8	2	2	10	2	7	1	3	1	1.214	0.892	86	
PSDDA1	PGT13	5	6	1	1	5	15	1	6	1	4	1	1.263	0.892	82	
PSDDA1	PGT11	1	25	13	0	3	19	5	7	0	9	1	1.322	0.856	78	
PSDDA1	PGT11	2	18	8	1	4	12	3	8	1	8	1	1.337	0.905	81	
PSDDA1	PGT11	3	23	4	0	9	15	3	9	0	6	1	1.281	0.859	78	
PSDDA1	PGT11	4	20	8	1	6	19	2	6	1	4	1	1.325	0.881	81	
PSDDA1	PGT11	5	90	5	1	1	12	3	5	1	5	1	0.82	0.594	90	
PSDDA1	PGB02	1	9	5	1	4	11	2	4	1	4	2	1.198	0.906	88	
PSDDA1	PGB02	2	20	9	2	5	12	5	8	1	9	3	1.383	0.927	78	
PSDDA1	PGB02	3	16	10	3	5	10	3	7	2	5	1	1.224	0.876	85	
PSDDA1	PGB02	4	27	17	2	2	15	6	8	1	9	2	1.383	0.896	78	
PSDDA1	PGB02	5	14	10	3	0	8	3	8	1	7	0	1.15	0.833	87	
PSDDA1	PGB01	1	15	6	2	1	17	4	9	1	9	1	1.124	0.701	69	
PSDDA1	PGB01	2	9	7	0	5	20	3	4	0	4	2	1.113	0.754	76	
PSDDA1	PGB01	3	10	5	2	0	15	5	7	2	9	0	0.909	0.599	74	
PSDDA1	PGB01	4	32	14	4	0	12	7	10	3	15	0	1.047	0.654	70	
PSDDA1	PGB01	5	13	6	2	7	16	5	10	2	8	1	0.86	0.541	69	
PSDDA1	EBB04	1	87	15	0	5	14	5	5	0	11	1	0.974	0.653	66	
PSDDA1	EBB04	2	100	36	0	6	13	9	5	0	15	1	1.12	0.731	70	
PSDDA1	EBB04	3	62	20	1	7	15	7	6	1	14	1	1.035	0.66	67	
PSDDA1	EBB04	4	72	16	0	3	16	6	5	0	9	1	0.944	0.627	67	
PSDDA1	EBB04	5	87	16	2	3	21	6	6	2	10	3	1.074	0.671	68	
PSDDA1	EBB03	2	5	4	0	4	18	1	3	0	2	1	0.672	0.493	70	
PSDDA1	EBB03	3	7	5	0	5	19	4	6	0	6	2	0.953	0.633	71	
PSDDA1	EBB03	4	5	2	0	6	17	2	9	0	4	2	0.73	0.485	68	
PSDDA1	EBB03	5	7	2	0	6	25	2	6	0	6	3	0.881	0.558	70	

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
PSDDA1	EBB02	1		2	47	36	0.8	122	20	30.2	-35	66	1.4		168	43	68	79
PSDDA1	EBB02	2		2	47	36	0.8	122	20	30.2	-35	66	1.4		97	34	50	36
PSDDA1	EBB02	3		2	47	36	0.8	122	20	30.2	-35	66	1.4		144	37	62	65
PSDDA1	EBB02	4		2	47	36	0.8	122	20	30.2	-35	66	1.4		188	39	72	91
PSDDA1	EBB02	5		2	47	36	0.8	122	20	30.2	-35	66	1.4		182	40	83	74
PSDDA1	EBB01	1		2	47	35	20.7	122	21	41.5	-39	17	0.9		326	55	198	73
PSDDA1	EBB01	2		2	47	35	20.7	122	21	41.5	-39	17	0.9		350	49	210	84
PSDDA1	EBB01	3		2	47	35	20.7	122	21	41.5	-39	17	0.9		763	83	391	198
PSDDA1	EBB01	4		2	47	35	20.7	122	21	41.5	-39	17	0.9		556	61	296	157
PSDDA1	EBB01	5		2	47	35	20.7	122	21	41.5	-39	17	0.9		458	59	215	179
PSDDA1	CBB03	1		2	47	17	13.6	122	27	20.2	-146	88	1.4		315	43	60	207
PSDDA1	CBB03	2		2	47	17	13.6	122	27	20.2	-146	88	1.4		209	27	60	130
PSDDA1	CBB03	3		2	47	17	13.6	122	27	20.2	-146	88	1.4		215	29	51	124
PSDDA1	CBB03	4		2	47	17	13.6	122	27	20.2	-146	88	1.4		290	39	71	184
PSDDA1	CBB03	5		2	47	17	13.6	122	27	20.2	-146	88	1.4		255	32	45	173
PSDDA1	CBB02	1		2	47	19	0	122	26	40	-175	91	2.2		270	29	23	182
PSDDA1	CBB02	2		2	47	19	0	122	26	40	-175	91	2.2		326	43	33	215
PSDDA1	CBB02	3		2	47	19	0	122	26	40	-175	91	2.2		288	36	33	166
PSDDA1	CBB02	4		2	47	19	0	122	26	40	-175	91	2.2		402	37	33	244
PSDDA1	CBB02	5		2	47	19	0	122	26	40	-175	91	2.2		274	29	25	198
PSDDA1	CBB01	1		2	47	18	46.3	122	27	20.1	-175	87	2		292	43	44	169
PSDDA1	CBB01	2		2	47	18	46.3	122	27	20.1	-175	87	2		321	35	51	192
PSDDA1	CBB01	3		2	47	18	46.3	122	27	20.1	-175	87	2		327	36	57	195
PSDDA1	CBB01	4		2	47	18	46.3	122	27	20.1	-175	87	2		242	39	29	138
PSDDA1	CBB01	5		2	47	18	46.3	122	27	20.1	-175	87	2		280	31	42	184
DUWAM84	#25-640			1	47	35	47	122	27	18	196.9	85	2.2		420	36.66	33.33	303.33
DUWAM84	X(DUW)-300			1	47	37	35	122	24	33	92.3	33.6	0.8	FN	419	56	337	57
DUWAM84	X(DUW)-100			1	47	37	42	122	24	17	30.8	33.6	0.8	FN	689	89	327	235
DUWAM84	XI(DUW)-300 127)		MO	1	47	38	1	122	25	25	92.3	70.72	2		280	39	38	204
DUWAM84	XI(DUW)-100			1	47	37	21	122	22	16	30.8	40	0.9	FN	552	75	255	203
DUWAM84	VII(DUW)-750 (126)		MO	1	47	39	14	122	27	14	230.8	97.3	0.6		389	43	59	254
DUWAM84	VII(DUW)-300			1	47	39	12	122	26	43	92.3	10.3	0.2		196	59	151	18

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
PSDDA1	EBB02	1	21	5	0	6	25	3	11	0	7	3	1.344	0.823	70	
PSDDA1	EBB02	2	8	4	2	59	18	4	7	2	6	5	1.361	0.889	73	
PSDDA1	EBB02	3	16	5	1	30	21	1	9	1	6	3	1.299	0.829	67	
PSDDA1	EBB02	4	21	1	2	38	24	1	7	1	5	3	1.17	0.735	71	
PSDDA1	EBB02	5	23	6	0	47	24	3	8	0	7	3	1.372	0.856	70	
PSDDA1	EBB01	1	53	3	1	5	29	3	10	1	14	3	1.348	0.775	69	
PSDDA1	EBB01	2	56	2	0	0	29	2	11	0	9	0	1.319	0.781	71	
PSDDA1	EBB01	3	166	14	7	8	48	5	14	3	17	2	1.426	0.743	67	
PSDDA1	EBB01	4	100	5	2	1	33	4	14	1	12	1	1.365	0.765	69	
PSDDA1	EBB01	5	61	6	3	4	38	2	11	2	8	2	1.287	0.727	68	
PSDDA1	CBB03	1	42	14	3	16	19	7	7	1	14	3	1.011	0.619	60	
PSDDA1	CBB03	2	15	4	3	19	15	3	4	2	5	3	0.963	0.673	62	
PSDDA1	CBB03	3	35	7	5	28	15	5	4	1	9	3	0.922	0.63	64	
PSDDA1	CBB03	4	29	5	1	21	22	5	4	1	10	2	0.976	0.614	58	
PSDDA1	CBB03	5	32	13	4	21	13	6	4	2	12	4	0.946	0.629	56	
PSDDA1	CBB02	1	65	20	0	4	8	9	9	0	12	1	0.913	0.624	51	
PSDDA1	CBB02	2	72	28	2	9	9	11	9	2	20	3	1.007	0.616	52	
PSDDA1	CBB02	3	88	25	1	5	12	11	5	1	18	3	1.037	0.666	54	
PSDDA1	CBB02	4	123	36	1	6	8	12	8	1	19	2	0.991	0.632	52	
PSDDA1	CBB02	5	49	12	2	0	8	7	6	1	14	0	0.894	0.611	53	
PSDDA1	CBB01	1	72	24	1	454	15	9	6	1	18	3	1.06	0.649	55	
PSDDA1	CBB01	2	72	16	6	357	13	6	7	2	13	3	0.978	0.633	54	
PSDDA1	CBB01	3	73	18	2	400	11	9	4	1	20	4	0.967	0.622	54	
PSDDA1	CBB01	4	71	15	2	387	10	9	6	1	20	3	1.032	0.648	53	
PSDDA1	CBB01	5	51	14	2	652	11	7	5	2	12	3	0.873	0.585	51	
DUWAM84	#25-640		80.33	9.3	1	16	15.33	3.7	9.66	1	9.33	2			60	
DUWAM84	X(DUW)-300		11	1	0.5	23	37	2	5	0.5	8	3			67	
DUWAM84	X(DUW)-100		119	10.5	0.5	18	54	7	13	0.5	17	3			69	
DUWAM84	XI(DUW)-300 127)		37	16		22	25	4	3		10	6			69	
DUWAM84	XI(DUW)-100		78	10	2	17	41	3	15	2	7	4			69	
DUWAM84	VII(DUW)-750 (126)		72	12	4	2	19	6	10	3	11	2			63	
DUWAM84	VII(DUW)-300		23	11		0	33	6	7		16	0			82	

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
DUWAM84	VII(DUW)-100			1	47	39	11	122	26	17	30.8	13.7	0.8		759	113	301	212
DUWAM84	VIII(DUW)-750			1	47	38	30	122	27	22	230.8	96.62	2.3		165	34	13	79
DUWAM84	VIII(DUW)-300			1	47	38	30	122	26	22	92.3	19.6	0.3		508	105	228	147
DUWAM84	VIII(DUW)-100			1	47	38	37	122	26	7	30.8	6.2	0.2		441	114	117	135
DUWAM84	SS-7(DUW)-200			1	47	32	5	122	27	53	61.5	9	0.3	FN	549	118	234	42
DUWAM84	SS-5(DUW)-770			1	47	32	38	122	26	29	236.3	66	1.4		186	31	16	111
DUWAM84	SS-4(DUW)-600			1	47	32	42	122	25	32	185	84.3	1.8		133	35	19	51
DUWAM84	SS-3(DUW)-600			1	47	33	46	122	25	15	186.5	66.1	1.4	FN	180	33	32	36
DUWAM84	SS-11(DUW)-300			1	47	34	0	122	29	1	87.8	69.1	1.5	FN	340	68	107	147
DUWAM84	IX(DUW)-300			1	47	38	1	122	25	25	92.3	23.2	0.6	FN	720	99	309	362
DUWAM84	IX(DUW)-100			1	47	38	9	122	25	10	30.8	36	0.8	FN	844	128	482	137
DUWAM84	BX(1)-50 (120)]		MO	1	47	35	11	122	21	54	15.4	54.05	4.6		1445	102	842	184
DUWAM84	BX(1)-200			1	47	35	52	122	21	58	61.5	67.48	1.4		333	70	154	104
DUWAM84	BXI(2)-50 (121)		MO	1	47	35	23	122	21	12	15.4	29.7	0.9		201	45	148	15
DUWAM84	BXI(2)-300 (123)		MO	1	47	36	16	122	21	22	92.3	94.04	2		231	43	45	147
DUWAM84	BXI(2)-200 (122)		MO	1	47	35	38	122	21	15	61.5	68.42	1.8		106	26	60	36
DUWAM84	BXII(2)-50 (124)		MO	1	47	35	31	122	20	35	15.4	29.57	0.8		772	73	263	271
DUWAM84	BXII(2)-200 (125)		MO	1	47	35	31	122	20	35	61.5	69.11	2.5		792	59	125	620
DUWAM84	BV(24)-600 (110)		MO	1	47	36	11	122	24	58	184.6	90.71	2.4		226	35	26	163
DUWAM84	BV(1)N-600			1	47	36	46	122	25	27	184.6	86.78	2.3		253	39	38	169
DUWAM84	BV(1)-50			1	47	35	14	122	24	8	15.4	4.83	0.2		716.5	60.5	65.5	143
DUWAM84	BV(1)-400 (109)		MO	1	47	35	26	122	24	31	123.1	75.33	1.9		278.5	44	39.5	206
DUWAM84	BV(1)-200			1	47	35	22	122	24	8	61.5	7.29	0.3		331	75.5	113	119.5
DUWAM84	BVI(37)-600 (130)		MO	1	47	36	41	122	24	28	184.6	89.4	2.4		282.5	34.5	32.5	196.5
DUWAM84	BVI(1)N-600			1	47	36	49	122	24	40	184.6	85.87	2.4		372	41.5	42.5	265.5
DUWAM84	BVI(1)-600 (113)		MO	1	47	36	29	122	24	45	184.6	89.44	2.4		246.5	33.5	24	186
DUWAM84	BVI(1)-500 (111)		MO	1	47	36	4	122	24	23	153.8	91.55	2.3		315	43	49.5	203
DUWAM84	BVI(1)-50			1	47	35	31	122	23	50	15.4	3.81	0.1		960.5	100	286	116.5
DUWAM84	BVI(1)-400 (112)		MO	1	47	35	37	122	24	8	123.1	86.74	2.2		293	38.5	34.5	231.5
DUWAM84	BVI(1)-200			1	47	35	39	122	23	52	61.5	11.23	0.2		601.5	103	189.5	199
DUWAM84	BVII(1)N-600 (116)		MO	1	47	36	40	122	24	23	184.6	88.75	2.4		408.5	42.5	58	298.5
DUWAM84	BVII(1)-600 (115)		MO	1	47	36	38	122	24	20	184.6	88.04	2.5		199	37	26	134
DUWAM84	BVII(1)-50			1	47	35	45	122	23	37	15.4	6.93	0.4		931	89.5	137	166.5

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SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
DUWAM84	VII(DUW)-100		206	38	21	10	49	12	24	3	24	3			78	
DUWAM84	VIII(DUW)-750		68	10	3	1	12	2	10	2	8	1			64	
DUWAM84	VIII(DUW)-300		74	31	7	0	58	13	14	1	23	0			69	
DUWAM84	VIII(DUW)-100		141	27	10	2	57	14	15	4	25	2			72	
DUWAM84	SS-7(DUW)-200		126	31	114	3	56	11	15	11	25	1			89	
DUWAM84	SS-5(DUW)-770		56	4		3	12	4	8		9	1			56	
DUWAM84	SS-4(DUW)-600		57	9	2	11	12	4	11	1	8	3			65	
DUWAM84	SS-3(DUW)-600		109	24		8	14	5	8		10	3			66	
DUWAM84	SS-11(DUW)-300		70	19	3	6	40	4	9	2	12	2			70	
DUWAM84	IX(DUW)-300		39	16	4	5	57	9	13	3	21	1			71	
DUWAM84	IX(DUW)-100		134	37	51	14	57	15	21	6	28	5			82	
DUWAM84	BX(1)-50 (120)]		385	14	17	7	66	7	14	3	19	3			64	
DUWAM84	BX(1)-200		74	15	1	33	36	9	11	1	19	3			73	
DUWAM84	BXI(2)-50 (121)		21	13	1	2	22	4	8	1	10	1			64	
DUWAM84	BXI(2)-300 (123)		36	25	2	1	24	5	5	1	12	1			69	
DUWAM84	BXI(2)-200 (122)		10	4		2	15	4	4		7	1			72	
DUWAM84	BXII(2)-50 (124)		227	4	3	0	37	3	14	1	14	0			66	
DUWAM84	BXII(2)-200 (125)		42	12	1	4	34	5	7	1	13	3			65	
DUWAM84	BV(24)-600 (110)		34.5	10	0.5	1	14.5	4.5	9	0.5	9	1			64	
DUWAM84	BV(1)N-600		43	18		3	19	4.5	9		8	3			65	
DUWAM84	BV(1)-50		501	66.5		6	25.5	10.5	11.5		20	2			69	
DUWAM84	BV(1)-400 (109)		30	9	0.5	14	24.5	4.5	8	0.5	9	2			64	
DUWAM84	BV(1)-200		91.5	16.5	1.5	6	39.5	7.5	15	1	17	1			71	
DUWAM84	BVI(37)-600 (130)		52	15.5	2.5	5	14.5	4	9	1	8.5	1			60	
DUWAM84	BVI(1)N-600		61	12	3	1	19	4	9	2	11.5	1			63	
DUWAM84	BVI(1)-600 (113)		32	11	3	3	13	4	10	1.5	7.5	1			62	
DUWAM84	BVI(1)-500 (111)		59.5	13	1.5	3	19.5	4.5	8.5	1	12.5	2			64	
DUWAM84	BVI(1)-50		507	40.5	31.5	0	46.5	9.5	19	5.5	21	0			73	
DUWAM84	BVI(1)-400 (112)		24	6.5	0.5	8	18.5	3	6	0.5	11	2			62	
DUWAM84	BVI(1)-200		148.5	21	5	3	51	10.5	14	3.5	25	2			73	
DUWAM84	BVII(1)N-600 (116)		48	17	2	0	18.5	3.5	10.5	1.5	10	0			61	
DUWAM84	BVII(1)-600 (115)		35	21	3	47	14.5	4.5	9.5	1.5	10.5	4			63	
DUWAM84	BVII(1)-50		598.5	56	10	6	38.5	9	18.5	3	20	2			73	

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
DUWAM84	BVII(1)-400 (114)		MO	1	47	35	59	122	23	52	123.1	81.36	2.4		281.5	40.5	67	179.5
DUWAM84	BVII(1)-200			1	47	35	49	122	23	41	61.5	9.15	0.4		532	91	204.5	182.5
DUWAM84	BVIII(1)N-600			1	47	36	43	122	23	56	184.6	61.09	2		460	47.5	59	321
DUWAM84	BVIII(1)-600			1	47	36	35	122	23	53	184.6	72.33	2		437	47.5	68.5	278.5
DUWAM84	BVIII(1)-50			1	47	36	4	122	23	19	15.4	4.5	0.2		1072.5	129	566	97.5
DUWAM84	BVIII(1)-400			1	47	36	25	122	23	44	123.1	72.84	2		304	50.5	86.5	195.5
DUWAM84	BVIII(1)-200			1	47	36	15	122	23	35	61.5	19.69	0.6		417.5	90.5	210	77.5
DUWAM84	BV32-500 (128)		MO	1	47	35	49	122	24	43	153.8	92	2.4		402.5	43	33.5	314
DUWAM84	BIX(2)-400 (119)		MO	1	47	36	37	122	21	57	123.1	82.18	2		397	38	41	317
DUWAM84	BIX(2)-300 (118)		MO	1	47	35	50	122	22	29	92.3	69.83	1.9		367	66	156	170
DUWAM84	BIX(1)-50 (117)		MO	1	47	35	6	122	22	17	15.4	35.42	1.5		1242	100	412	490
DUWAM84	BIX(1)-200			1	47	35	27	122	22	32	61.5	38.27	1.1		762.5	81	177	483.5
DUWAM84	BIV(34)C-600 (108)		MO	1	47	36	7	122	25	34	184.6	92.6	2.4		102	40	22	32.5
DUWAM84	BIV(1)N-600 (107)		MO	1	47	36	43	122	25	48	184.6	92.56	2.5		339.5	33.5	13	282
DUWAM84	BIV(1)-600 (106)		MO	1	47	35	49	122	25	13	184.6	95.65	2.4		89	31	16	41.5
DUWAM84	BIV(1)-50			1	47	34	58	122	24	36	15.4	3.4	0.1		755	66	82.5	210.5
DUWAM84	BIV(1)-400			1	47	35	24	122	24	53	123.1	28.25	0.9		177	39.5	48	86
DUWAM84	BIV(1)-200			1	47	35	8	122	24	47	61.5	11	0.5		615.5	103	174	269.5
DUWAM84	BIV35-500 (129)		MO	1	47	35	31	122	25	0	153.8	87.8	2.1		350.5	43	36.5	272.5
DUWAM84	BII(2)W-200			1	47	34	43	122	28	19	61.5	10.31	0.5		757	138	151	433
DUWAM84	BII(2)-600 (104)		MO	1	47	34	58	122	25	54	184.6	86.87	1.2		441	86	171	124
DUWAM84	BII(2)-50			1	47	34	40	122	25	13	15.4	2.31	0.2		683	102	142	71
DUWAM84	BII(2)-400			1	47	34	46	122	25	41	123.1	9.53	0.3		299	80	148	84
DUWAM84	BII(2)-200			1	47	34	44	122	25	18	61.5	8.26	0.8		989	178	563	126
DUWAM84	BII(1)W-600 (102)		MO	1	47	34	34	122	27	50	184.6	34.83	1.2		282	86	100	107
DUWAM84	BII(1)W-50			1	47	34	52	122	28	38	15.4	11.67	0.2		1006	138	517	222
DUWAM84	BII(1)W-400			1	47	34	36	122	28	0	123.1	18.59	1.4		343	62	122	111
DUWAM84	BII(1)-792 (103)		MO	1	47	34	47	122	26	47	243.7	67.54	1.9		458	69	137	177
DUWAM84	BIII.5(1)-50			1	47	35	3	122	25	4	15.4	5.02	0.2		965.5	98	171.5	174.5
DUWAM84	BIII.5(1)-200			1	47	35	3	122	25	4	61.5	6.93	0.3		583	124	235.5	146.5
DUWAM84	BIII(1)N-600			1	47	36	33	122	26	39	184.6	91.74	2.4		351.5	40	26	233
DUWAM84	BIII(1)C-600 (105)		MO	1	47	35	59	122	26	16	184.6	95.63	2.4		401.5	40.5	27.5	267.5
DUWAM84	BIII(1)-640			1	47	35	53	122	26	3	196.9	95.6	2.4		421.5	35	15	320

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
DUWAM84	BVII(1)-400 (114)		32.5	6.5	1.5	21	22.5	3	6	1	9.5	3			64	
DUWAM84	BVII(1)-200		131	20.5	2.5	4	44	8	19.5	2	19.5	2			71	
DUWAM84	BVIII(1)N-600		77	14	0.5	12	21.5	6	9.5	0.5	14.5	6			64	
DUWAM84	BVIII(1)-600		83.5	16	1	3	21.5	5.5	10.5	1	12	2			64	
DUWAM84	BVIII(1)-50		322	147.5	64.5	7	51	24.5	22.5	6	38	4			84	
DUWAM84	BVIII(1)-400		19	7	1	13	25.5	4	12	1	10.5	3			66	
DUWAM84	BVIII(1)-200		41	11.5	62.5	14	46	7	14	6	17	3			76	
DUWAM84	BV32-500 (128)		49	8	2	238	18	5	12	2	9.5	3			62	
DUWAM84	BIX(2)-400 (119)		34	7	1.5	86	20	6	5	0.5	10	3			65	
DUWAM84	BIX(2)-300 (118)		36	6.5	0.5	72	34	6	8	0.5	20	4			69	
DUWAM84	BIX(1)-50 (117)		320	3	1.5	4	54	5	17	0.5	17	1			65	
DUWAM84	BIX(1)-200		80.5	7	2.5	7	45	4	14	2	23.5	2			64	
DUWAM84	BIV(34)C-600 (108)		37	11	8	6	14	5.5	10	2.5	12	2			64	
DUWAM84	BIV(1)N-600 (107)		43	15	1	7	10.5	6	10.5	1	11	1			64	
DUWAM84	BIV(1)-600 (106)		25.5	12.5	3	6	12.5	3.5	5	2	9	2			64	
DUWAM84	BIV(1)-50		460	101	0.5	8	29	10	17.5	0.5	17.5	1			68	
DUWAM84	BIV(1)-400		26	8.5	9	6	17	3.5	8.5	3	9	2			53	
DUWAM84	BIV(1)-200		142.5	15	11	1	51.5	7	17.5	4.5	21	1			71	
DUWAM84	BIV35-500 (129)		64.5	7.5	2	2	18.5	4.5	9	1	12.5	2			62	
DUWAM84	BII(2)W-200		160	19	1		41	8	19	1	22				68	
DUWAM84	BII(2)-600 (104)		61	30	2	4	43	11	12	1	23	3			72	
DUWAM84	BII(2)-50		439	224	1	2	43	15	19	1	31	1			66	
DUWAM84	BII(2)-400		35	25	14	0	44	12	13	1	20	0			82	
DUWAM84	BII(2)-200		222	98	18	0	78	30	24	5	51	0			84	
DUWAM84	BII(1)W-600 (102)		56	27	2	0	39	10	15	2	23	0			72	
DUWAM84	BII(1)W-50		185	27	59	0	64	13	28	7	27	0			80	
DUWAM84	BII(1)W-400		52	31	13	10	23	9	12	4	17	4			75	
DUWAM84	BII(1)-792 (103)		133	23		11	34	10	11		21	4			66	
DUWAM84	BIII.5(1)-50		595.5	120.5	18	3	40.5	17.5	19	4	28.5	2			72	
DUWAM84	BIII.5(1)-200		134.5	31.5	26.5	22	60.5	13	18.5	4.5	28	3			76	
DUWAM84	BIII(1)N-600		88	15.5	2	13	17	5	9	1.5	10.5	3			64	
DUWAM84	BIII(1)C-600 (105)		99	6.5	2	4	16	3.5	8	1.5	11	1			64	
DUWAM84	BIII(1)-640		80	9	3.5	9	11	4.5	9.5	1	11.5	2			64	

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	C	S*	LatDeg	LatMin	LatSec	LonDeg	LonMin	LonSec	Depth (m)	% FINES	% TOC	2**	TOAB	TOTAX	POAB	MOAB
DUWAM84	BIII(1)-600			1	47	36	37	122	26	40	184.6	95.6	2.5		257.5	34	16	194.5
DUWAM84	BIII(1)-400			1	47	35	6	122	25	20	123.1	19.2	0.5		485	80.5	225.5	155.5
DUWAM84	A(DUW)W-50			1	47	30	57	122	28	10	15.4	2.3	0.2		39	15	10	15
DUWAM84	A(DUW)W-400			1	47	31	18	122	27	18	123.1	38.8	0.9		391	60	67	274
DUWAM84	A(DUW)W-200			1	47	31	12	122	27	52	61.5	10.5	0.4		178	93	184	159
DUWAM84	A(DUW)-720			1	47	31	37	122	26	12	221.5	76.6	2		210	35	25	101
DUWAM84	A(DUW)-600 (101)		MO	1	47	32	16	122	24	22	184.6	93.8	1.8		109	34	19	19
DUWAM84	A(DUW)-400			1	47	32	22	122	24	10	123.1	44.4	0.8		278	51	59	132
DUWAM84	A(DUW)-200			1	47	32	13	122	24	2	61.5	8.2	0.5		325	101	159	49
DUWAM84	BX-400			1							123.1	82	1.7		258	52	88	126
ALKI	LSUV01		MO	1	47	31	38	122	23	57	30.8	88.4	0.2		431.25	58.75	167.25	126.5
ALKI	LSUU03		MO	1	47	31	41	122	24	16	107.7	43.2	0.4		332.6	76.2	180.8	54
ALKI	LSUU02		MO	1	47	31	39	122	24	13	92.3	26.2	0.4		456	80.8	222	89
ALKI	LSUU01		MO	1	47	31	38	122	24	8	46.2	72	0.4		347.2	85.2	213	52.4
ALKI	LSLR02		MO	1	47	34	9	122	25	12	46.2	56.1	1.5		498.6	104.4	220.8	135.2
ALKI	LSLPO2		MO	1	47	34	12	122	25	31	92.3	71.3	0.4		546.4	103	258.8	90.6
ALKI	LSKR06-		MO	1	47	37	15	122	24	53	30.8		0.2		369	55.4	124.2	108
ALKI	LSKR05		MO	1	47	34	20	122	24	53	30.8	96.2	0.2		504.25	63.75	136.5	146.25
ALKI	LSKR04		MO	1	47	34	22	122	25	5	30.8	97	0.2		391.25	56	110	130.25
ALKI	LSKN02		MO	1	47	34	20	122	25	52	92.3	51.9	1.5		589.6	101.2	219	177
ALKI	LSJR02		MO	1	47	34	43	122	25	5	30.8	93.5	0.4		515.75	90	364.75	111
EHCHEM	EH-16		MO	2	47	37	9.71	122	30	33.97	-11.3	60	3.2		3397		1537	713
EHCHEM	EH-15		MO	2	47	37	11.97	122	30	27.59	-11.3	62.5	1.1		9406		5830	1997
EHCHEM	EH-08		MO	2	47	37	17.88	122	30	15.15	-14.9	9.2	0.9		7511		2230	4544
EHCHEM	EH-06		MO	2	47	37	25.26	122	30	5.22	-13.1	52.4	1.9		3134		1623	667
EHCHEM	EH-05		MO	2	47	37	20.89	122	30	3.05	-14.6	49.7	1.8		6378		4263	1116
EHCHEM	EH-03		MO	2	47	37	15.56	122	29	54.54	-16.8	7.9	0.5		3670		1393	1247
EHCHEM	EH-02		MO	2	47	37	12.46	122	29	48.17	-17.7	10.7	2.4		6059		3103	1436
EHCHEM	EH-01		MO	2	47	37	6.38	122	29	36.91	-17.4	50.8	1		6107		1810	2270
EHCHEM	BH-02		MO	2	47	35	43.02	122	30	4.78	-17.7	10.8	2		5543		1563	2193
EHCHEM	BH-01		MO	2	47	35	44.97	122	30	34.93	-10	10.7	1.3		5734		1397	2460

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

SURVEY	STATION	SAMPLE	CRAB	AMPAB	ECHAB	MISCAB	POTAX	AMPTX	MOTAX	ECHTAX	CRTX	MISCTX	H'	J'	ITI	SDI
DUWAM84	BIII(1)-600		44.5	12	1	22	11.5	3	8	1	12	4			63	
DUWAM84	BIII(1)-400		42.5	14.5	11.5	2	42	9	12	3.5	18	2			75	
DUWAM84	A(DUW)W-50		14	10		4	7	3	2		6	2			88	
DUWAM84	A(DUW)W-400		44	35	3	5	30	11	10	3	14	4			67	
DUWAM84	A(DUW)W-200		93	19	7	5	45	10	16	3	23	2			68	
DUWAM84	A(DUW)-720		83	10		6	11	4	8		13	2			60	
DUWAM84	A(DUW)-600 (101)		63	17	6	2	12	5	9	2	9	2			67	
DUWAM84	A(DUW)-400		74	18	4	1	17	10	8	3	19	1			68	
DUWAM84	A(DUW)-200		75	17	28	11	49	9	13	7	20	5			76	
DUWAM84	BX-400		39	11		21	31	7	6		13	7			68	
						16						2				
ALKI	LSUV01		108.5				28.25		13.75		14					
ALKI	LSUU03		92.2			4	45		10.6		18.6	3				
ALKI	LSUU02		96.8			1	44		10.8		20.2	1				
ALKI	LSUU01		91.6			0	48.2		14.2		18.2	0				
ALKI	LSLR02		115.2			5	51		20.6		26.4	2				
ALKI	LSLPO2		127.4			2	59		11.2		27.4	1				
ALKI	LSKR06-		133.4			32	26.4		12.6		14.8	2				
ALKI	LSKR05		216			31	28.75		16.25		17.25	3				
ALKI	LSKR04		145.5			22	25.5		13.5		15.75	3				
ALKI	LSKN02		135.4			4	55		13.8		27.2	2				
ALKI	LSJR02		111			0	50.25		10.5		25	0				
						1						1				
EHCHEM	EH-16		1144		3											
EHCHEM	EH-15		1563		10	178						3				
EHCHEM	EH-08		714		7	109						3				
EHCHEM	EH-06		837		7	100						3				
EHCHEM	EH-05		950		13	18						4				
EHCHEM	EH-03		1020			18						3				
EHCHEM	EH-02		1463		17	7						2				
EHCHEM	EH-01		2017			21						2				
EHCHEM	BH-02		1747		10	8						2				
EHCHEM	BH-01		1853		7	5						1				

TOAB is calculated by summing POAB, MOAB,CRAB,ECHAB, and MISCAB.

APPENDIX C
CLUSTER ANALYSES WITHIN UNCONTAMINATED HABITAT CATEGORIES

Appendix C1
0-20% Fines Habitat Category

C:\A94-01\SYSFILES\FINES20.SYS

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>LINKAGE=SINGLE
>JOIN ARAB POAB MOAB ECHAB MISCAB / ROWS
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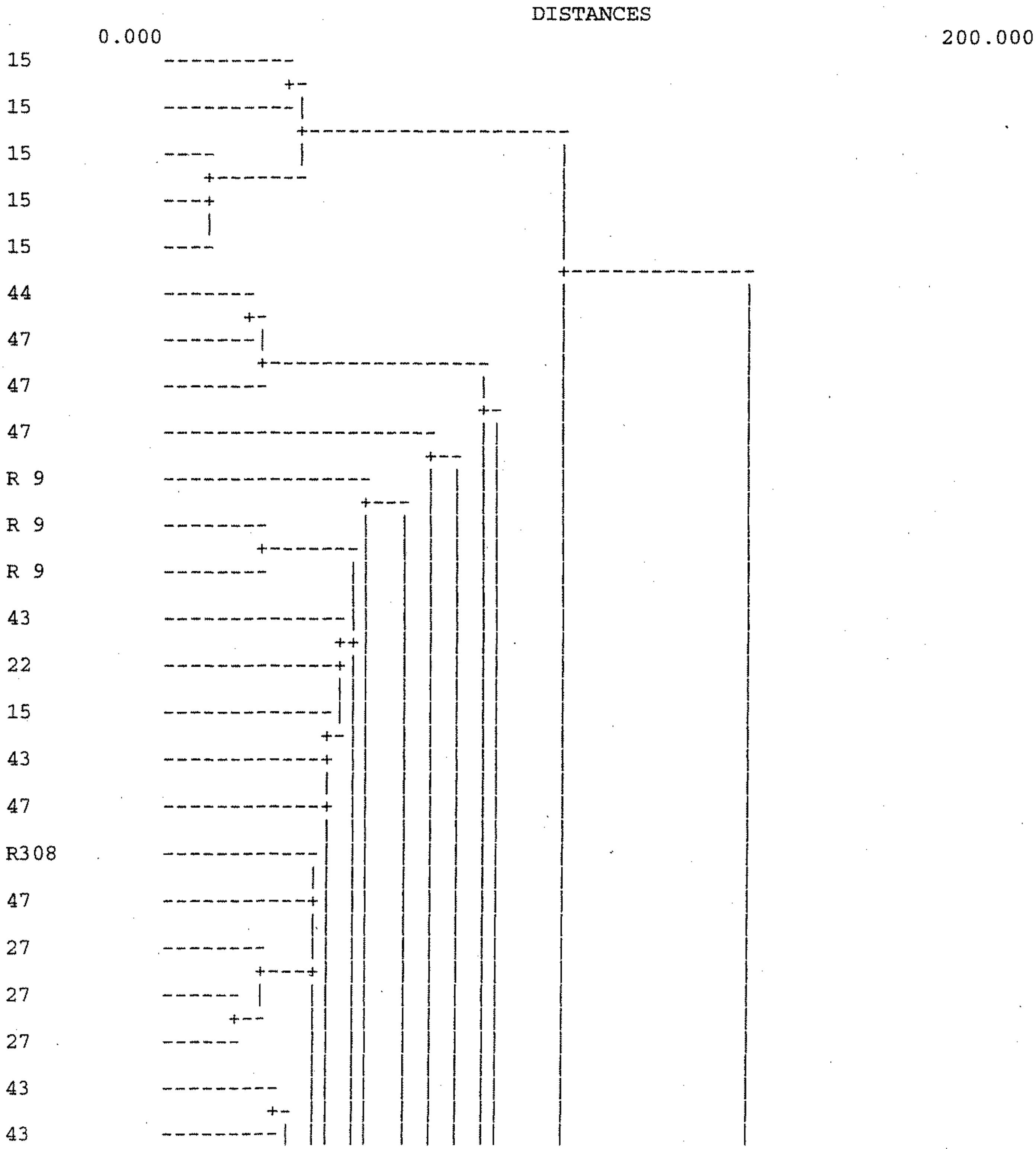
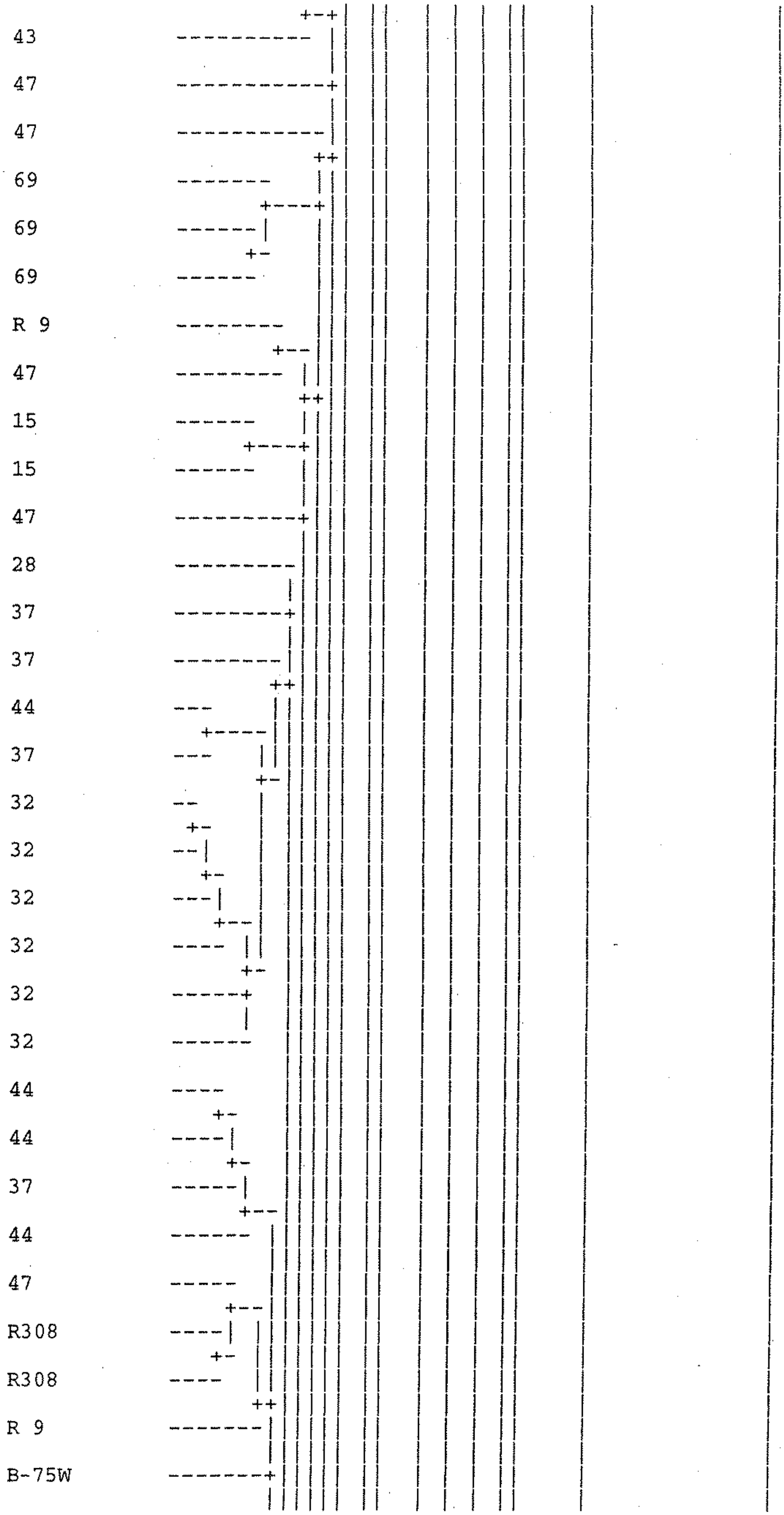
DISTANCE METRIC IS EUCLIDEAN DISTANCE
SINGLE LINKAGE METHOD (NEAREST NEIGHBOR)

TREE DIAGRAM

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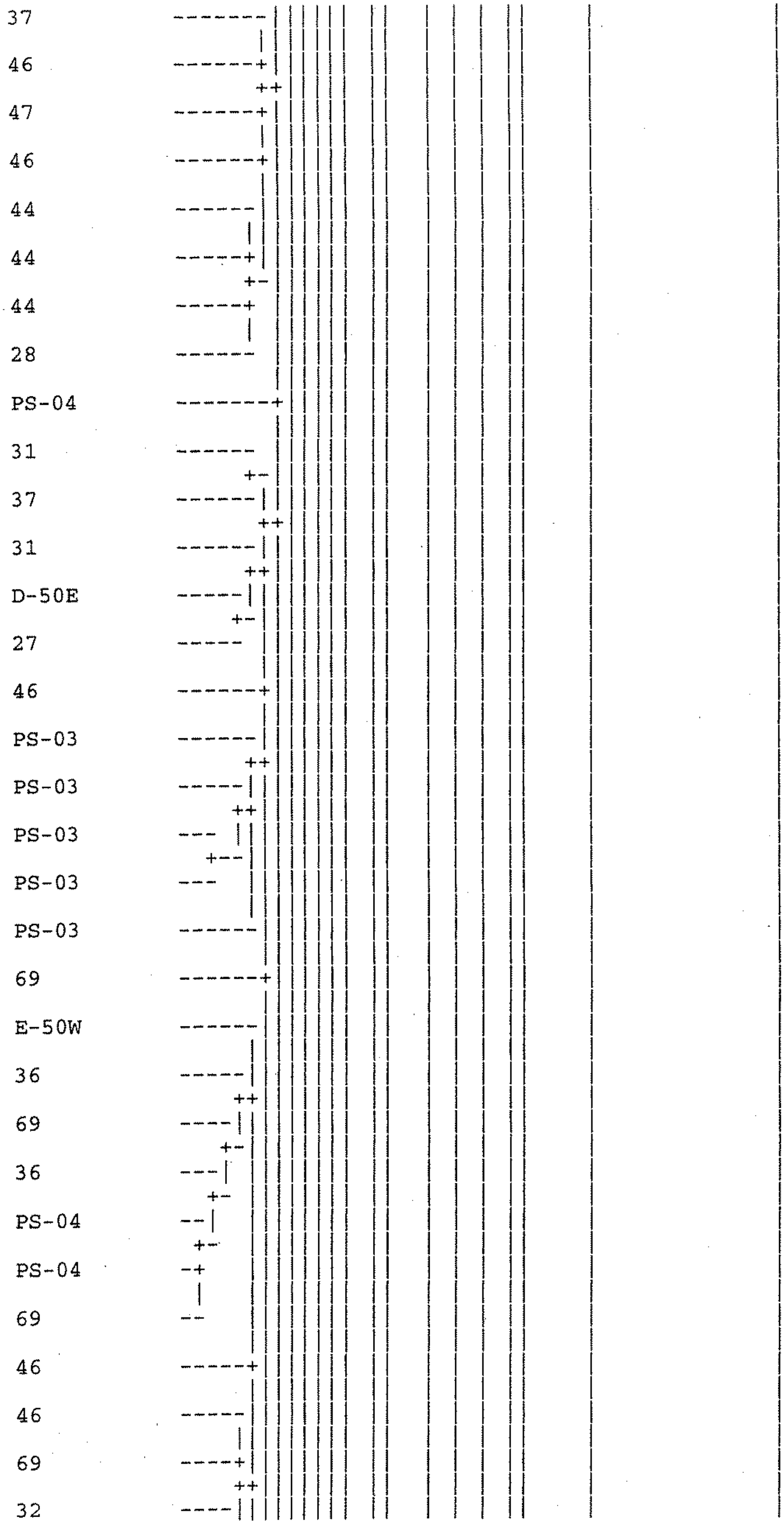
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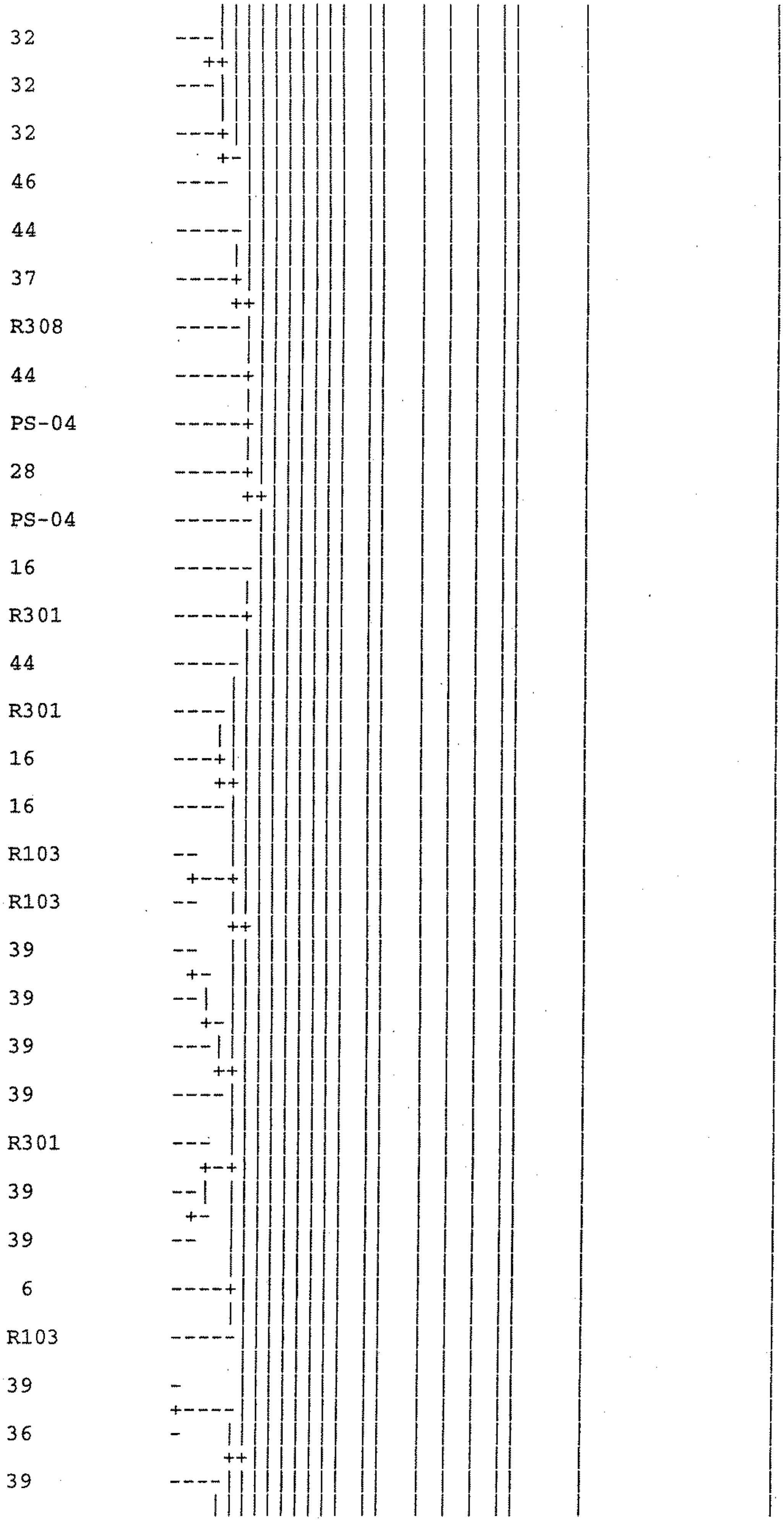
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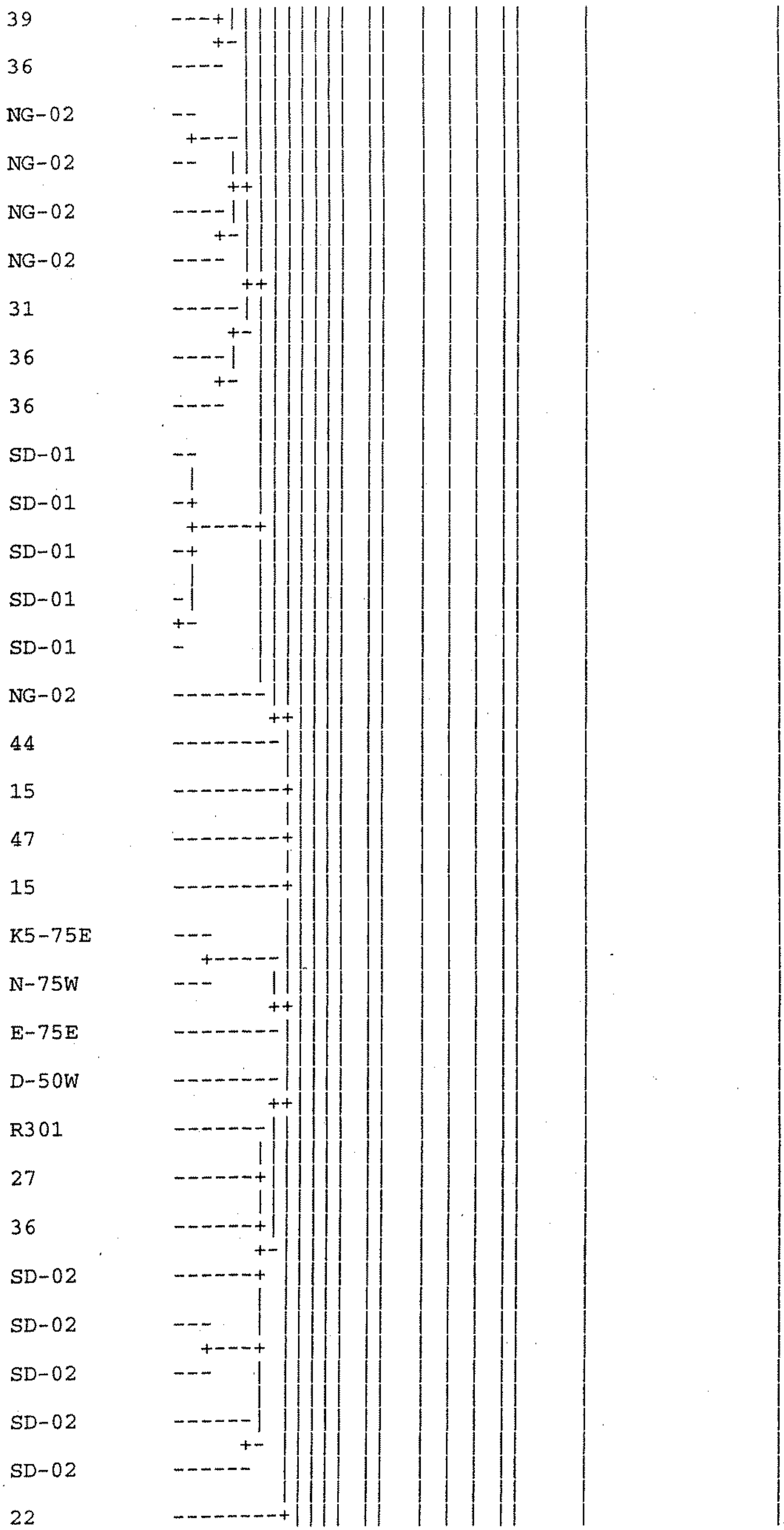
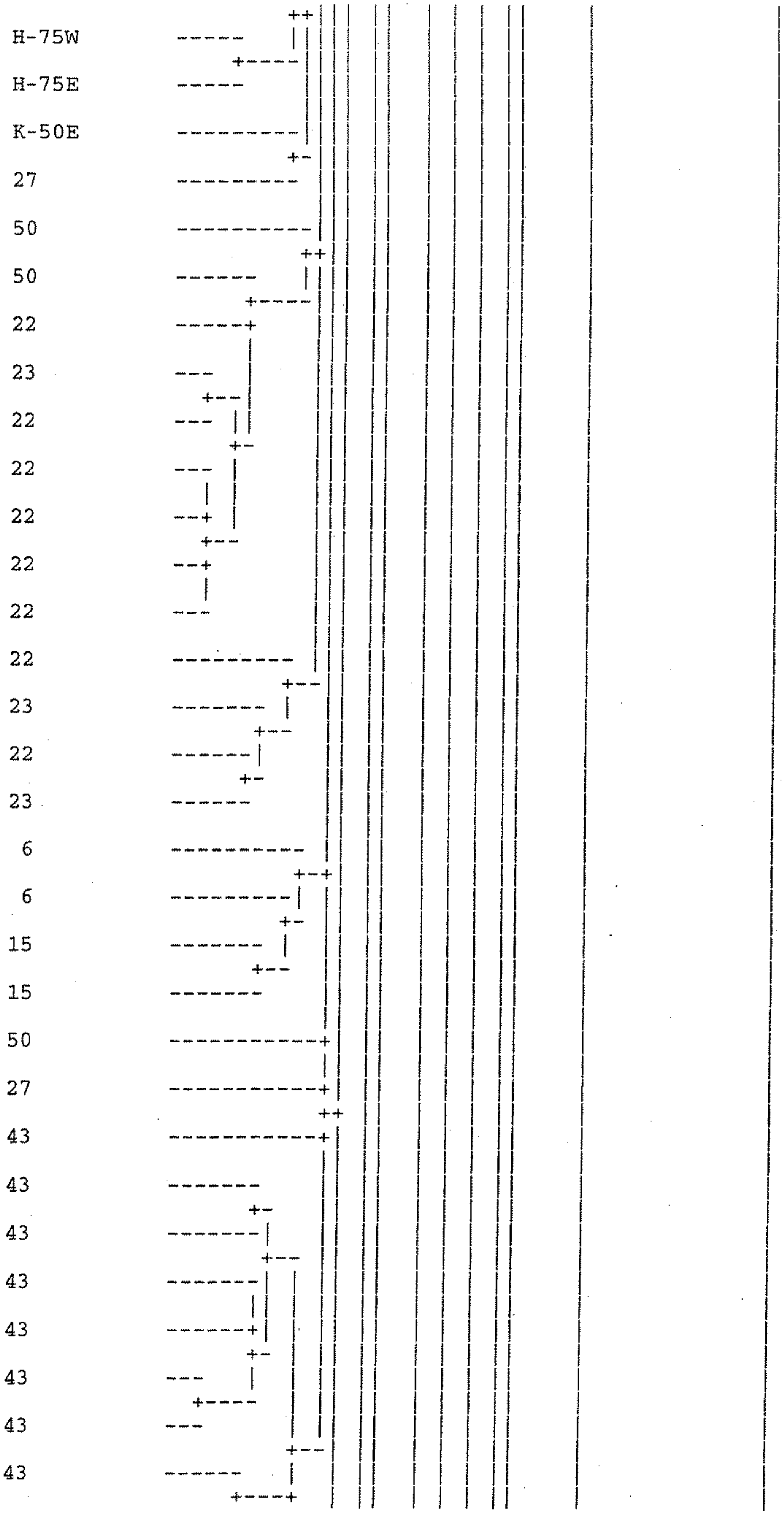
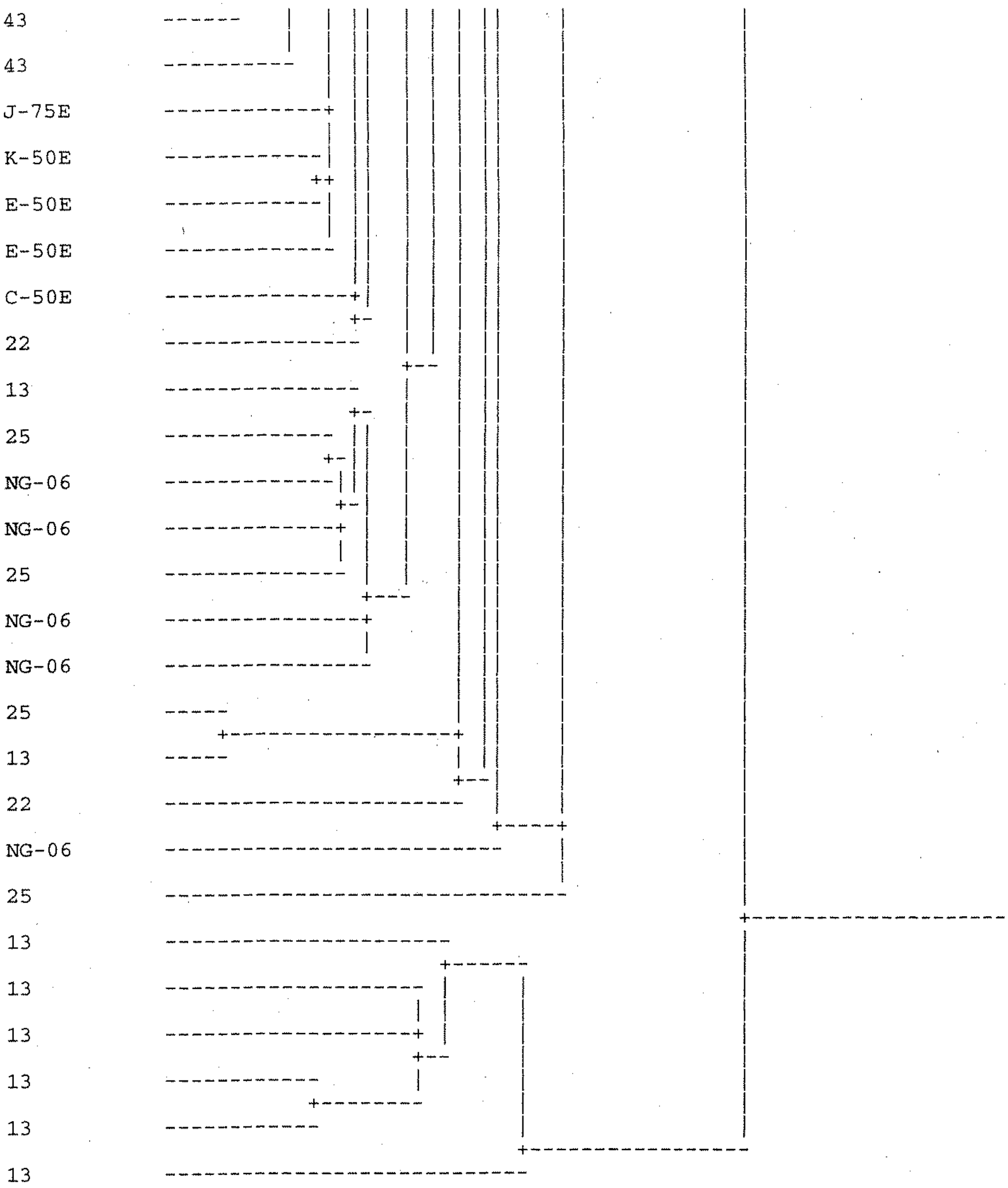
36
39


39
36
NG-02
NG-02
NG-02
NG-02
31
36
36
SD-01
SD-01
SD-01
SD-01
SD-01
NG-02
44
15
47
15
K5-75E
N-75W
E-75E
D-50W
R301
27
36
SD-02
SD-02
SD-02
SD-02
SD-02
22



H-75W
H-75E
K-50E
27
50
50
22
23
22
22
22
22
22
22
23
22
23
6
6
15
15
50
27
43
43
43
43
43
43
43
43


43
43
J-75E
K-50E
E-50E
E-50E
C-50E
22
13
25
NG-06
NG-06
25
NG-06
NG-06
25
13
22
NG-06
25
13
13
13
13
13
13

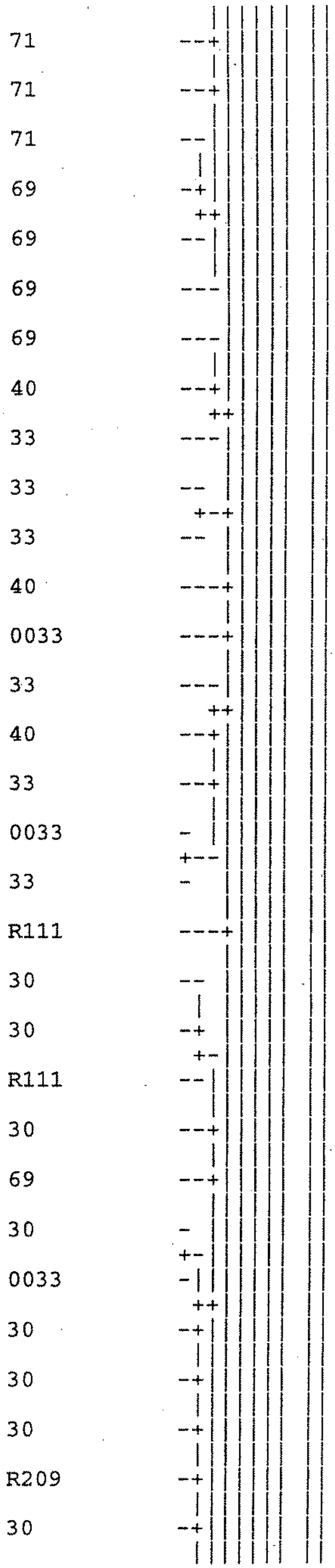
Appendix C2
20-50% Fines Habitat Category

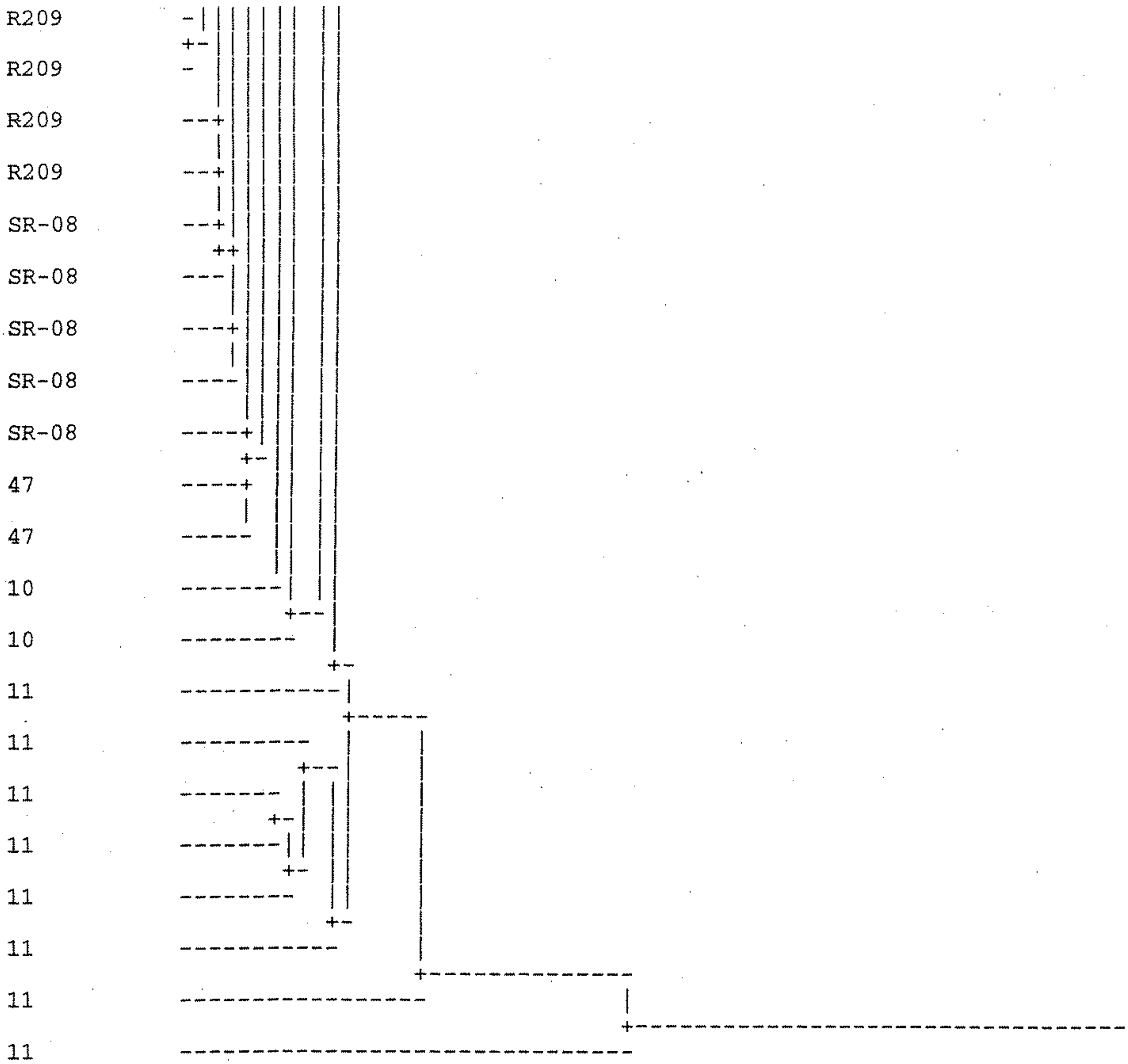
```
C:\A94-01\SYSFILES\FINES50.SYS

>LABEL=STATION$
>DISTANCE=EUCLIDEAN
>LINKAGE=SINGLE
>JOIN ARAB POAB MOAB ECHAB MISCAB / ROWS

 DISTANCE METRIC IS EUCLIDEAN DISTANCE
 SINGLE LINKAGE METHOD (NEAREST NEIGHBOR)

 TREE DIAGRAM
                                         DISTANCES
        0.000                                                          500.000
 47          ----------
                      +-
 18          -------  ||
                   +- ||
 18          ------|| ||
                  ||| ||
 18          ---- ||| ||
                | ||| ||
 R206        ---+ ||| ||
                +-||| ||
 R206        ---||||| ||
               |||||| ||
 R206        --+||||| ||
               +-|||| ||
 18          --- |||| ||
                 |||| ||
 18          ----|||| ||
                ++||| ||
 R206        ---+|||| ||
                ||||| ||
 18          ---+|||| ||
                ||||| ||
 R206        ---+|||| ||
                ||||| ||
 18          ----|||| ||
                 ++|| ||
 18          -----||| ||
                  ||| ||
 18          -----+|| ||
                  ++| ||
 33          -----||| ||
                 |||| ||
 33          ----+||| ||
                 |||| ||
 40          ----+||| ||
                 |||| ||
 10          --- |||| ||
               +-|||| ||
 10          ---||||| ||
                ++||| ||
 10          ---+|||| ||
                ||||| ||
 10          -- ||||| ||
              +-||||| ||
 10          --|||||| ||
               ++|||| ||
 10          --+||||| ||
               |||||| ||
 30          --+||||| ||
```


71
71
71
69
69
69
69
40
33
33
33
40
0033
33
40
33
0033
33
R111
30
30
R111
30
69
30
0033
30
30
30
R209
30


R209
R209
R209
R209
SR-08
SR-08
SR-08
SR-08
SR-08
47
47
10
10
11
11
11
11
11
11
11
11

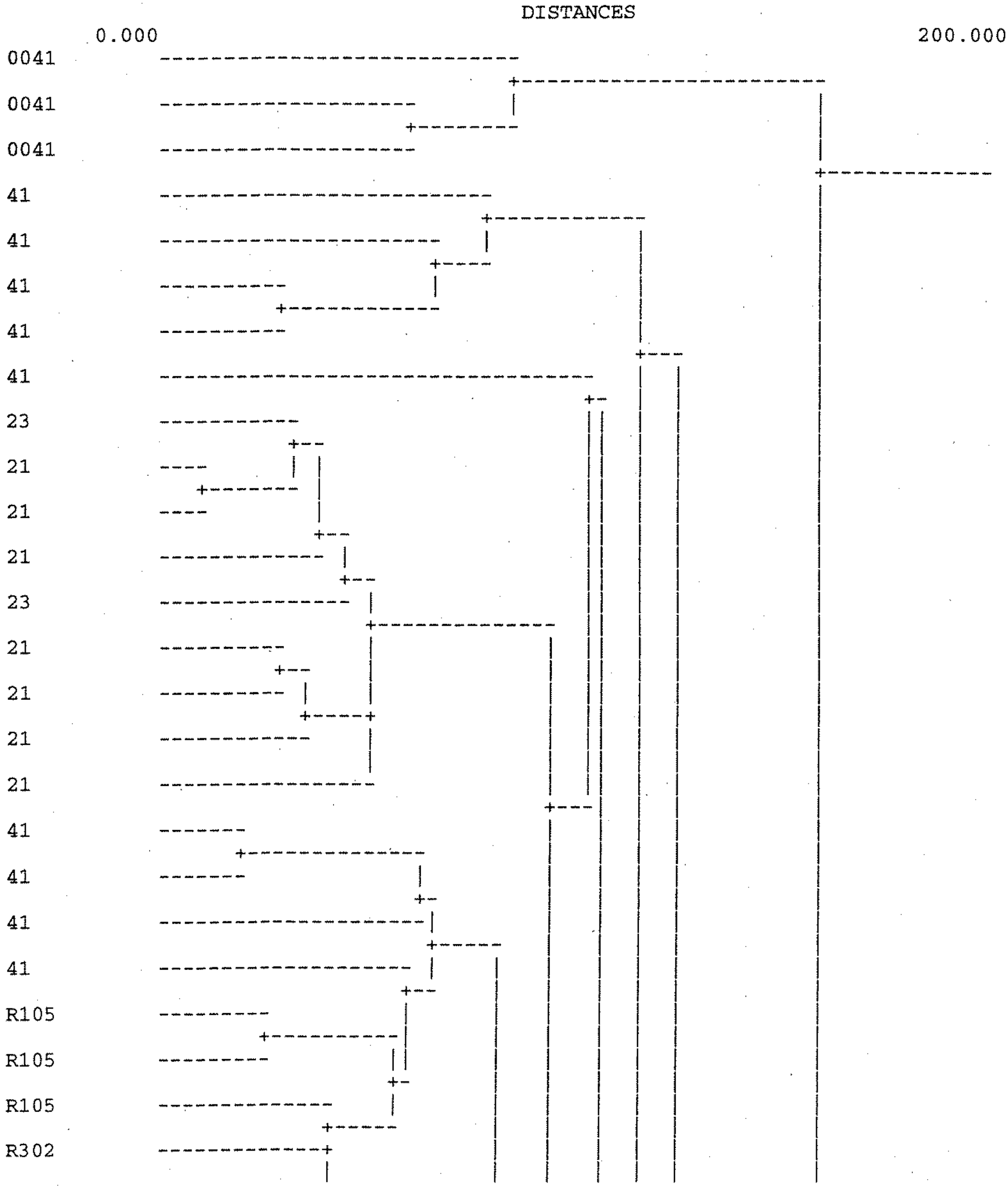
Appendix C3
50-80% Fines Habitat Category

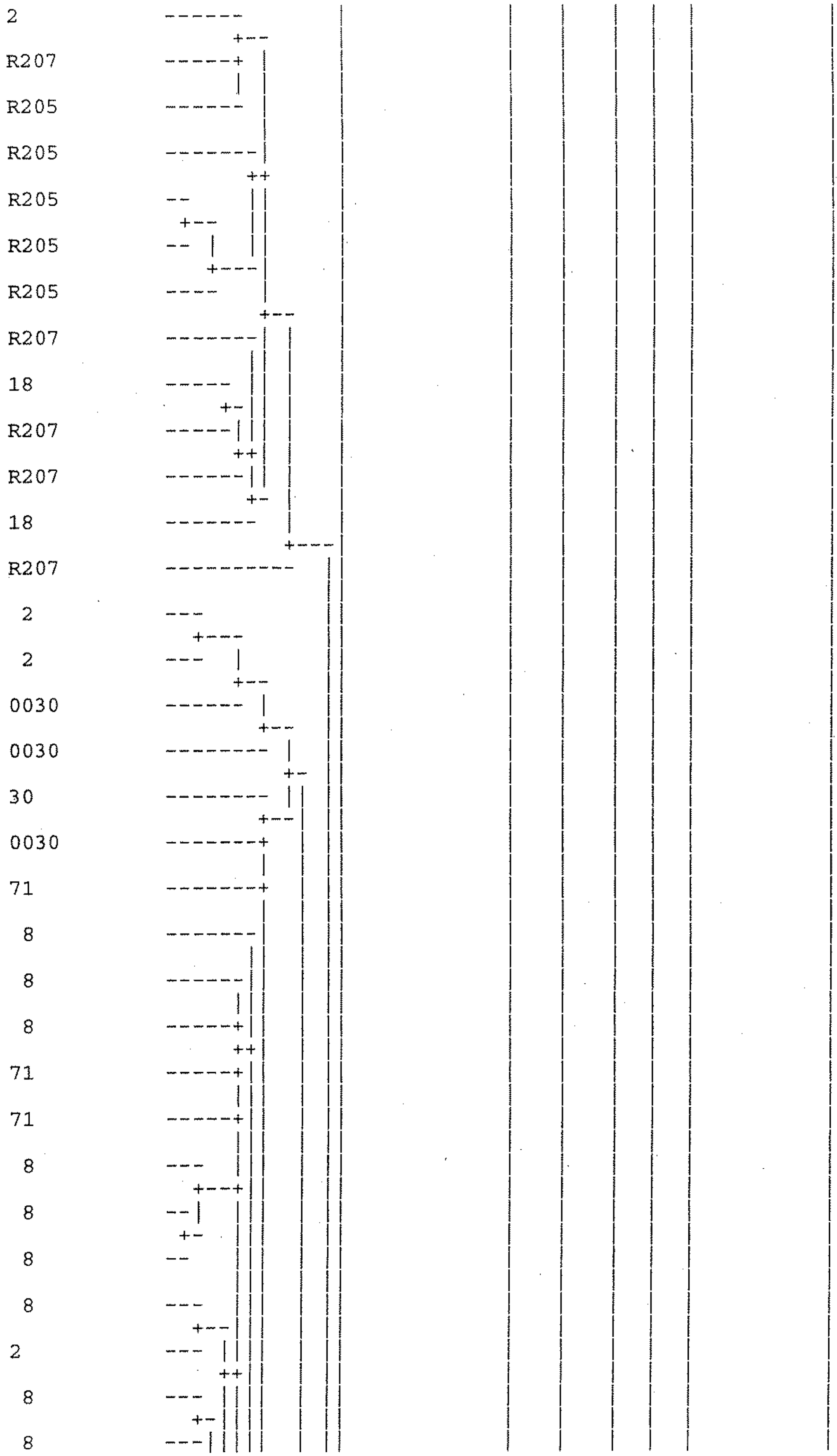
```
C:\A94-01\SYSFILES\FINES80.SYS

>LABEL=STATION$
>DISTANCE=EUCLIDEAN
>LINKAGE=SINGLE
>JOIN ARAB POAB MOAB ECHAB MISCAB / ROWS

 DISTANCE METRIC IS EUCLIDEAN DISTANCE
 SINGLE LINKAGE METHOD (NEAREST NEIGHBOR)

 TREE DIAGRAM
```




2
R207
R205
R205
R205
R205
R205
R207
18
R207
R207
18
R207
2
2
0030
0030
30
0030
71
8
8
8
71
71
8
8
8
8
2
8
8

8
8
8
71
8
71
2
2
71
8
8
71
71
71
R302
2
2
18
R302
R302
70
70
70
70
70
70
70
70
70
70

```
70           ---       |  ||            |    |   |  |  |           |
                       +--+|            |    |   |  |  |           |
R303         -------   |  ||            |    |   |  |  |           |
                   +-  |  ||            |    |   |  |  |           |
R303         -------|  |  ||            |    |   |  |  |           |
                    +---  ||            |    |   |  |  |           |
R303         ----   |     ||            |    |   |  |  |           |
                +----     ||            |    |   |  |  |           |
R303         ----         ||            |    |   |  |  |           |
                          +-            |    |   |  |  |           |
23           --------------             |    |   |  |  |           |
                                        +-----   |  |  |           |
30           ----------------------------        |  |  |           |
                                                 +---  |           |
30           -------------------------------------     |           |
                                                       +------------
23           -------------------------------------------
```

Appendix C4
80-100% Fines Habitat Category

```
C:\A94-01\SYSFILES\FINES100.SYS

>CLUSTER
>LABEL=STATION$
>DISTANCE=EUCLIDEAN
>LINKAGE=SINGLE
>JOIN ARAB POAB MOAB ECHAB MISCAB / ROWS

 DISTANCE METRIC IS EUCLIDEAN DISTANCE
 SINGLE LINKAGE METHOD (NEAREST NEIGHBOR)

 TREE DIAGRAM
                                             DISTANCES
      0.000                                                                1000.000
 41          --------------------------------
                                            +---
 41          --------------------------------  |
                                               +-------------------------------
 41          -------                           |
                   +----------------------------
 20          --    |
              +-   |
 20          -||   |
             ++|   |
 20          -||   |
              ||   |
 20          --|   |
               |   |
 20          --|   |
              ||   |
 R203        -+|   |
              ||   |
 0020        -||   |
             ++|   |
 0020        -||   |
              ||   |
 0020        -||   |
             ++|   |
 20          -||   |
              ||   |
 20          -+|   |
              ||   |
 LSUV01      -+|   |
              ||   |
  1          -+|   |
              ||   |
 R106        -+|   |
              ||   |
 R106        -||   |
             ++|   |
  1          -||   |
              ||   |
  1          -+|   |
              ||   |
 48          -||   |
             |||   |
 48          +||   |
             ++|   |
 48          -||   |
              ||   |
 0048        -||   |
             ++|   |
 0048        -||   |
```

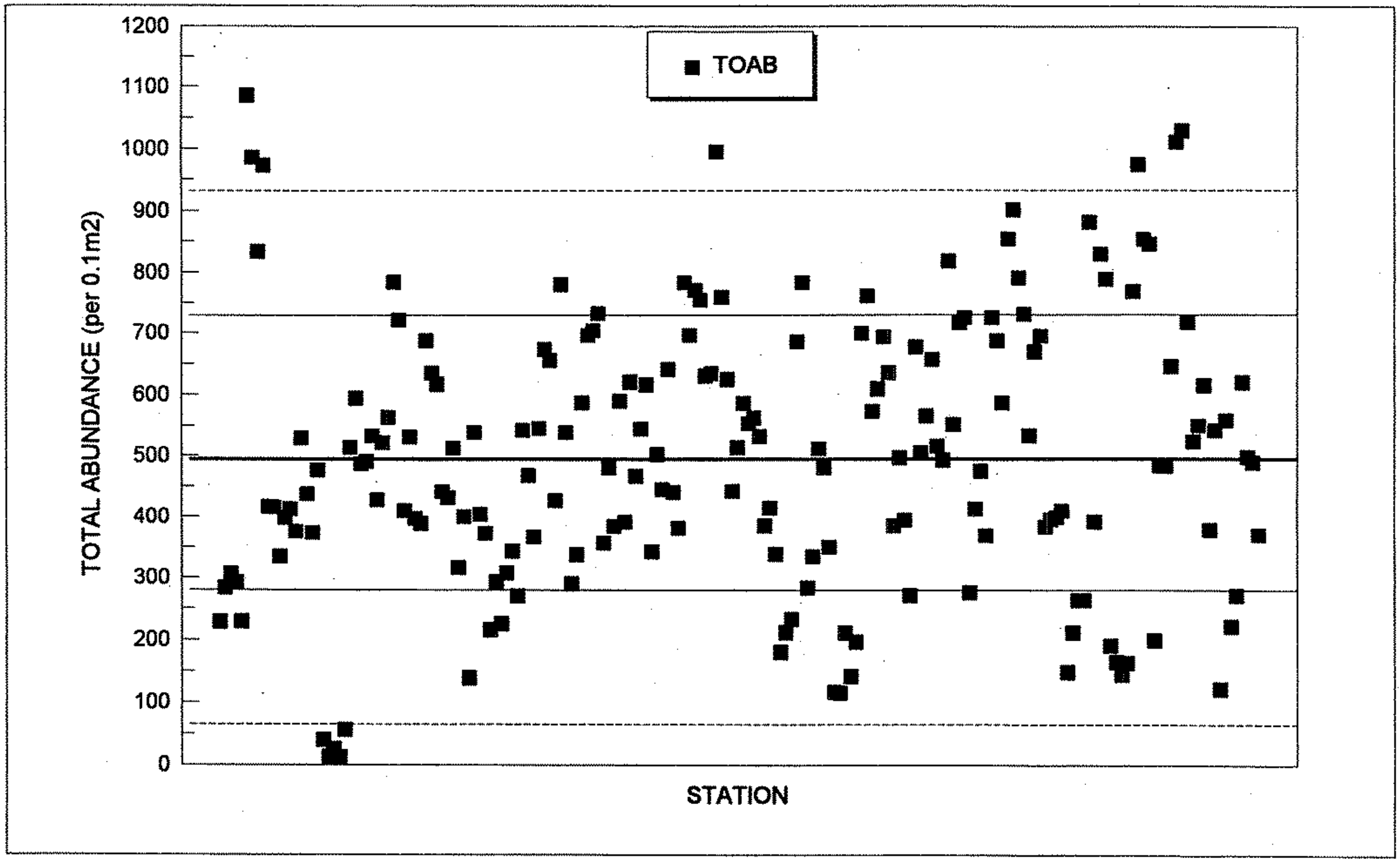
```
                  ||    |
20               -+|    |
20               - |    |
20               + |    |
20               + |    |
                 ++     |
20               - |    |
R203             - |    |
R203             + |    |
R203             + |    |
                 ++     |
R203             - |    |
R204             -+|    |
R204             -+|    |
48               - |    |
48               + |    |
48               + |    |
48               + |    |
                 ++     |
48               - |    |
SR-07            - |    |
SR-07            + |    |
SR-07            + |    |
SR-07            + |    |
SR-07            + |    |
49               + |    |
49               + |    |
49               + |    |
R204             + |    |
R204             + |    |
R102             + |    |
R102             + |    |
R101             + |    |
                 ++     |
49               + |    |
QM-2             - |    |
                  ||    |
```

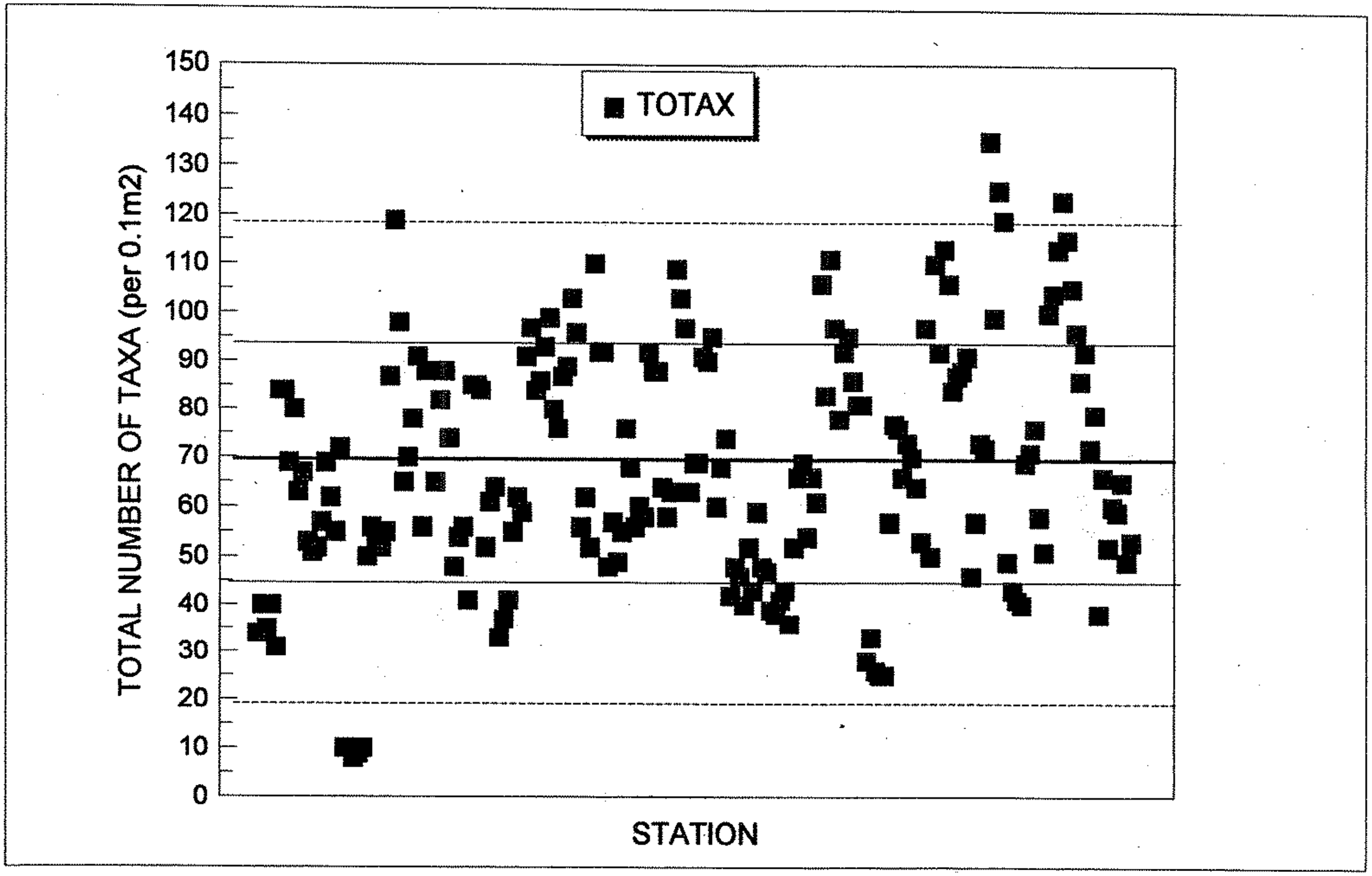
```
4      -||     |
       ++|     |
R204   -||     |
        ||     |
5      -+|     |
        ||     |
4      -+|     |
        ||     |
4      -||     |
       ++|     |
4      +||     |
       |||     |
4      +||     |
       |||     |
4      +||     |
       |||     |
5      +||     |
       |||     |
5      +||     |
       |||     |
5      +||     |
       |||     |
5      +||     |
       |||     |
5      -||     |
        ||     |
5      -+|     |
        ||     |
5      -+|     |
        ||     |
4      -||     |
       ++|     |
4      -||     |
        ||     |
R102   -+|     |
        ||     |
0018   -+|     |
        ||     |
5      -+|     |
        ||     |
R101   -||     |
       ++|     |
R101   -||     |
        ||     |
0018   -||     |
       ++|     |
0018   -||     |
        ||     |
0012   -+|     |
        ||     |
0012   -+|     |
        ||     |
0012   -+|     |
        ||     |
12     -+|     |
        ||     |
12     -||     |
       ++|     |
12     +||     |
       |||     |
12     -||     |
        ||     |
12     -||     |
```

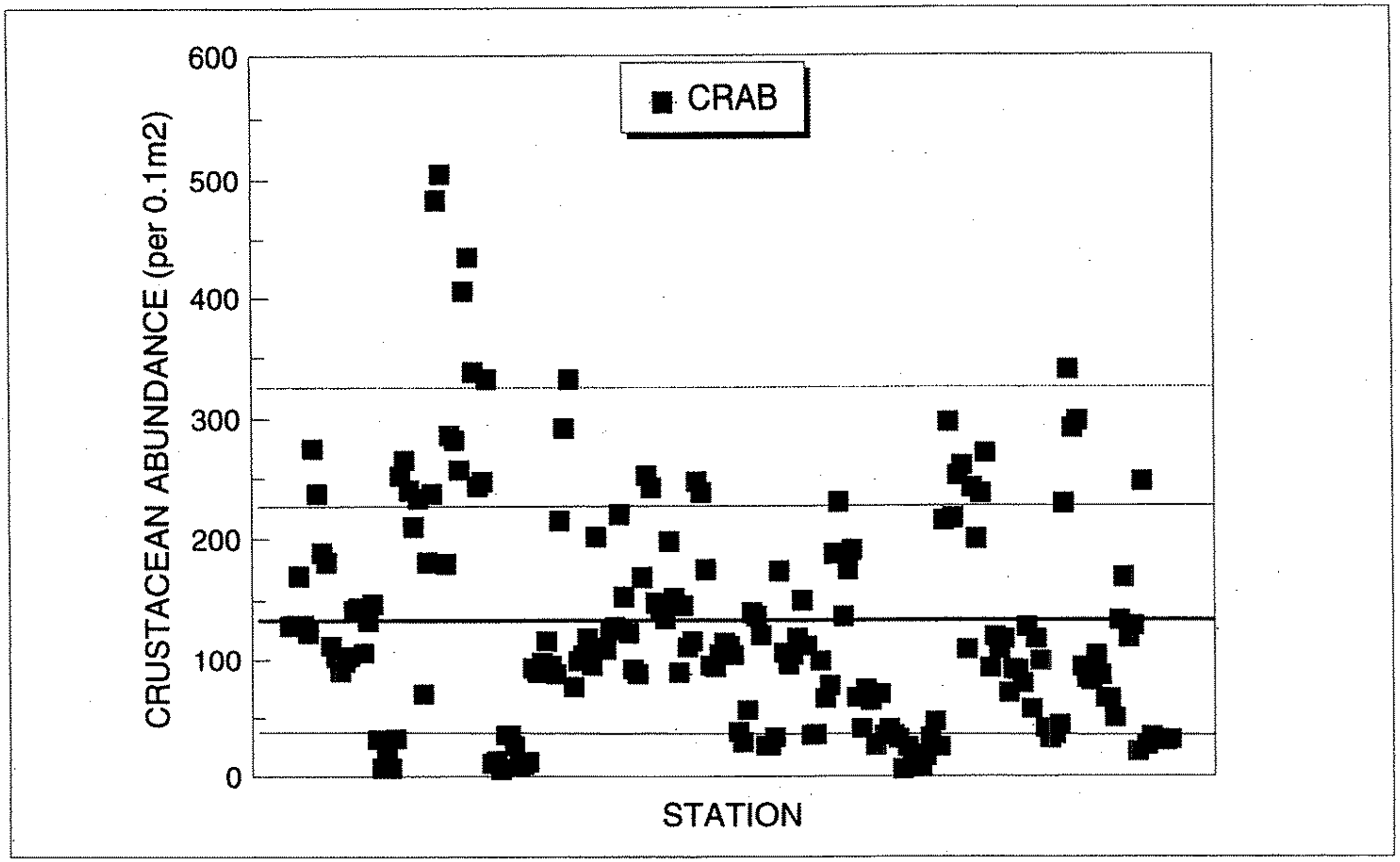
```
                |||   |
12              +||   |
                |||   |
12              +||   |
                ++|   |
12              -||   |
                 ||   |
12              -+|   |
                 ||   |
 1              -+|   |
                 ||   |
 4              -+|   |
                 ++   |
R106            --|   |
                  |   |
0048            --|   |
                 ++   |
48              --|   |
                  |   |
 1              --+   |
                  |   |
 1              --|   |
                 ++   |
 1              --|   |
                  +-  |
R109            --||  |
                 |||  |
R109            -+||  |
                 ++|  |
R109            --||  |
                  ||  |
 1              - ||  |
                +--|  |
 1              -  |  |
                   |  |
 1              ---|  |
                  ++  |
 1              --+|  |
                  ||  |
 1              --||  |
                 +-|  |
 1              -- |  |
                   +- |
 1              ---|| |
                  +-| |
LSKR05          --- | |
                    +--
 1              -----
```

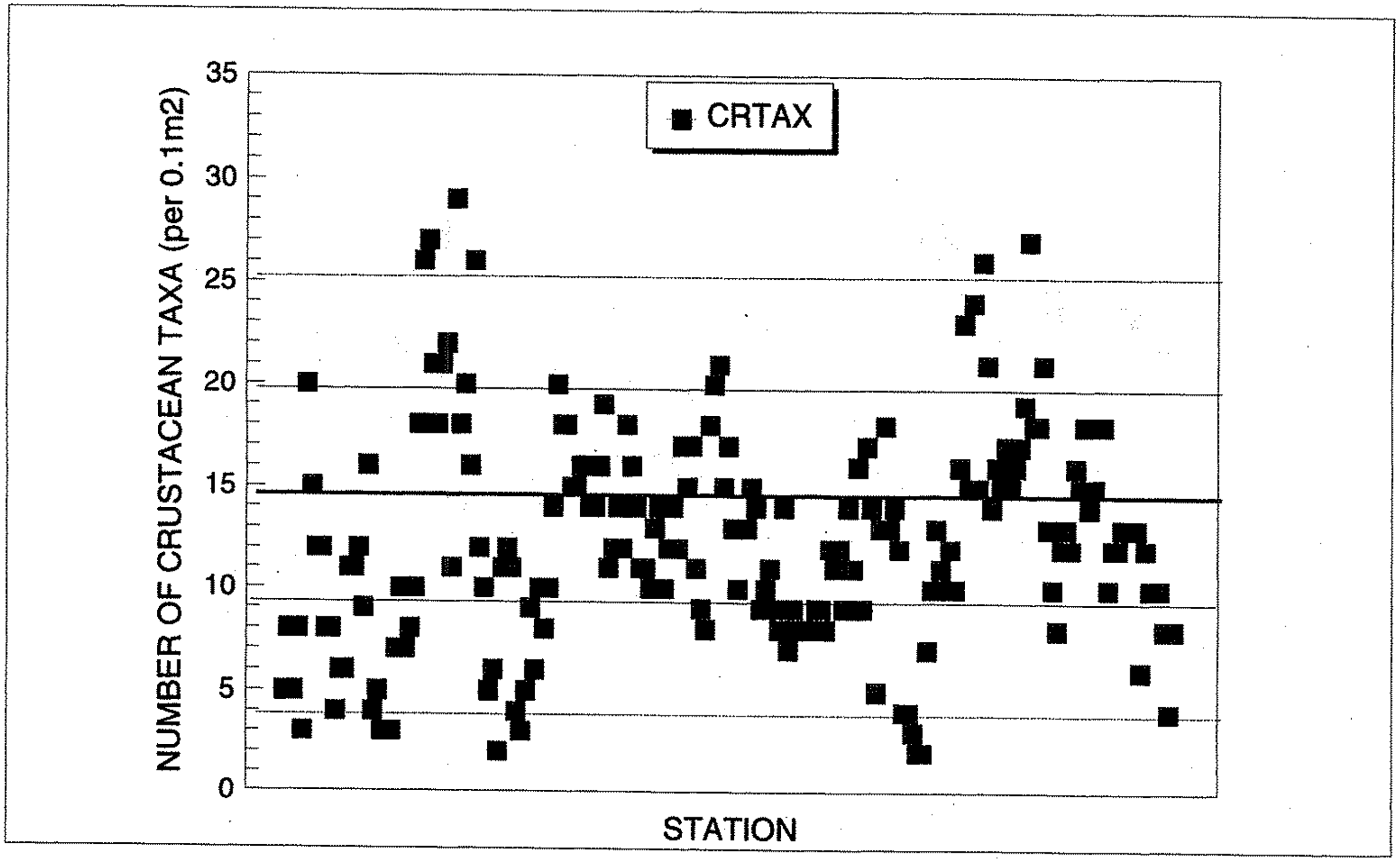
APPENDIX D
PLOTS OF BENTHIC ENDPOINTS PRIOR TO REMOVAL OF OUTLIER SAMPLES IDENTIFIED BY ± 1.96 STANDARD NORMAL DEVIATES

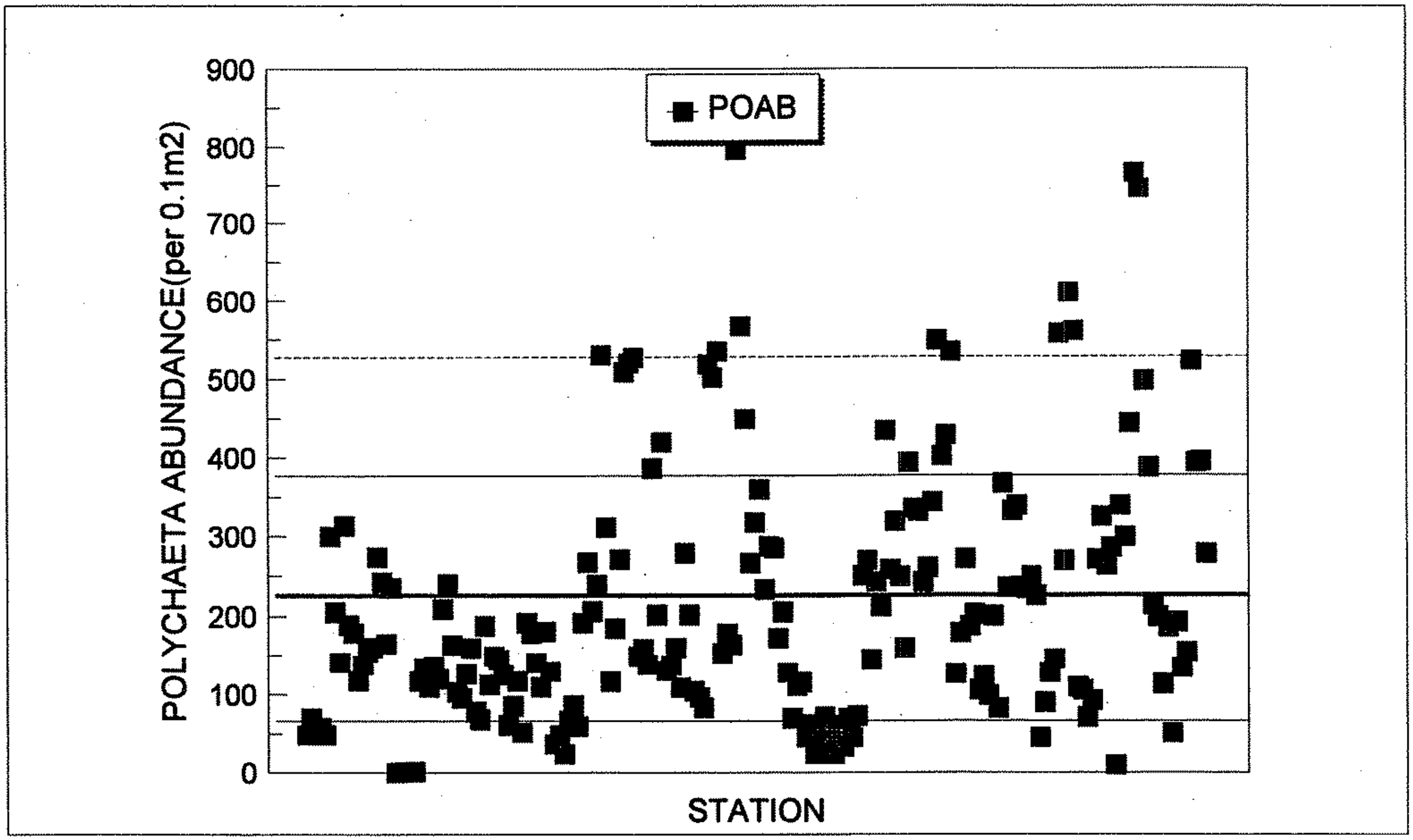
Appendix D1
0-20% Fines Habitat Category


TOAB
TOTAL ABUNDANCE (per 0.1m2)
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
STATION

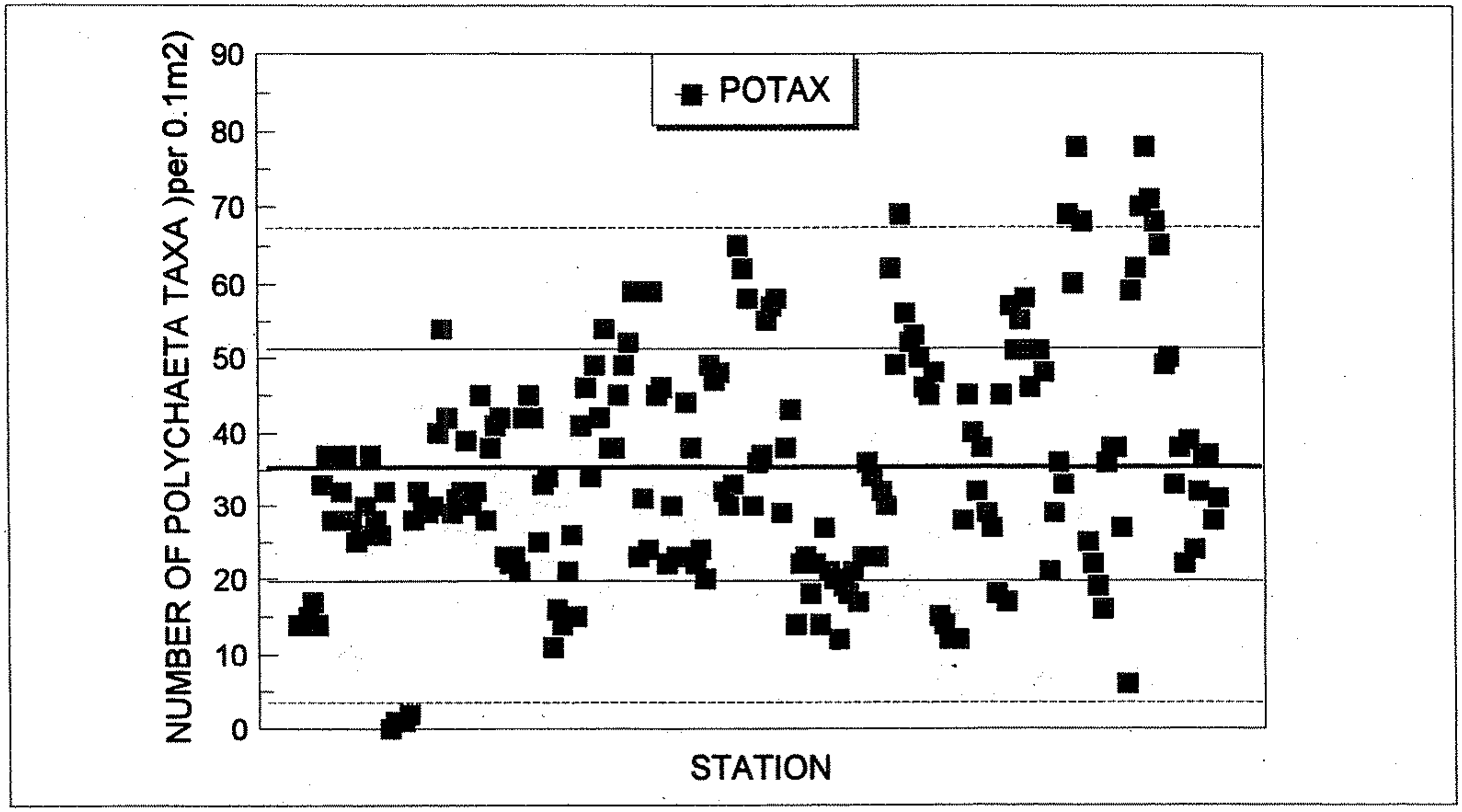

TOTAX
TOTAL NUMBER OF TAXA (per 0.1m2)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
STATION

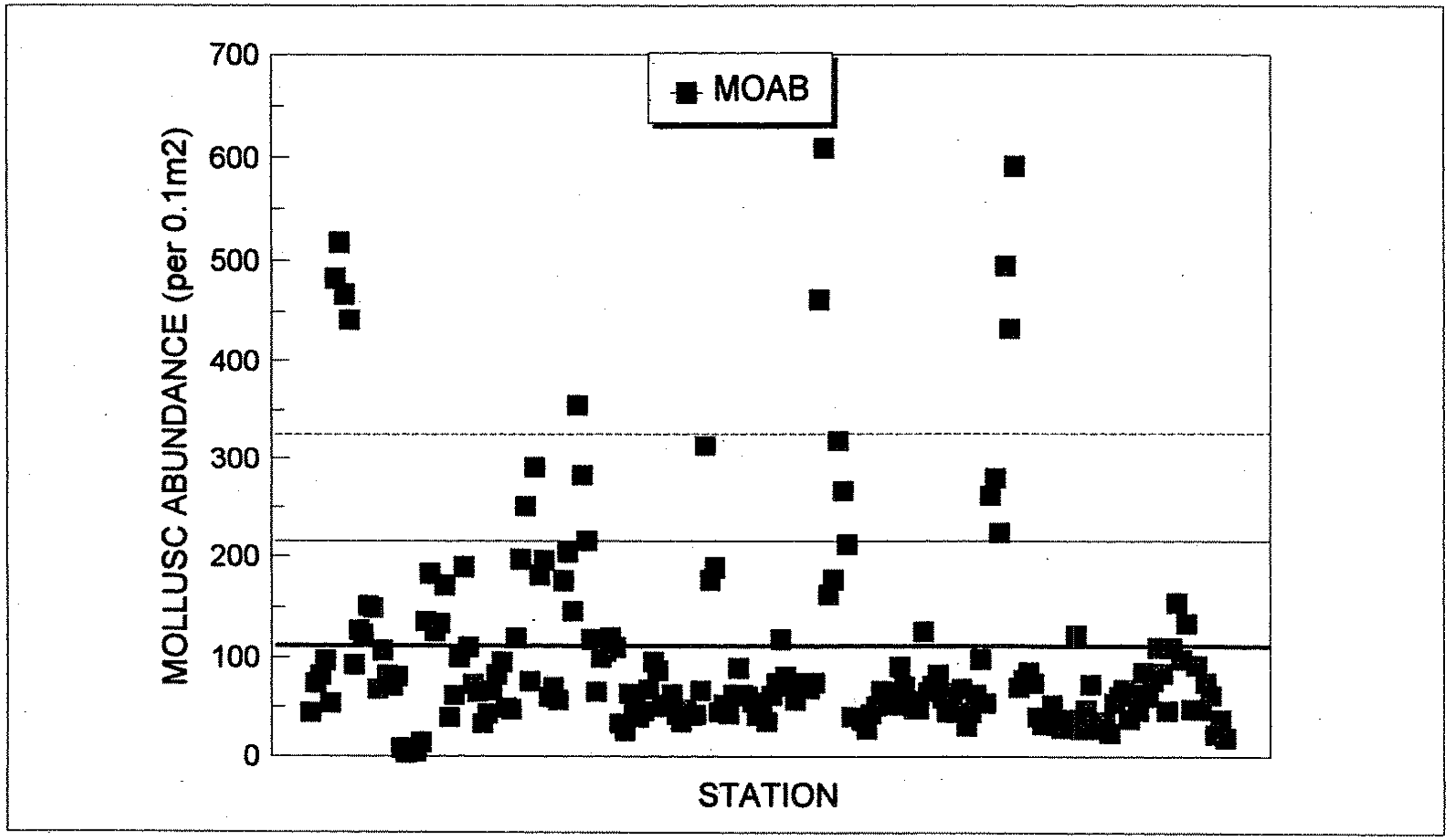

CRAB
CRUSTACEAN ABUNDANCE (per 0.1m2)
600
500
400
300
200
100
0
STATION

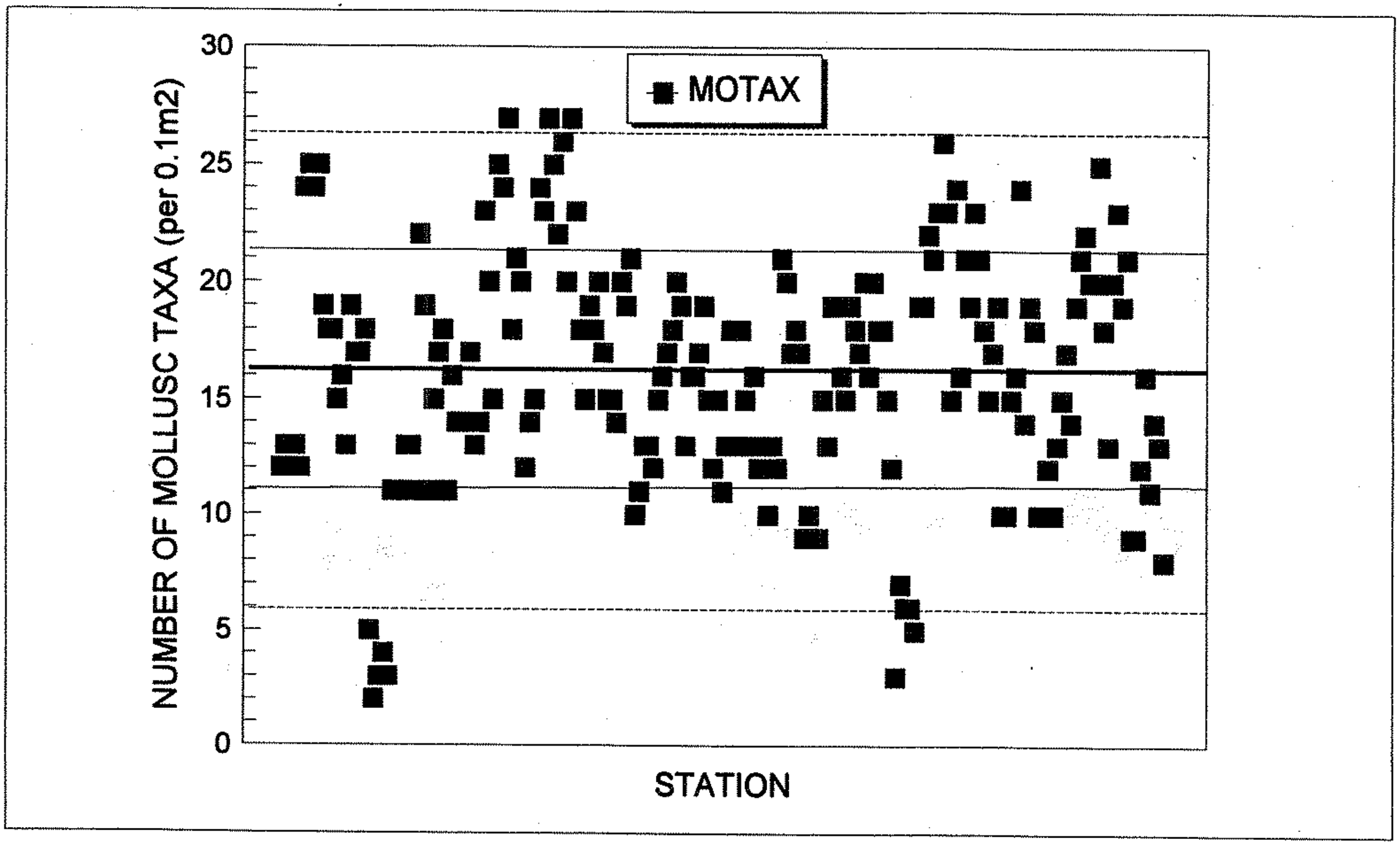

CRTAX
NUMBER OF CRUSTACEAN TAXA (per 0.1m2)
35
30
25
20
15
10
5
0
STATION

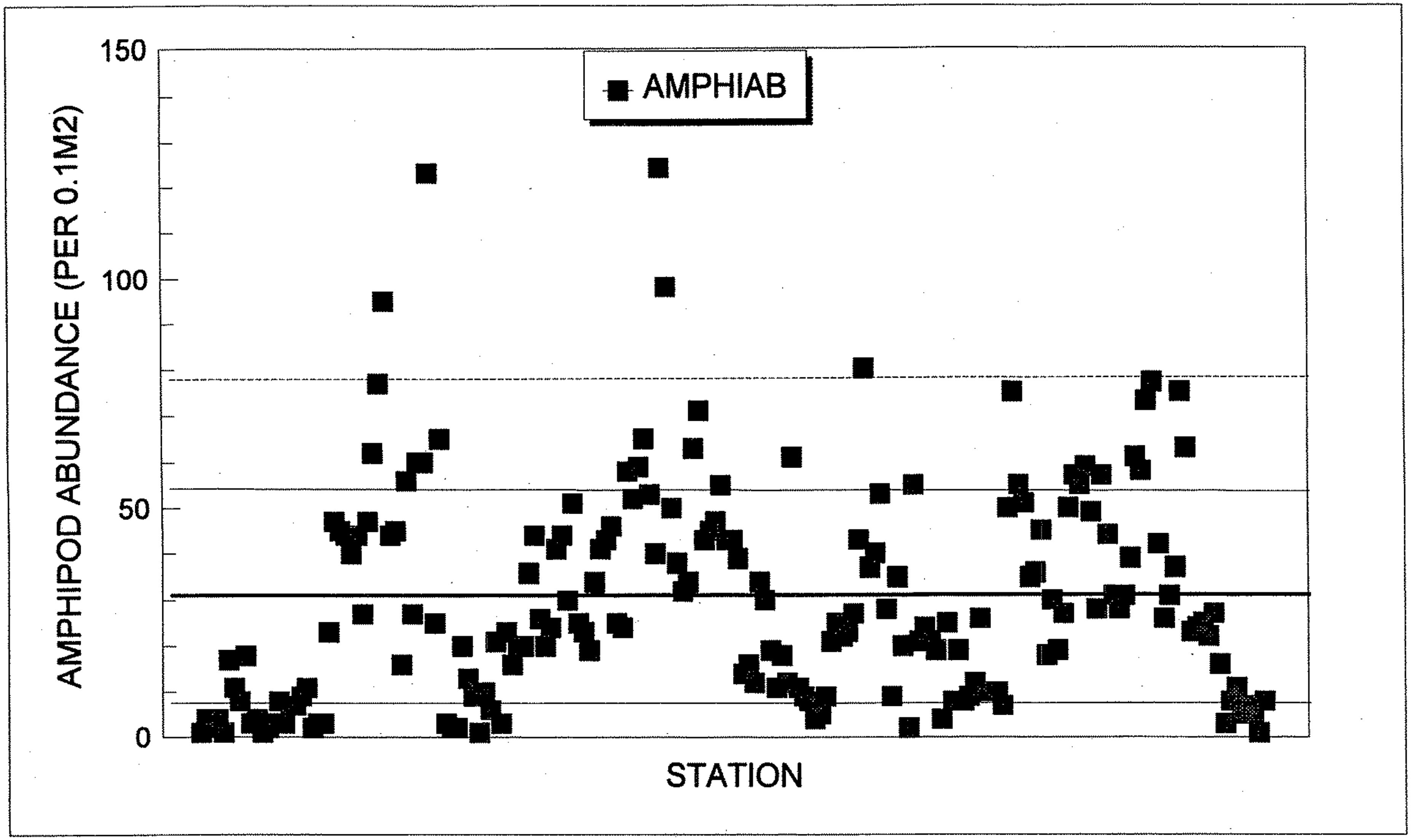


POAB
POLYCHAETA ABUNDANCE(per 0.1m2)
900
800
700
600
500
400
300
200
100
0
STATION

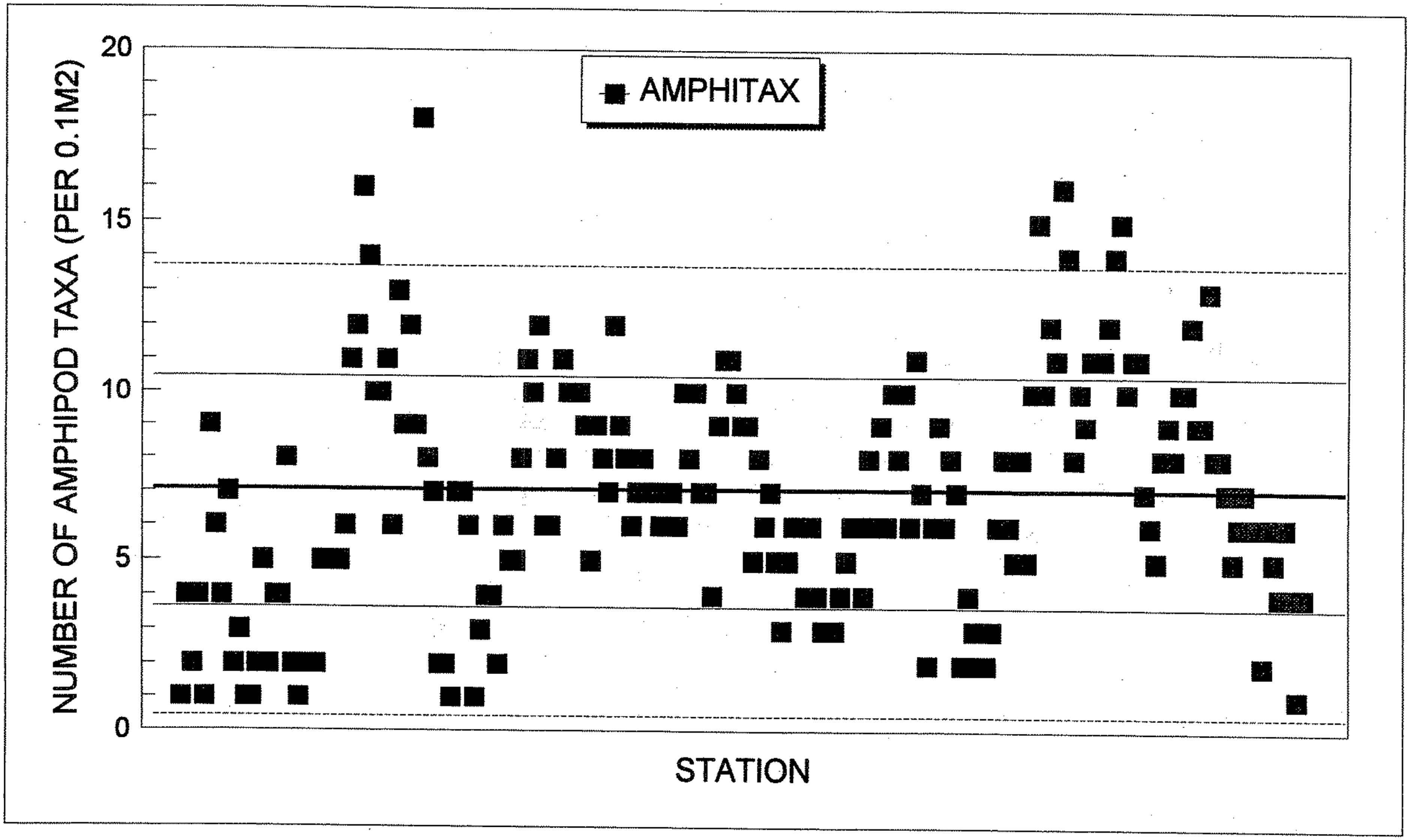

NUMBER OF POLYCHAETA TAXA)per 0.1m2)
90
80
70
60
50
40
30
20
10
0
POTAX
STATION

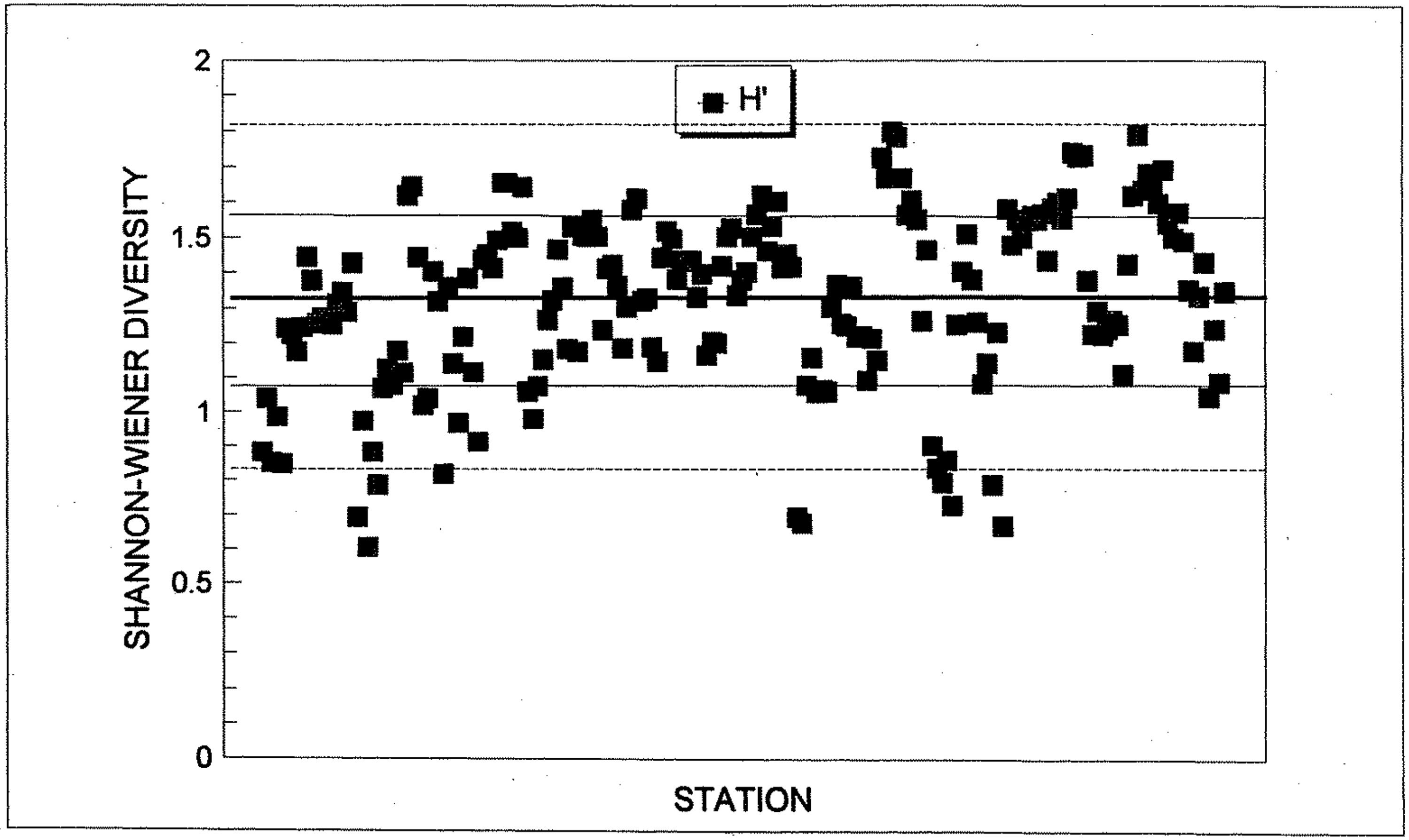

MOAB
MOLLUSC ABUNDANCE (per 0.1m2)
700
600
500
400
300
200
100
0
STATION

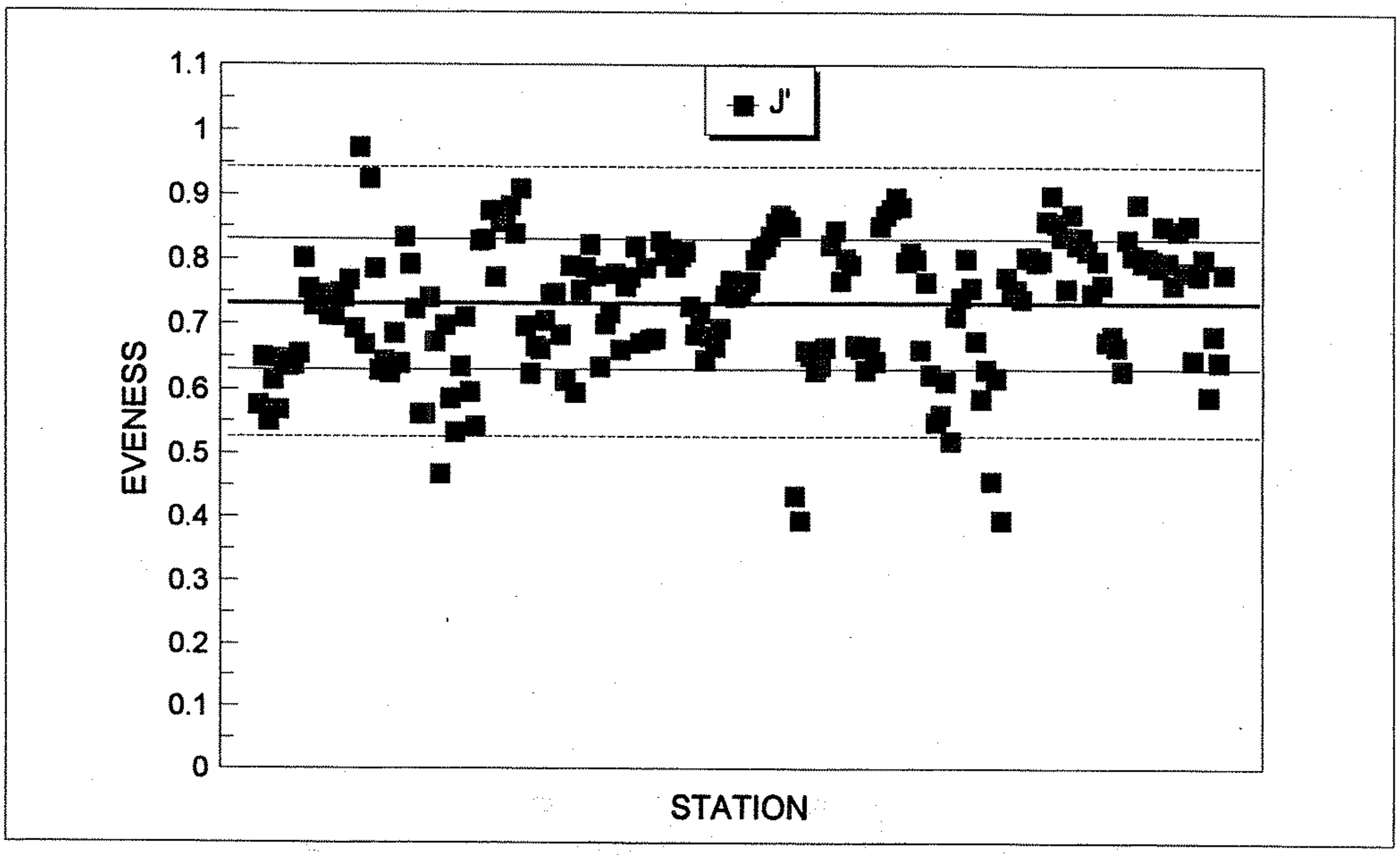

MOTAX
NUMBER OF MOLLUSC TAXA (per 0.1m2)
30
25
20
15
10
5
0
STATION

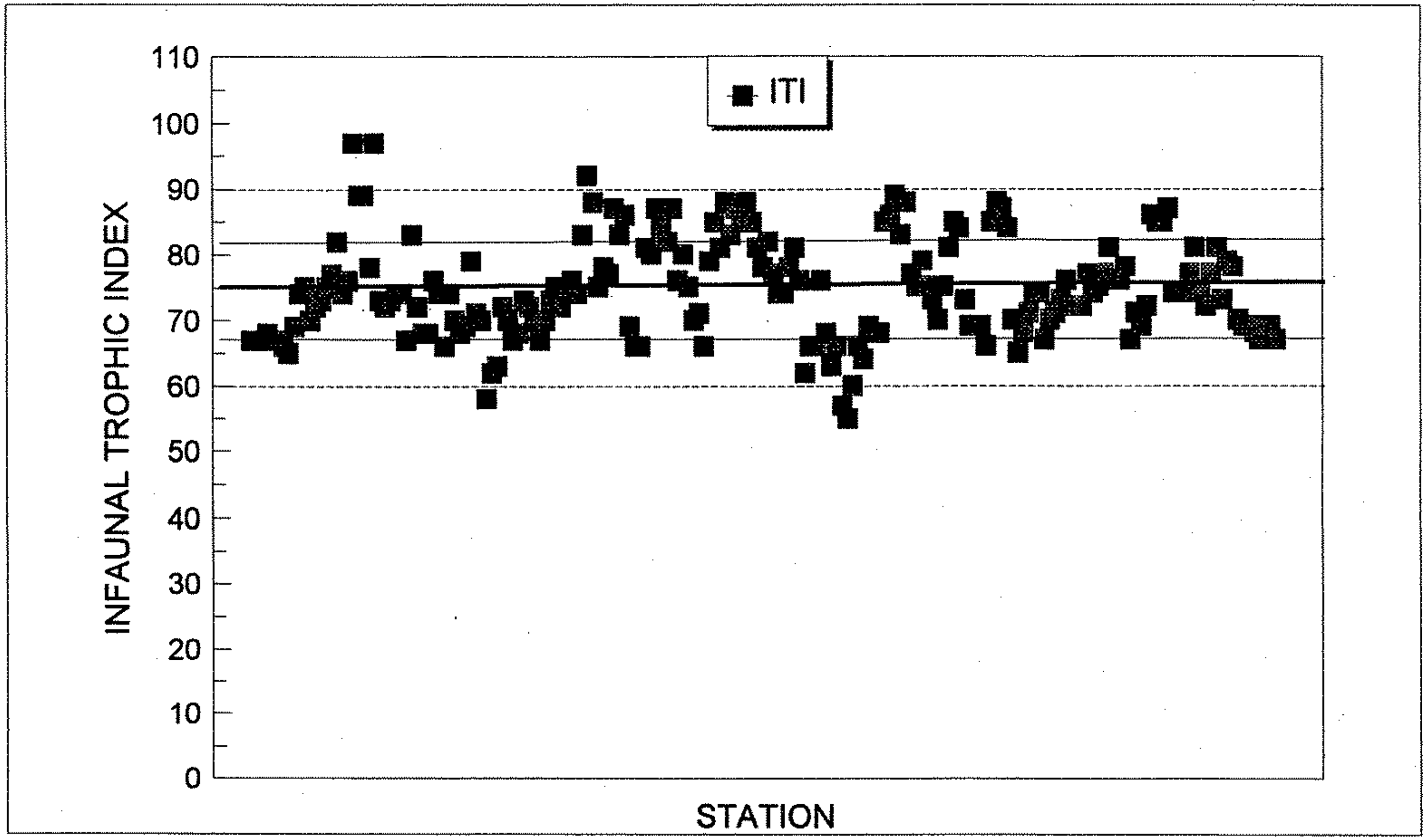


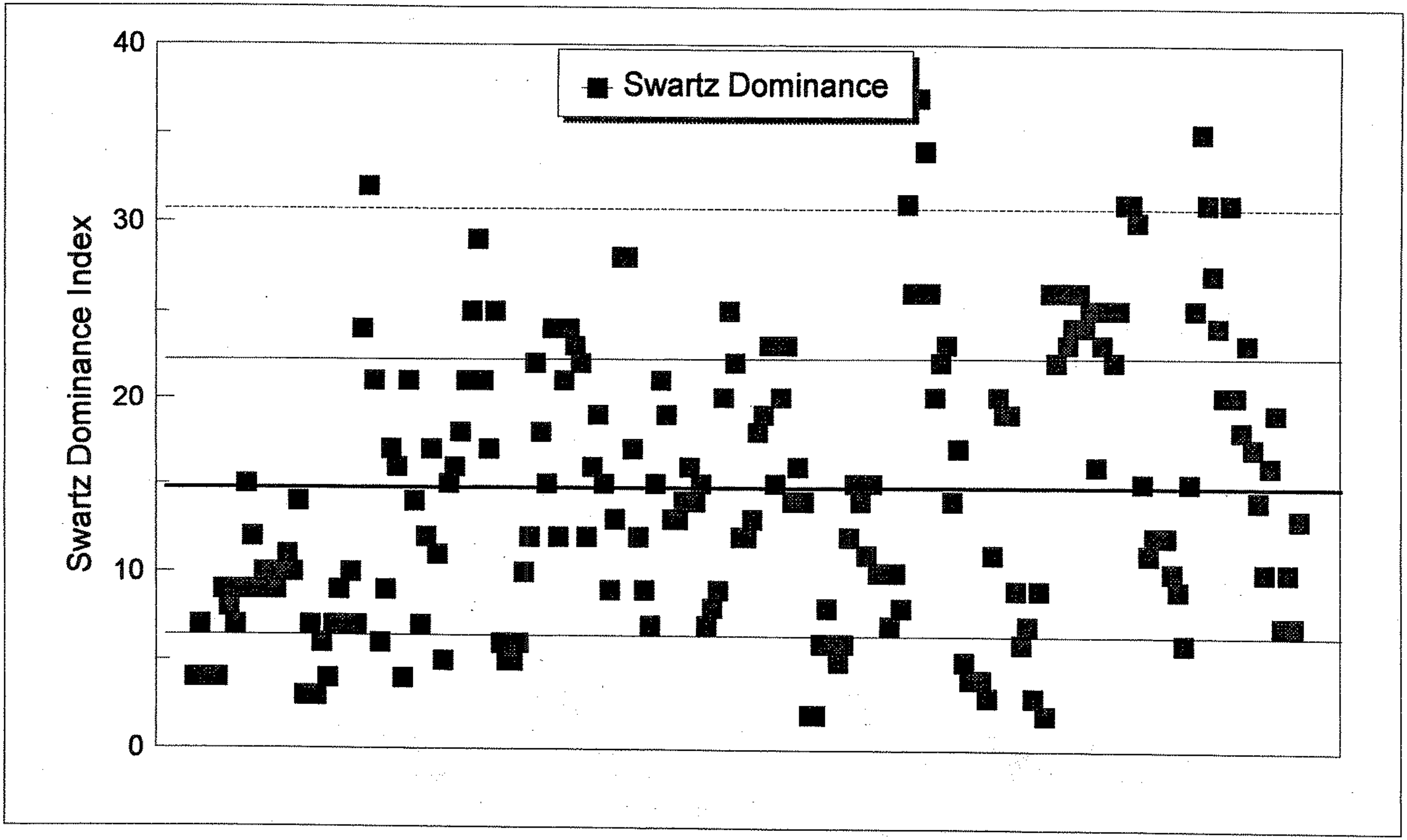
150
100
50
0
AMPHIPOD ABUNDANCE (PER 0.1M2)
AMPHIAB
STATION


AMPHITAX
NUMBER OF AMPHIPOD TAXA (PER 0.1M2)
20
15
10
5
0
STATION

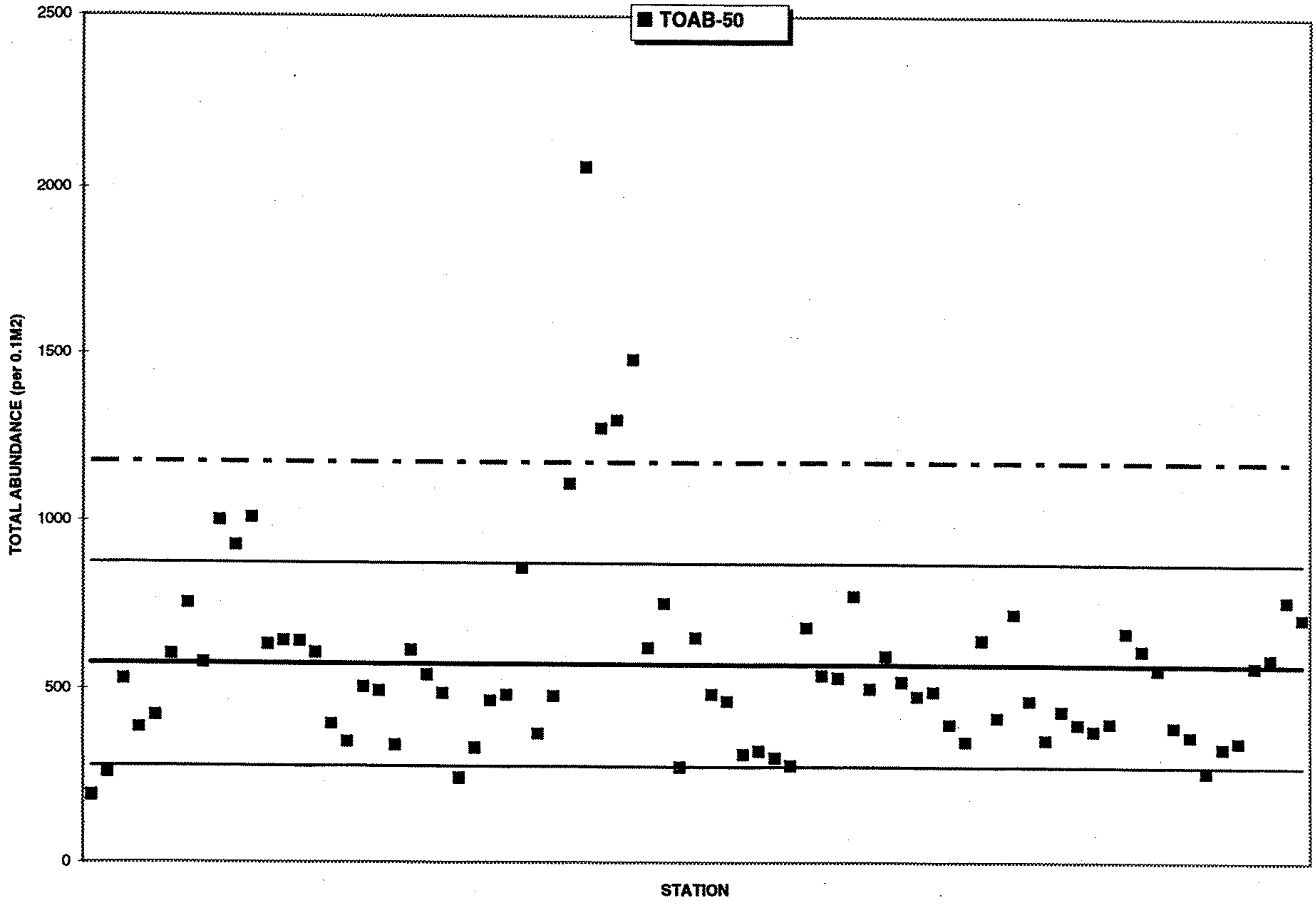

H'
2
1.5
1
0.5
0
SHANNON-WIENER DIVERSITY
STATION

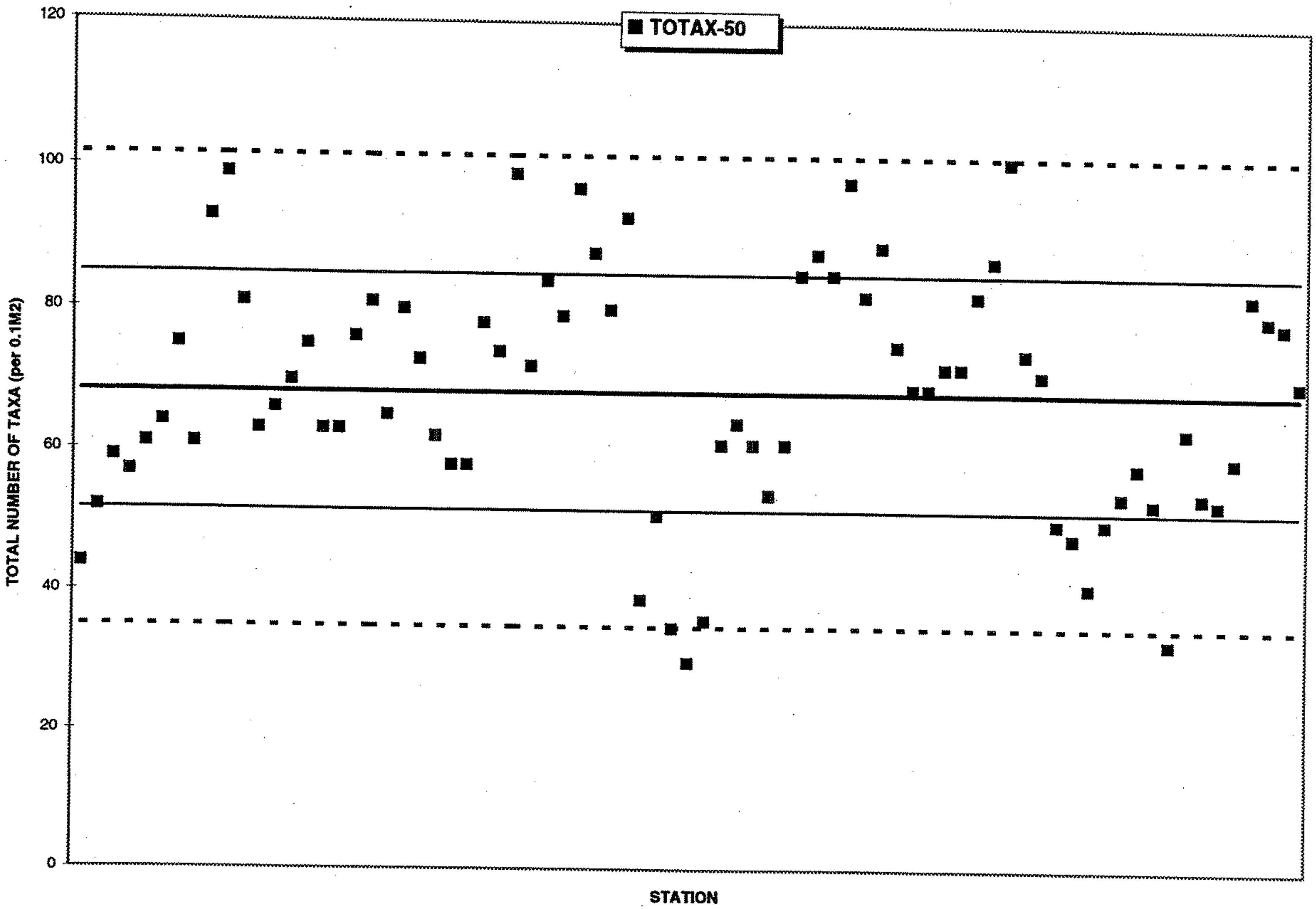

J'
EVENESS
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
STATION

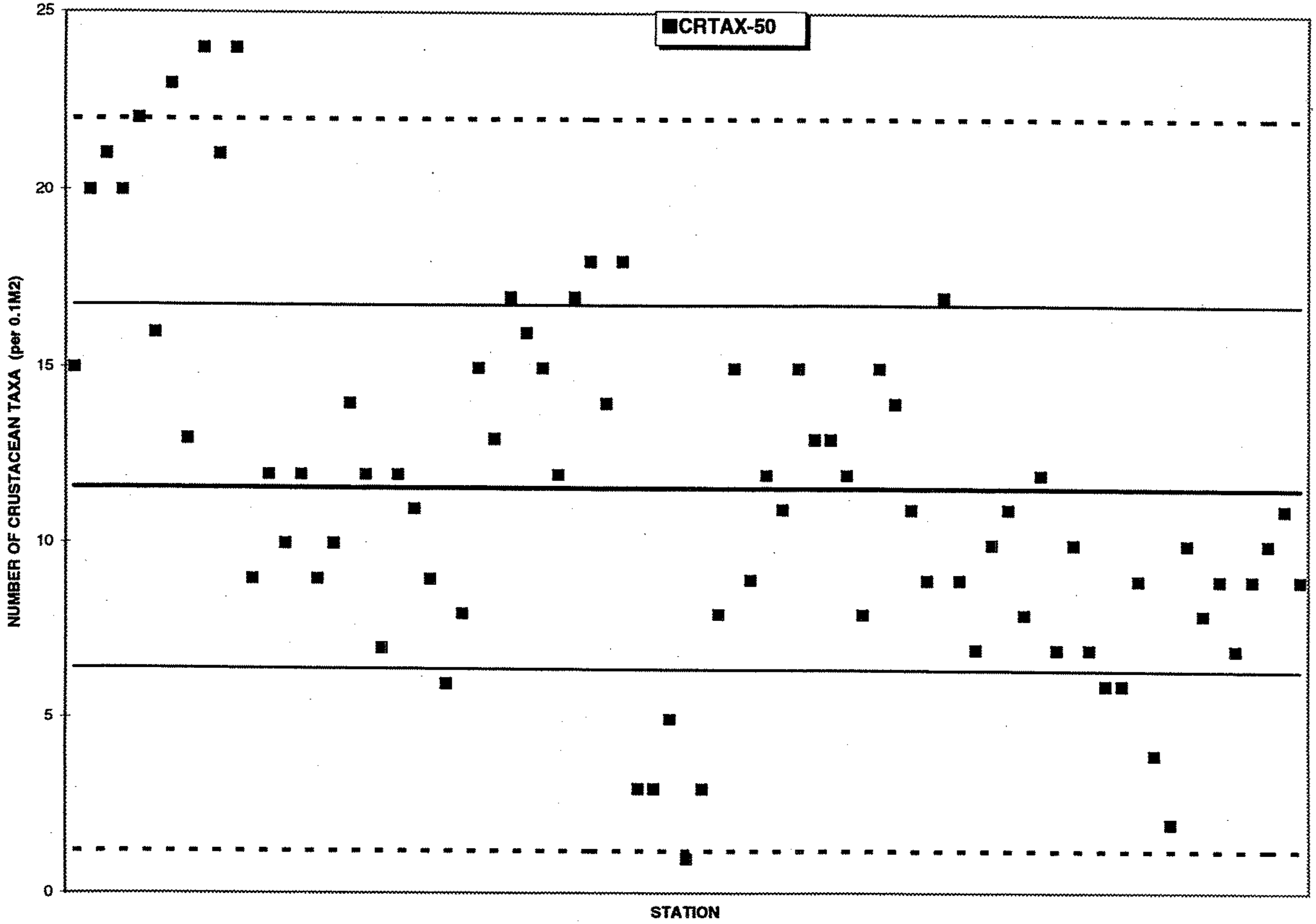

ITI
INFAUNAL TROPHIC INDEX
110
100
90
80
70
60
50
40
30
20
10
0
STATION


Swartz Dominance
Swartz Dominance Index
40
30
20
10
0

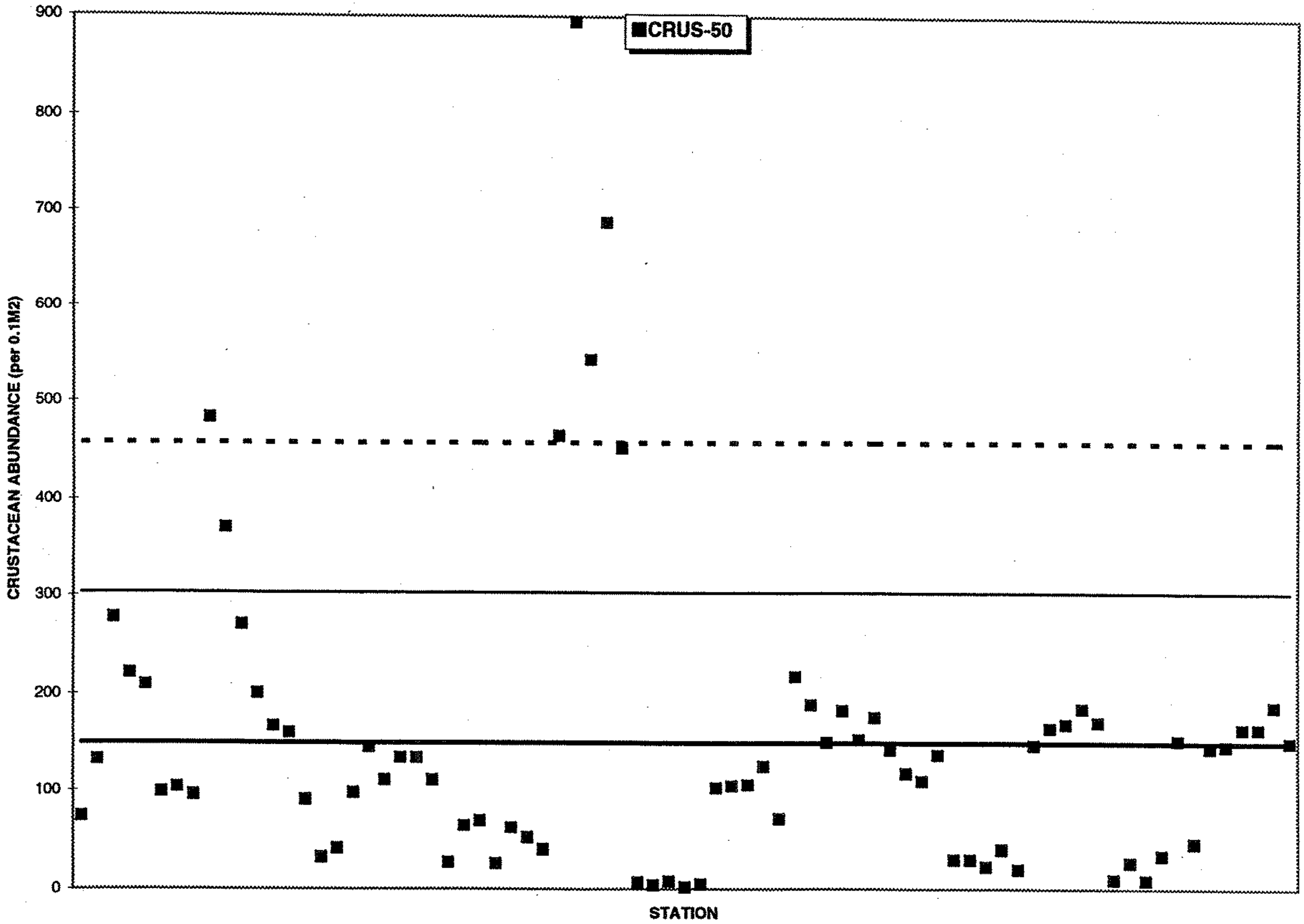
Appendix D2
20-50% Fines Habitat Category


TOAB-50
TOTAL ABUNDANCE (per 0.1M2)
2500
2000
1500
1000
500
0
STATION

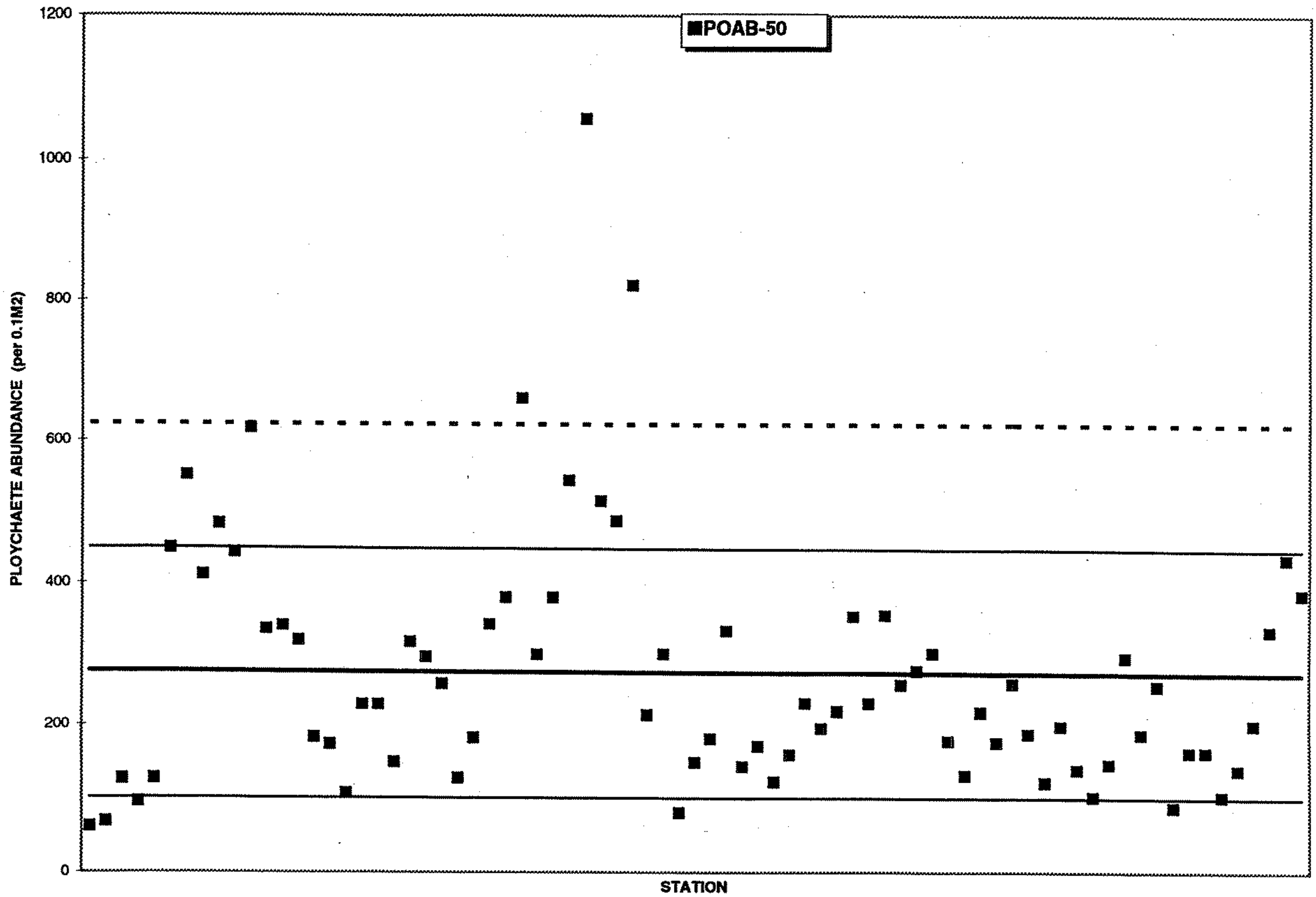

TOTAX-50
TOTAL NUMBER OF TAXA (per 0.1M2)
120
100
80
60
40
20
0
STATION



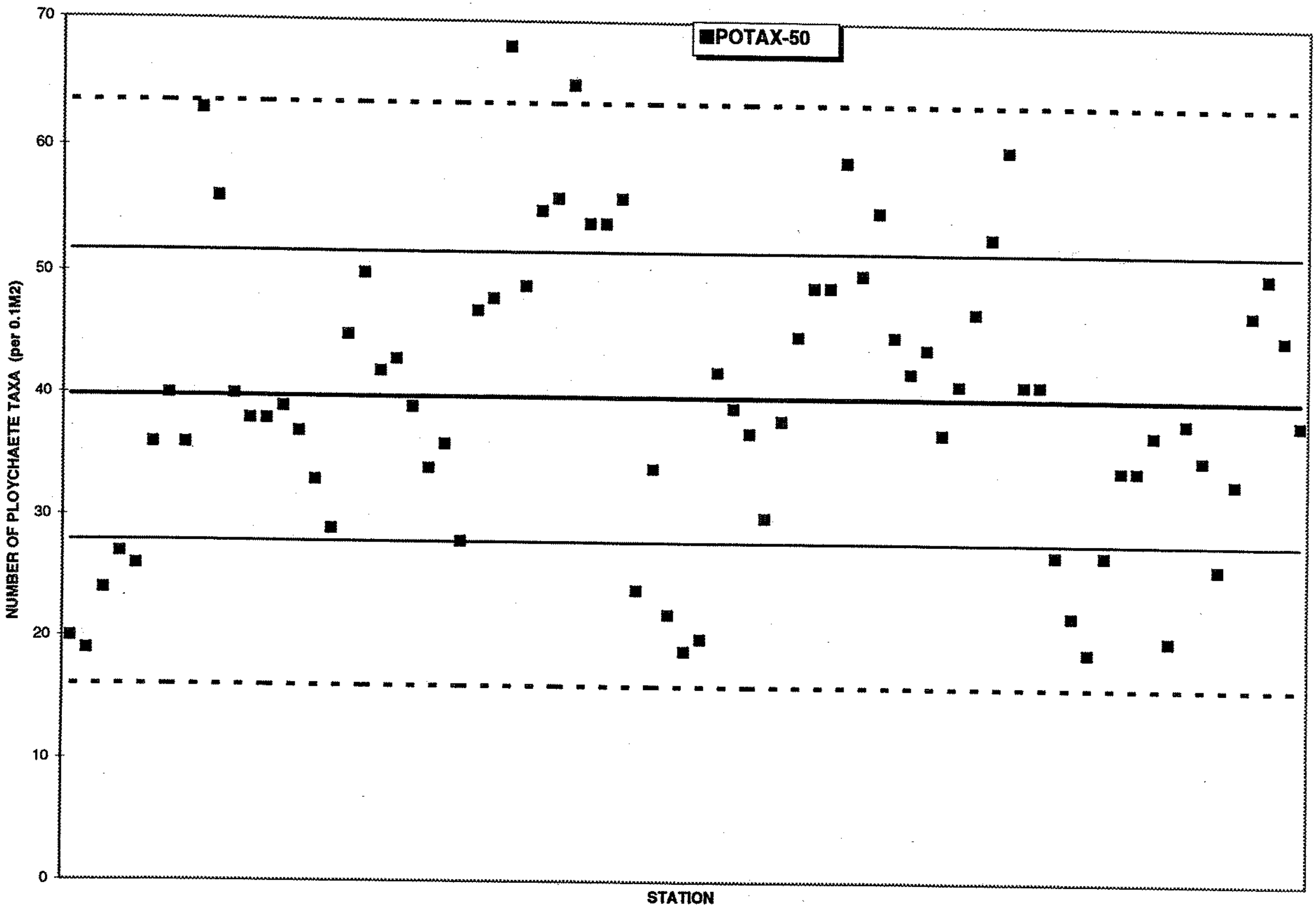
CRTAX-50
25
20
15
10
5
0
NUMBER OF CRUSTACEAN TAXA (per 0.1M2)
STATION



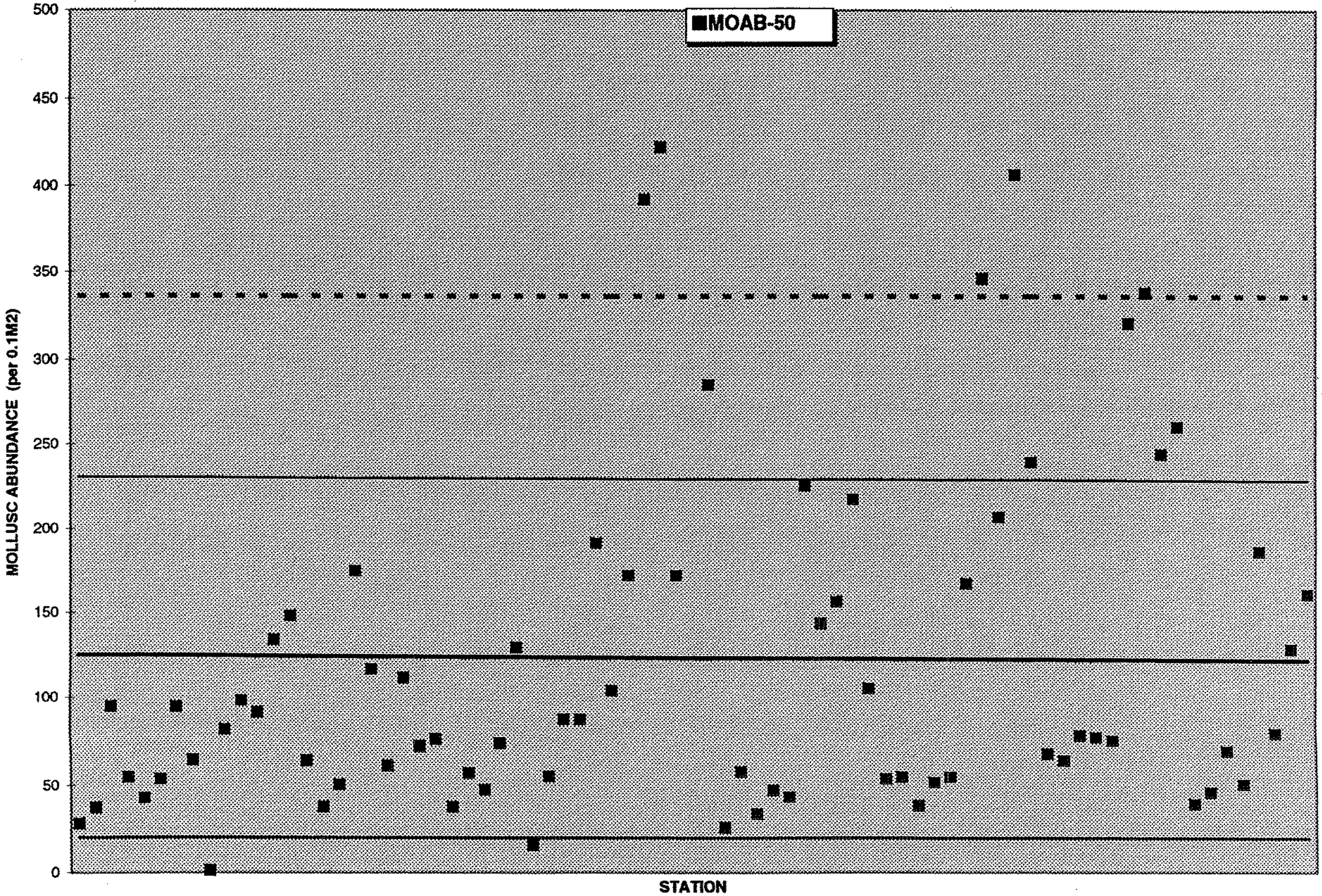
CRUS-50
CRUSTACEAN ABUNDANCE (per 0.1M2)
STATION
0
100
200
300
400
500
600
700
800
900

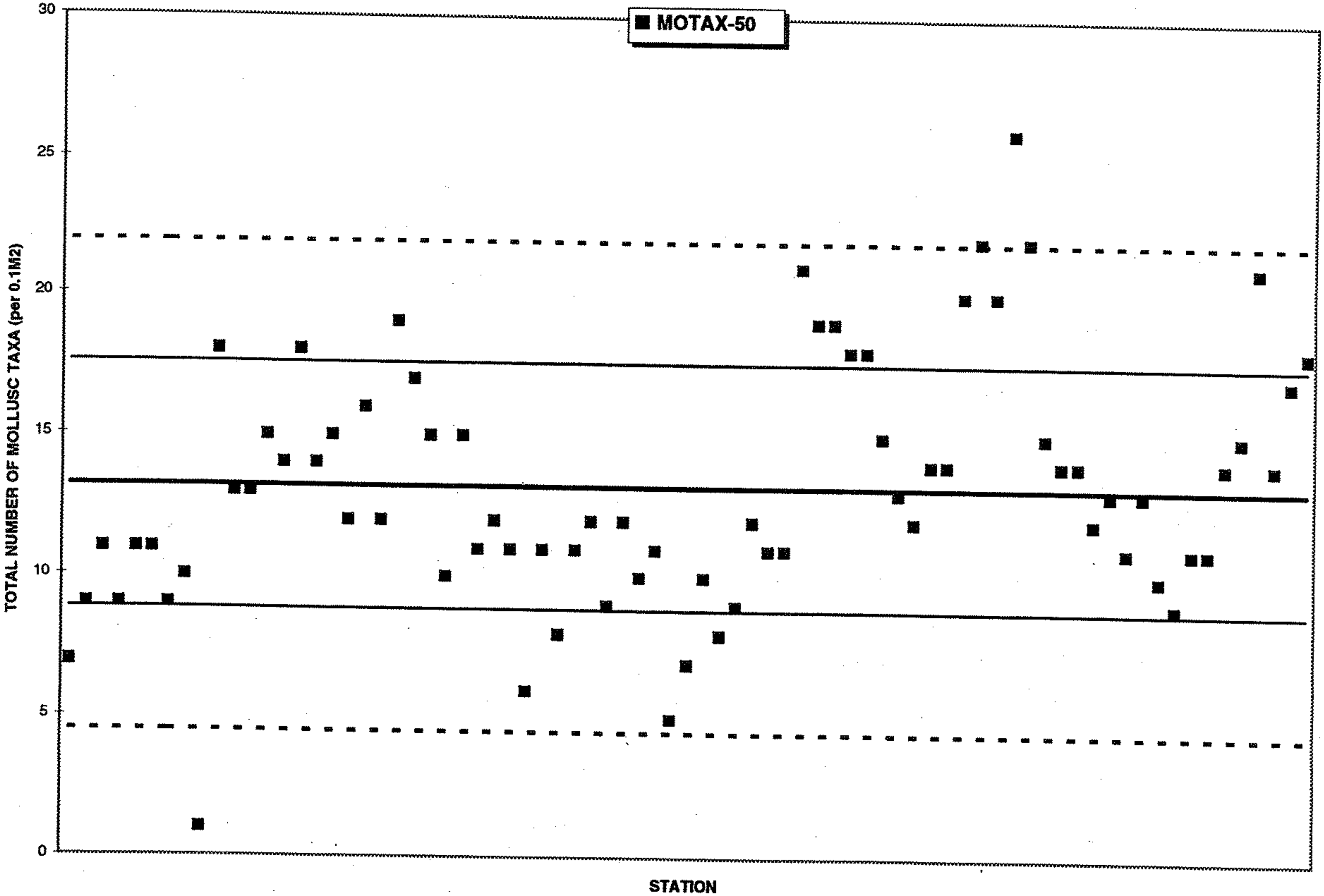


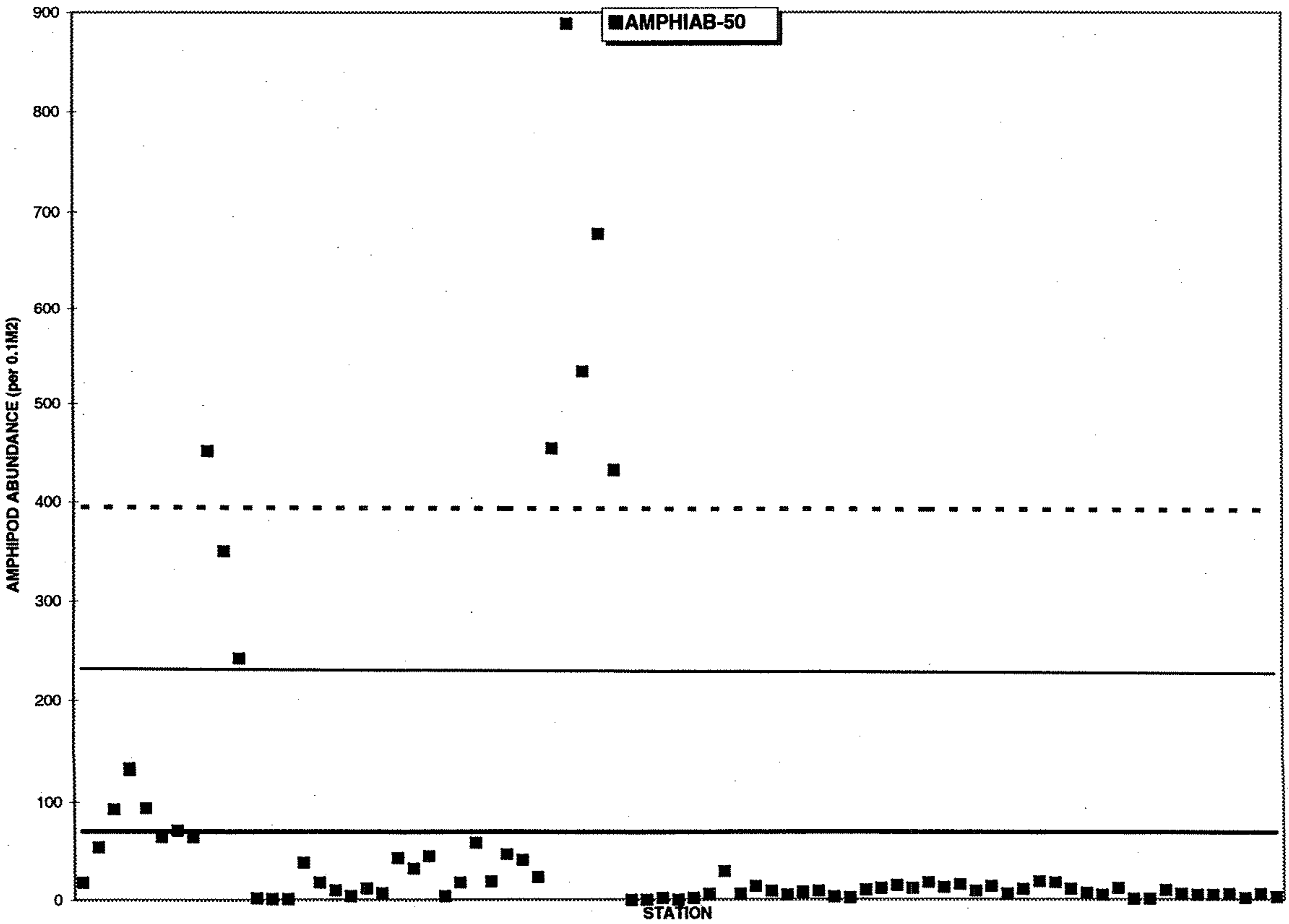
POAB-50
1200
1000
800
600
400
200
0
PLOYCHAETE ABUNDANCE (per 0.1M2)
STATION

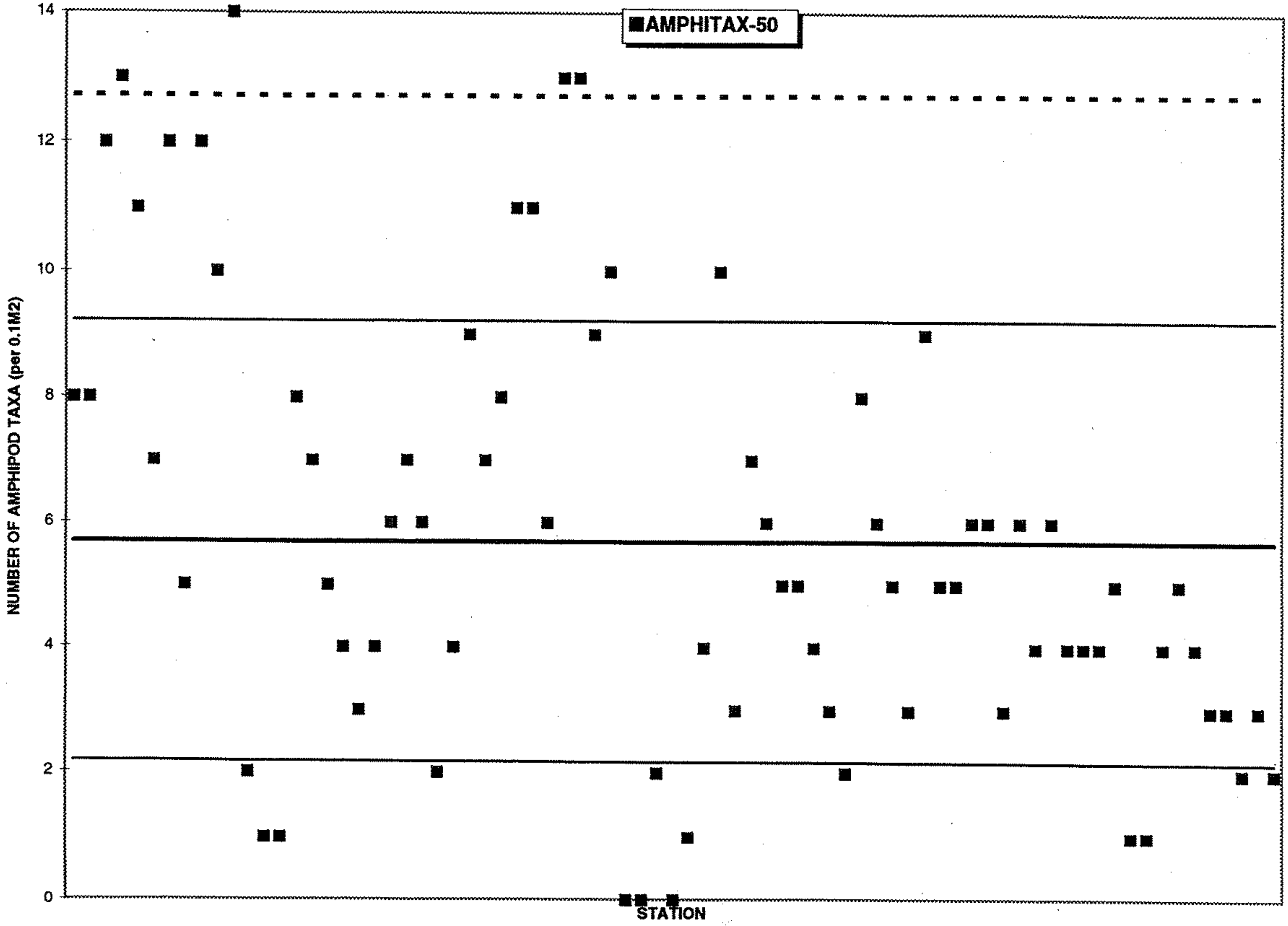


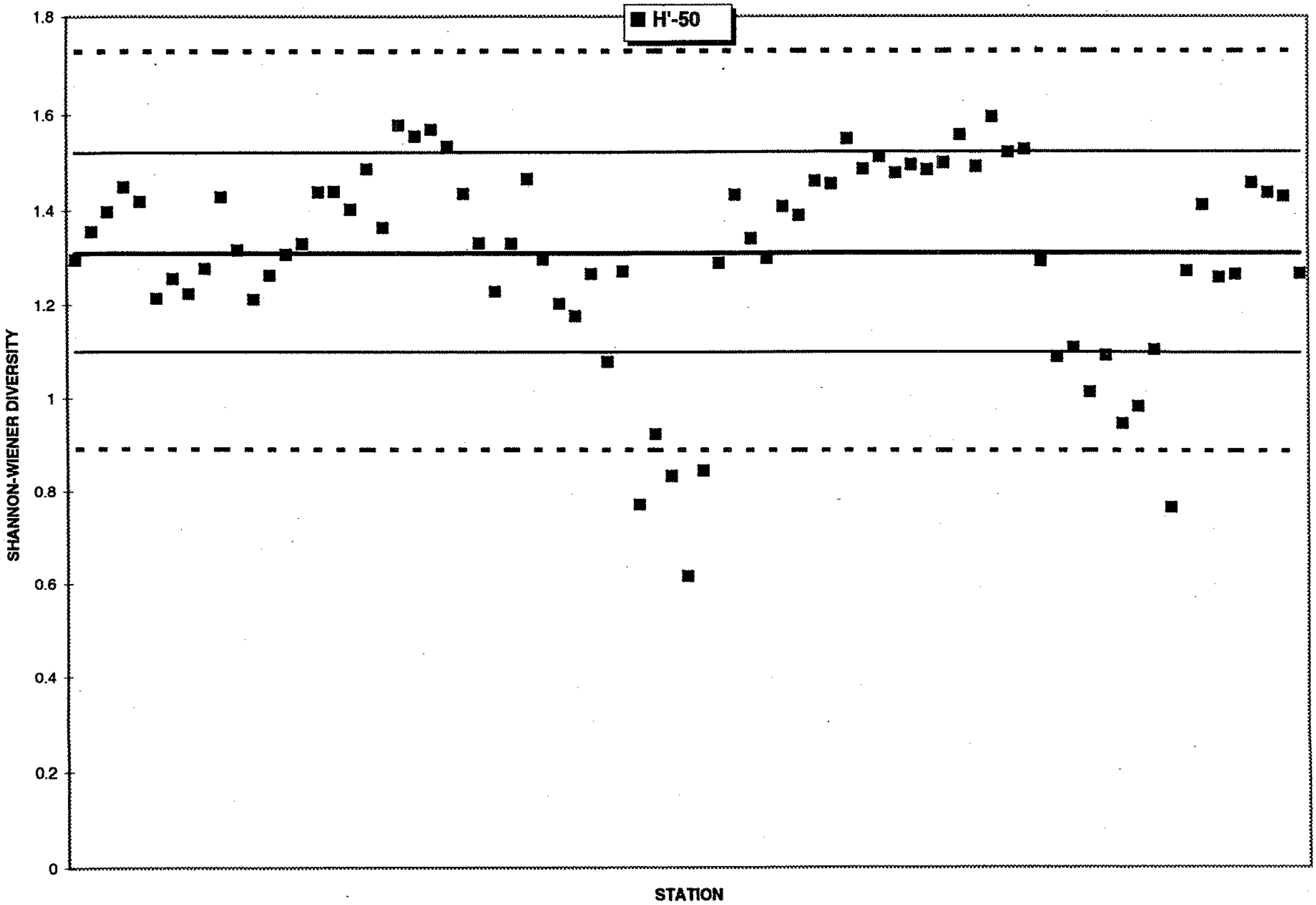
POTAX-50
70
60
50
40
30
20
10
0
NUMBER OF PLOYCHAETE TAXA (per 0.1M2)
STATION

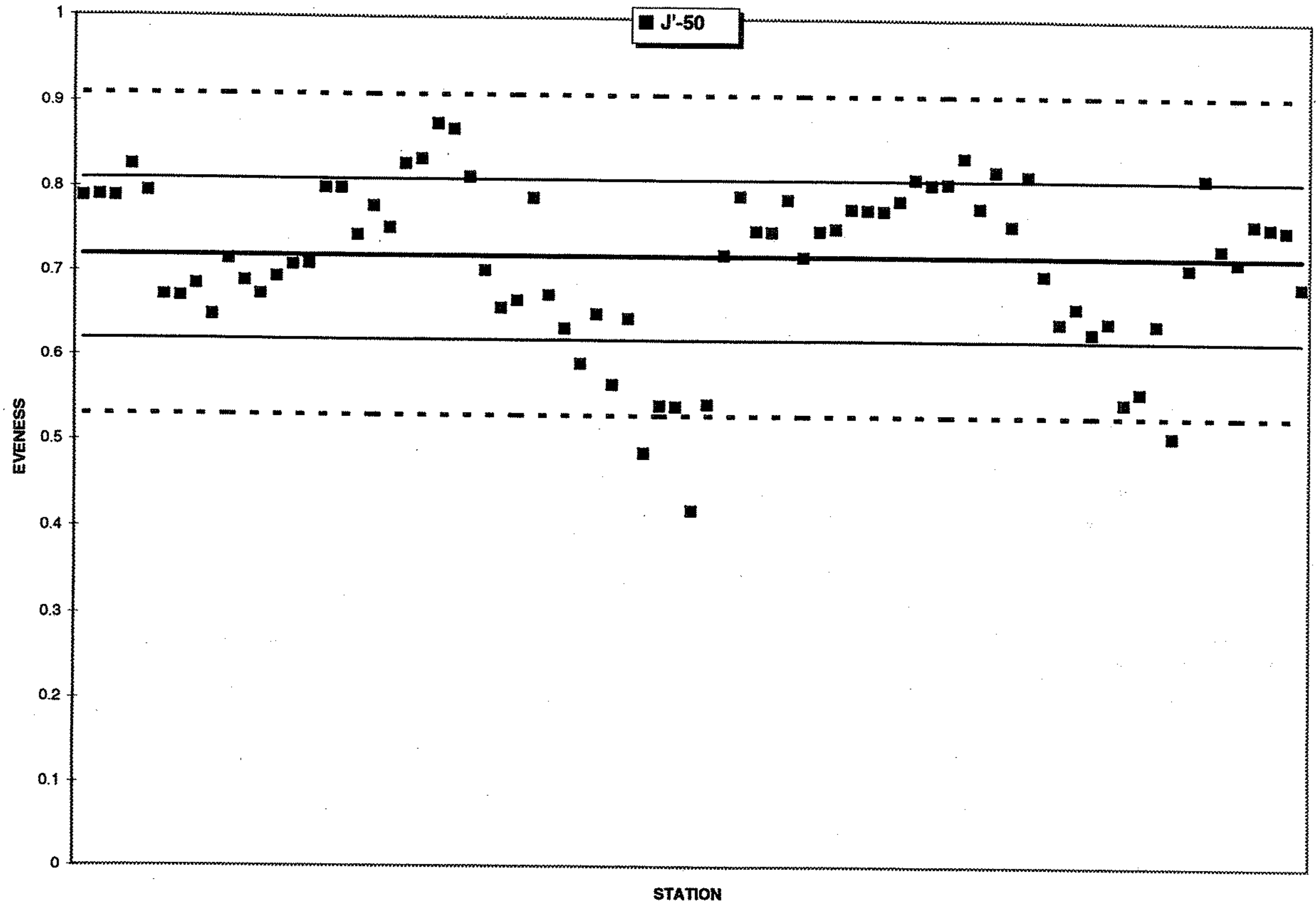

MOAB-50
500
450
400
350
300
250
200
150
100
50
0
MOLLUSC ABUNDANCE (per 0.1M2)
STATION

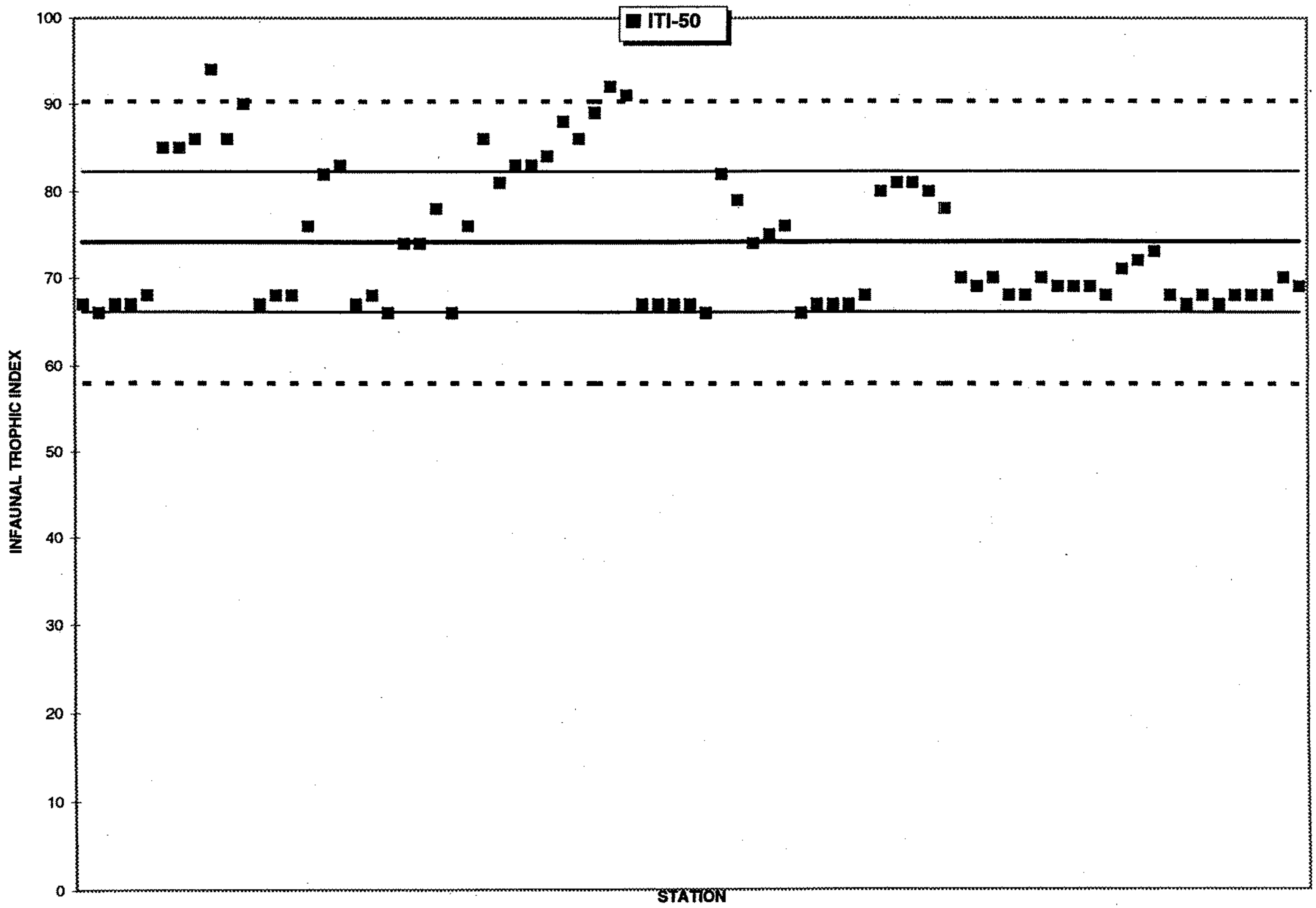

MOTAX-50
TOTAL NUMBER OF MOLLUSC TAXA (per 0.1M2)
30
25
20
15
10
5
0
STATION

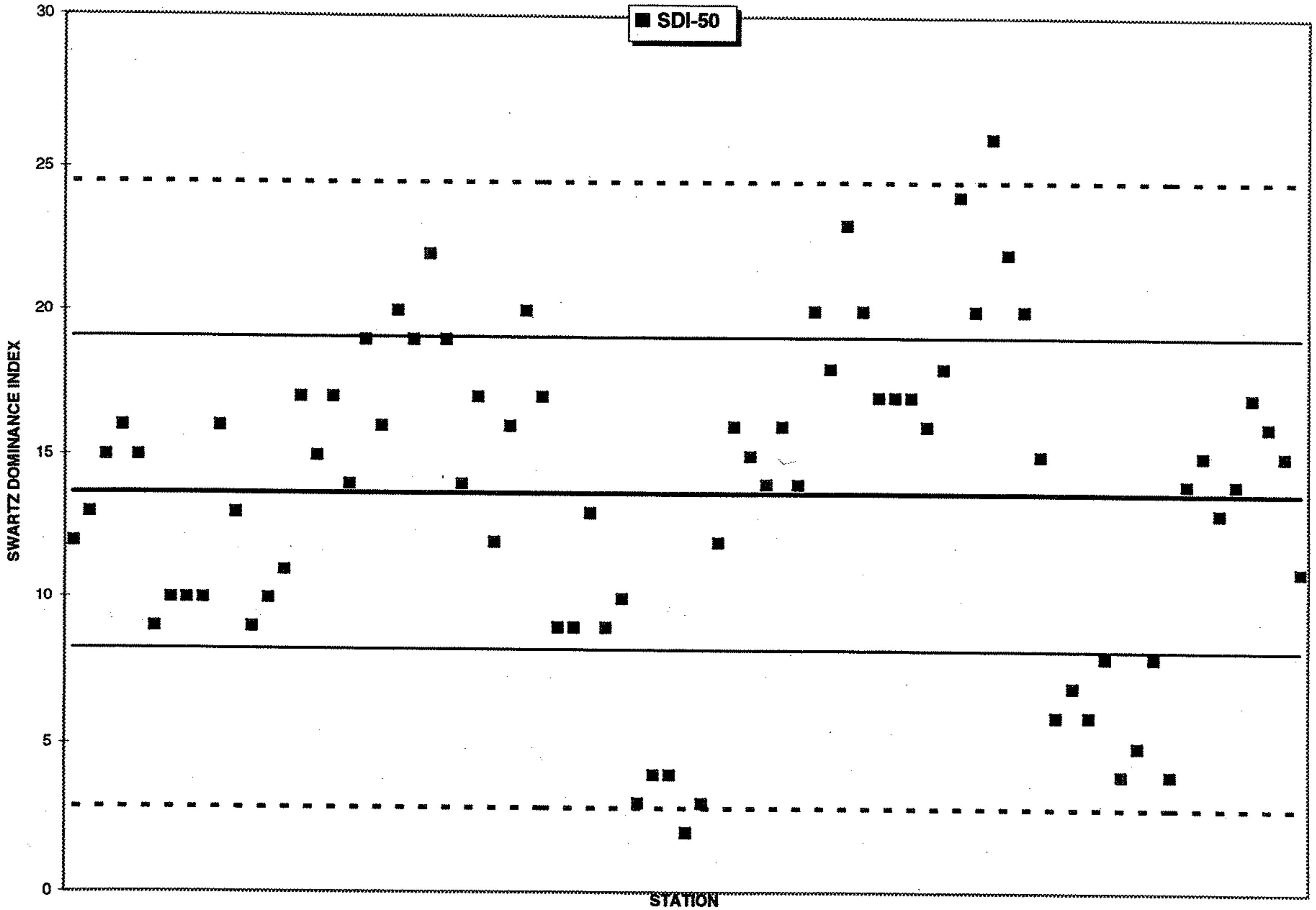

AMPHIAB-50
900
800
700
600
500
400
300
200
100
0
AMPHIPOD ABUNDANCE (per 0.1M2)
STATION


AMPHITAX-50
NUMBER OF AMPHIPOD TAXA (per 0.1M2)
STATION
14
12
10
8
6
4
2
0

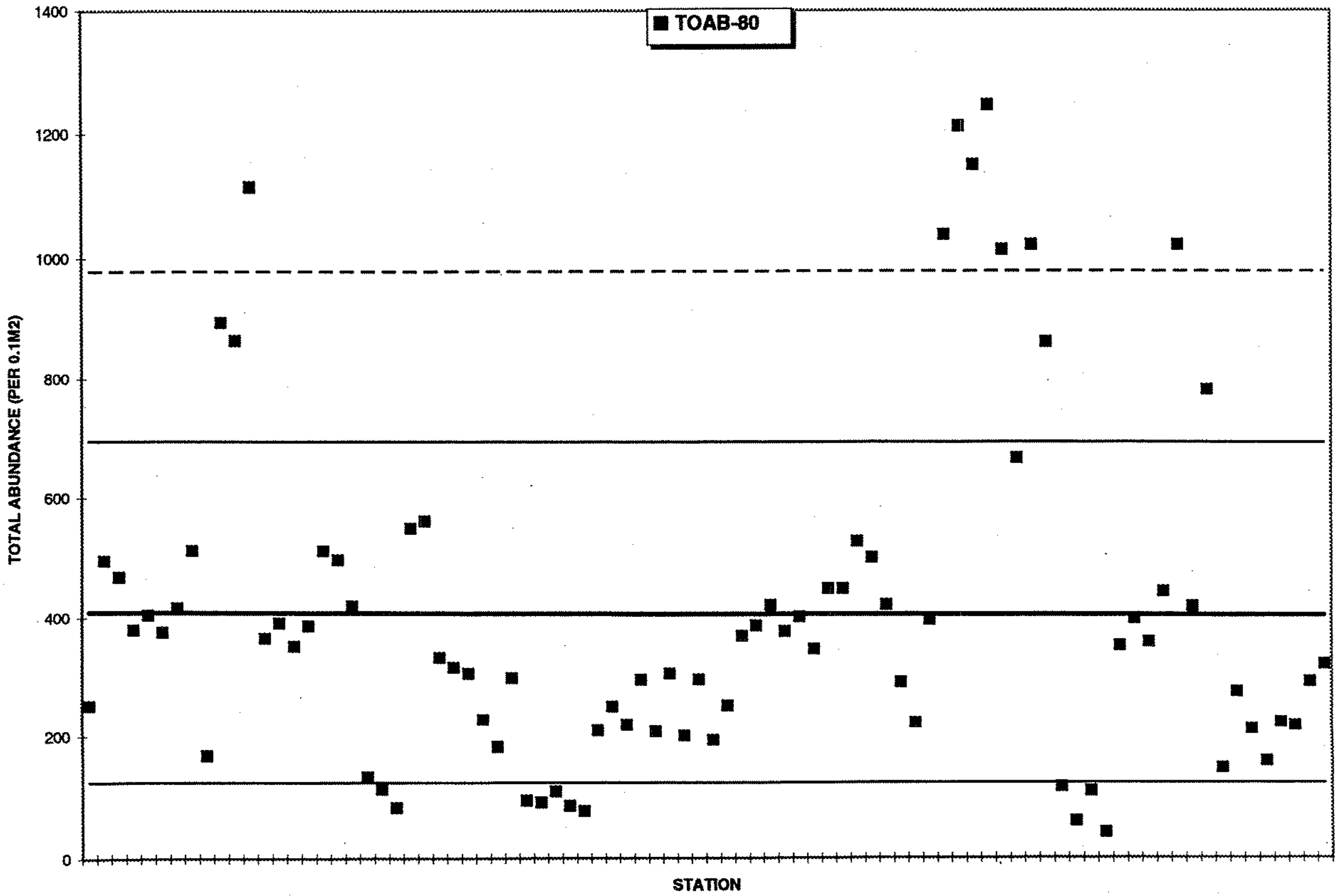

H'-50
SHANNON-WIENER DIVERSITY
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
STATION

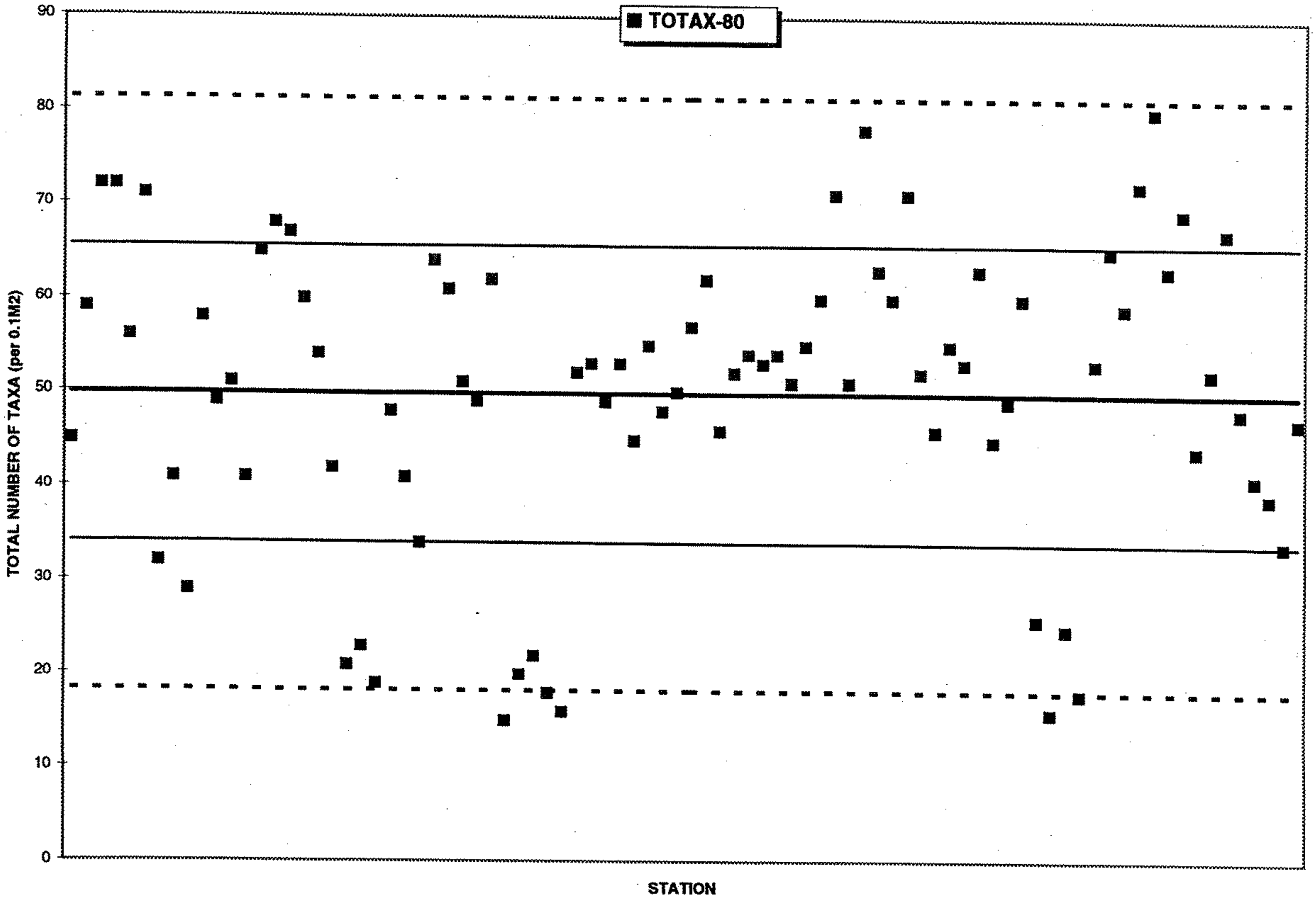

J'-50
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
EVENESS
STATION

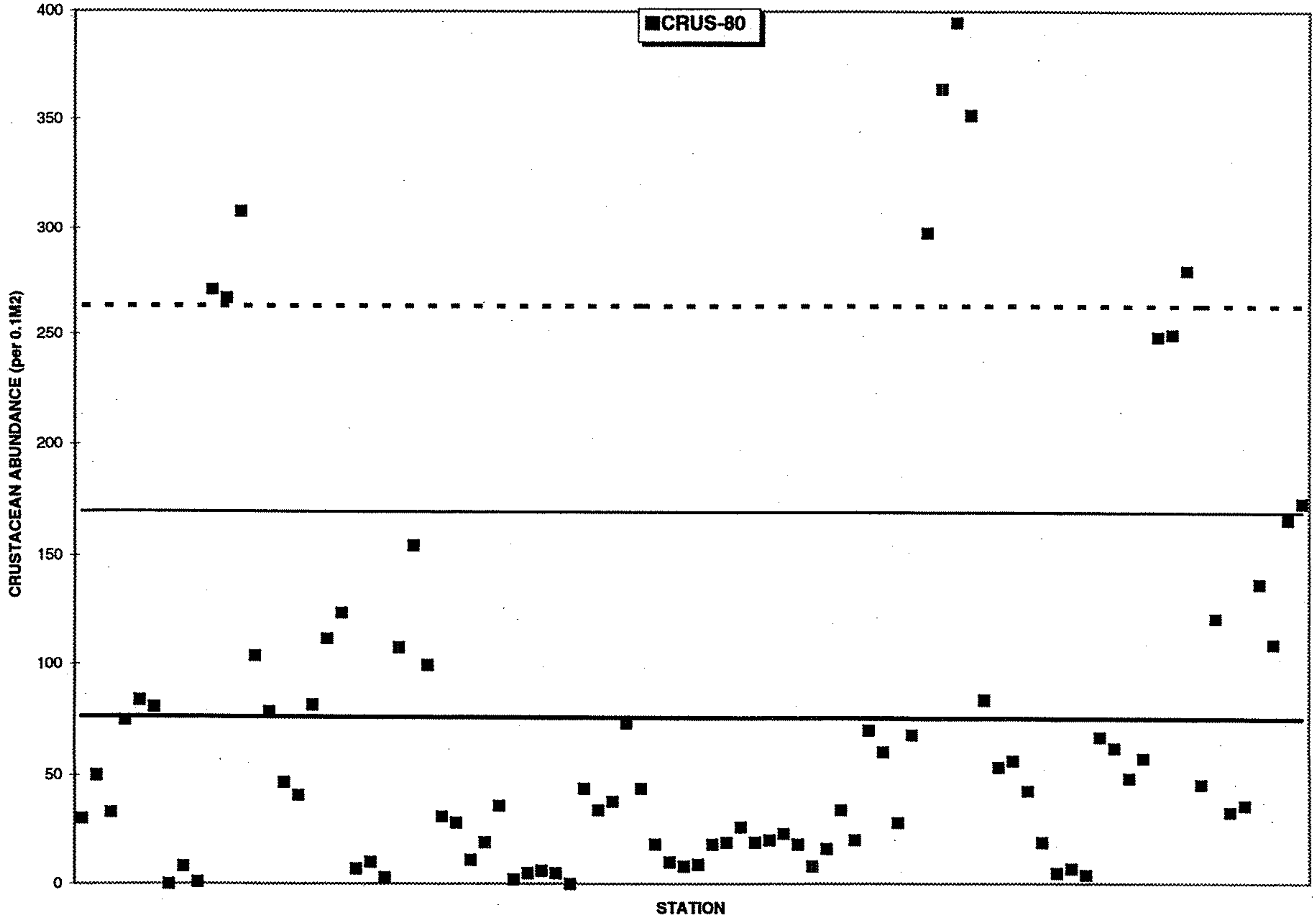

ITI-50
100
90
80
70
60
50
40
30
20
10
0
INFAUNAL TROPHIC INDEX
STATION


SDI-50
SWARTZ DOMINANCE INDEX
30
25
20
15
10
5
0
STATION

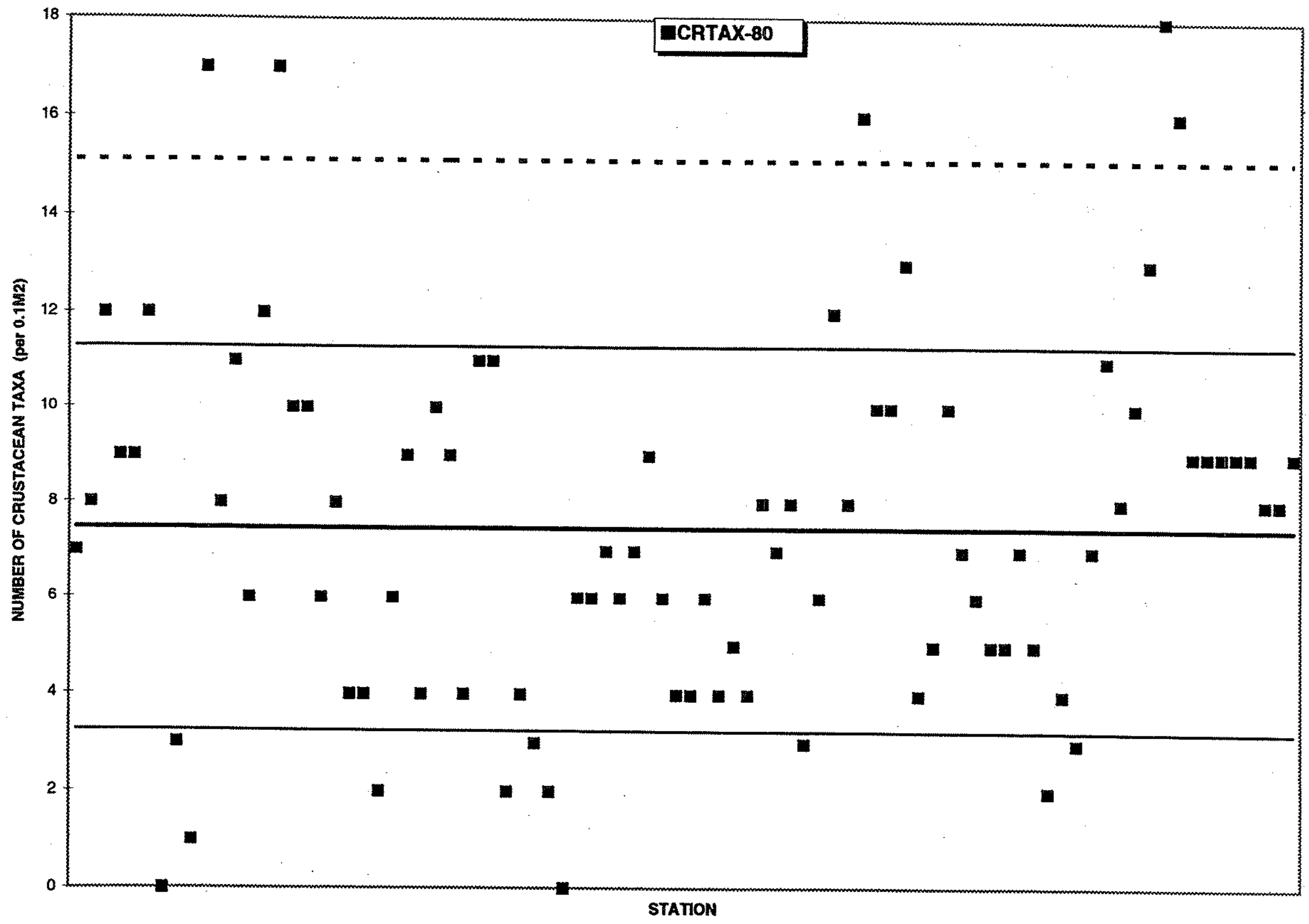
Appendix D3
50-80% Fines Habitat Category

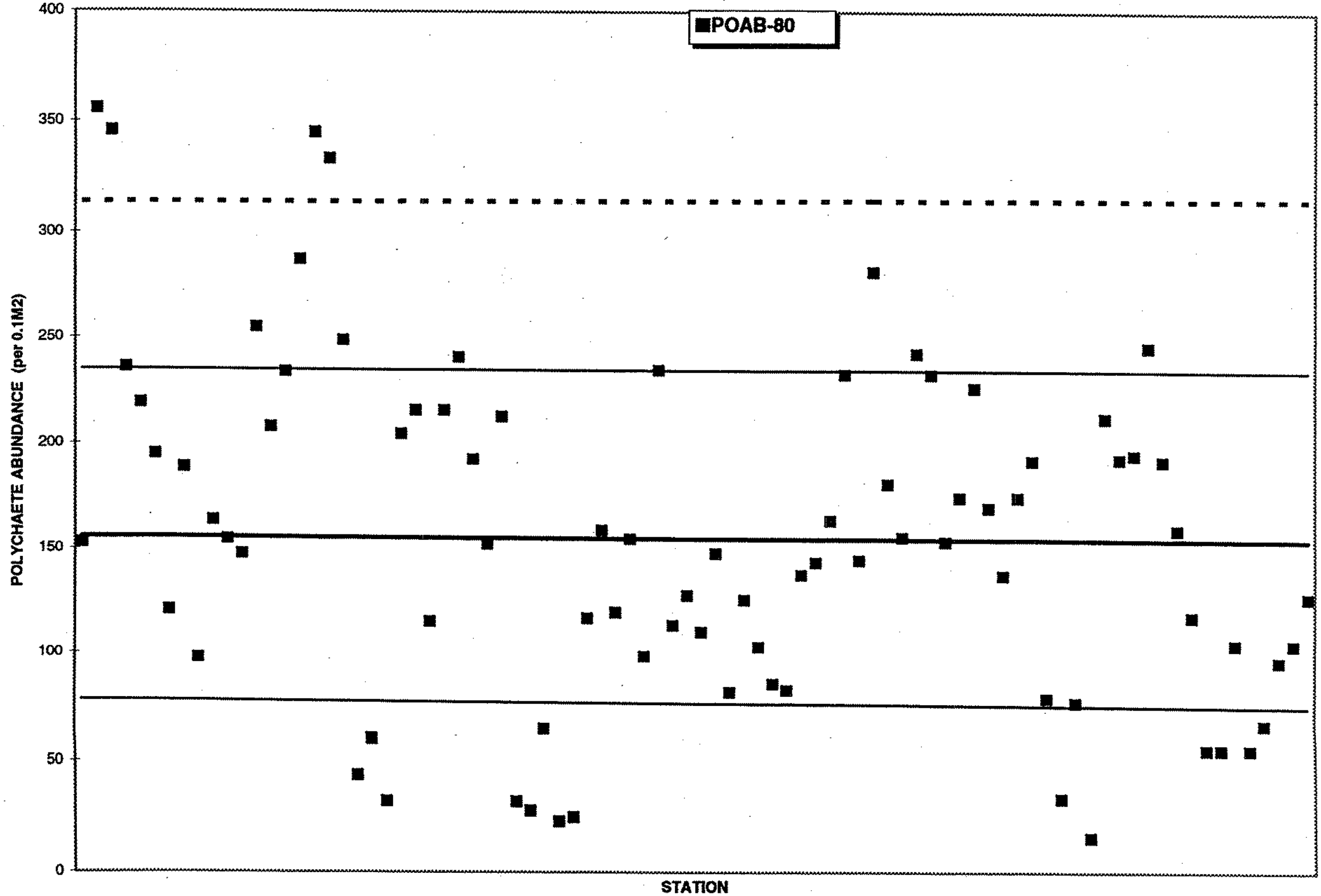

TOAB-80
1400
1200
1000
800
600
400
200
0
TOTAL ABUNDANCE (PER 0.1M2)
STATION

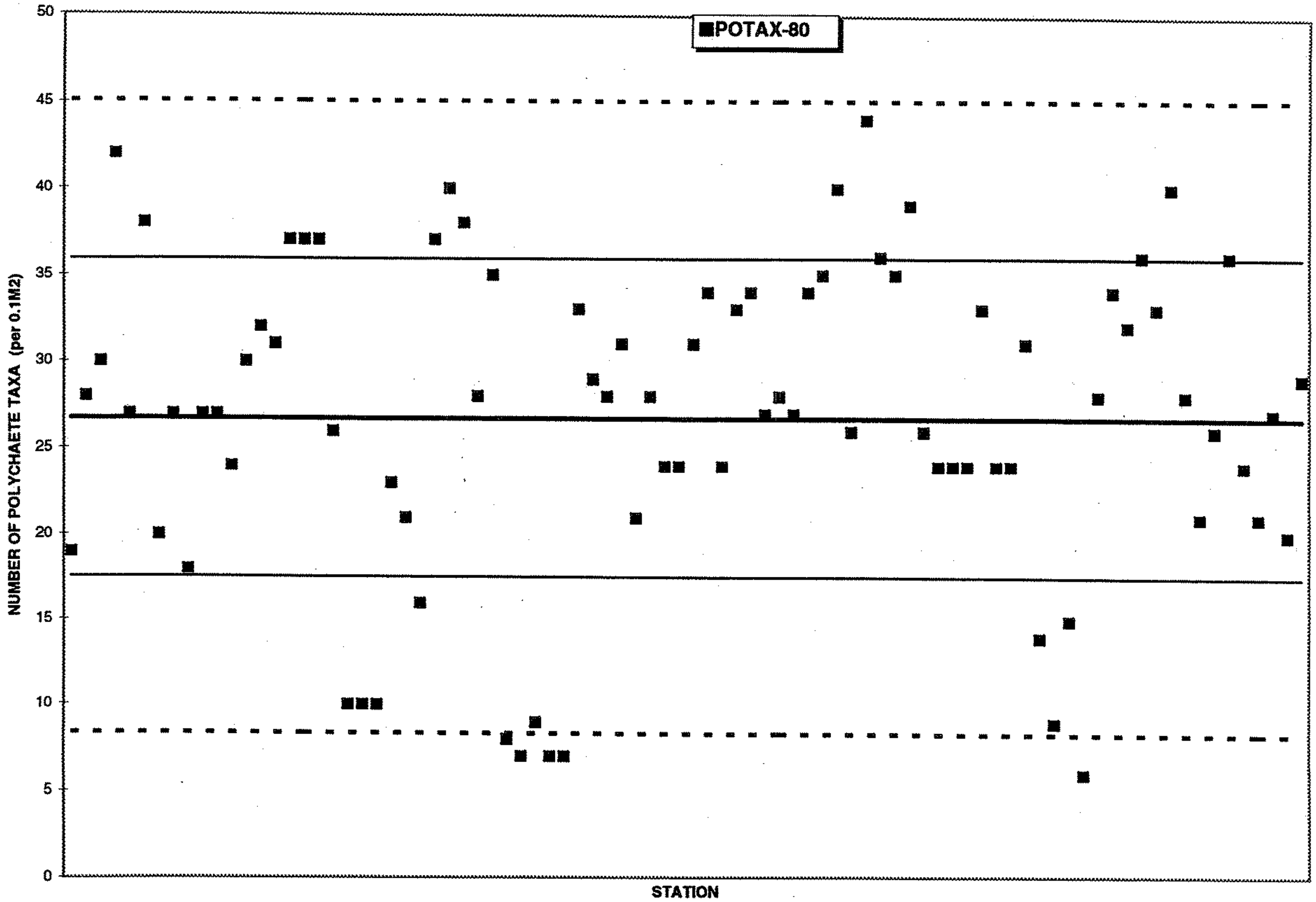

TOTAX-80
TOTAL NUMBER OF TAXA (per 0.1M2)
90
80
70
60
50
40
30
20
10
0
STATION



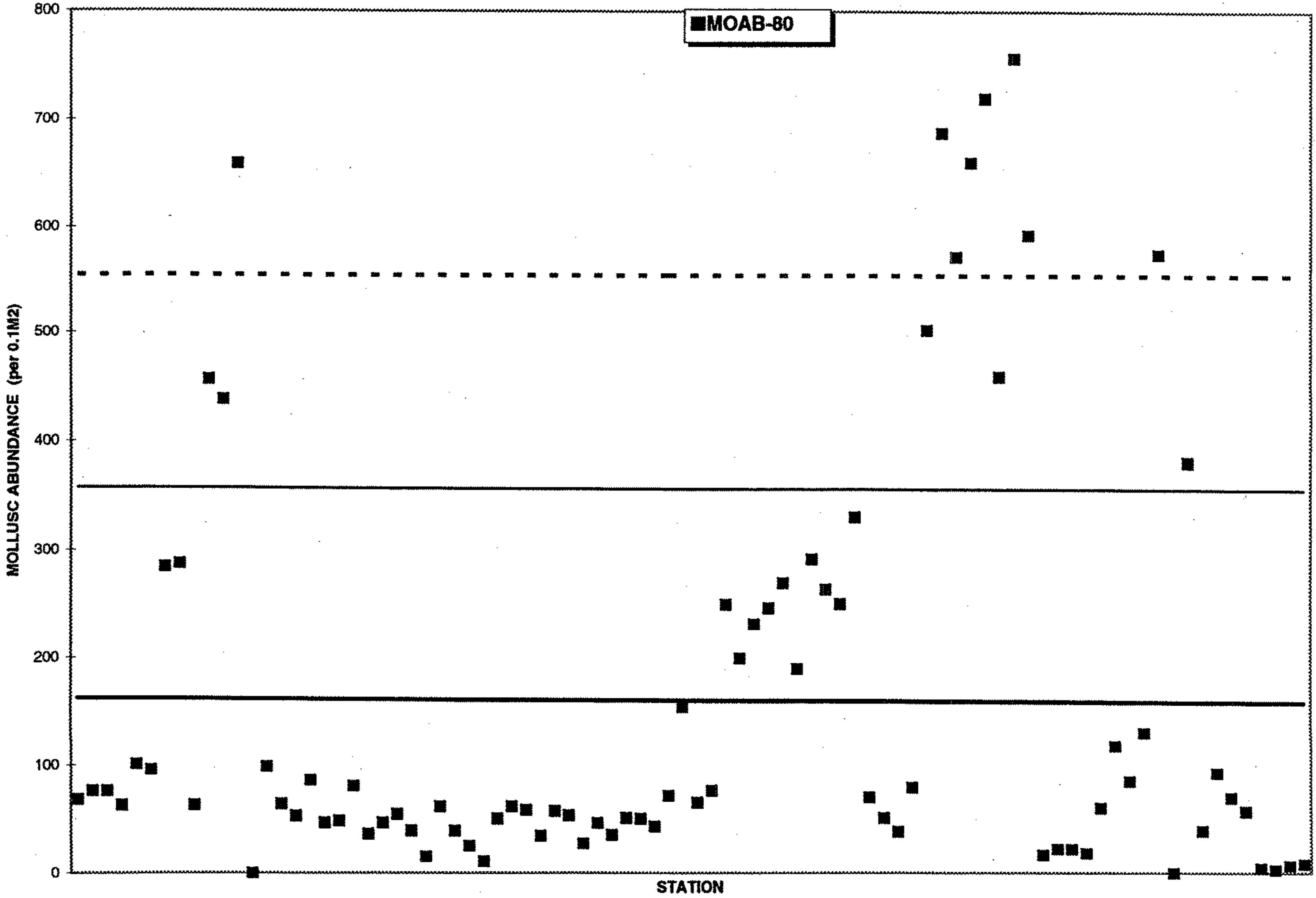
CRUS-80
CRUSTACEAN ABUNDANCE (per 0.1M2)
STATION
400
350
300
250
200
150
100
50
0

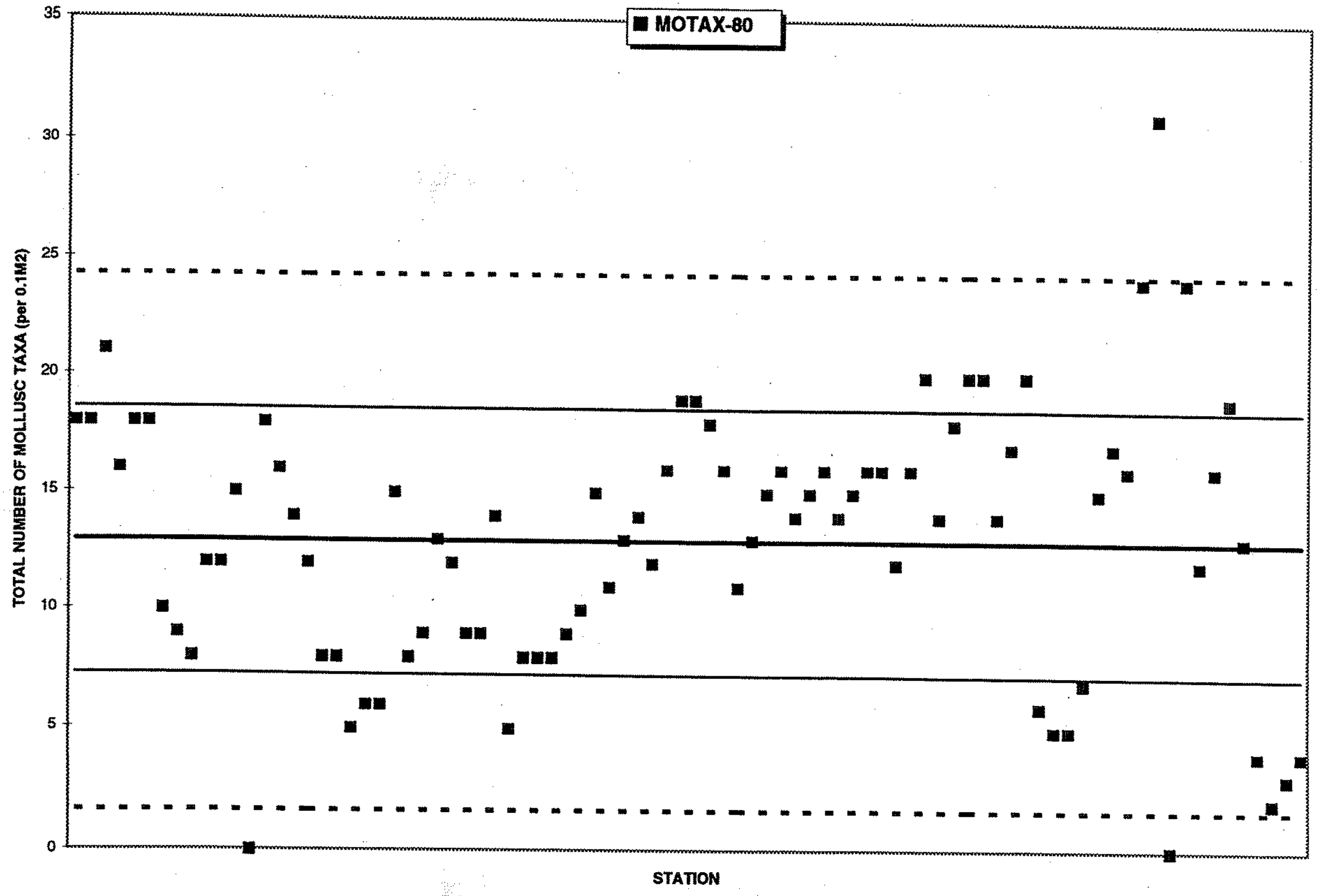

CRTAX-80
NUMBER OF CRUSTACEAN TAXA (per 0.1M2)
18
16
14
12
10
8
6
4
2
0
STATION

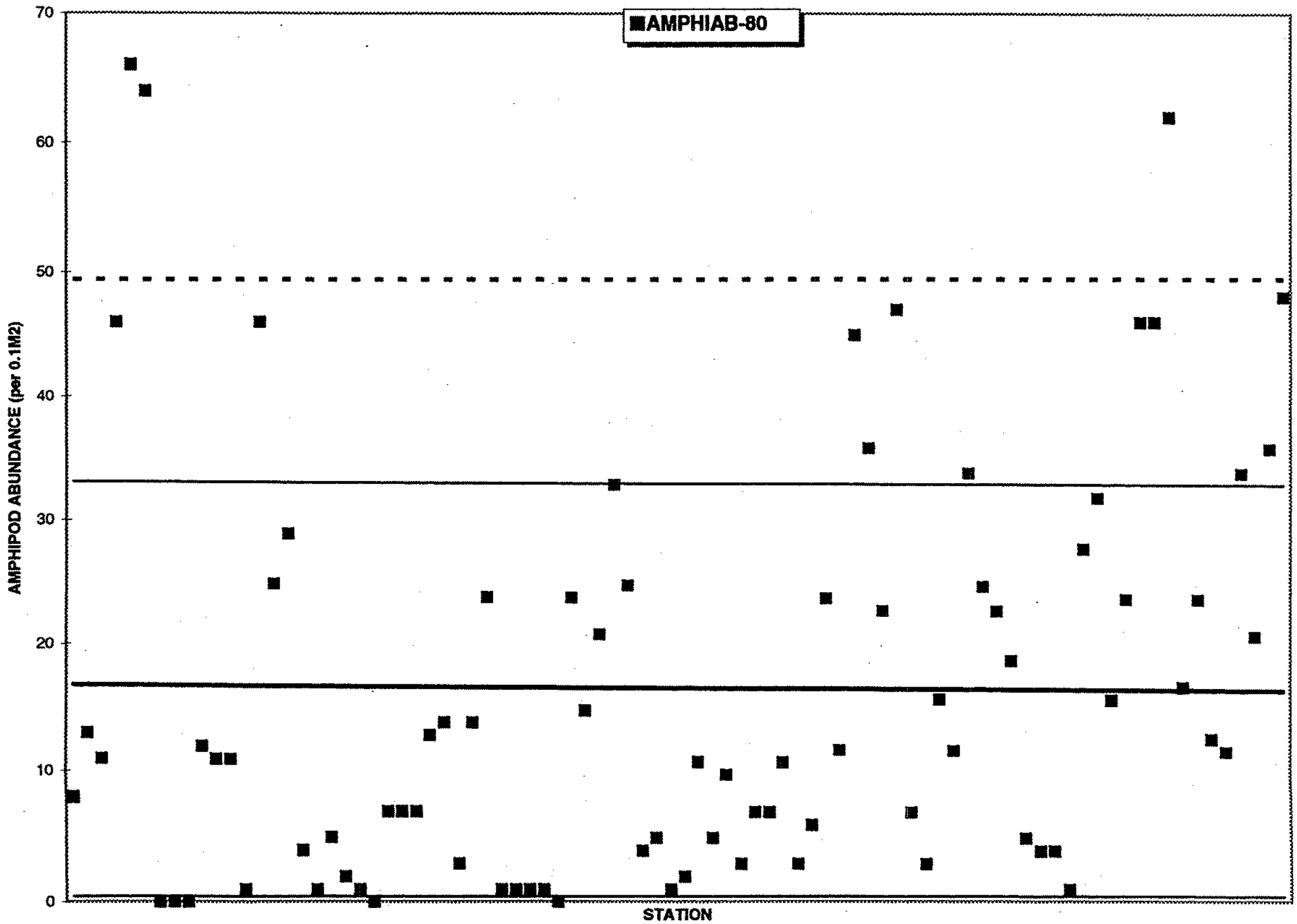

POAB-80
400
350
300
250
200
150
100
50
0
POLYCHAETE ABUNDANCE (per 0.1M2)
STATION



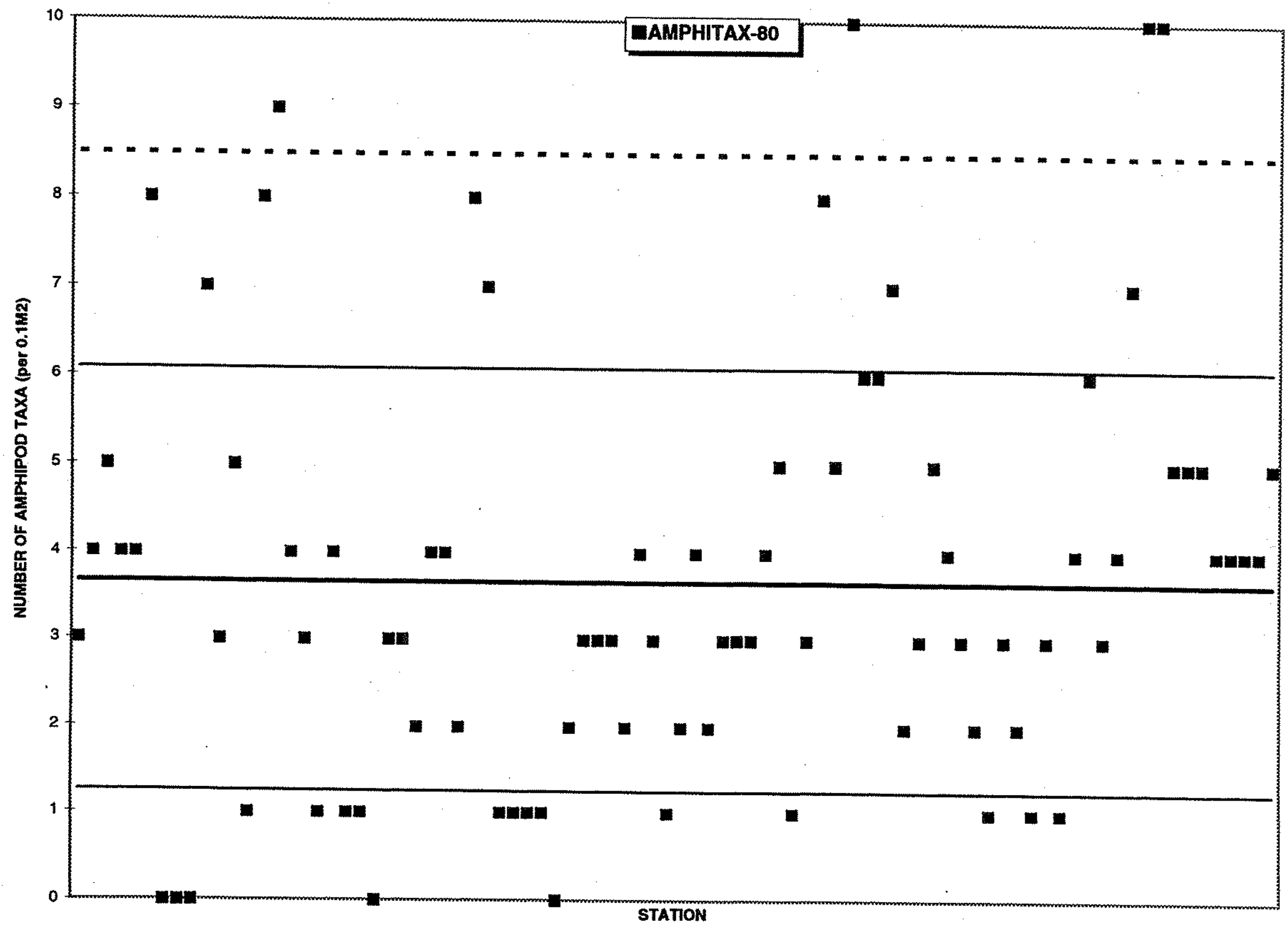
POTAX-80
NUMBER OF POLYCHAETE TAXA (per 0.1M2)
STATION
50
45
40
35
30
25
20
15
10
5
0


MOAB-80
MOLLUSC ABUNDANCE (per 0.1M2)
STATION
0
100
200
300
400
500
600
700
800

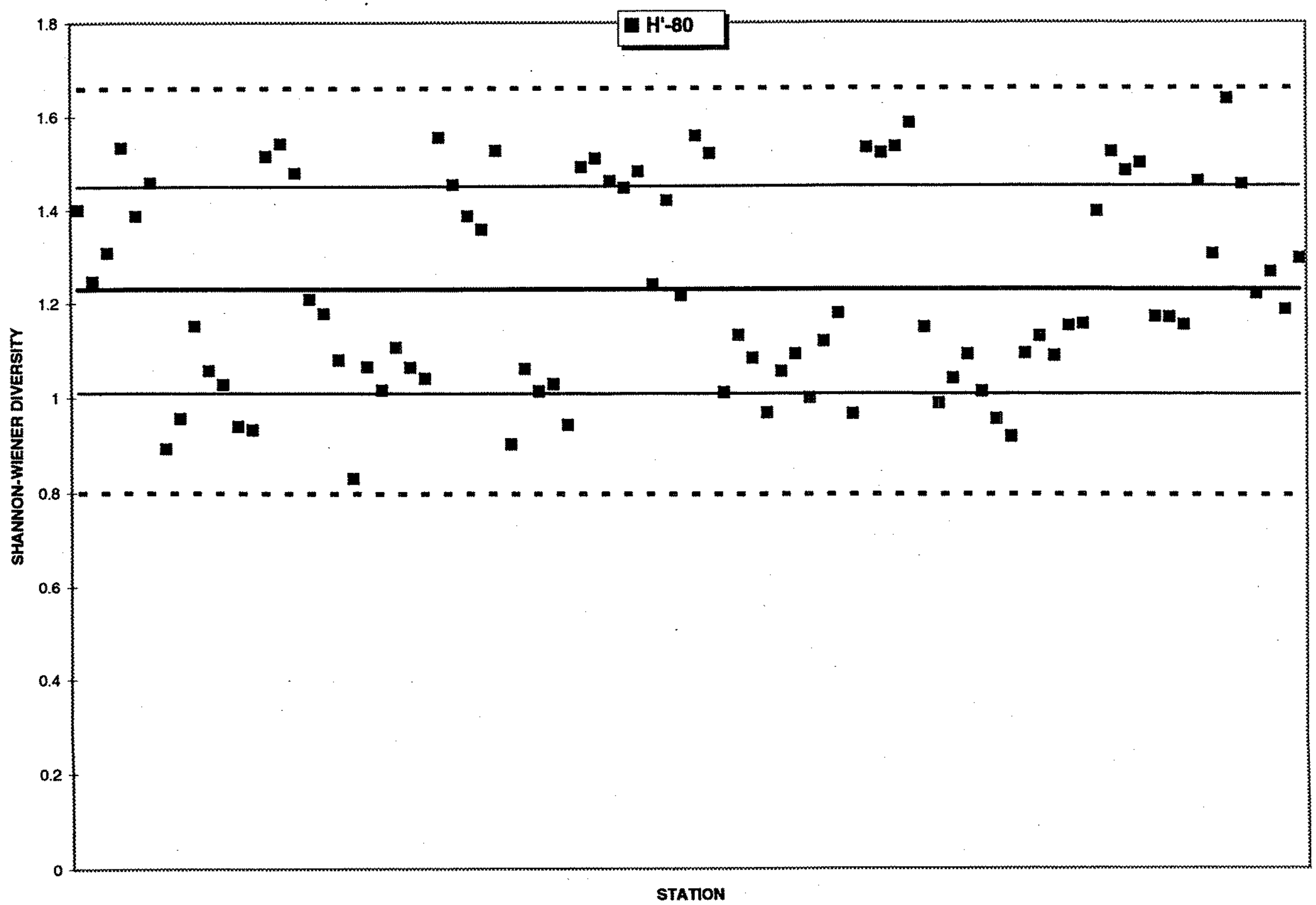

MOTAX-80
TOTAL NUMBER OF MOLLUSC TAXA (per 0.1M2)
STATION
35
30
25
20
15
10
5
0



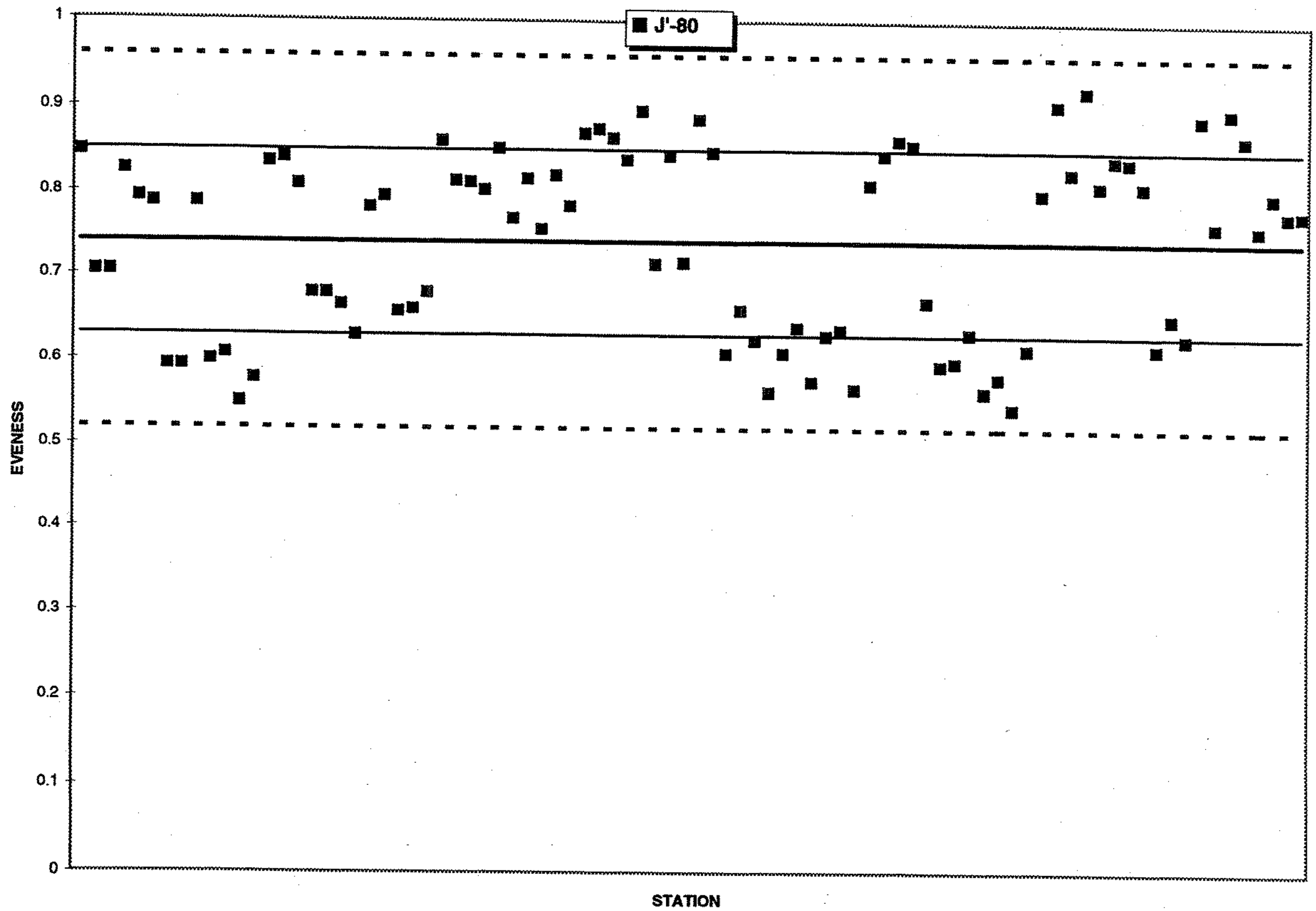
AMPHIAB-80
AMPHIPOD ABUNDANCE (per 0.1M2)
STATION
70
60
50
40
30
20
10
0

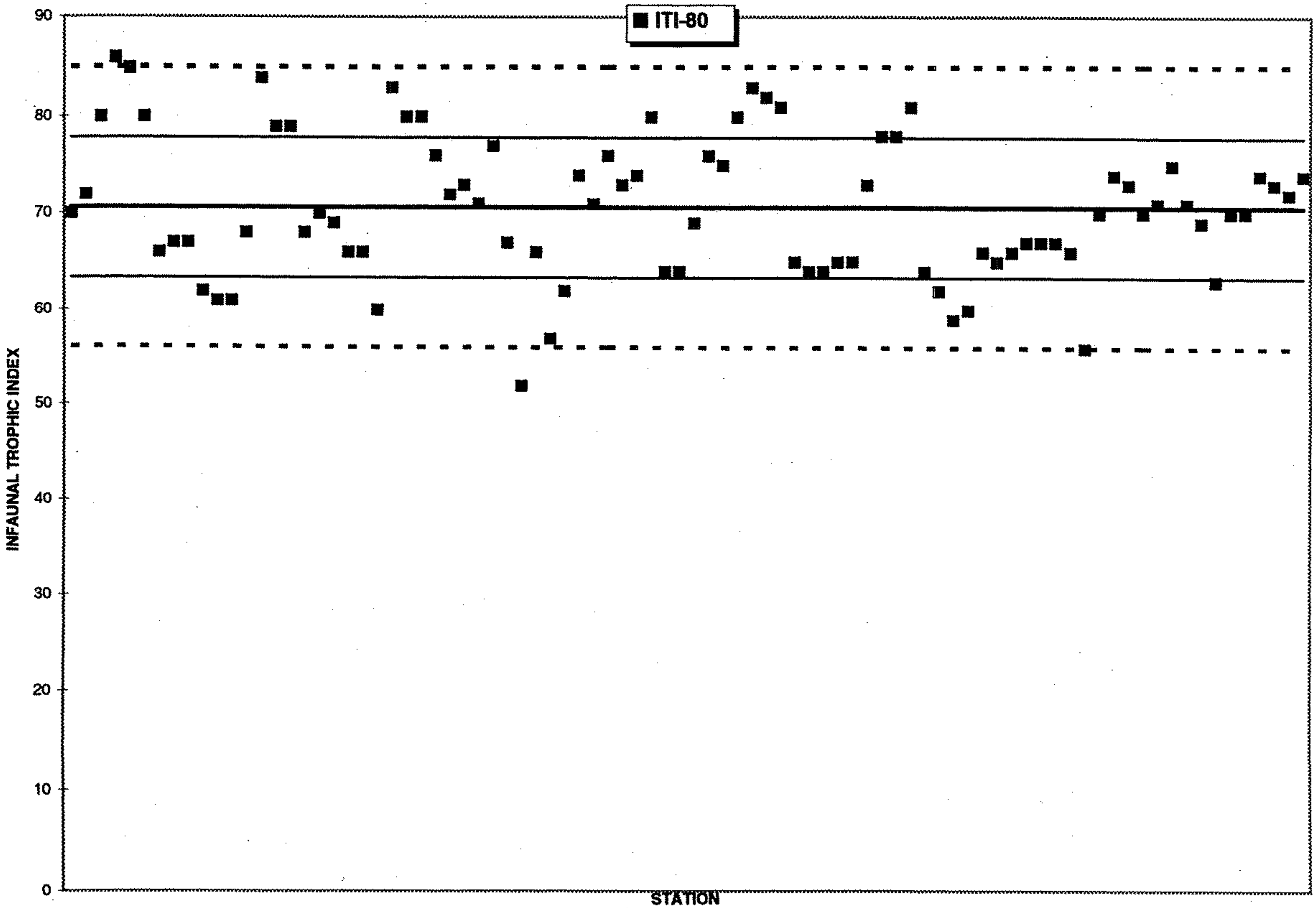


AMPHITAX-80
NUMBER OF AMPHIPOD TAXA (per 0.1M2)
STATION
10
9
8
7
6
5
4
3
2
1
0

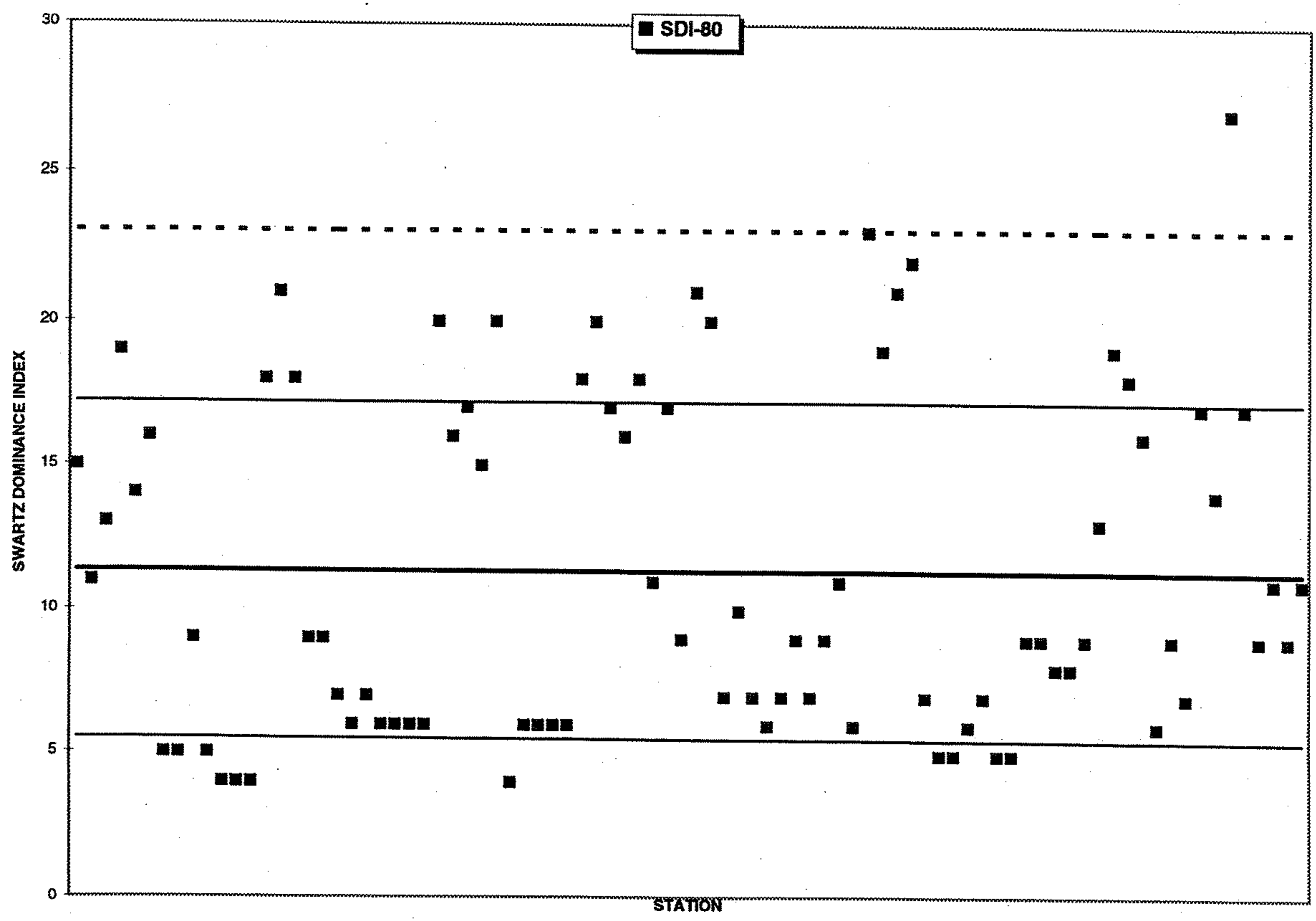


H'-80
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
SHANNON-WIENER DIVERSITY
STATION


J'-80
EVENESS
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
STATION

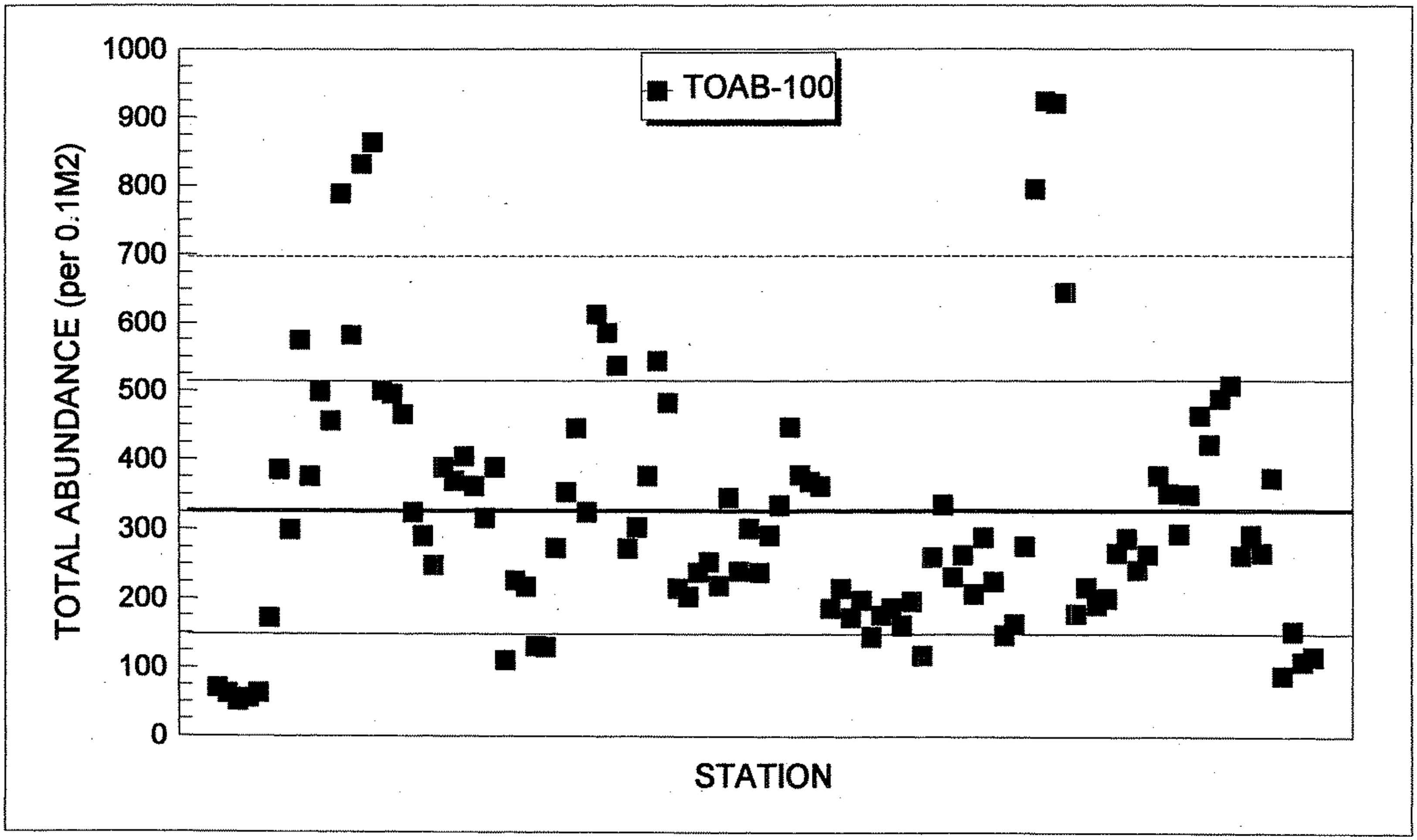


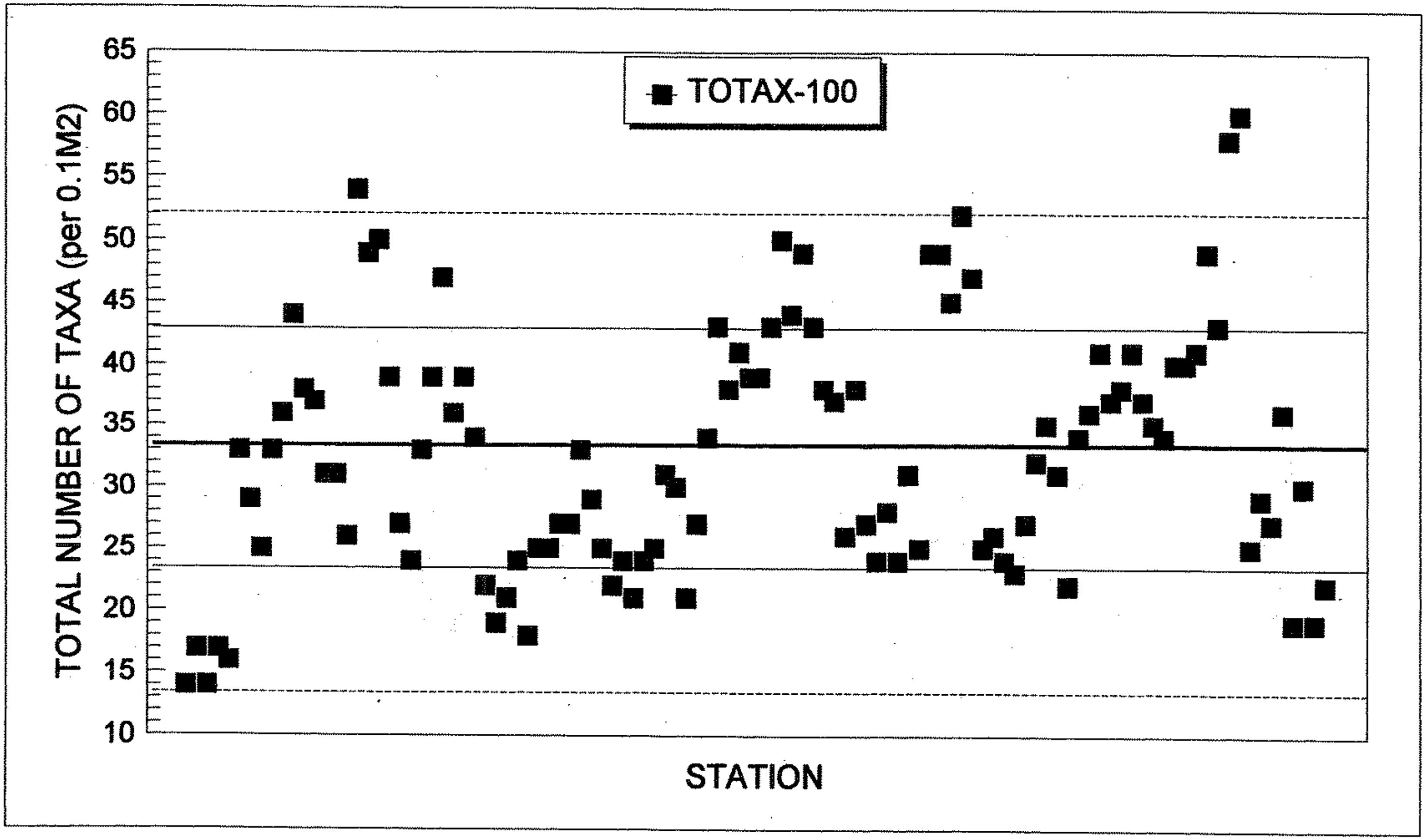
ITI-80
INFAUNAL TROPHIC INDEX
90
80
70
60
50
40
30
20
10
0
STATION

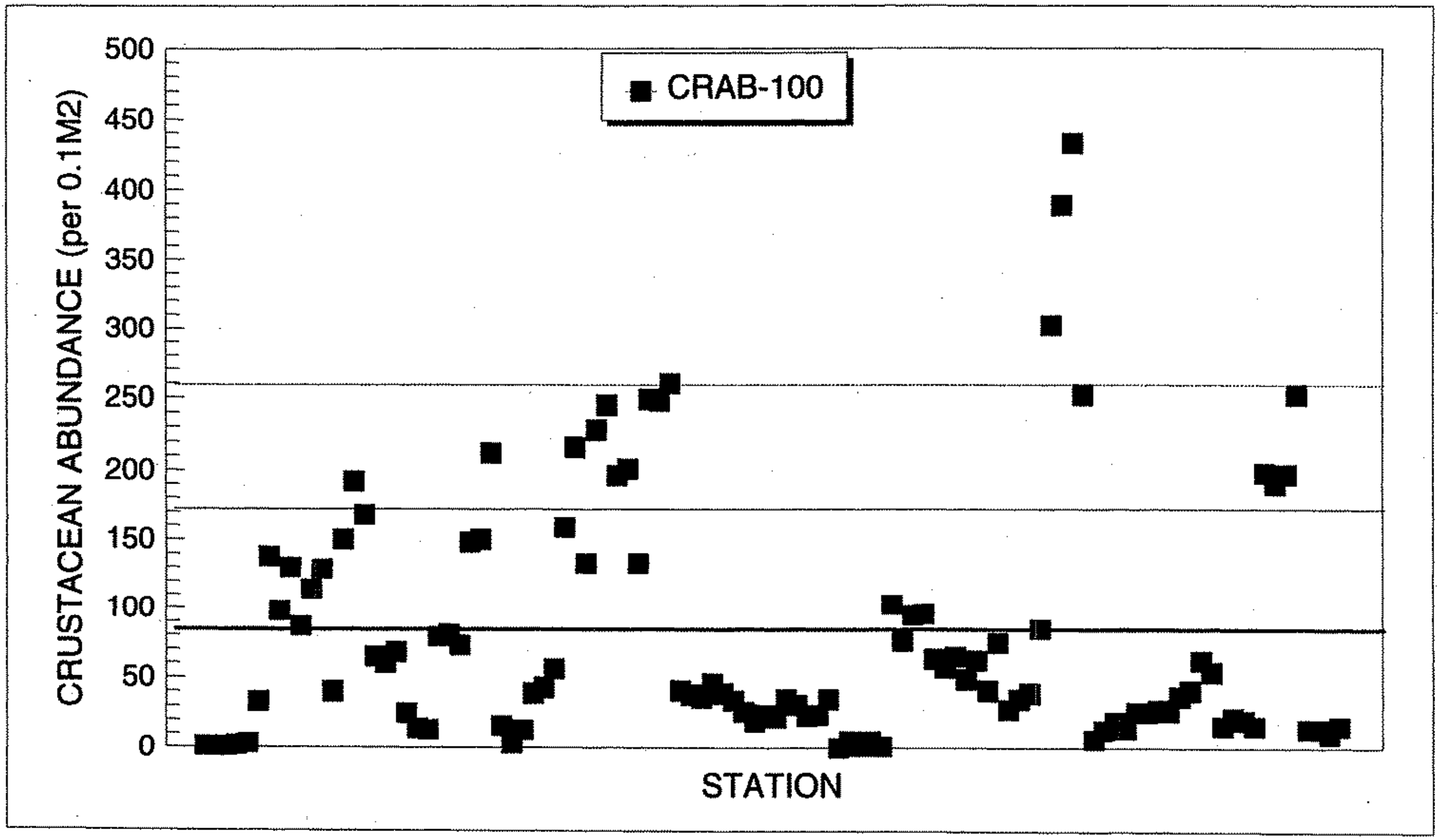


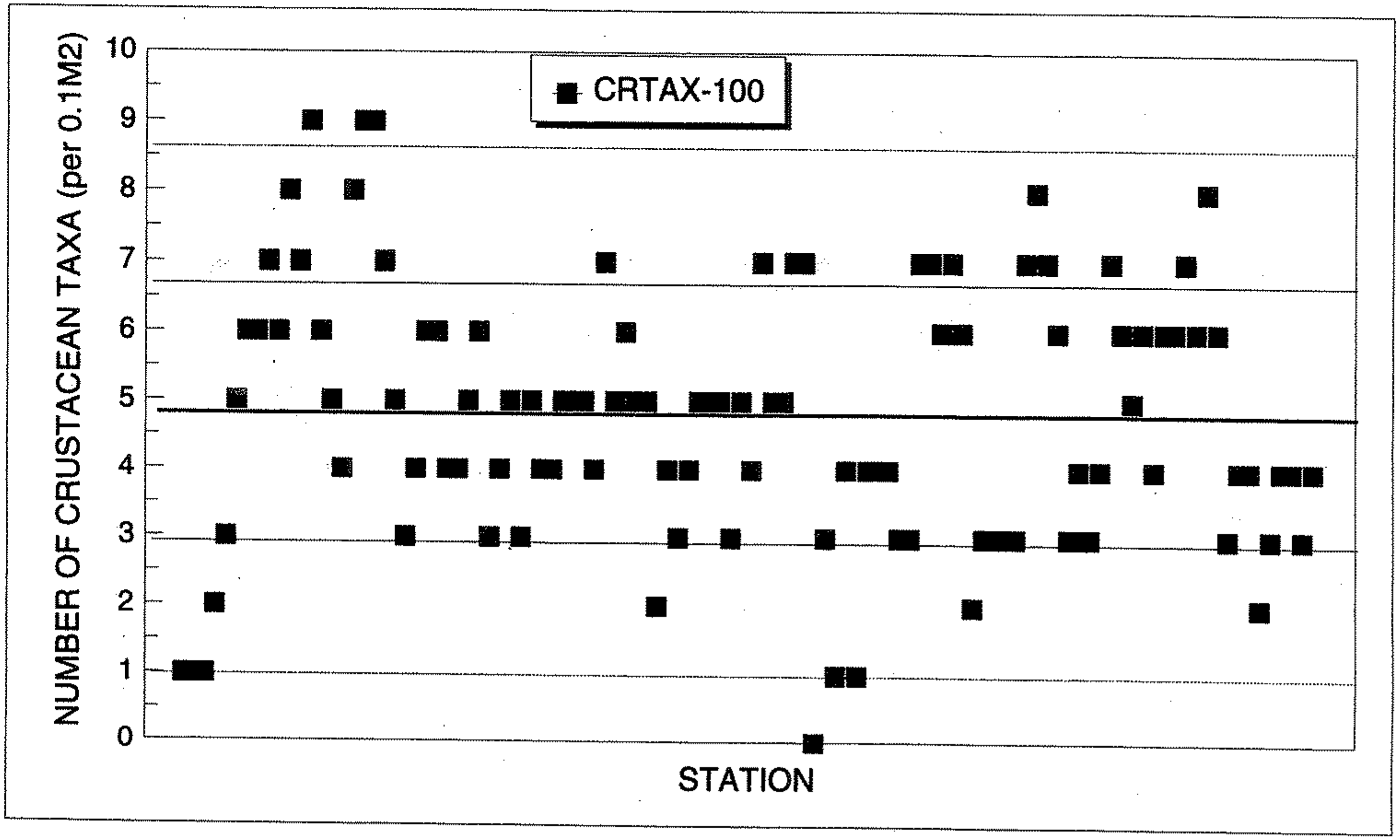
SDI-80
SWARTZ DOMINANCE INDEX
STATION
30
25
20
15
10
5
0

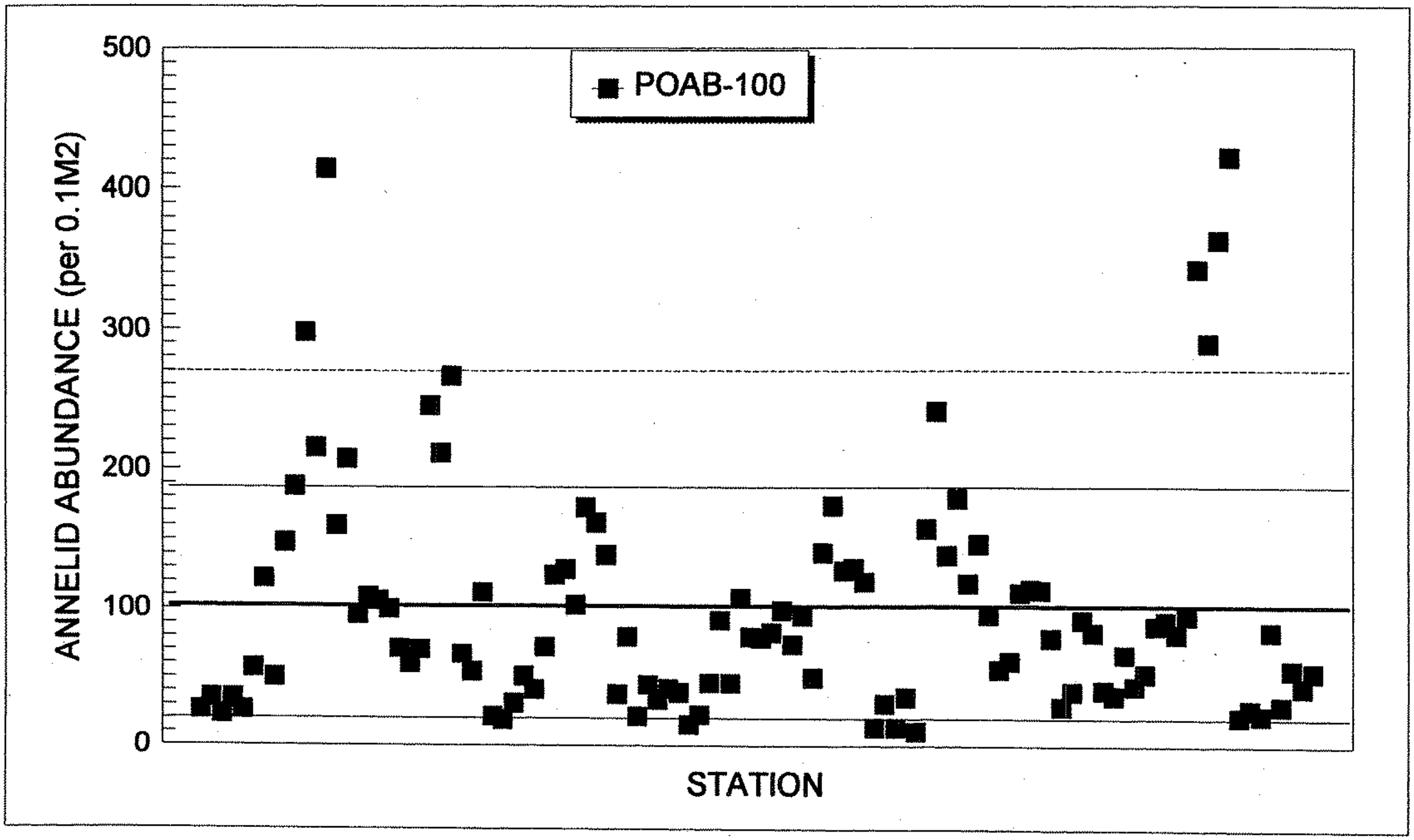
Appendix D4
80-100% Fines Habitat Category

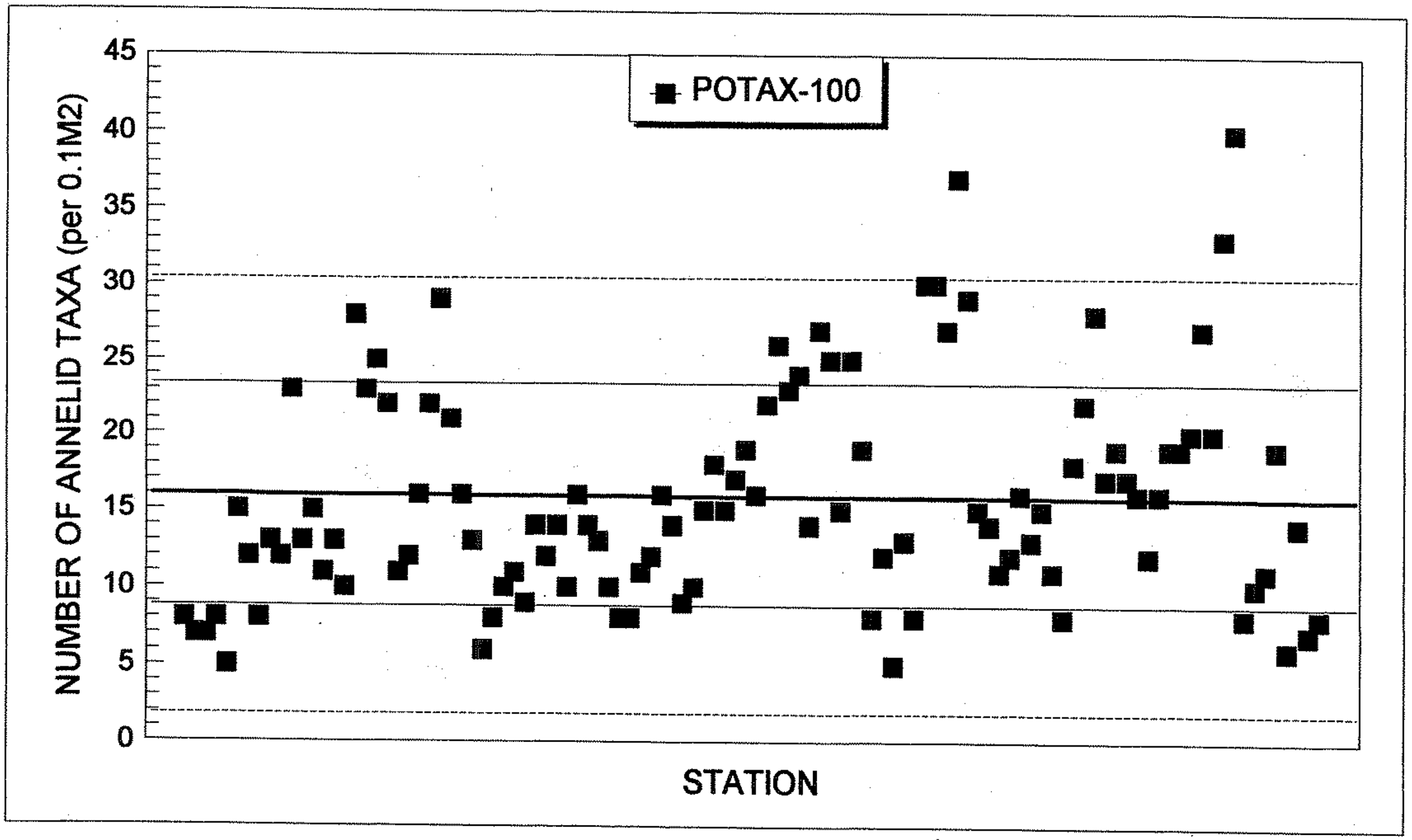

TOAB-100
TOTAL ABUNDANCE (per 0.1M2)
1000
900
800
700
600
500
400
300
200
100
0
STATION

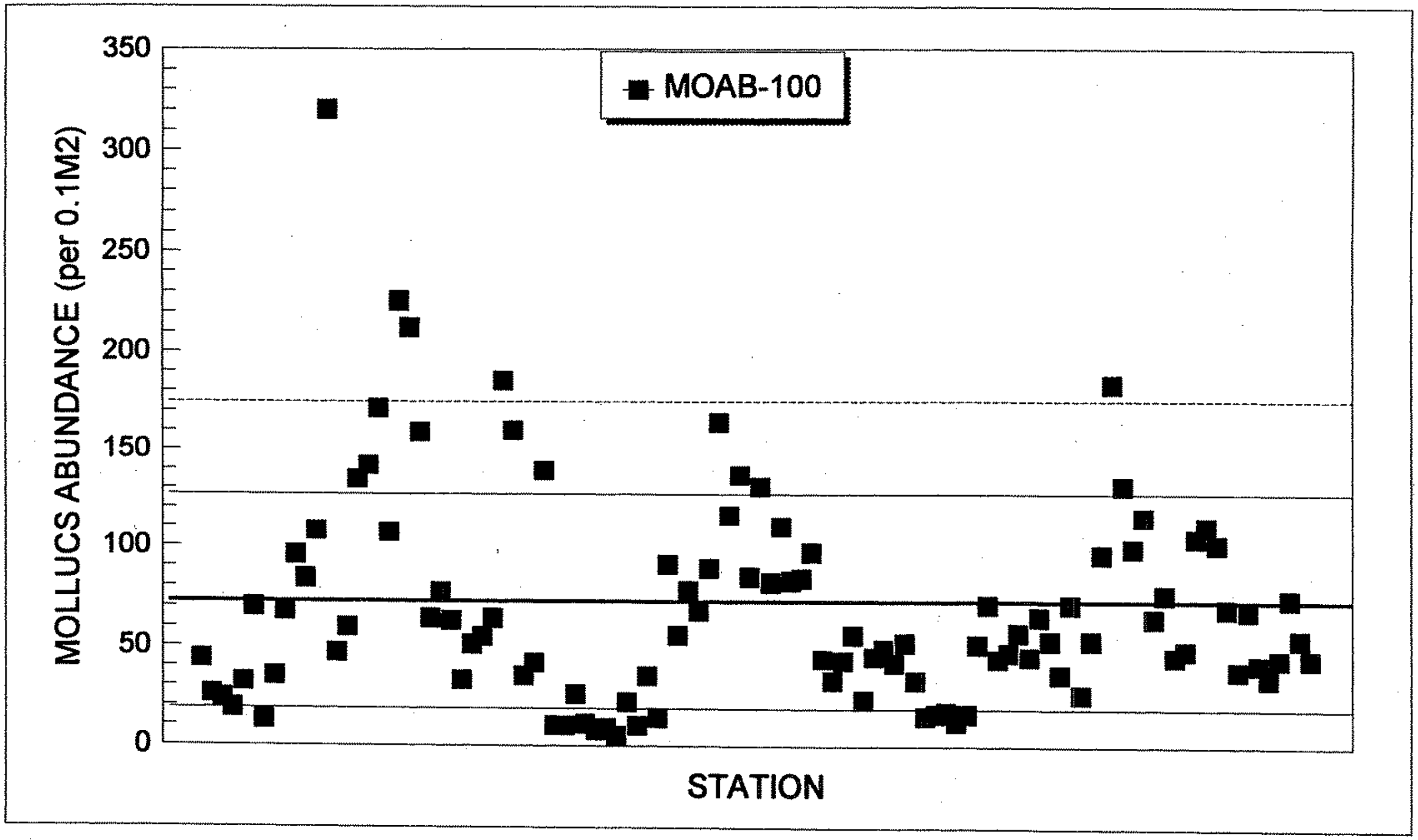

TOTAX-100
TOTAL NUMBER OF TAXA (per 0.1M2)
65
60
55
50
45
40
35
30
25
20
15
10
STATION

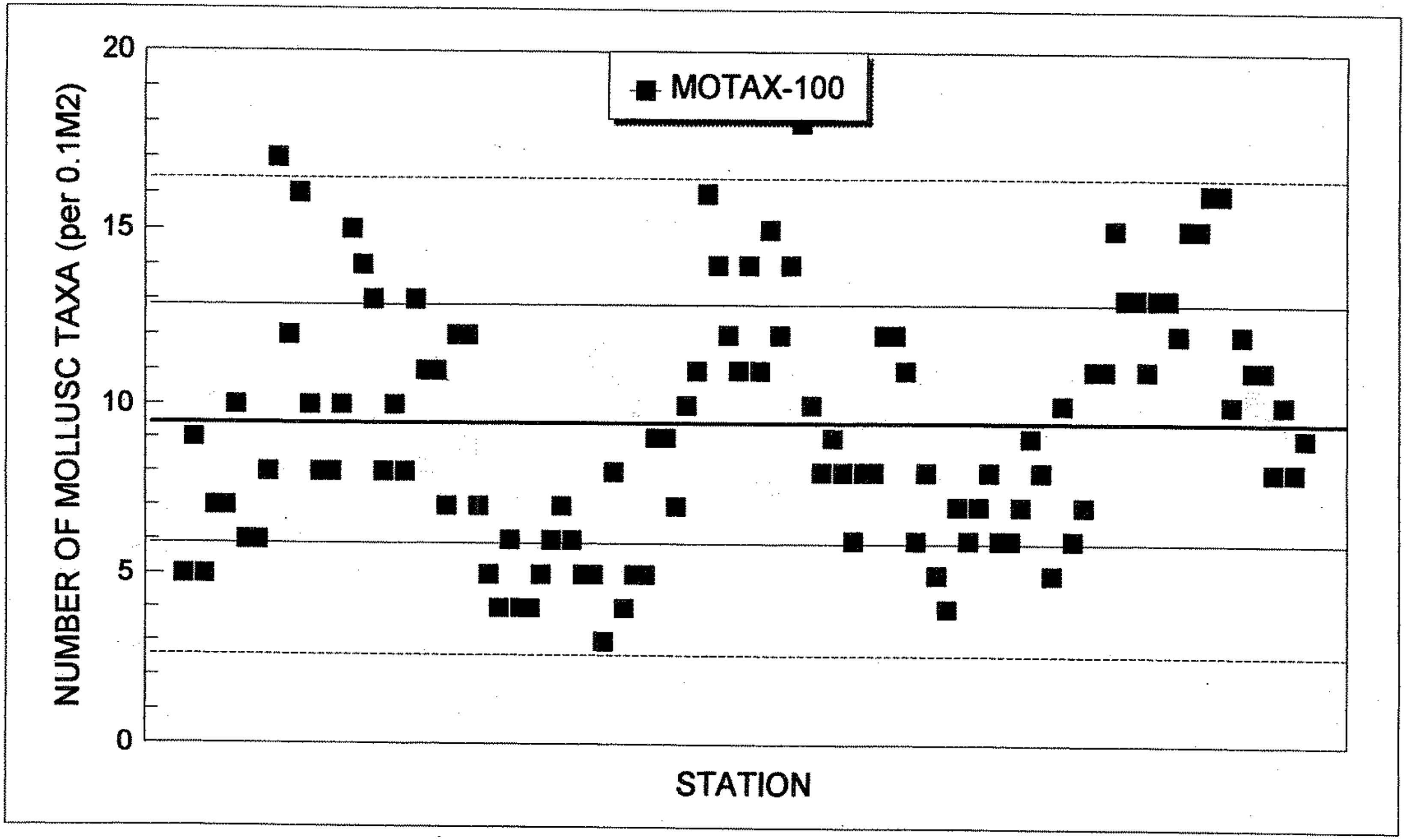

CRAB-100
CRUSTACEAN ABUNDANCE (per 0.1M2)
500
450
400
350
300
250
200
150
100
50
0
STATION

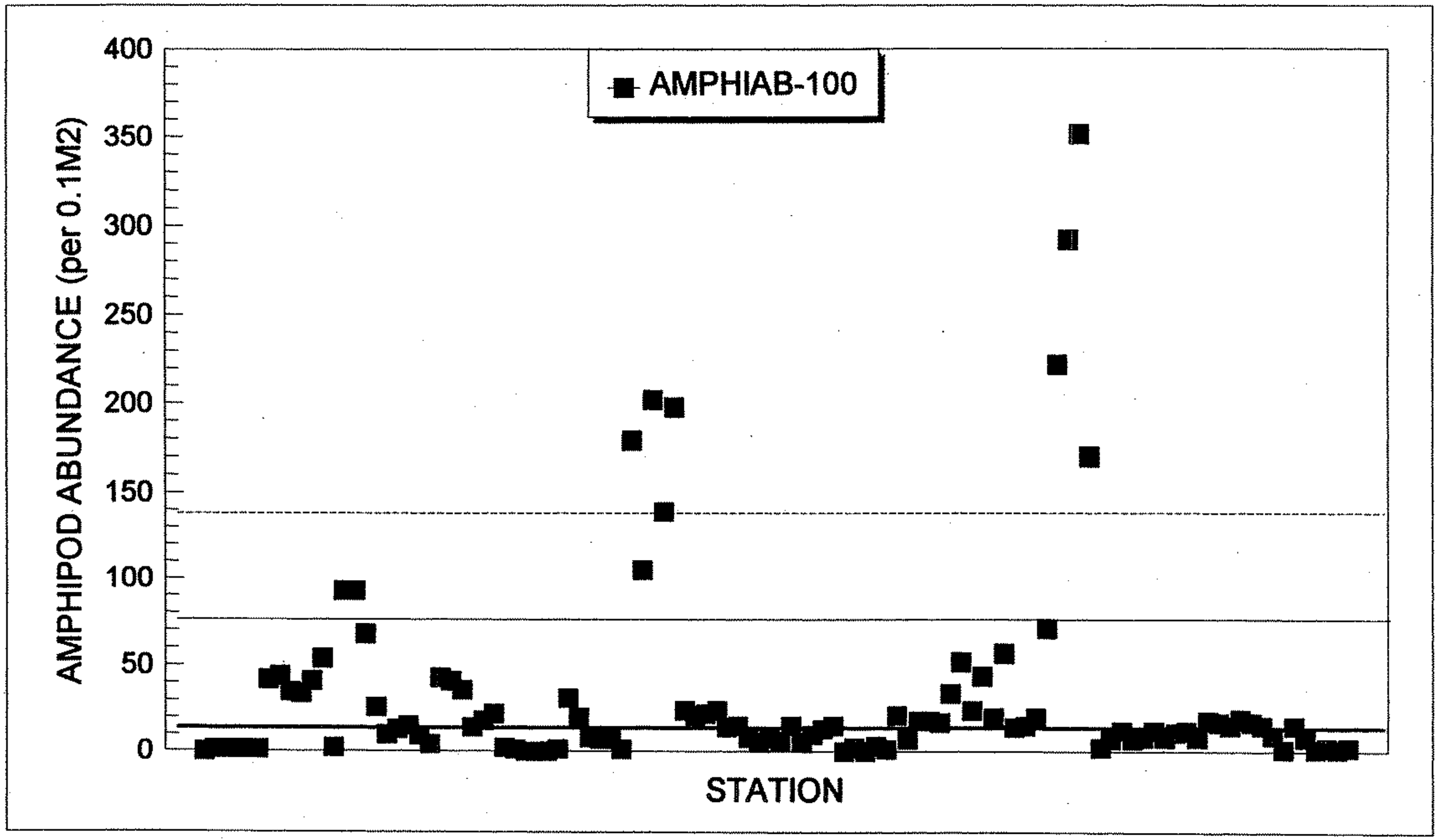

CRTAX-100
NUMBER OF CRUSTACEAN TAXA (per 0.1M2)
10
9
8
7
6
5
4
3
2
1
0
STATION

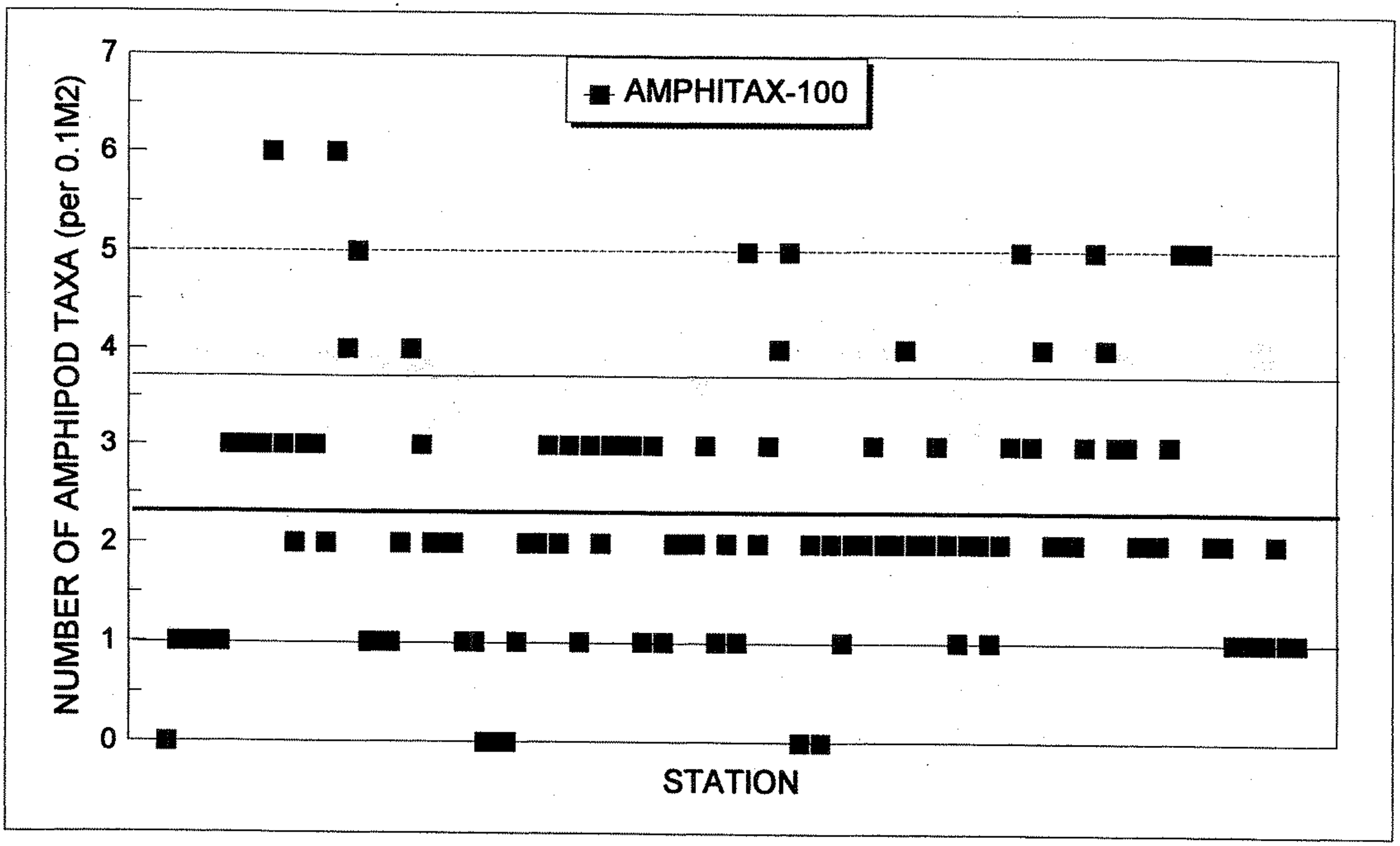

POAB-100
ANNELID ABUNDANCE (per 0.1M2)
500
400
300
200
100
0
STATION

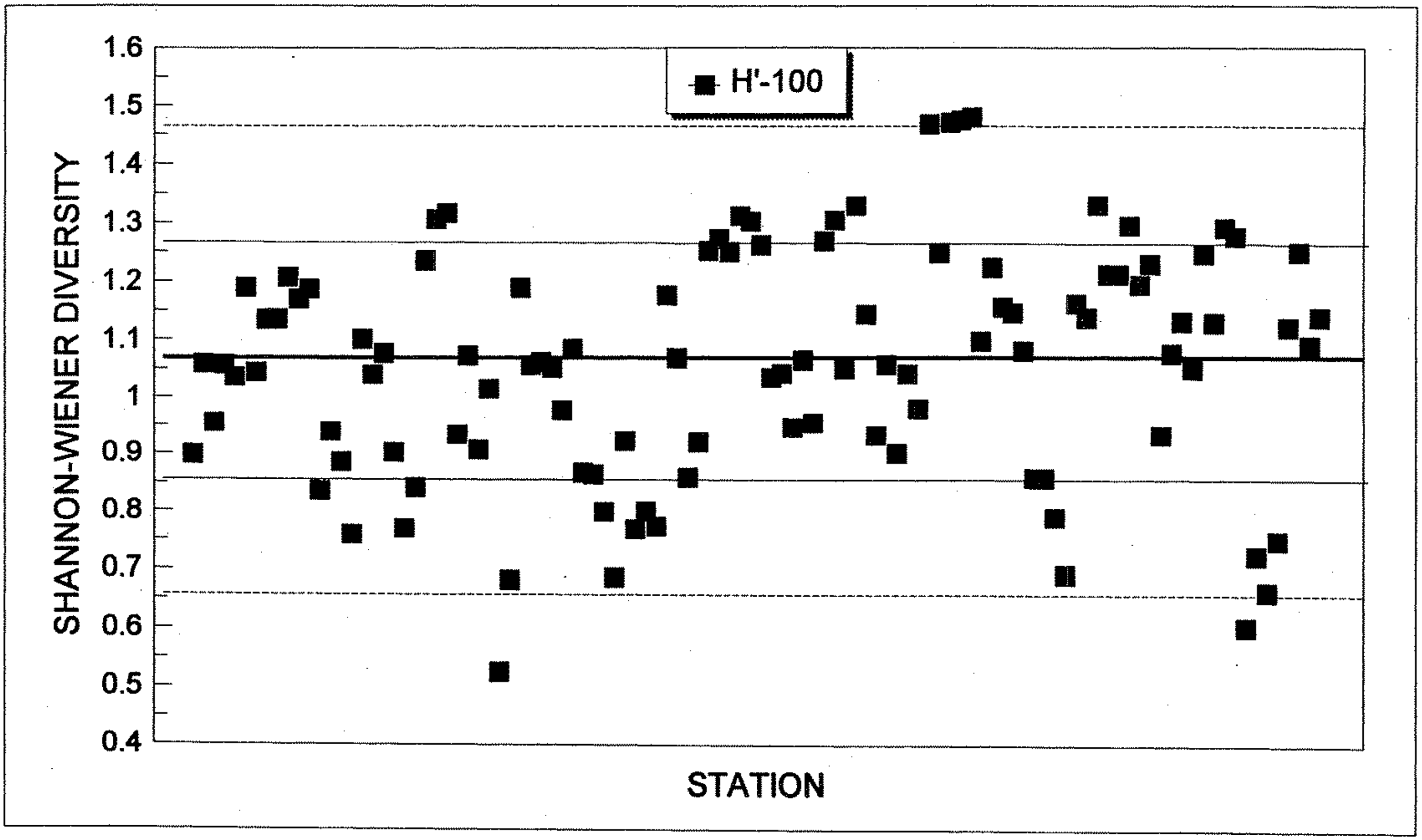

POTAX-100
NUMBER OF ANNELID TAXA (per 0.1M2)
45
40
35
30
25
20
15
10
5
0
STATION

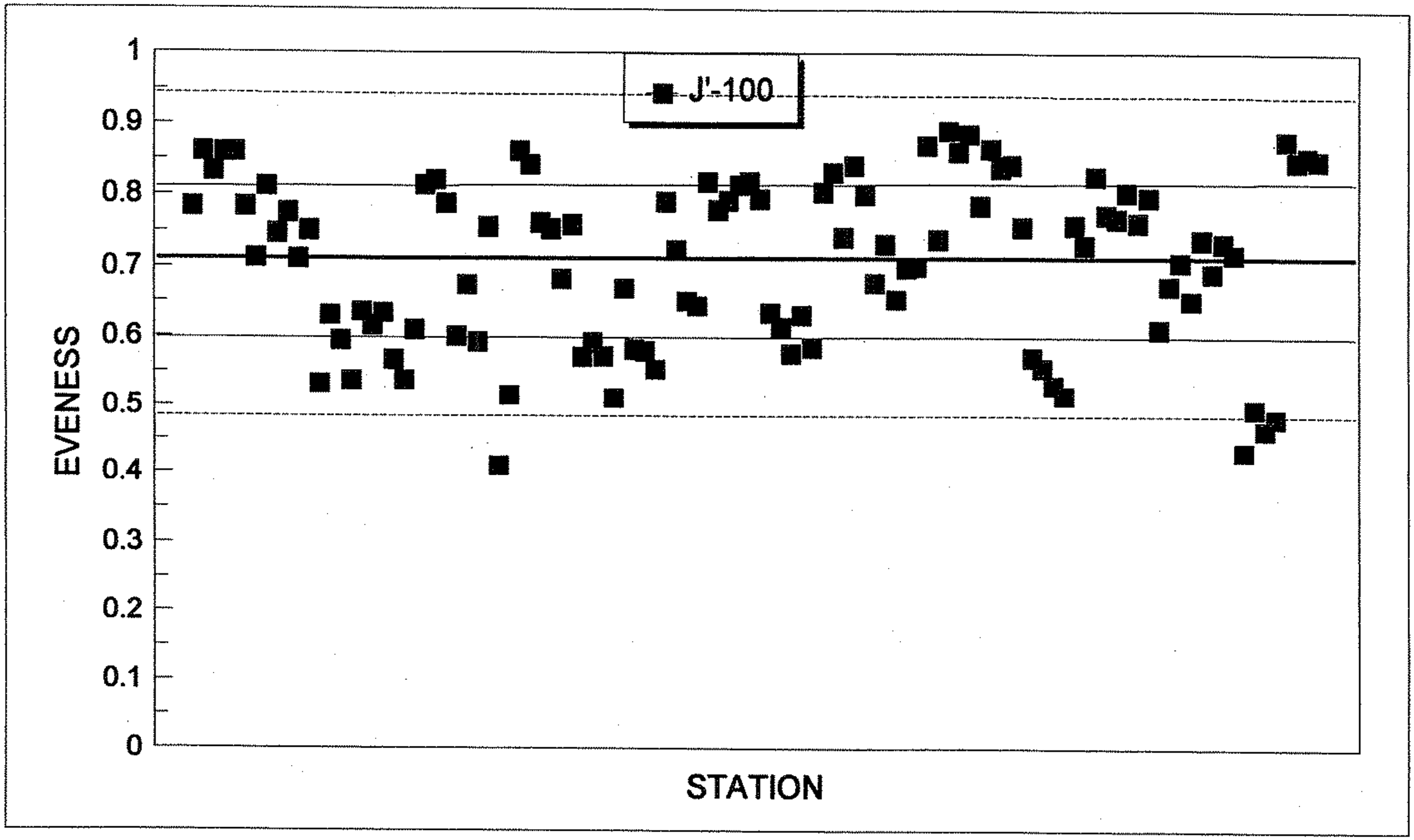

MOAB-100
MOLLUCS ABUNDANCE (per 0.1M2)
350
300
250
200
150
100
50
0
STATION

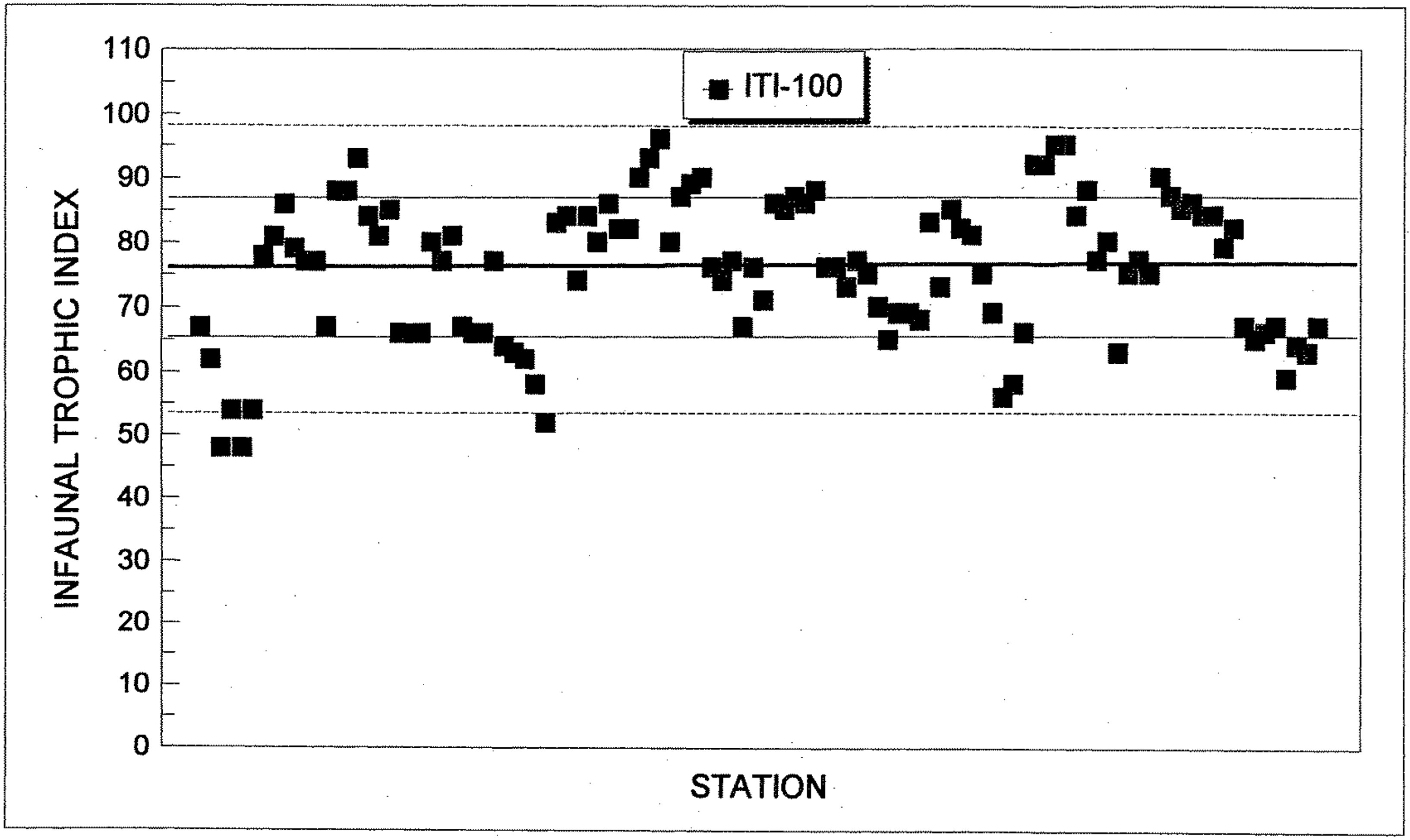

MOTAX-100
20
15
10
5
0
NUMBER OF MOLLUSC TAXA (per 0.1M2)
STATION

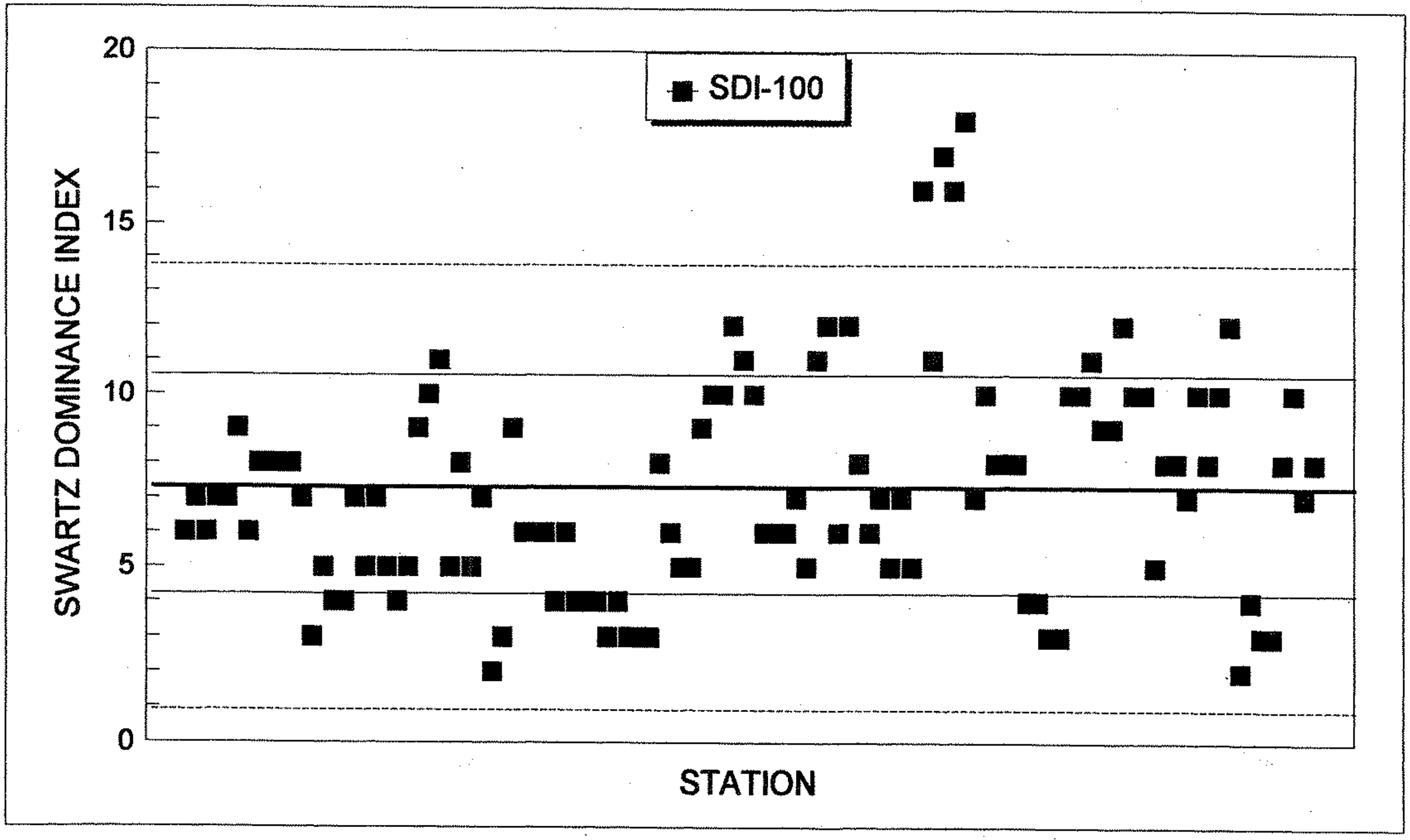

AMPHIAB-100
400
350
300
250
200
150
100
50
0
AMPHIPOD ABUNDANCE (per 0.1M2)
STATION


AMPHITAX-100
NUMBER OF AMPHIPOD TAXA (per 0.1M2)
STATION
0
1
2
3
4
5
6
7


H'-100
SHANNON-WIENER DIVERSITY
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
STATION


J'-100
EVENESS
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
STATION


ITI-100
INFAUNAL TROPHIC INDEX
110
100
90
80
70
60
50
40
30
20
10
0
STATION


SDI-100
SWARTZ DOMINANCE INDEX
20
15
10
5
0
STATION

APPENDIX E
SUMMARY STATISTICS FOR BENTHIC ENDPOINTS IN UNCONTAMINATED HABITAT CATEGORIES

Table E1. Summary statistics for total abundance.

	TOAB20	TOAB50	TOAB80	TOAB100
MEAN	491.413	494.217	343.481	307.01
STANDARD DEV	196.614	152.713	187.248	129.01
STD. ERROR	14.495	18.385	21.067	13.099
VARIANCE	38656.998	23321.408	35061.971	16643.469
UPPER 95% C.L.	519.823	530.252	384.772	332.684
LOWER 95% C.L.	463.003	458.182	302.190	281.336
C.V.	0.4	0.309	0.545	0.42
RANGE	937	672	851	554
MINIMUM	57	192	43	90
MAXIMUM	994	864	894	644
N OF CASES	184	69	79	97

Table E2. Summary statistics for total taxa.

	TOTAX20	TOTAX50	TOTAX80	TOTAX100
MEAN	68.656	64.409	51.815	32.97
STANDARD DEV	21.554	14.331	13.823	8.789
STD. ERROR	1.593	1.764	1.536	0.883
UPPER 95% C.L.	71.778	67.866	54.826	34.701
LOWER 95% C.L.	65.534	60.952	48.804	31.239
VARIANCE	464.59	205.384	191.078	77.254
C.V.	0.314	0.223	0.267	0.267
RANGE	90	59	61	34
MINIMUM	25	30	19	18
MAXIMUM	115	89	80	52
N OF CASES	183	66	81	99

Table E3. Summary statistics for crustacea abundance.

	CRAB20	CRAB50	CRAB80	CRAB100
MEAN	120.378	103.338	51.156	75.806
STANDARD DEV	77.710	63.773	52.746	71.848
STD. ERROR	5.792	7.734	6.011	7.258
VARIANCE	6038.784	4066.973	2782.186	5162.137
UPPER 95% C.L.	131.730	118.497	62.938	90.032
LOWER 95% C.L.	109.026	88.179	39.374	61.580
C.V.	0.646	0.617	1.031	0.948
RANGE	292	220	250	252
MINIMUM	6	2	0	0
MAXIMUM	298	222	250	252
N OF CASES	180	68	77	98

Table E4. Summary statistics for crustacea taxa.

	CRTAX20	CRTAX50	CRTAX80	CRTAX100
MEAN	12.099	10.288	6.9	4.893
STANDARD DEV	4.573	4.098	3.137	1.793
STD. ERROR	0.34	0.504	0.351	0.177
UPPER 95% C.L.	12.765	11.277	7.588	5.24
LOWER 95% C.L.	11.433	9.299	6.212	4.546
VARIANCE	20.912	16.793	9.838	3.214
C.V.	0.378	0.398	0.455	0.366
RANGE	21	19	13	10
MINIMUM	2	1	0	0
MAXIMUM	23	20	13	10
N OF CASES	181	66	80	103

Table E5. Summary statistics for amphipod abundance.

	AMPAB20	AMPAB50	AMPAB80	AMPAB100
MEAN	20.505	15.048	13.397	27.796
STANDARD DEV	24.260	13.847	13.906	19.505
STD. ERROR	2.489	1.520	1.752	1.430
VARIANCE	588.572	191.729	193.372	380.434
UPPER 95% C.L.	25.383	18.027	16.831	30.599
LOWER 95% C.L.	15.627	12.069	9.963	24.993
C.V.	1.183	0.920	1.038	0.702
RANGE	139	48	59	74
MINIMUM	0	0	0	1
MAXIMUM	139	48	59	75
N OF CASES	95	83	63	186

Table E6. Summary statistics for amphipod taxa.

	AMPTAX20	AMPTAX50	AMPTAX80	AMPTAX100
MEAN	6.605	4.758	3.128	2.065
STANDARD DEV	3.054	2.735	1.797	0.992
STD. ERROR	0.225	0.337	0.203	0.103
VARIANCE	9.327	7.479	3.230	0.985
UPPER 95% C.L.	7.046	5.419	3.526	2.267
LOWER 95% C.L.	6.164	4.199	2.730	1.863
C.V.	0.462	0.575	0.575	0.480
RANGE	12	11	7	4
MINIMUM	1	0	0	0
MAXIMUM	13	11	7	4
N OF CASES	185	66	78	92

Table E7. Summary statistics for polychaete abundance.

	POAB20	POAB50	POAB80	POAB100
MEAN	197.197	224.299	146.707	88.340
STANDARD DEV	124.785	97.822	68.331	57.195
STD. ERROR	9.353	11.951	7.546	5.807
VARIANCE	15571.413	9569.061	4669.074	3271.310
UPPER 95% C.L.	215.529	247.723	161.497	99.722
LOWER 95% C.L.	178.865	200.875	131.917	76.958
C.V.	0.633	0.436	0.466	0.647
RANGE	600	387	271	255
MINIMUM	10	62	16	11
MAXIMUM	610	449	287	266
N OF CASES	178	67	82	97

Table E8. Summary statistics for polychaete taxa.

	POTAX20	POTAX50	POTAX80	POTAX100
MEAN	33.959	37.544	27.926	15.687
STANDARD DEV	13.26	10.356	7.989	6.295
STD. ERROR	0.954	1.256	0.888	0.633
UPPER 95% C.L.	35.829	40.014	29.666	16.928
LOWER 95% C.L.	32.089	35.098	26.186	14.446
VARIANCE	175.832	107.237	63.819	39.625
C.V.	0.39	0.276	0.286	0.401
RANGE	59	41	35	25
MINIMUM	6	19	9	5
MAXIMUM	65	60	44	30
N OF CASES	193	68	81	99

Table E9. Summary statistics for mollusca abundance.

	MOAB20	MOAB50	MOAB80	MOAB100
MEAN	87.748	109.523	111.231	64.071
STANDARD DEV	61.800	82.206	120.448	39.922
STD. ERROR	4.632	10.196	13.638	4.033
VARIANCE	3819.300	6757.785	14507.686	1593.778
UPPER 95% C.L.	96.827	129.507	137.961	71.976
LOWER 95% C.L.	78.669	89.539	84.501	56.166
C.V.	0.704	0.751	1.083	0.623
RANGE	300	330	503	166
MINIMUM	18	16	0	5
MAXIMUM	318	346	503	171
N OF CASES	178	65	78	98

Table E10. Summary statistics for mollusc taxa.

	MOTAX20	MOTAX50	MOTAX80	MOTAX100
MEAN	16.265	13.061	12.902	9.32
STANDARD DEV	4.584	3.721	4.893	3.378
STD. ERROR	0.337	0.458	0.54	0.338
UPPER 95% C.L.	16.926	13.959	13.960	9.982
LOWER 95% C.L.	15.604	12.163	11.844	8.658
VARIANCE	21.011	13.842	23.941	11.412
C.V.	0.282	0.285	0.379	0.362
RANGE	23	16	22	13
MINIMUM	3	5	2	3
MAXIMUM	26	21	24	16
N OF CASES	185	66	82	100

Table E11. Summary statistics for Shannon-Wiener diversity index.

	H20	H50	H80	H100
MEAN	1.34	1.314	1.231	1.058
STANDARD DEV	0.228	0.218	0.217	0.176
STD. ERROR	0.017	0.026	0.023	0.018
UPPER 95% C.L.	1.373	1.365	1.276	1.093
LOWER 95% C.L.	1.307	1.263	1.186	1.073
VARIANCE	0.052	0.048	0.047	0.031
C.V.	0.17	0.166	0.176	0.166
RANGE	1.068	0.972	0.806	0.649
MINIMUM	0.727	0.622	0.832	0.681
MAXIMUM	1.795	1.594	1.638	1.33
N OF CASES	185	69	86	95

Table E12. Summary statistics for Pelou's evenness index.

	J20	J50	J80	J100
MEAN	0.737	0.724	0.739	0.709
STANDARD DEV	0.090	0.096	0.012	0.109
STD. ERROR	0.007	0.012	0.012	0.011
VARIANCE	0.008	0.009	0.017	0.012
UPPER 95% C.L.	0.751	0.762	0.749	0.731
LOWER 95% C.L.	0.723	0.716	0.695	0.687
C.V.	0.122	0.132	0.148	0.153
RANGE	0.376	0.454	0.377	0.409
MINIMUM	0.533	0.421	0.545	0.481
MAXIMUM	0.909	0.875	0.922	0.890
N OF CASES	182	69	86	99

Table E13. Summary statistics for infaunal trophic index.

	ITI20	ITI50	ITI80	ITI100
MEAN	74.377	71.585	70.229	77.198
STANDARD DEV	6.703	5.67	7.004	9.934
STD. ERROR	0.495	0.703	0.769	0.988
UPPER 95% C.L.	75.307	72.963	71.730	79.134
LOWER 95% C.L.	73.367	70.207	68.728	75.262
VARIANCE	44.928	32.153	49.057	98.680
C.V.	0.09	0.079	0.1	0.129
RANGE	28	18	32	42
MINIMUM	60	66	52	54
MAXIMUM	88	84	84	96
N OF CASES	183	65	83	101

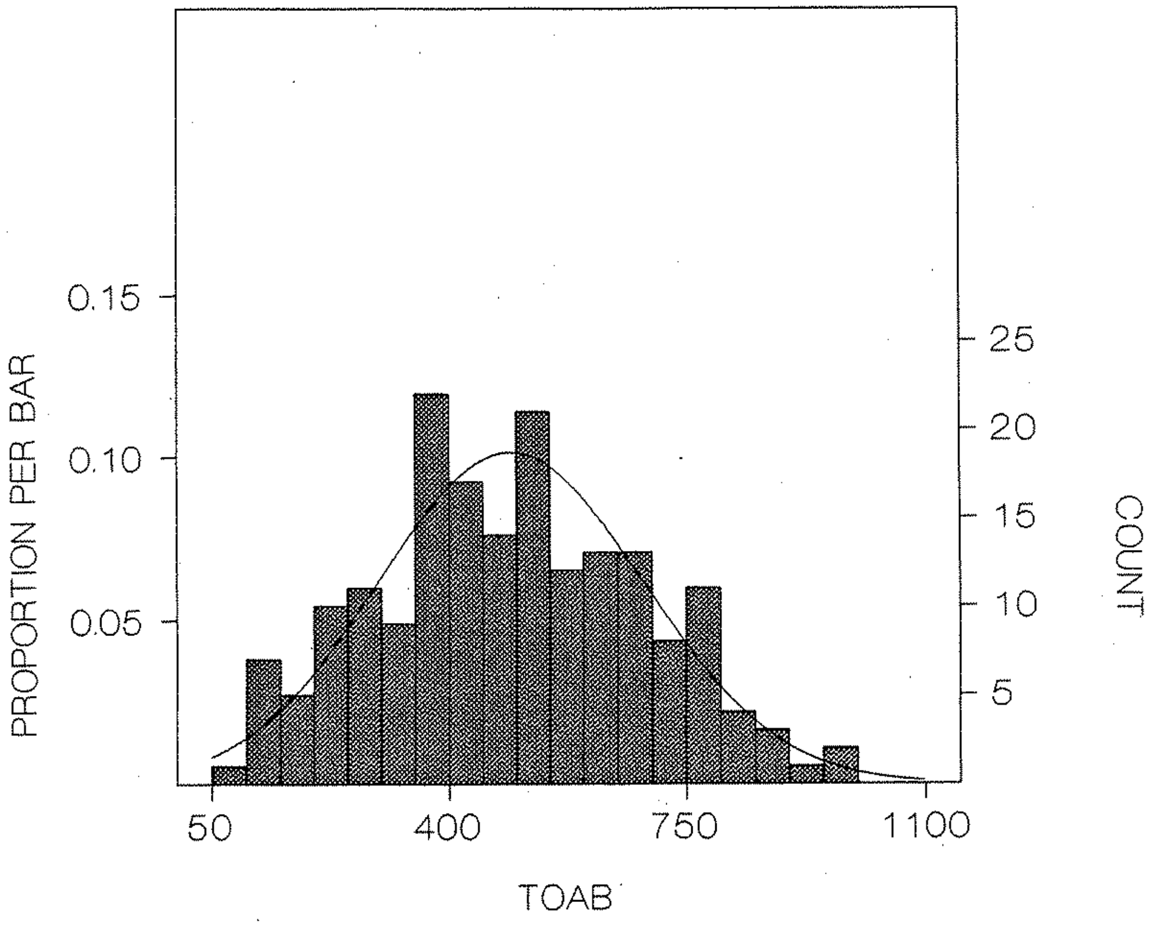
Table 14. Summary statistics for Swartz's dominance index.

	SDI20	SDI50	SDI80	SDI100
MEAN	14.194	13.779	11.024	6.939
STANDARD DEV	7.377	5.439	5.493	2.693
STD. ERROR	0.541	0.66	0.599	0.272
UPPER 95% C.L.	15.254	15.073	12.198	7.472
LOWER 95% C.L.	13.134	12.485	9.85	6.406
VARIANCE	54.416	29.577	30.168	7.254
C.V.	0.52	0.395	0.498	0.388
RANGE	35	22	18	10
MINIMUM	2	2	4	2
MAXIMUM	37	24	22	12
N OF CASES	186	68	84	98

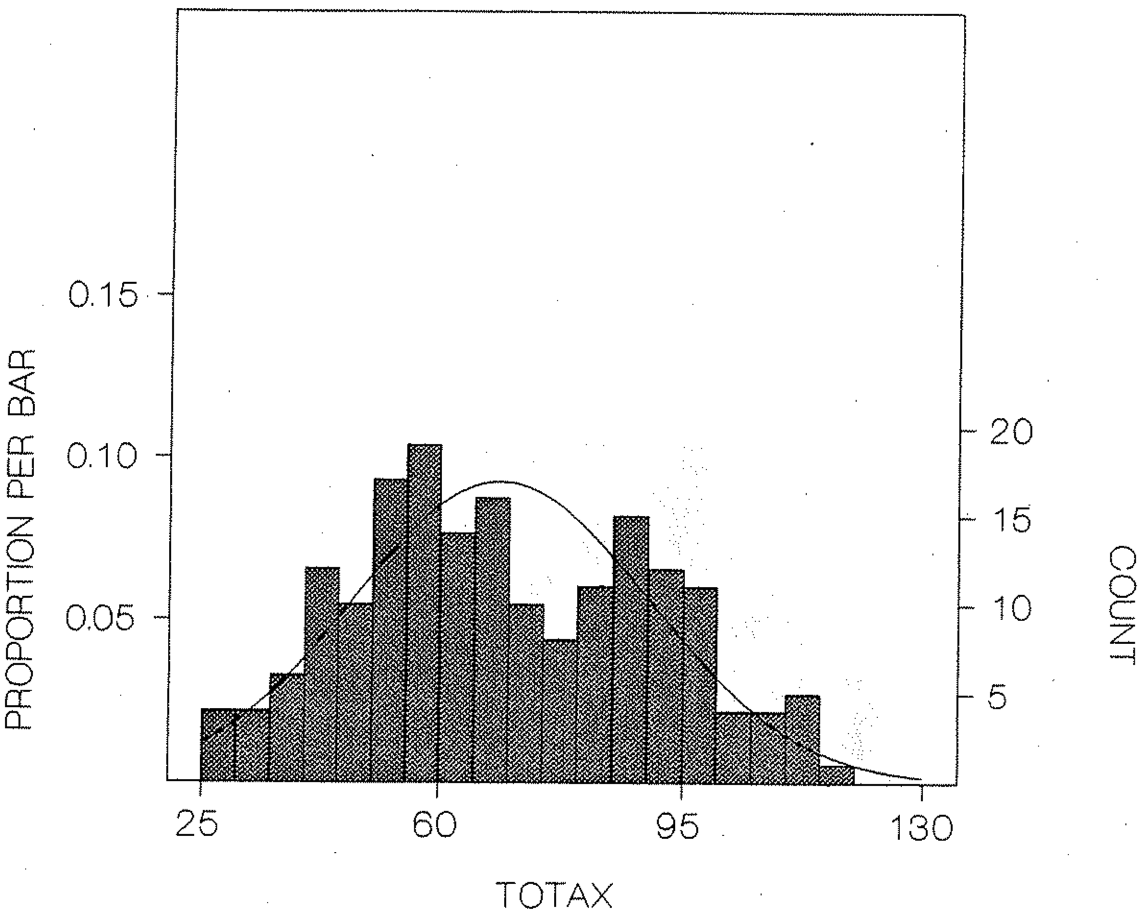
APPENDIX F
FREQUENCY DISTRIBUTIONS OF BENTHIC ENDPOINT DATA FOR UNCONTAMINATED HABITAT CATEGORIES

Appendix F1
0-20% Fines Habitat Category

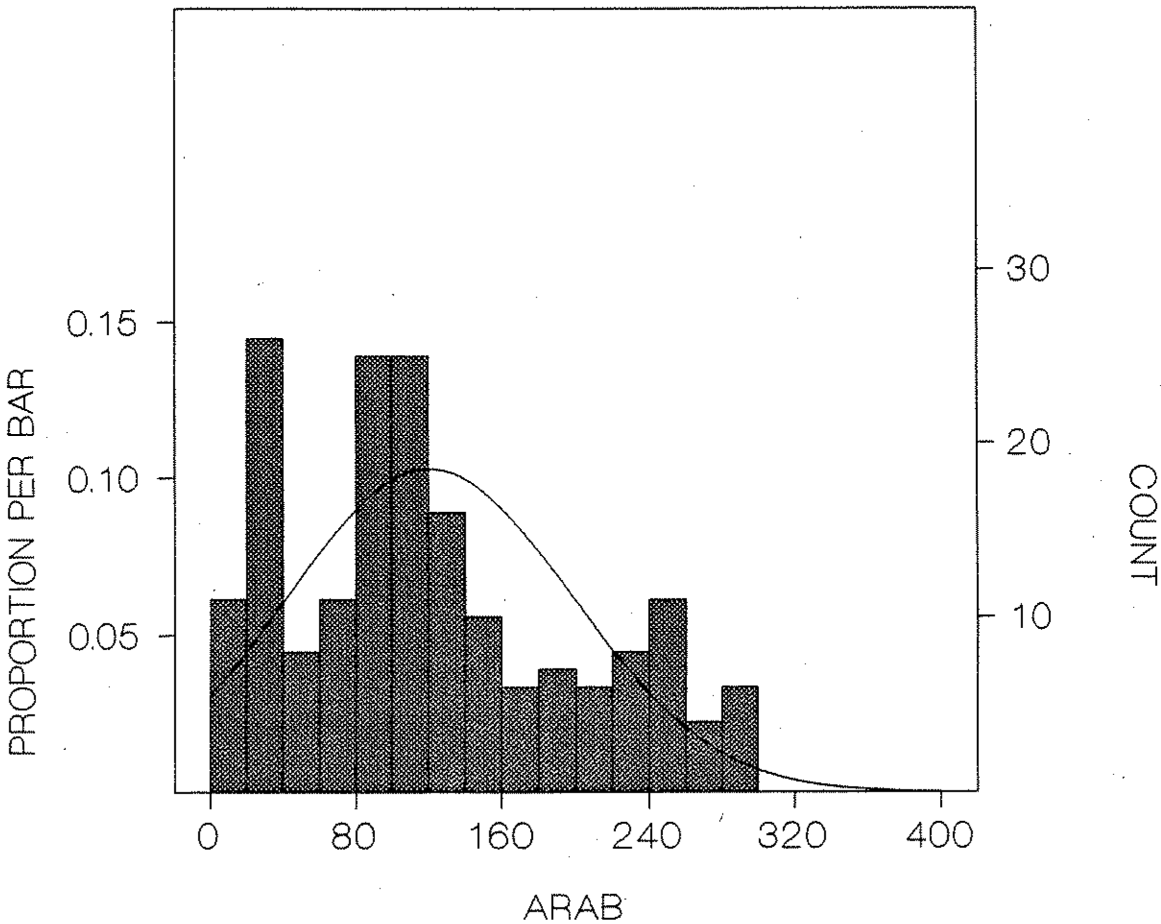
Frequency Distribution Total Abundance: Fines < 20 %



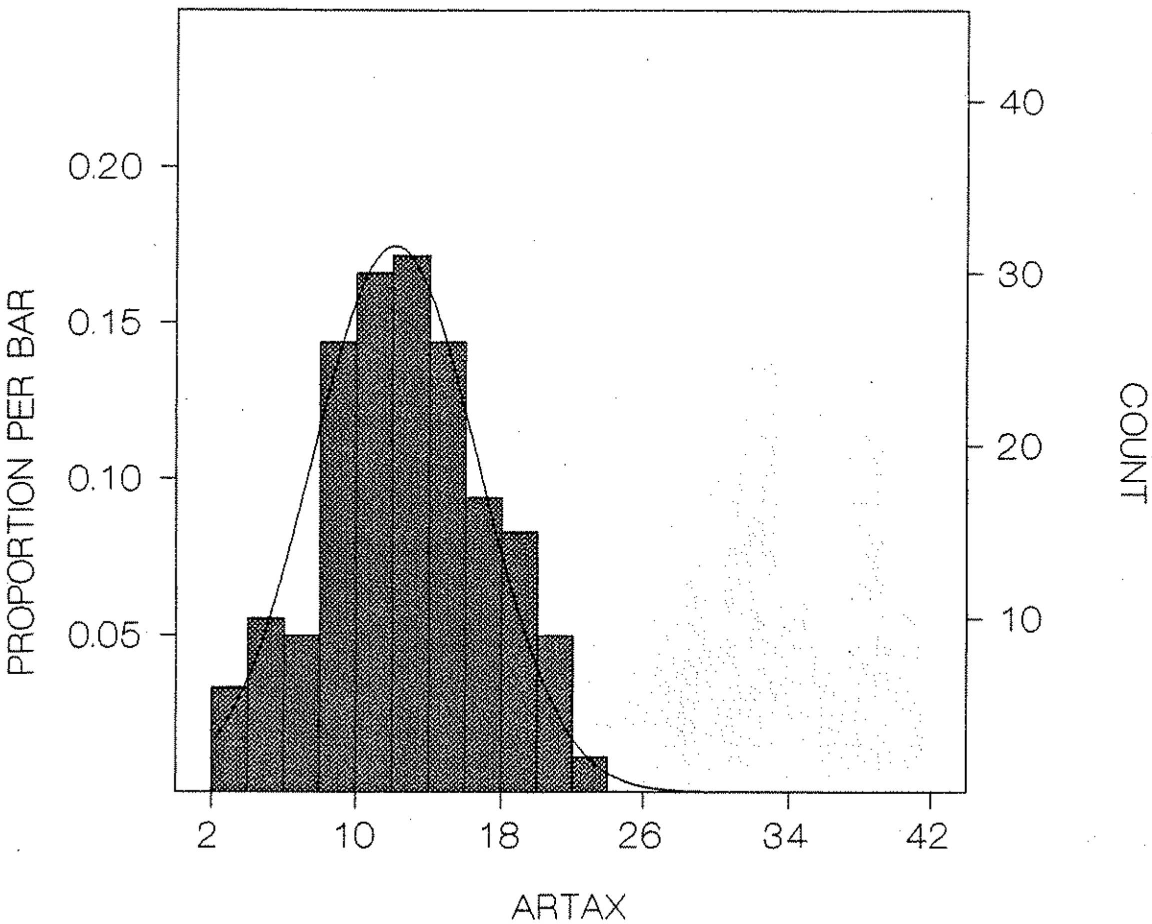
Frequency Distribution Total Taxa: Fines < 20 %



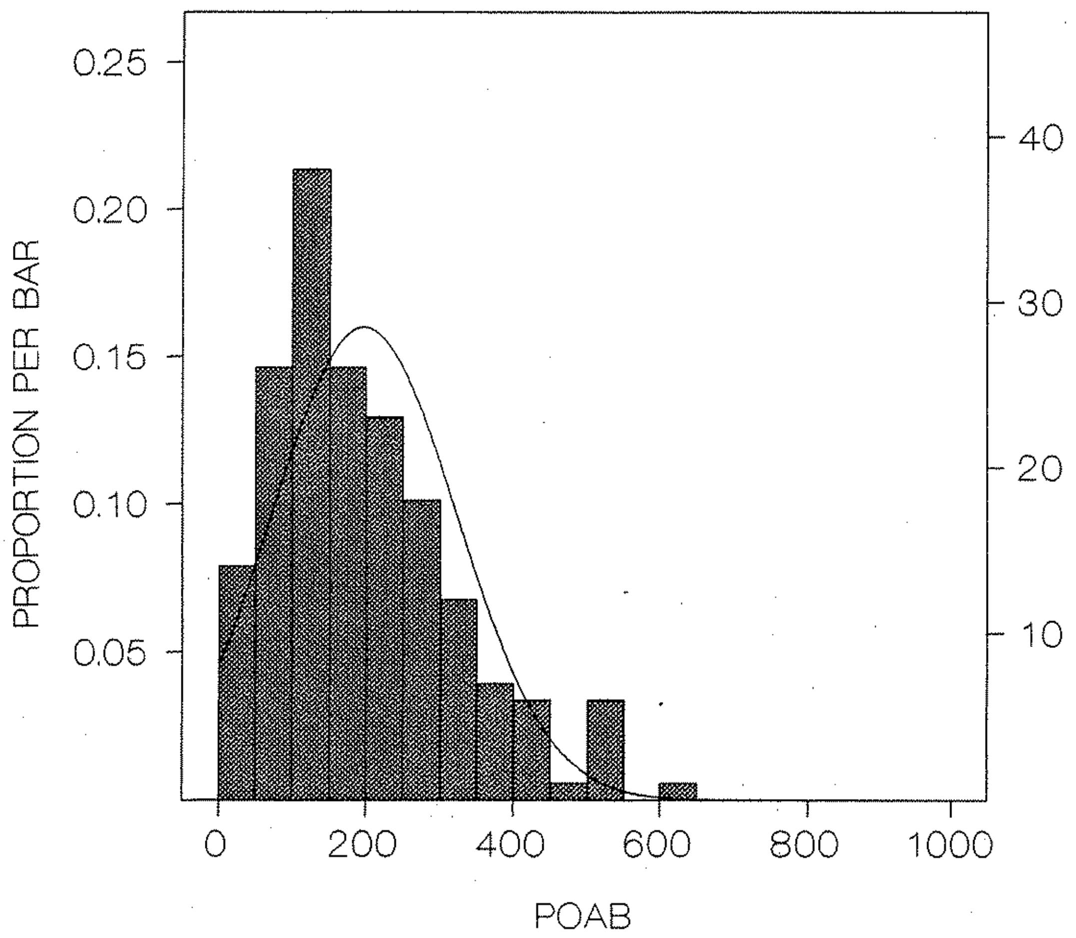
Frequency Distribution Arthropod Abundance: Fines <20%



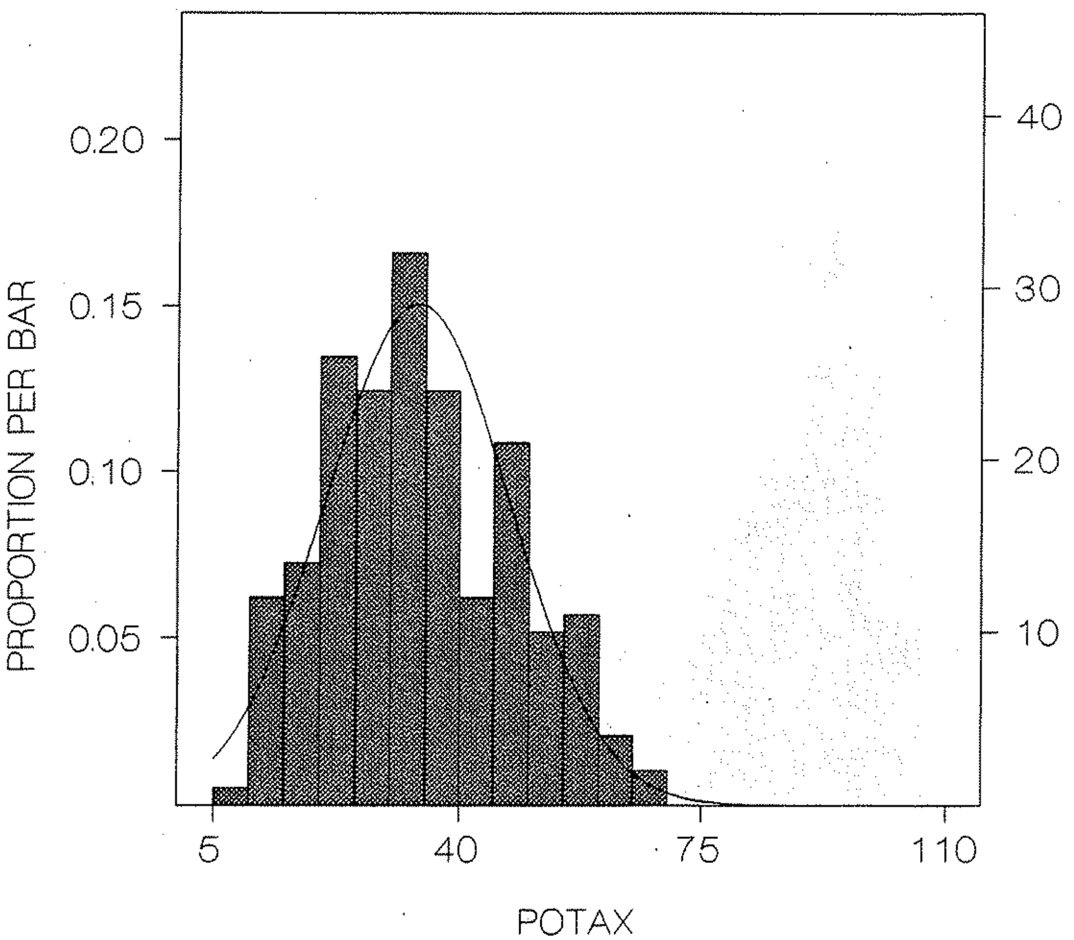
Frequency Distribution No. of Arthropod Taxa : Fines <20%



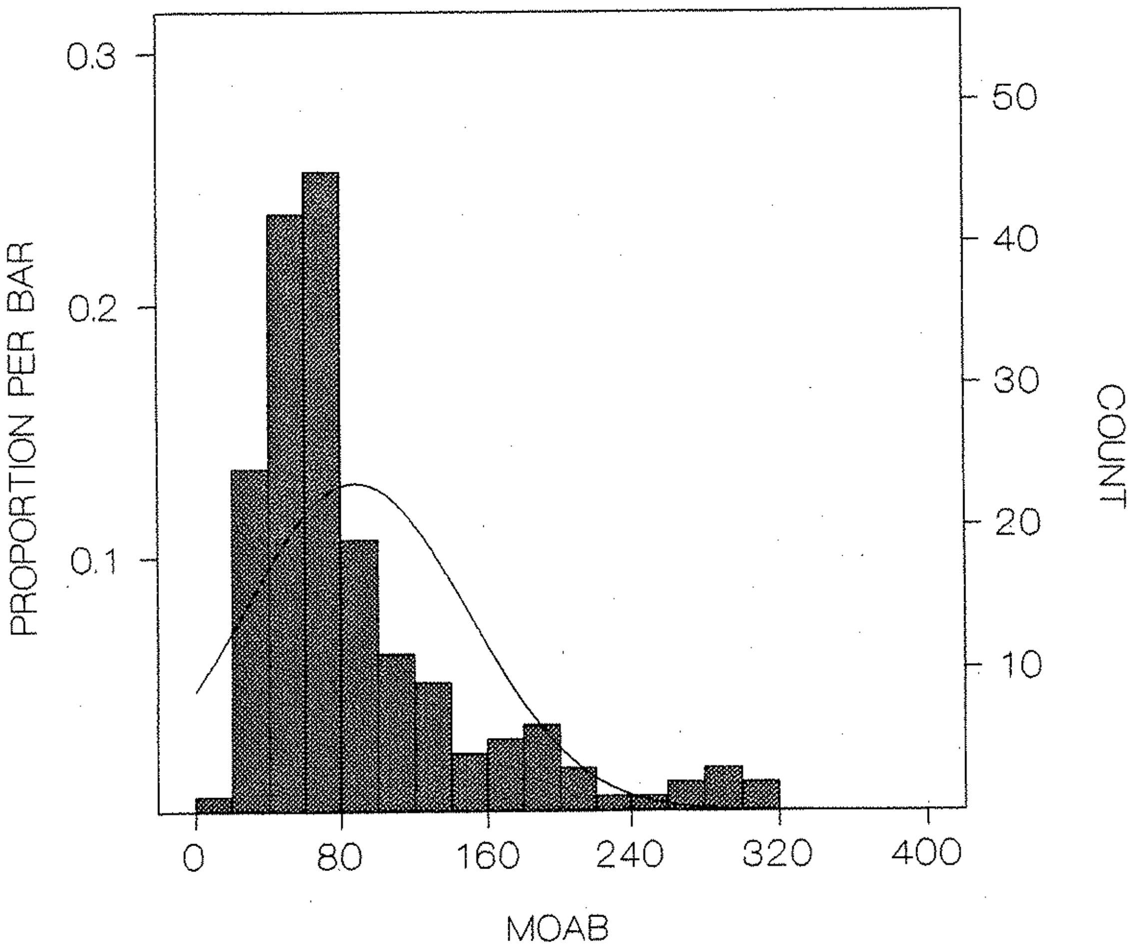
Frequency Distribution Annelid Abundance: Fines <20%



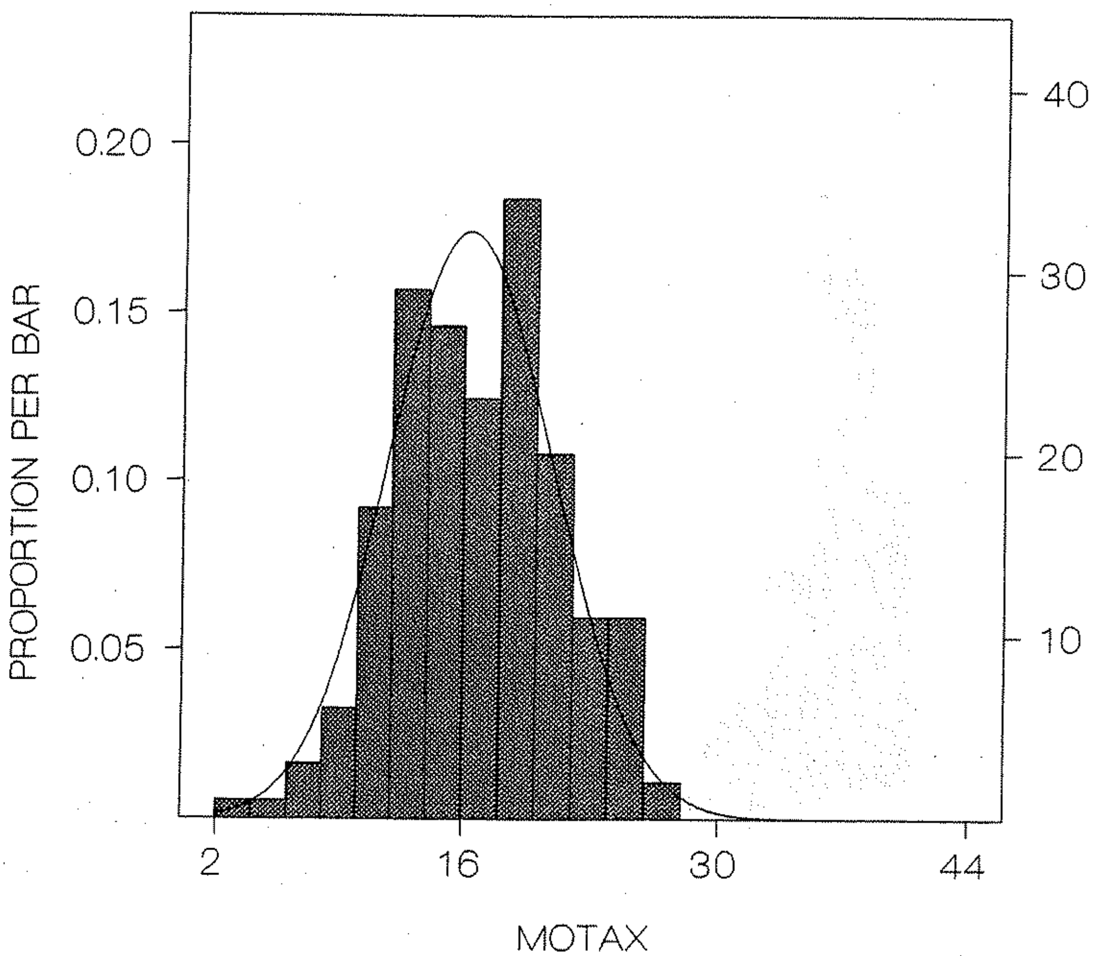
Frequency Distribution No. of Annelid Taxa: Fines <20%



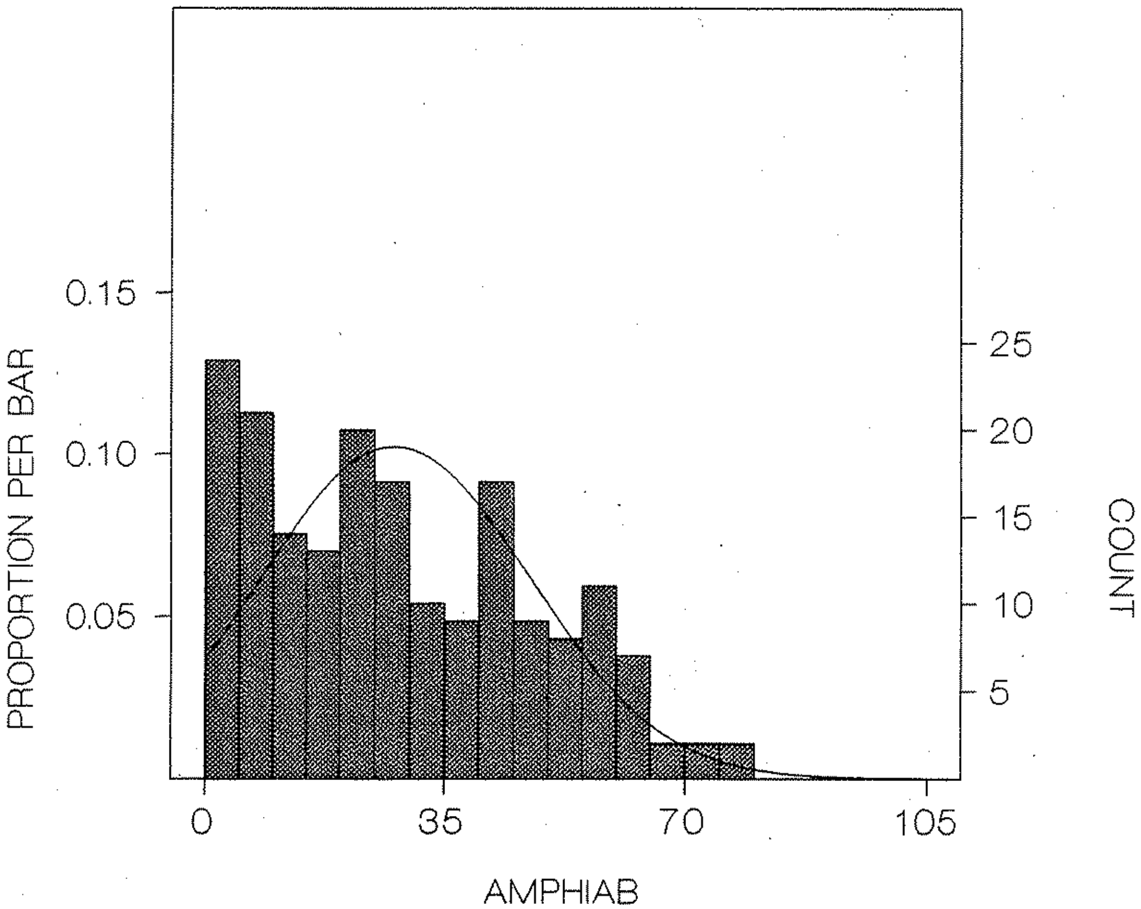
Frequency Distribution Mollusc Abundance: Fines <20%



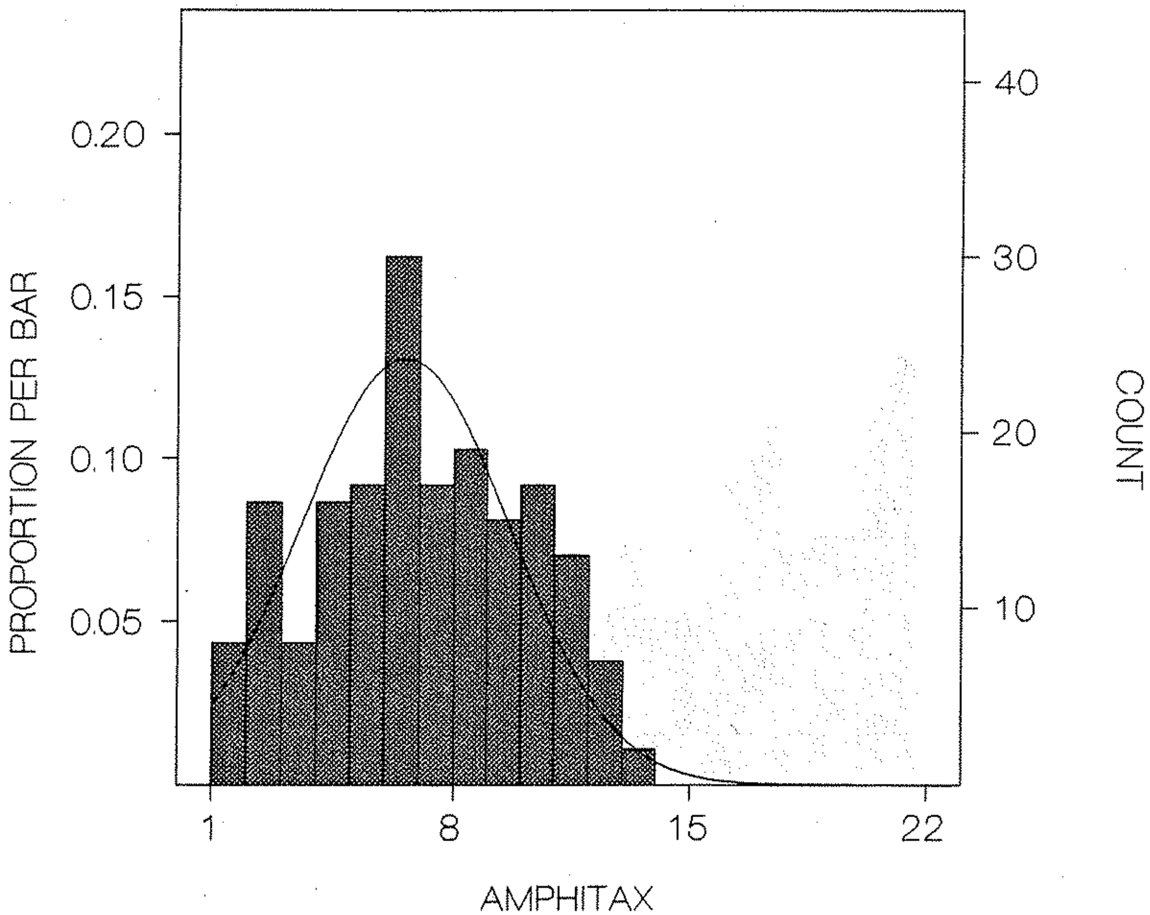
Frequency Distribution No. of Molluscan Taxa: Fines <20%



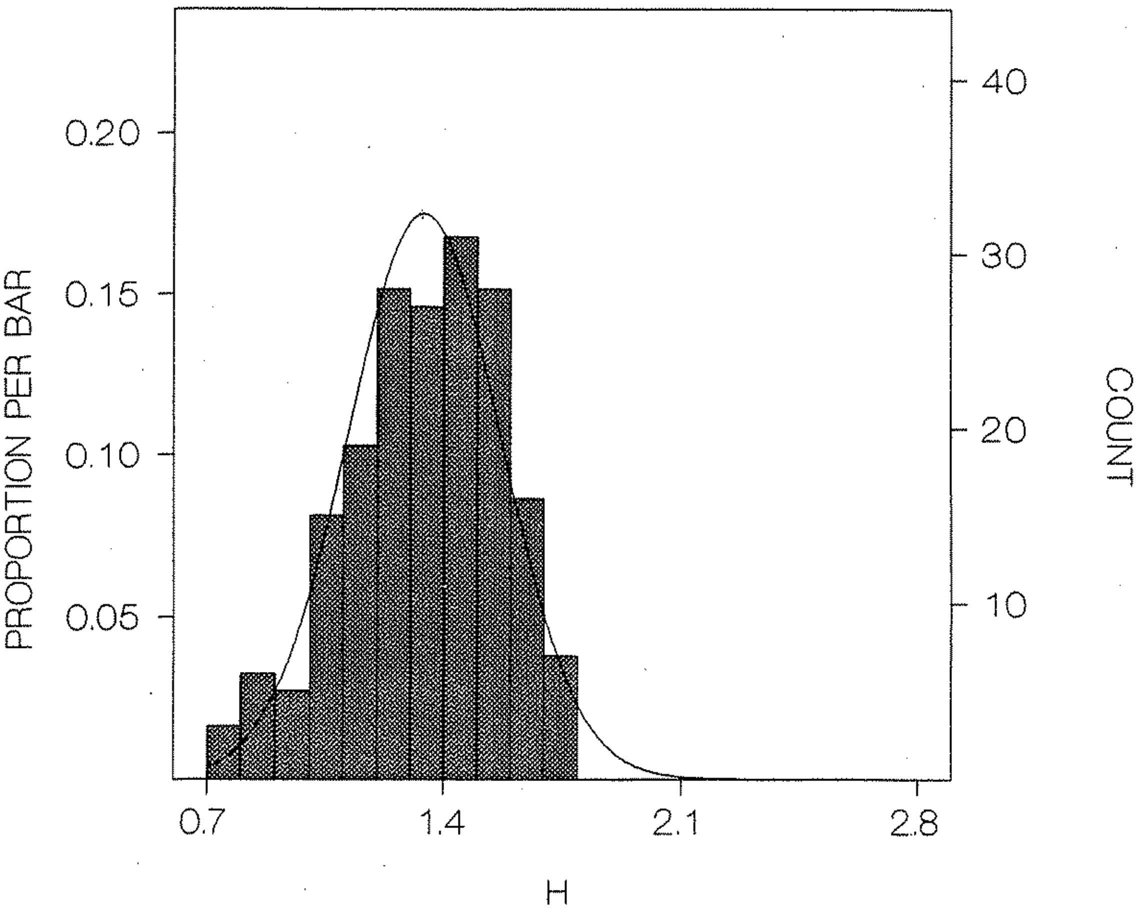
Frequency Distribution Amphipod Abundance: Fines <20%



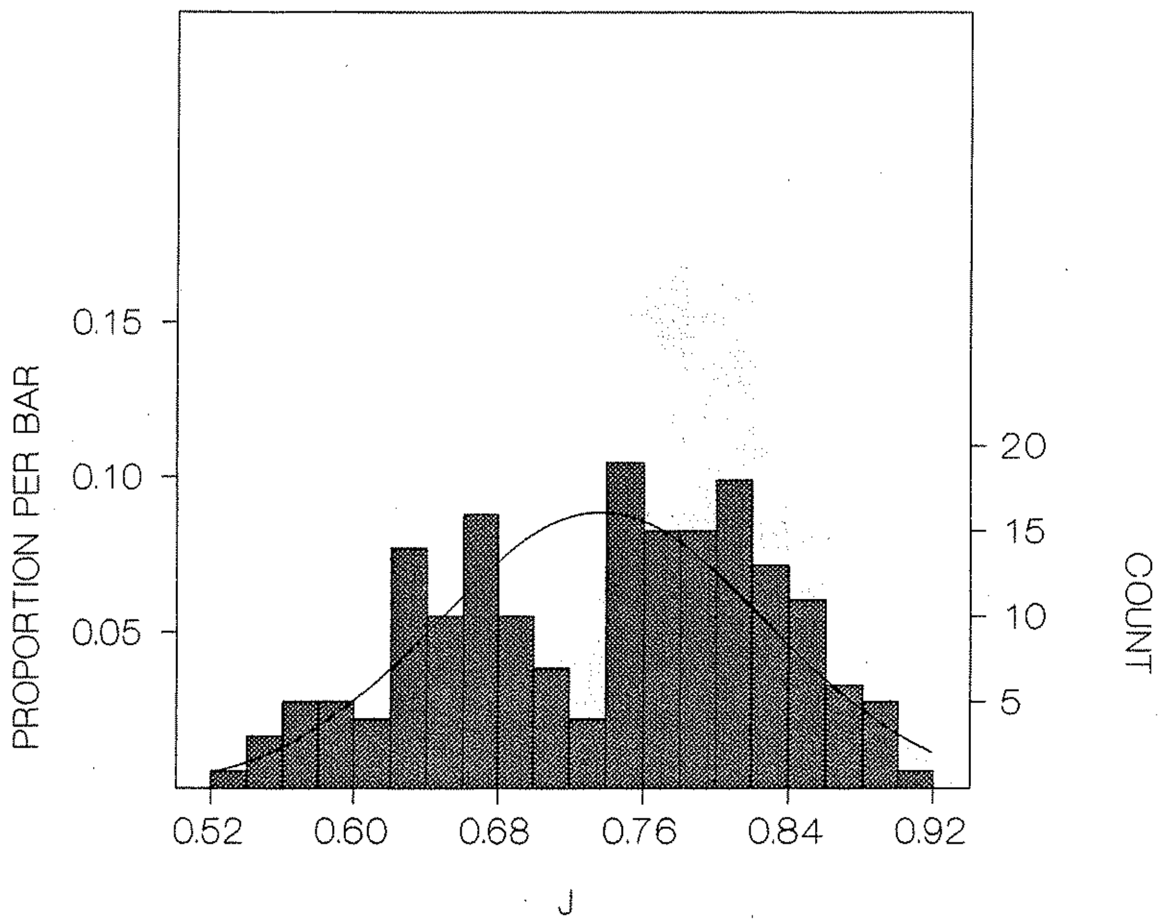
Frequency Distribution No. of Amphipod Taxa: Fines <20%



Frequency Distribution of H: Fines <20%

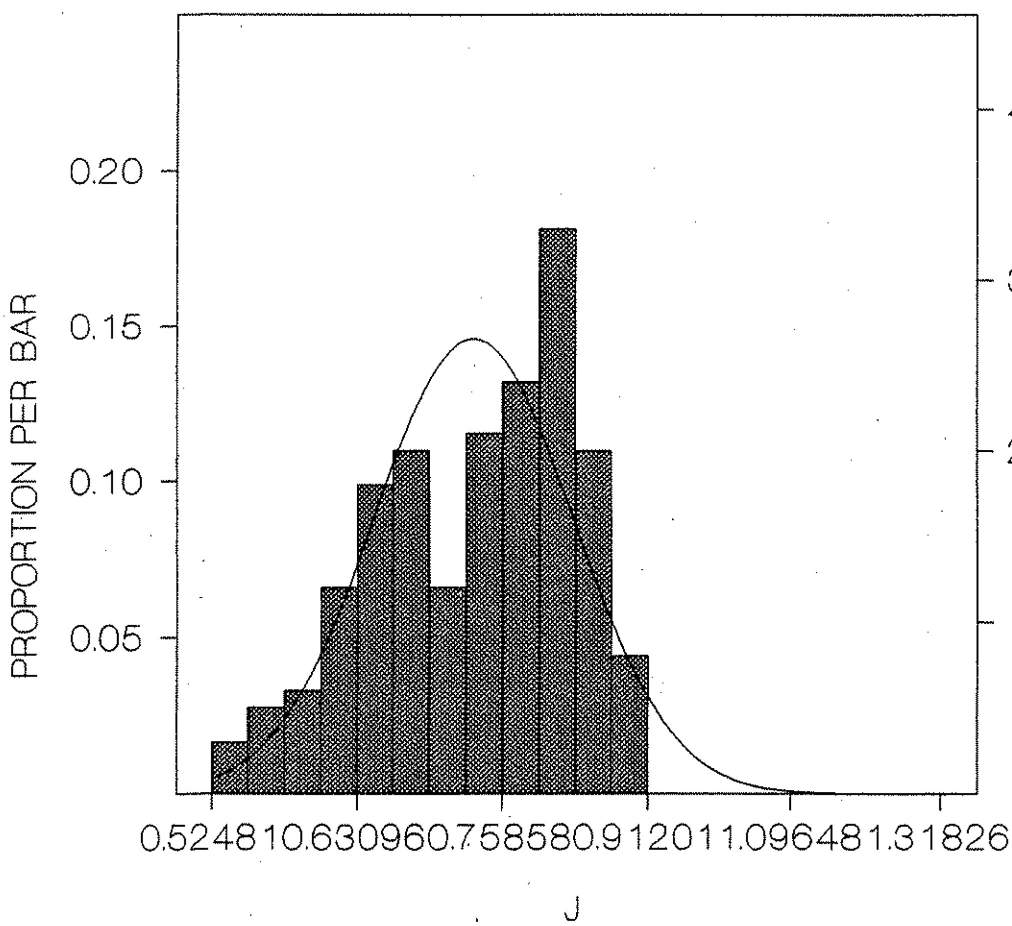


Frequency Distribution of J': fines <20%

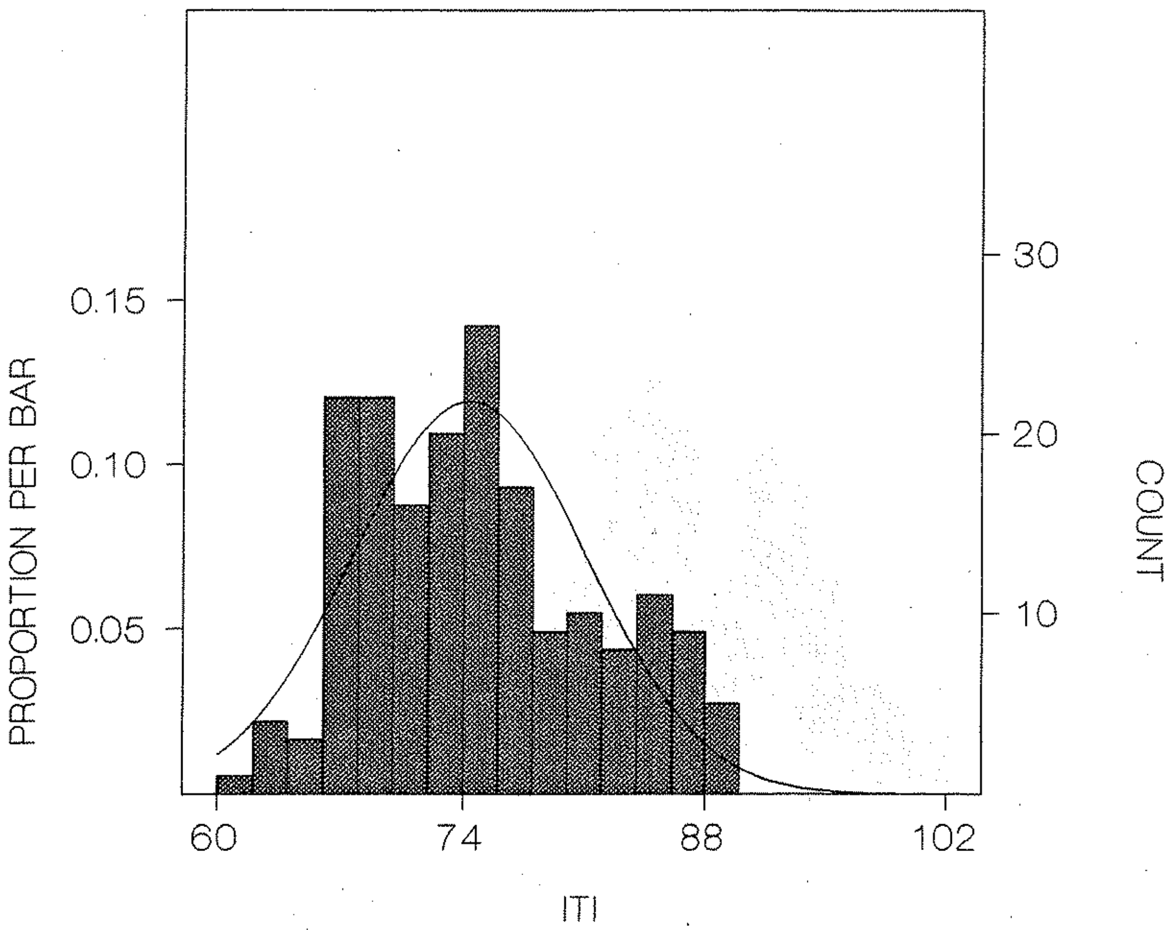


Frequency Distribution of J': fines <20%

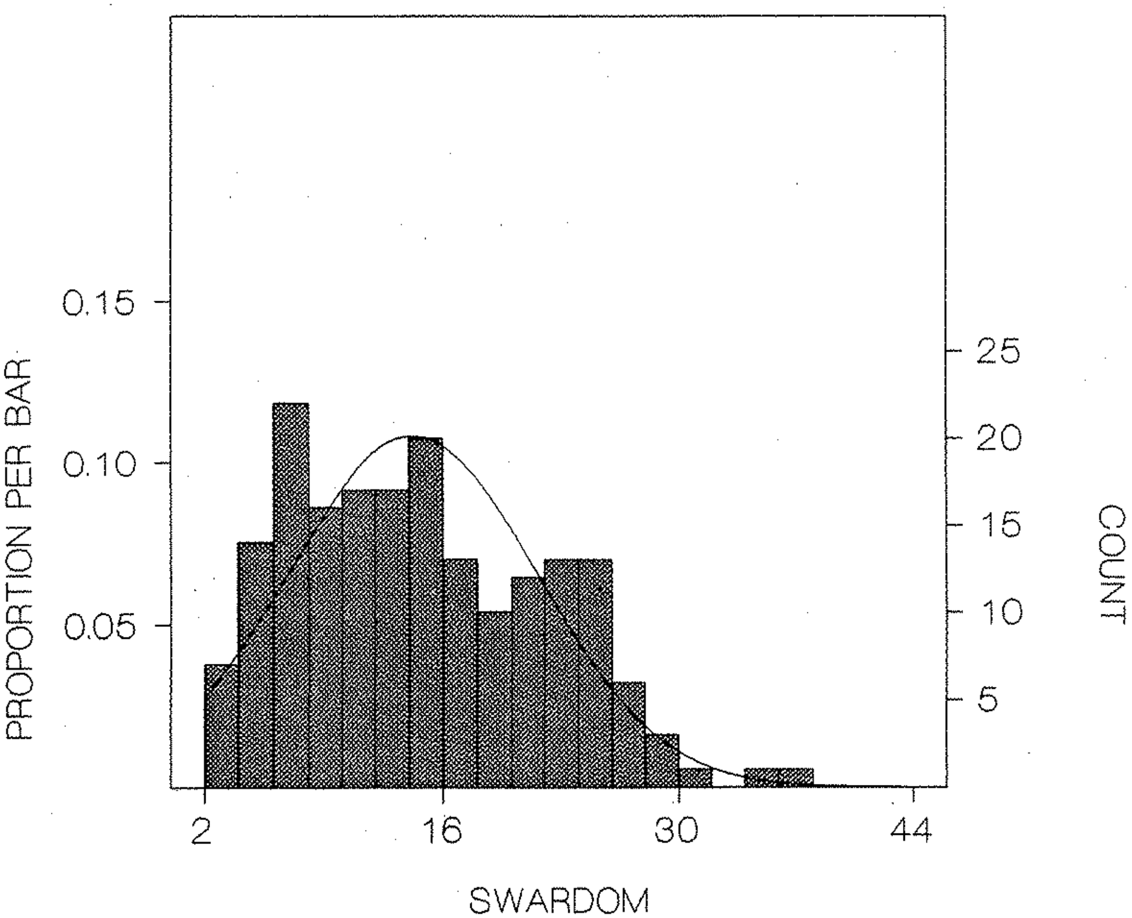
Log 10



Frequency Distribution of ITI: Fines <20%

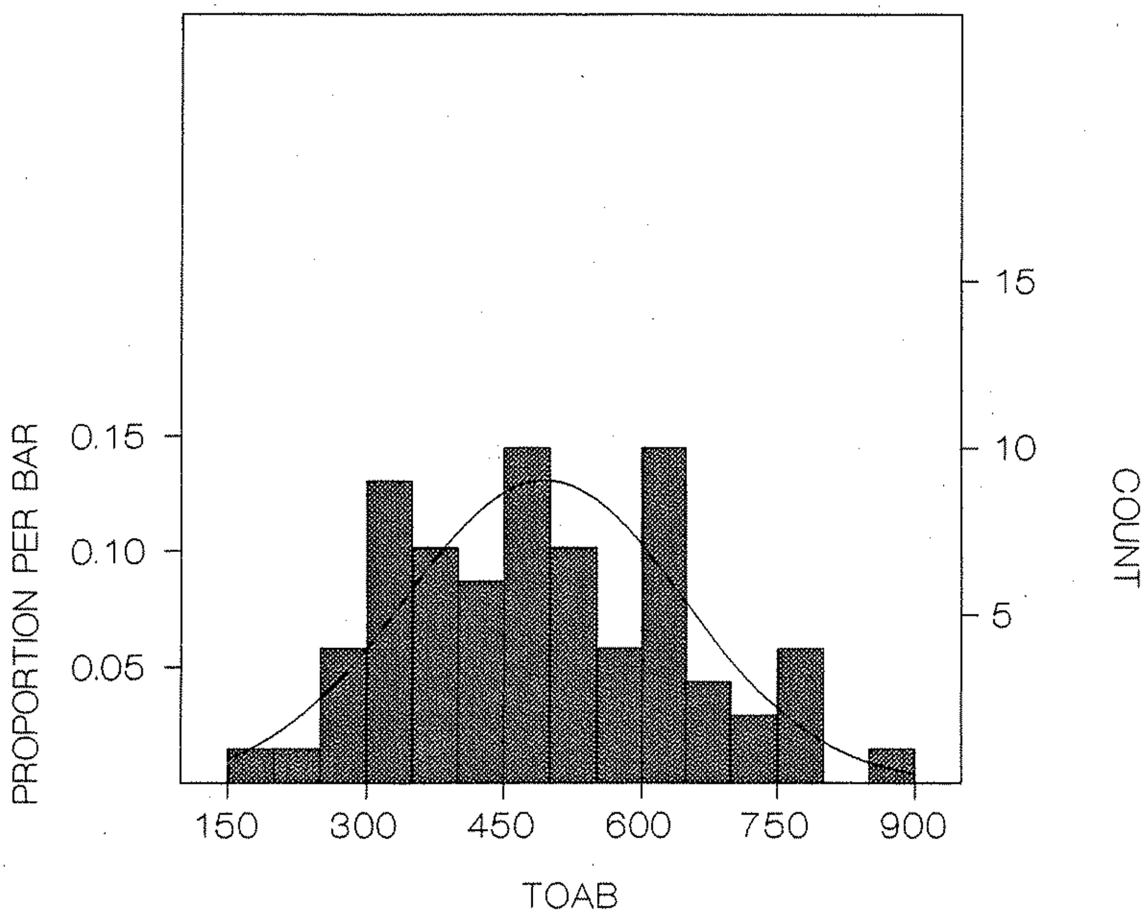


Frequency Distribution of SWARDOM: Fines <20%

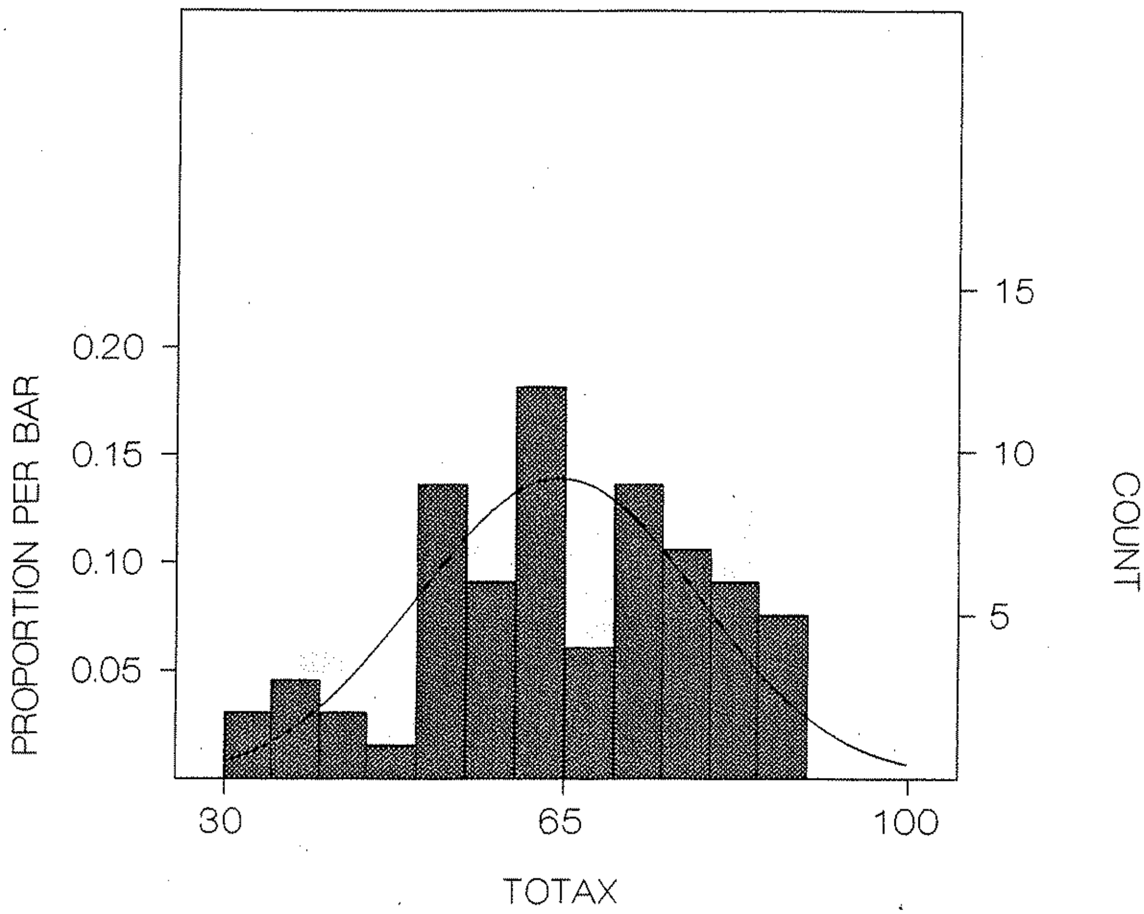


Appendix F2
20-50% Fines Habitat Category

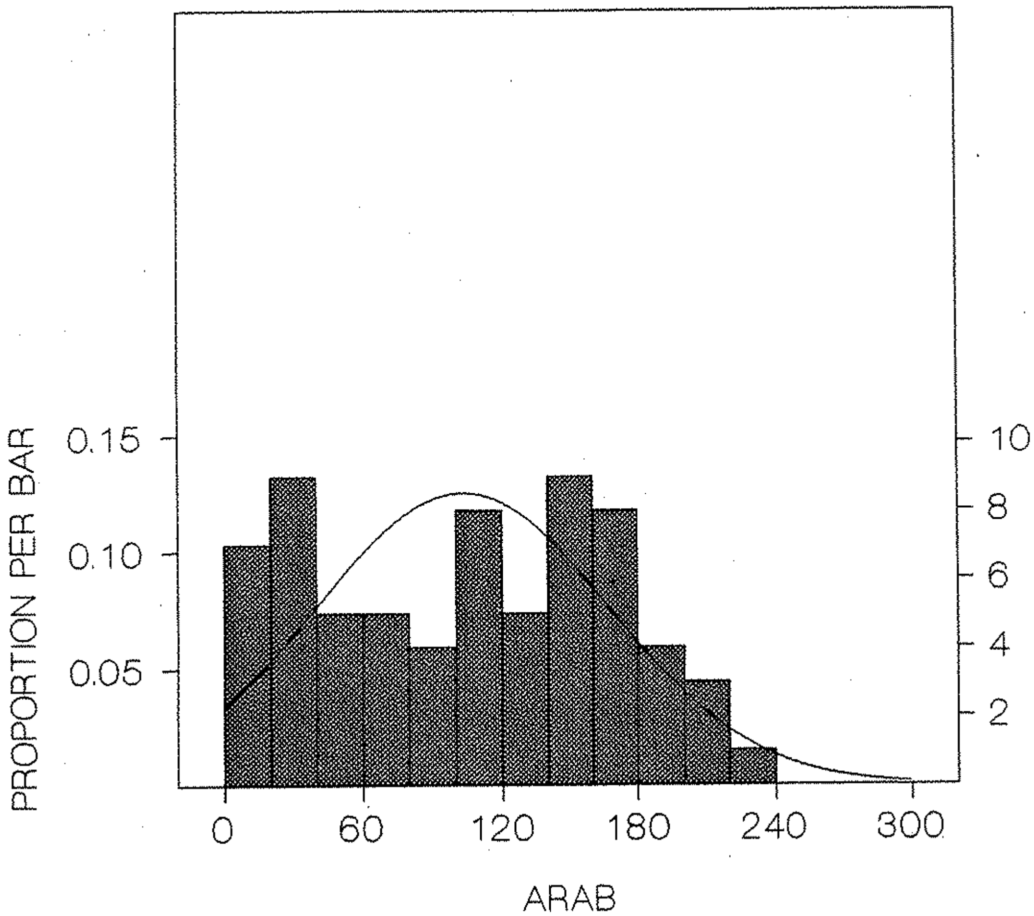
Frequency Distribution TOAB-50: Fines 20-50%



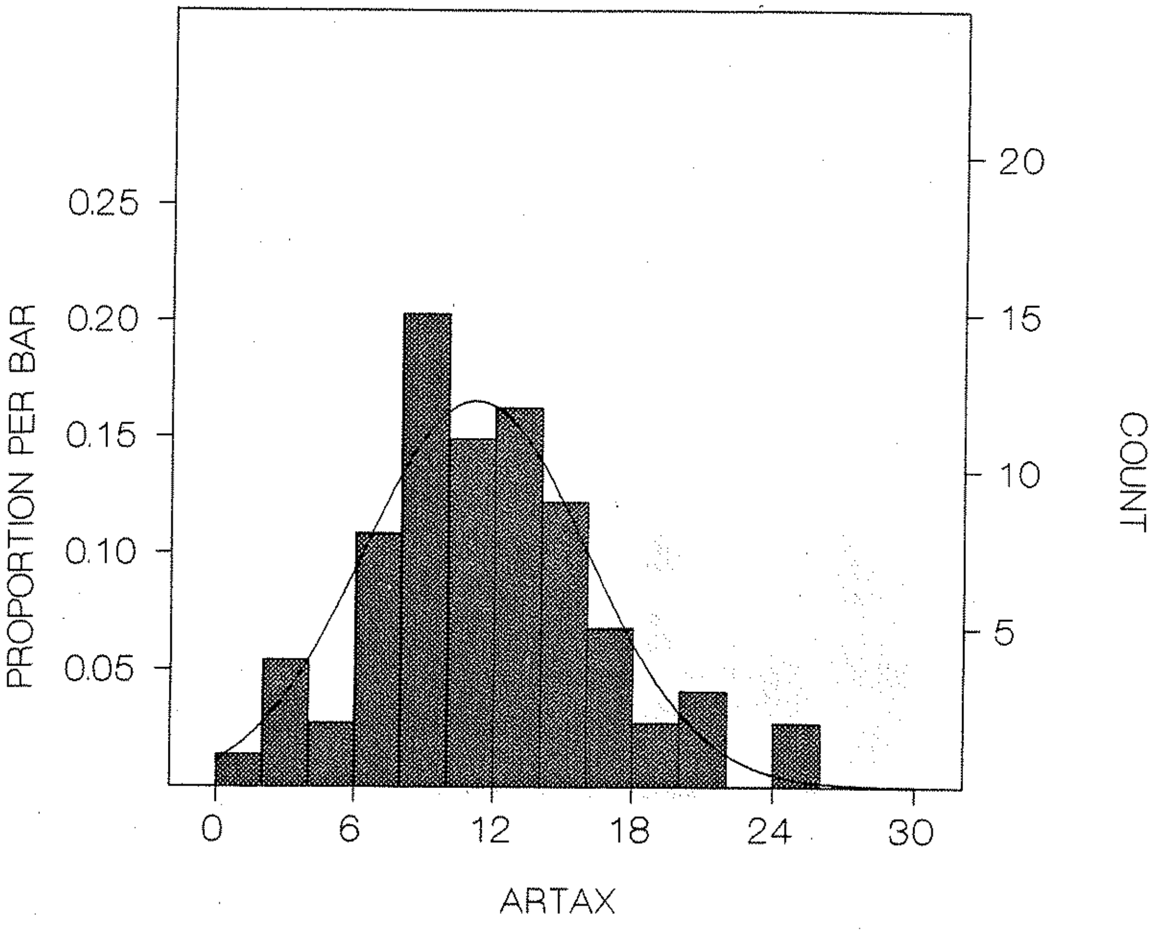
Frequency Distribution TOTAX-50: Fines 20-50%



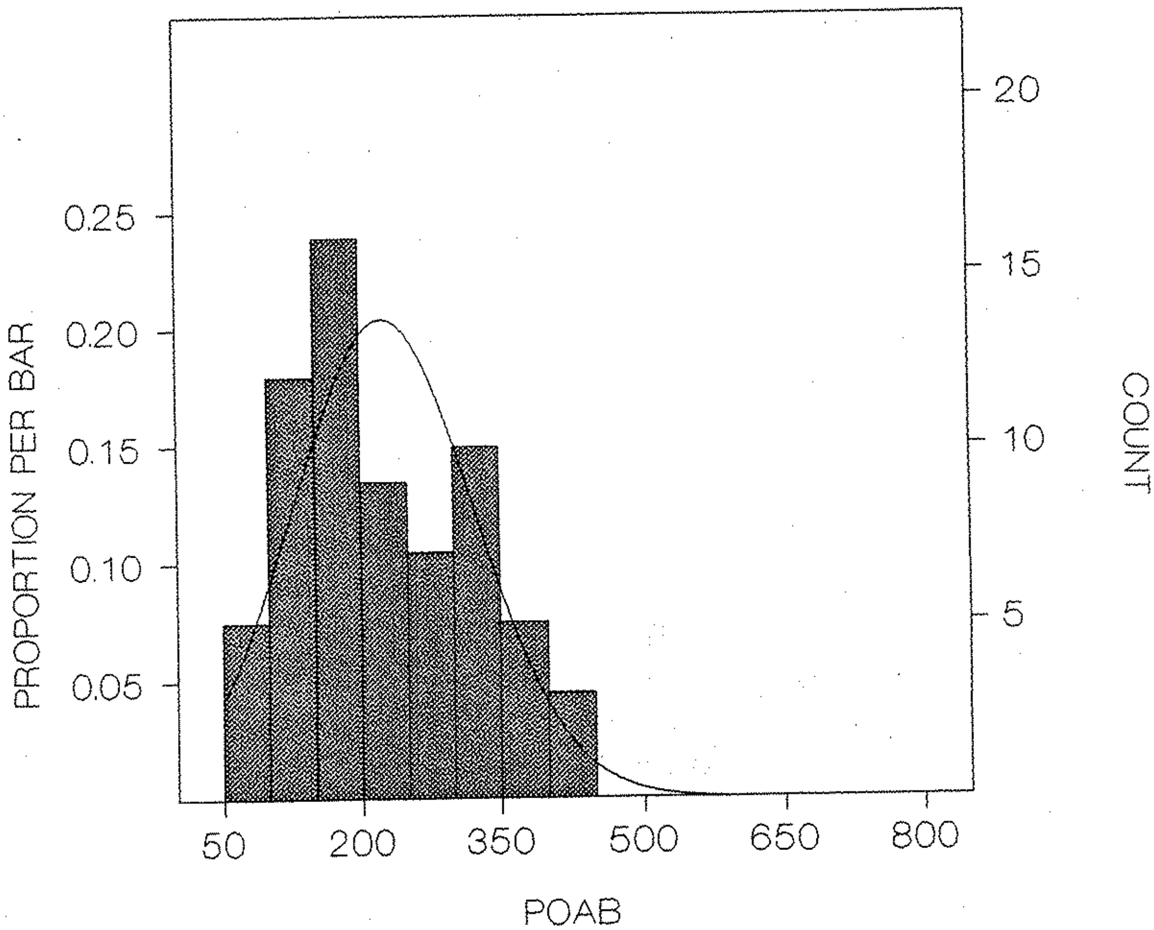
Frequency Distribution ARAB-50: Fines 20-50%



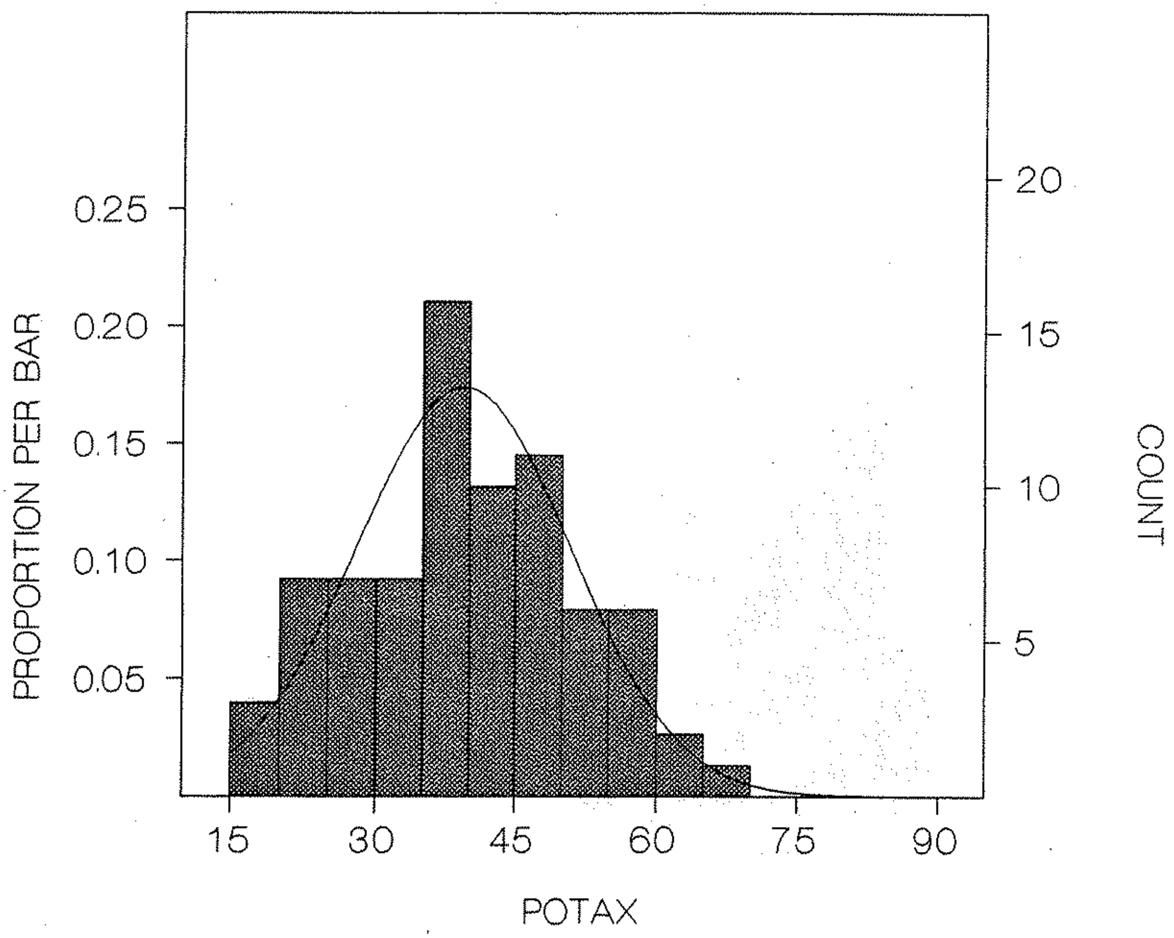
Frequency Distribution ARTAX-50: Fines 20-50%



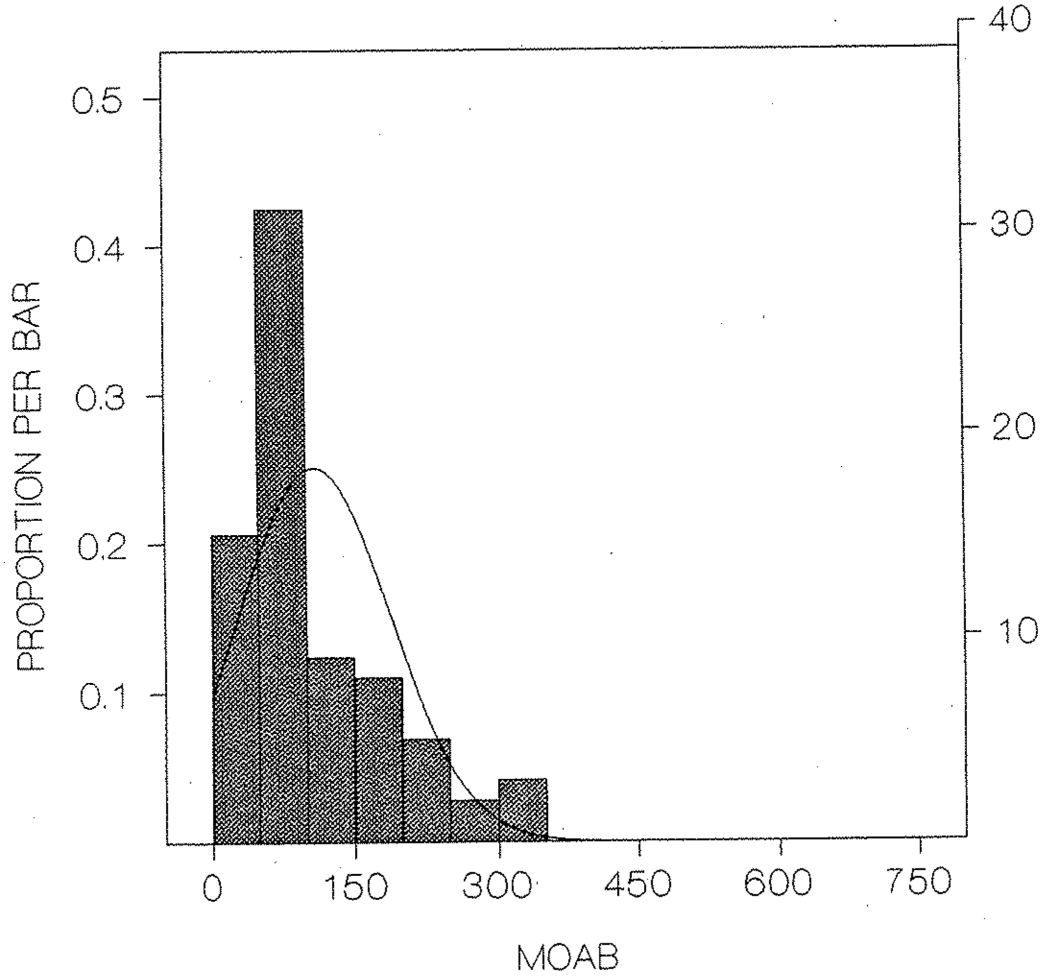
Frequency Distribution POAB-50: Fines 20-50%



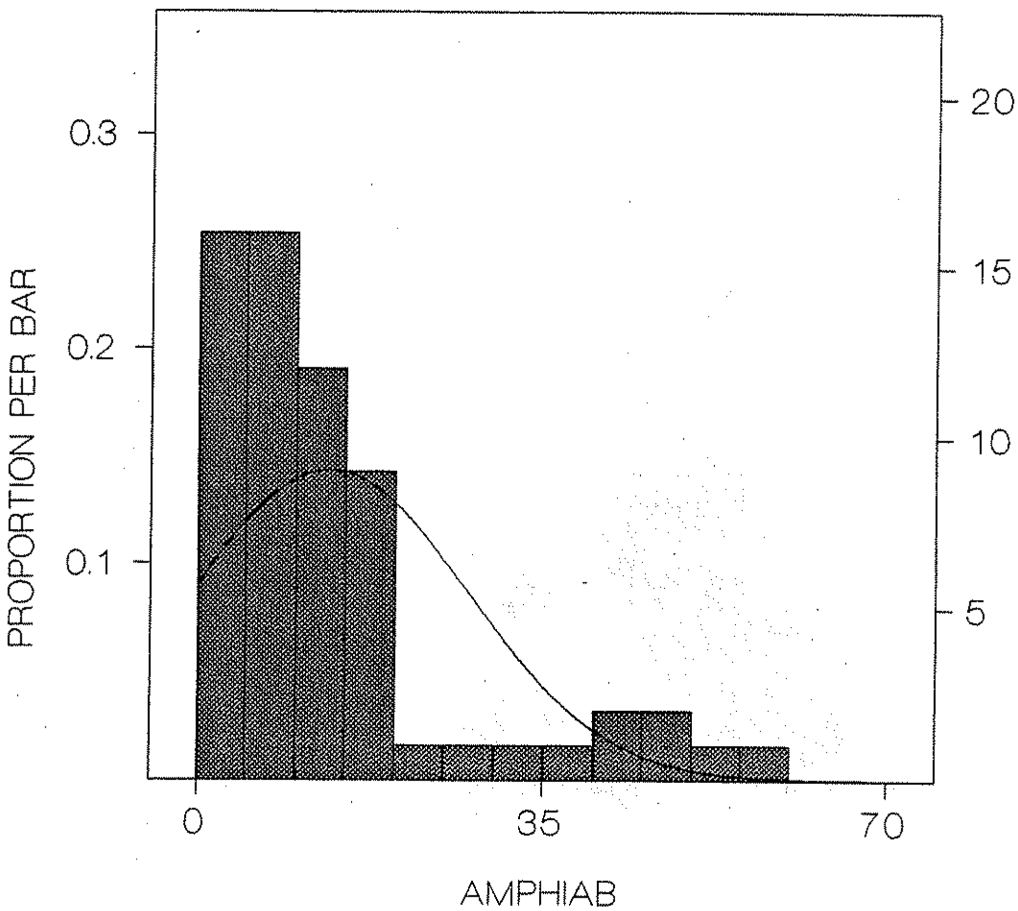
Frequency Distribution POTAX-50: Fines 20-50%



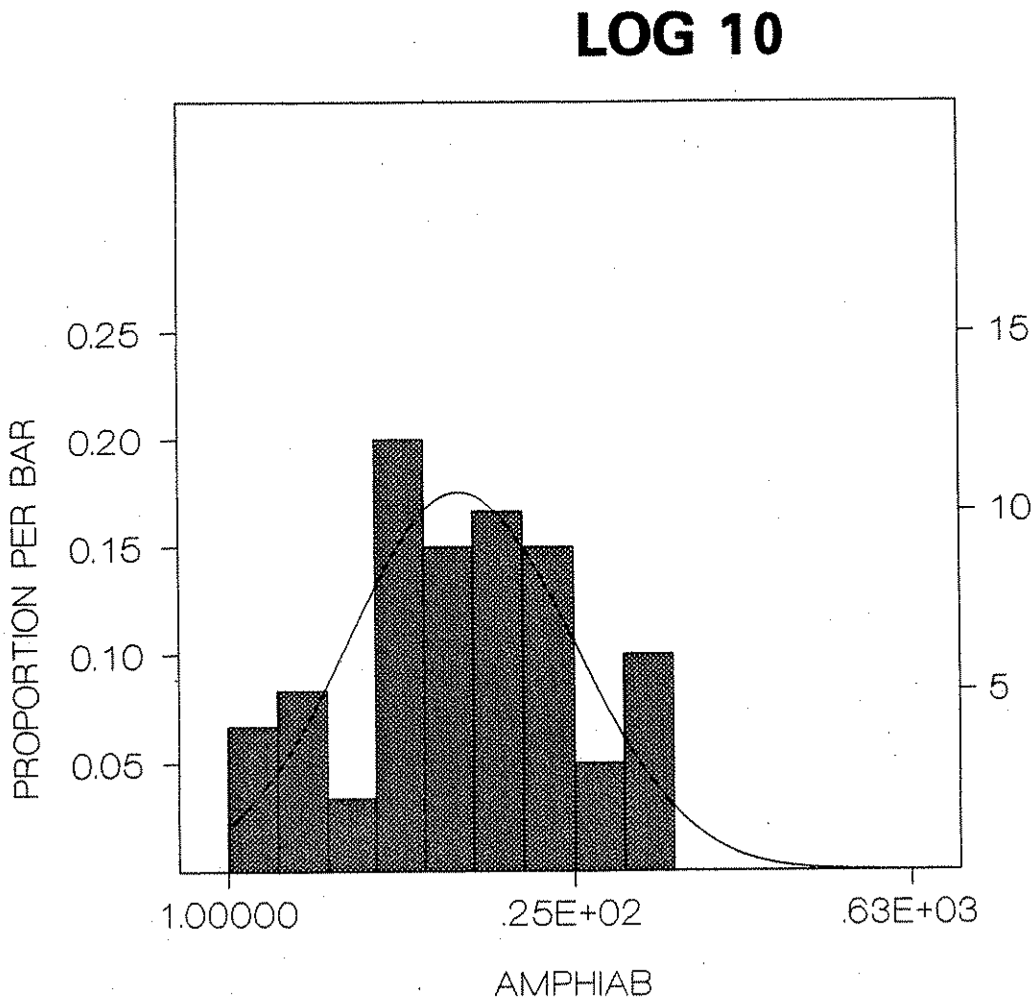
Frequency Distribution MOAB-50: Fines 20-50%



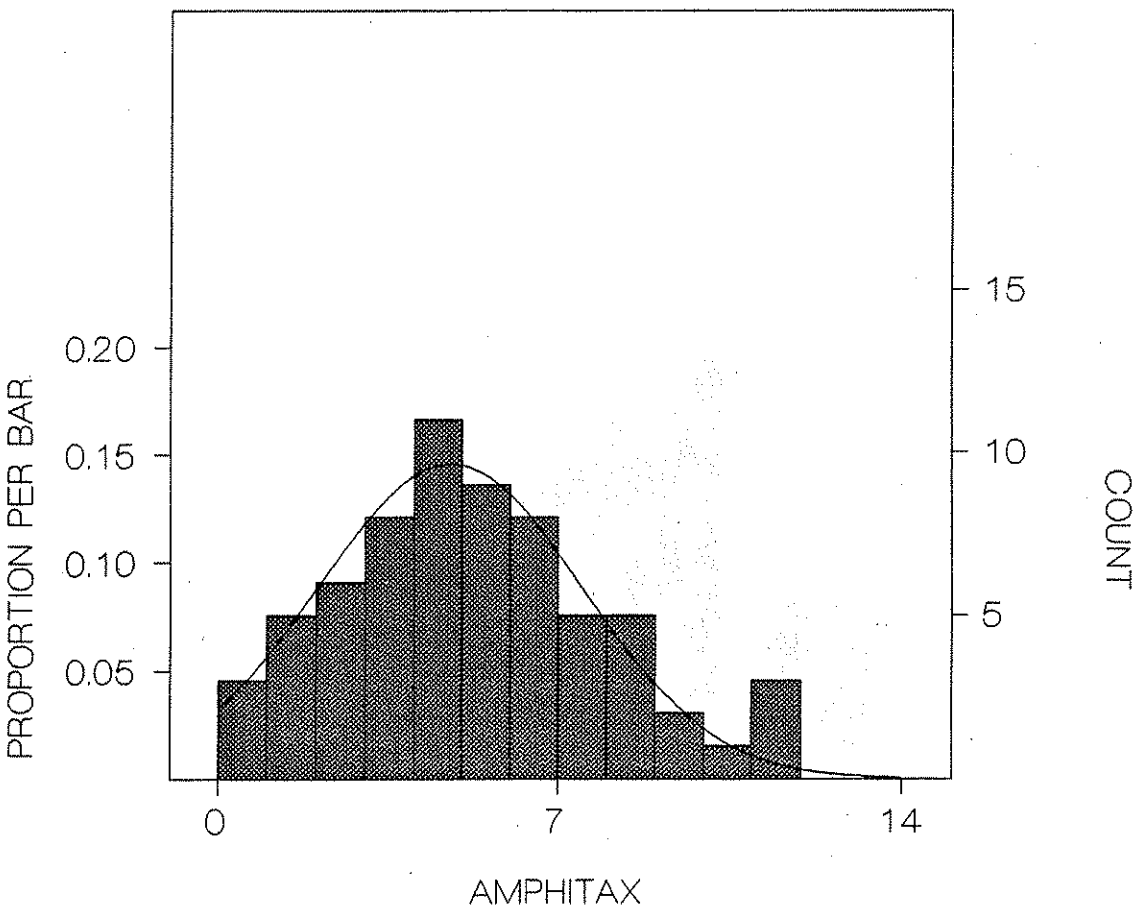
Frequency Distribution AMPHIAB-50: Fines 20-50%



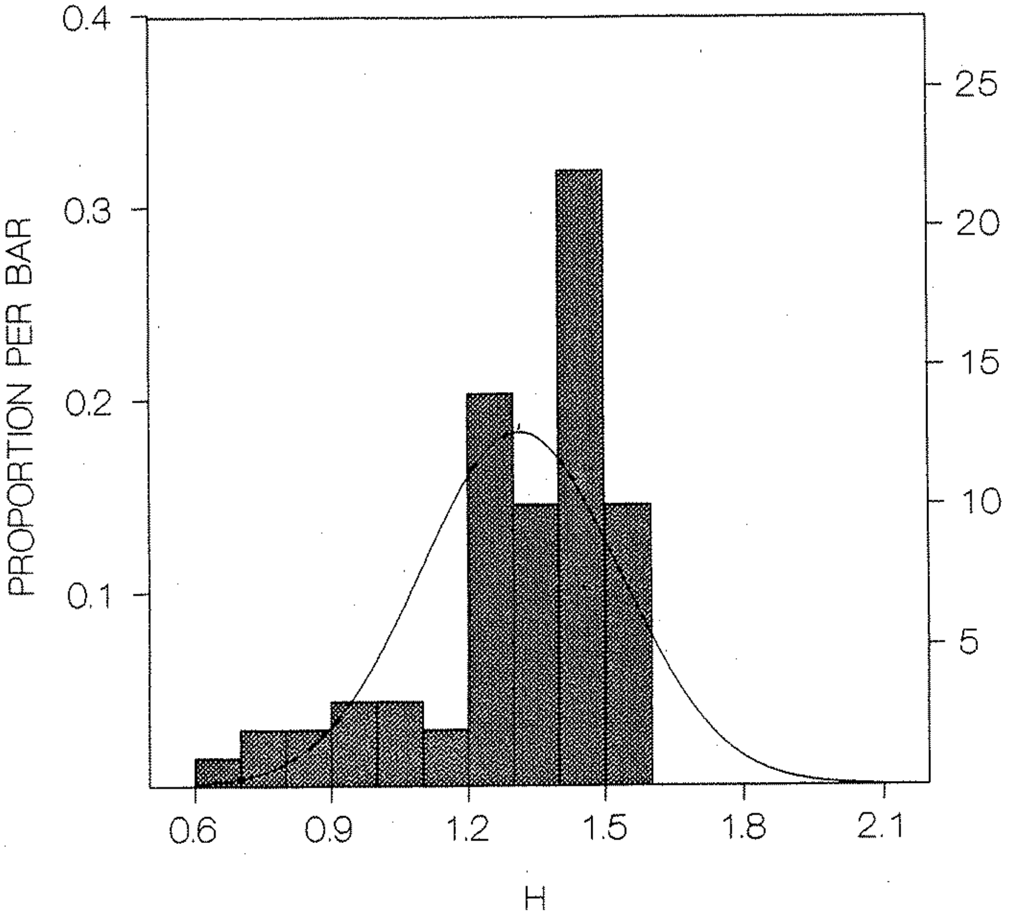
Frequency Distribution AMPHIAB-50: Fines 20-50%



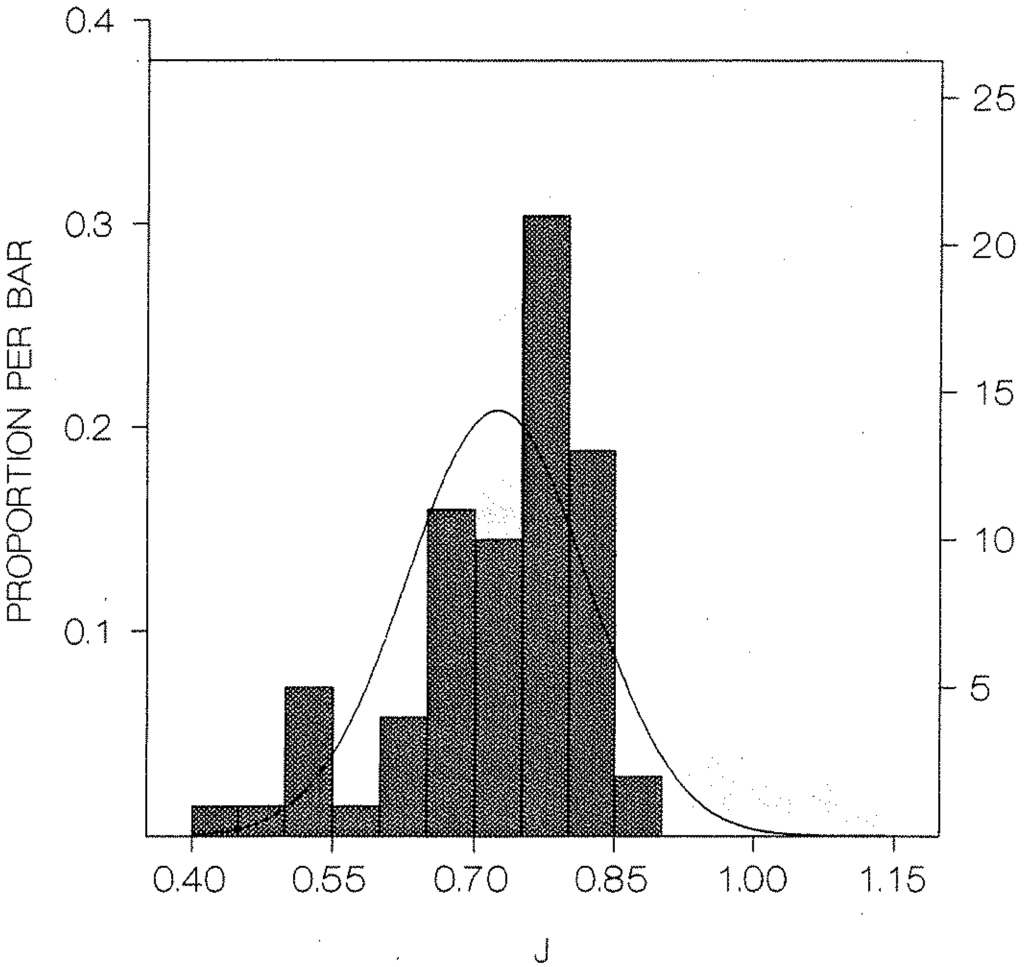
Frequency Distribution AMPHITAX-50: Fines 20-50%



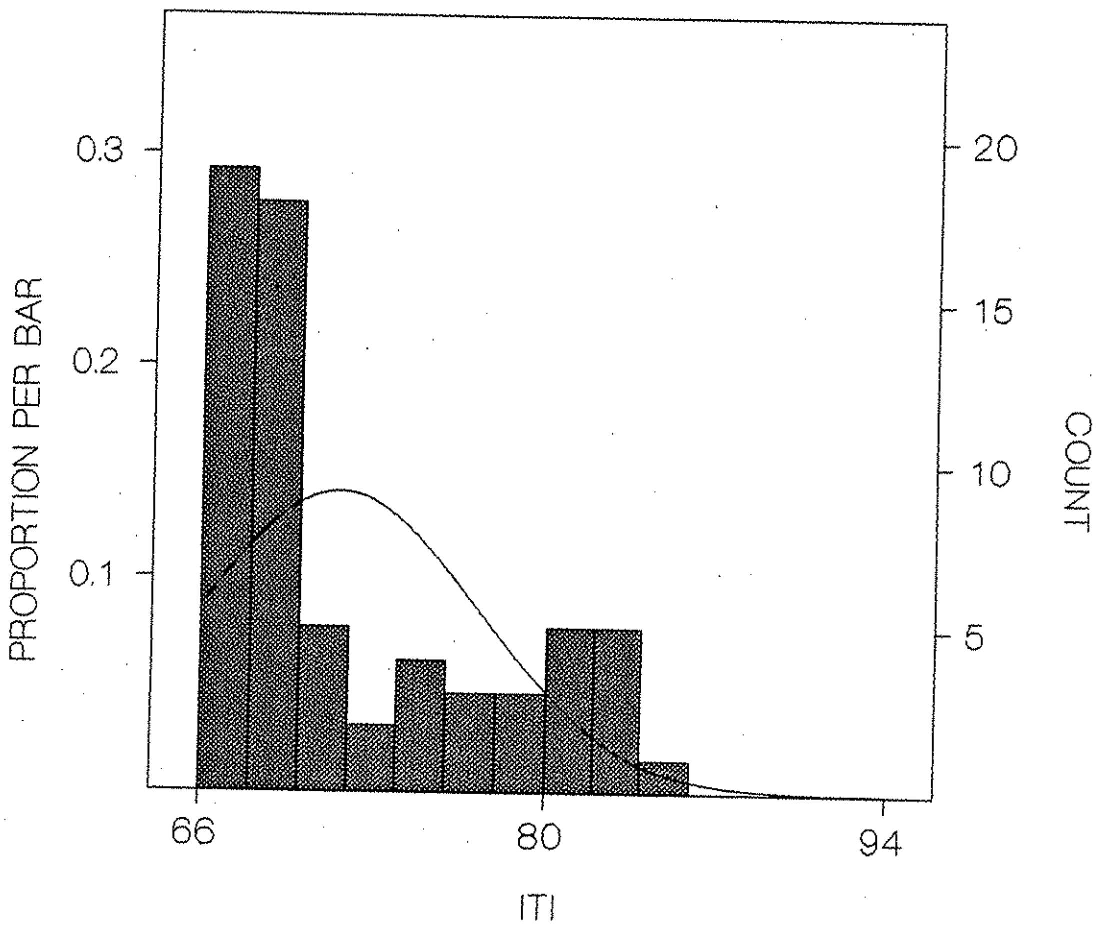
Frequency Distribution H'-50: Fines 20-50%



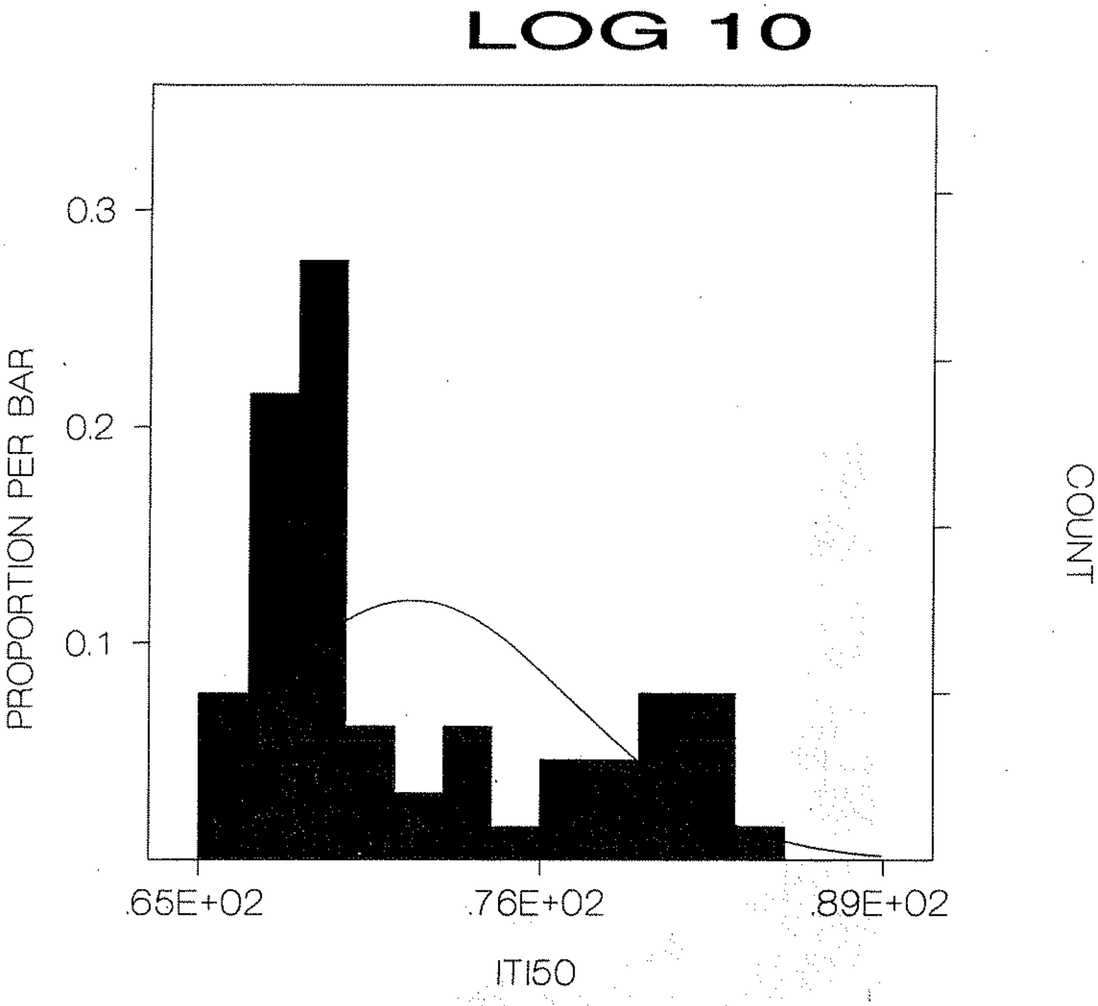
Frequency Distribution J'-50: Fines 20-50%



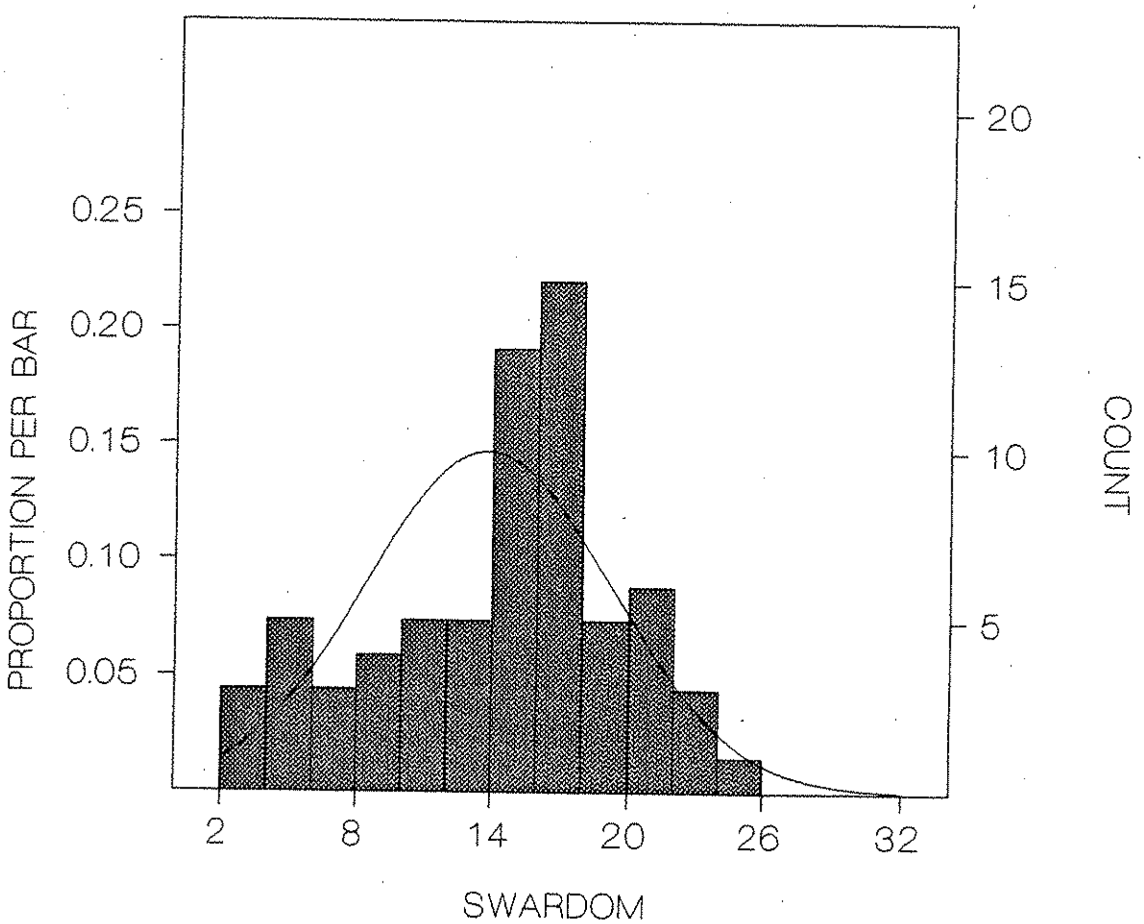
Frequency Distribution ITI-50: Fines 20-50%



Frequency Distribution ITI-50: Fines 20-50%

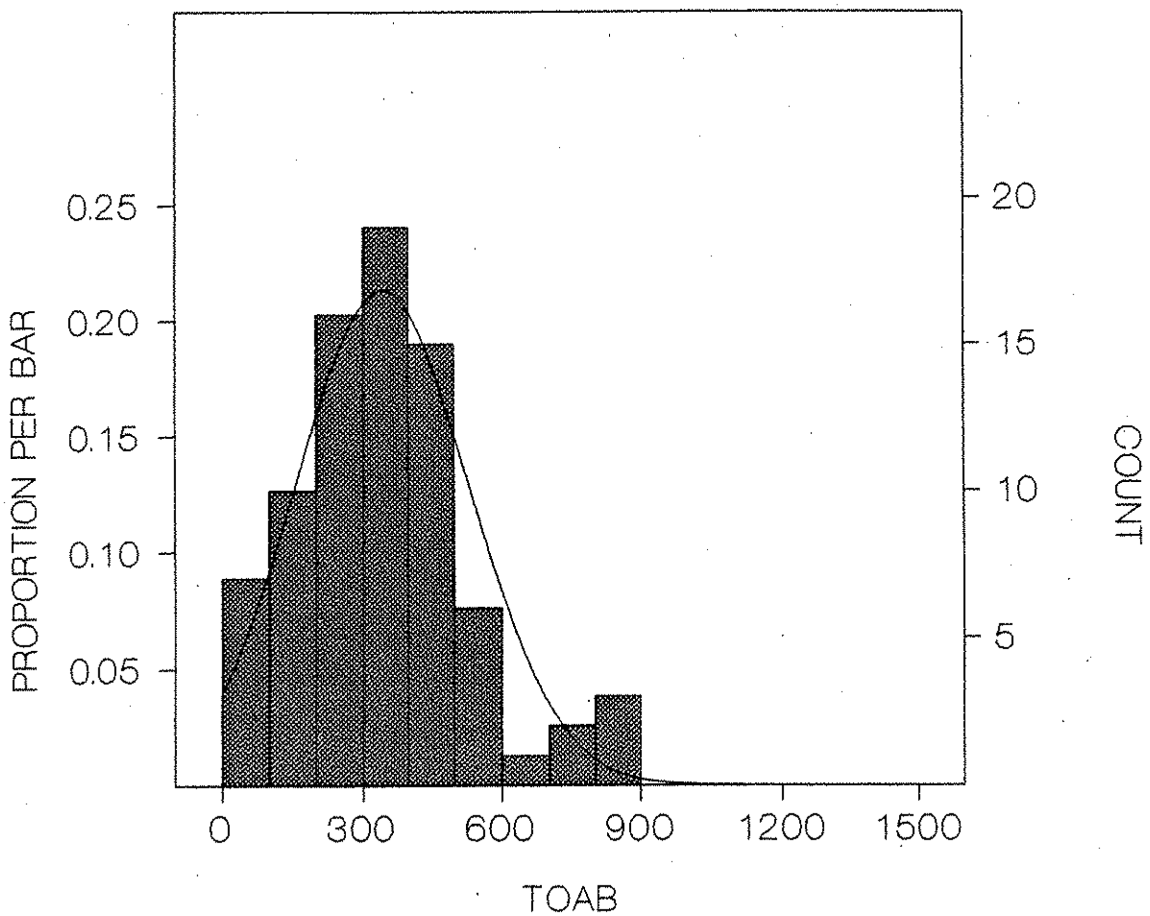


Frequency Distribution SDI-50: Fines 20-50%

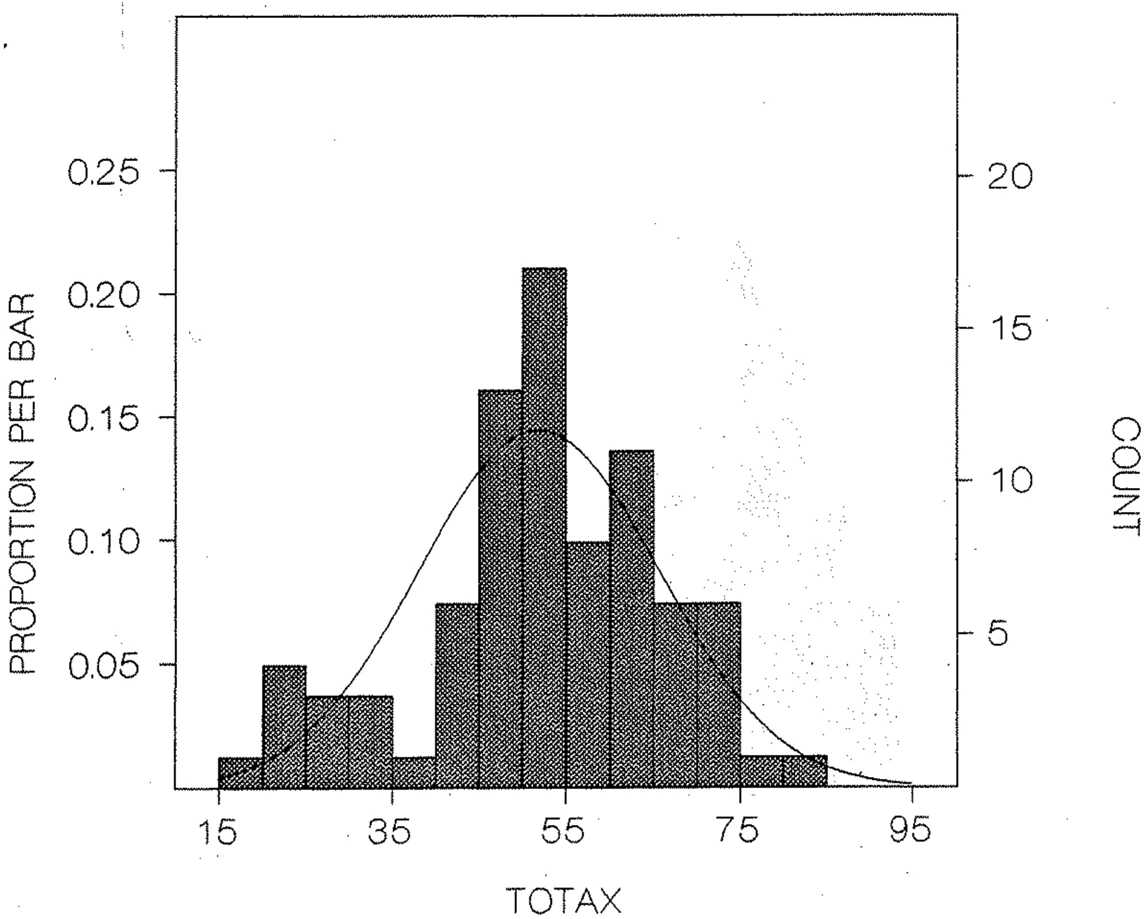


Appendix F3
50-80% Fines Habitat Category

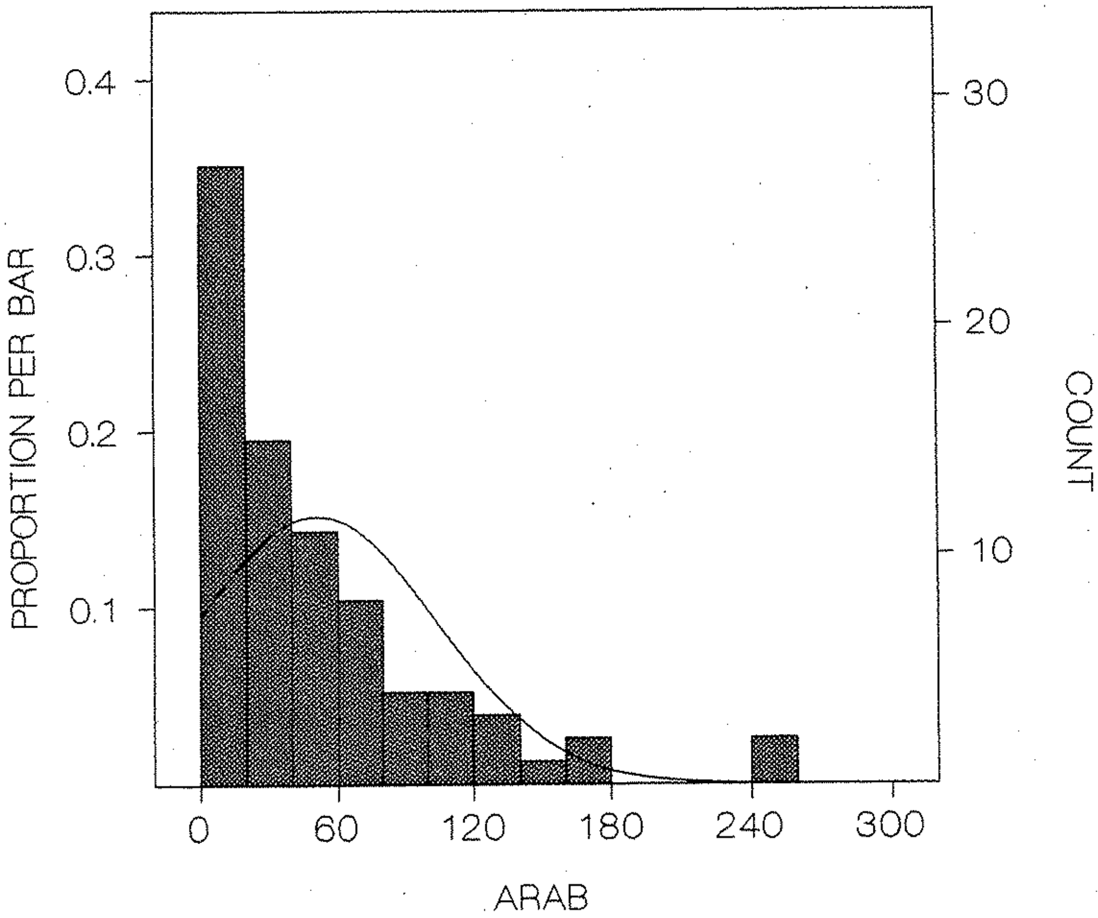
Frequency Distribution TOAB-80: Fines 50-80%



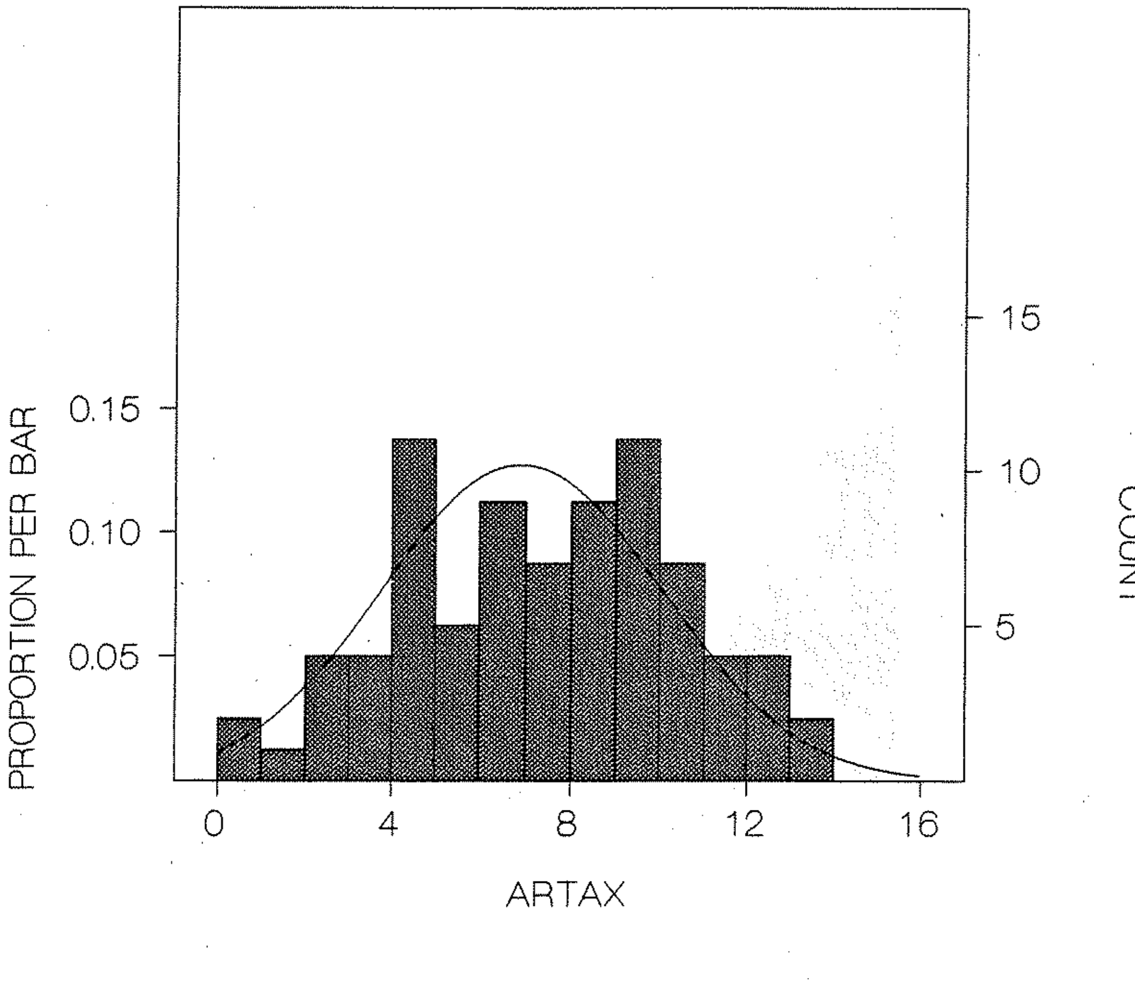
Frequency Distribution TOTAX-80: Fines 50-80%



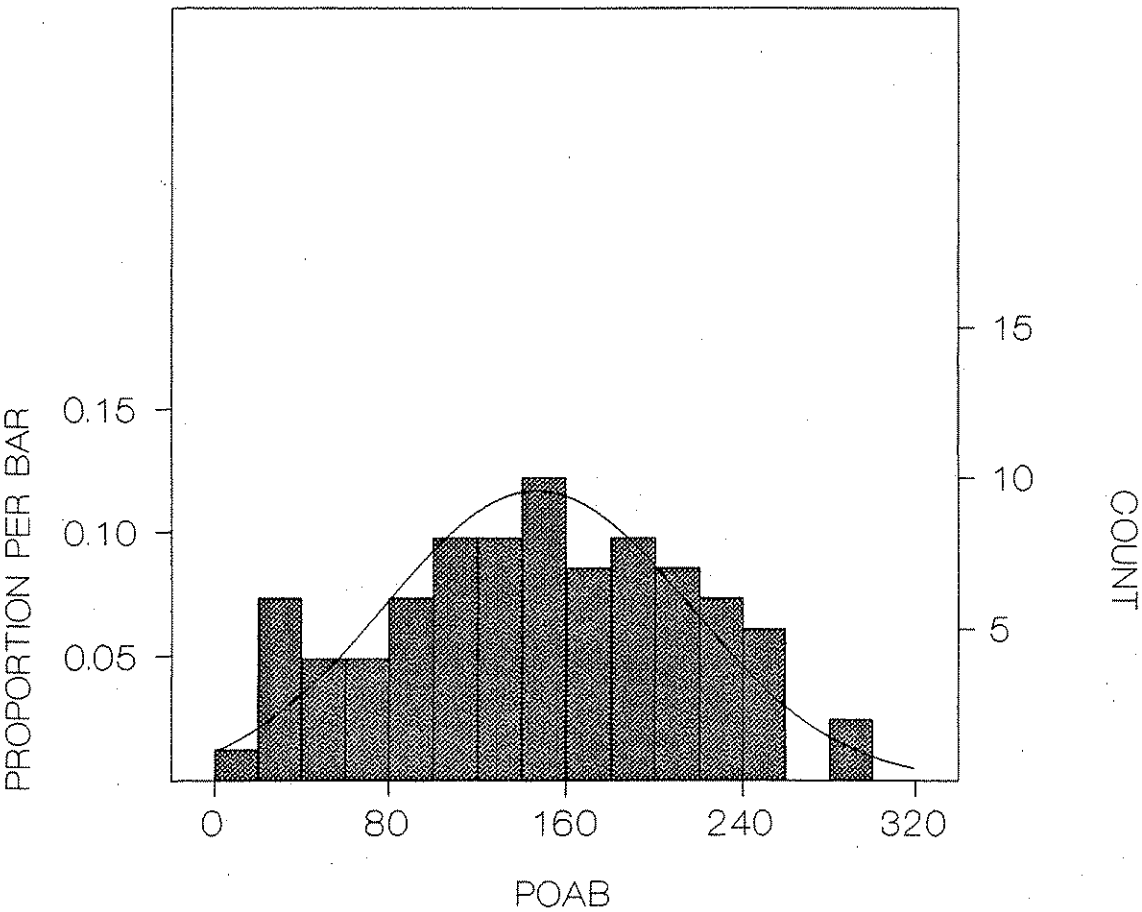
Frequency Distribution ARAB-80: Fines 50-80%



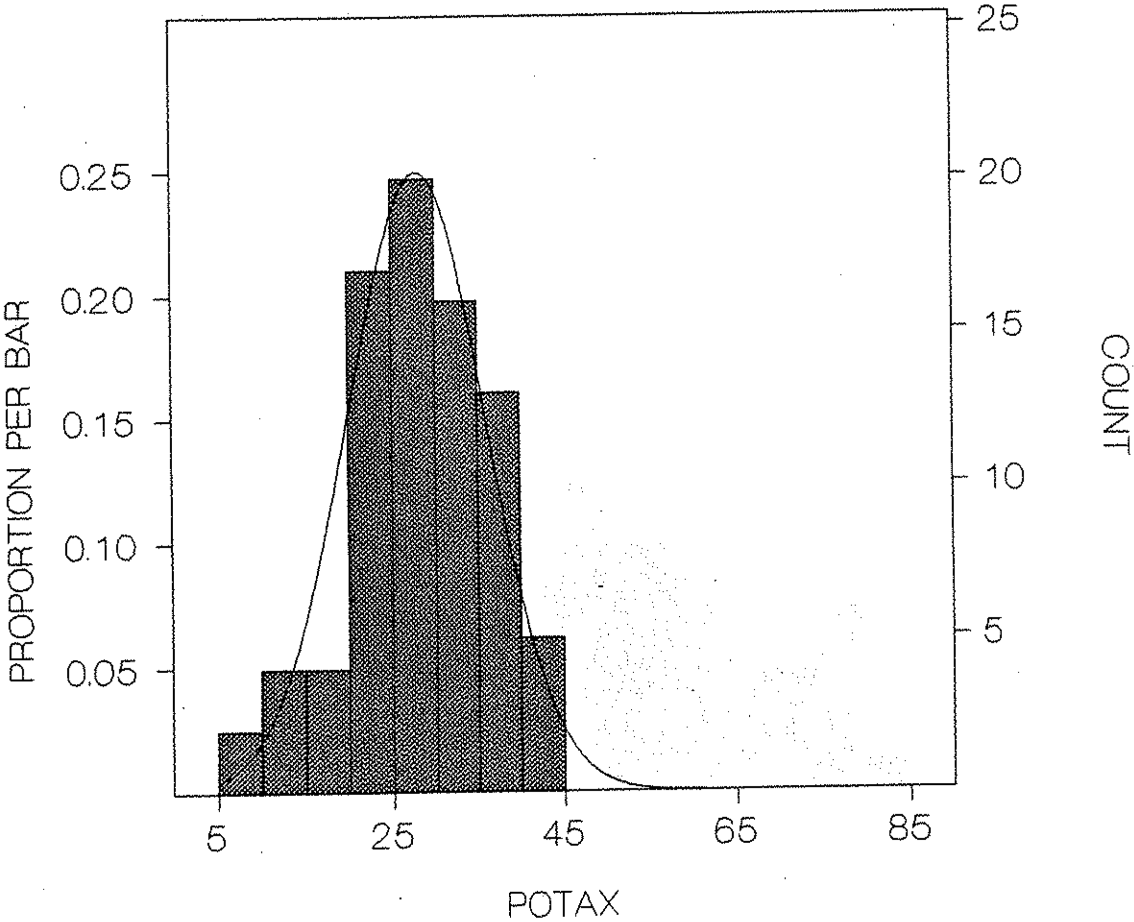
Frequency Distribution ARTAX-80: Fines 50-80%



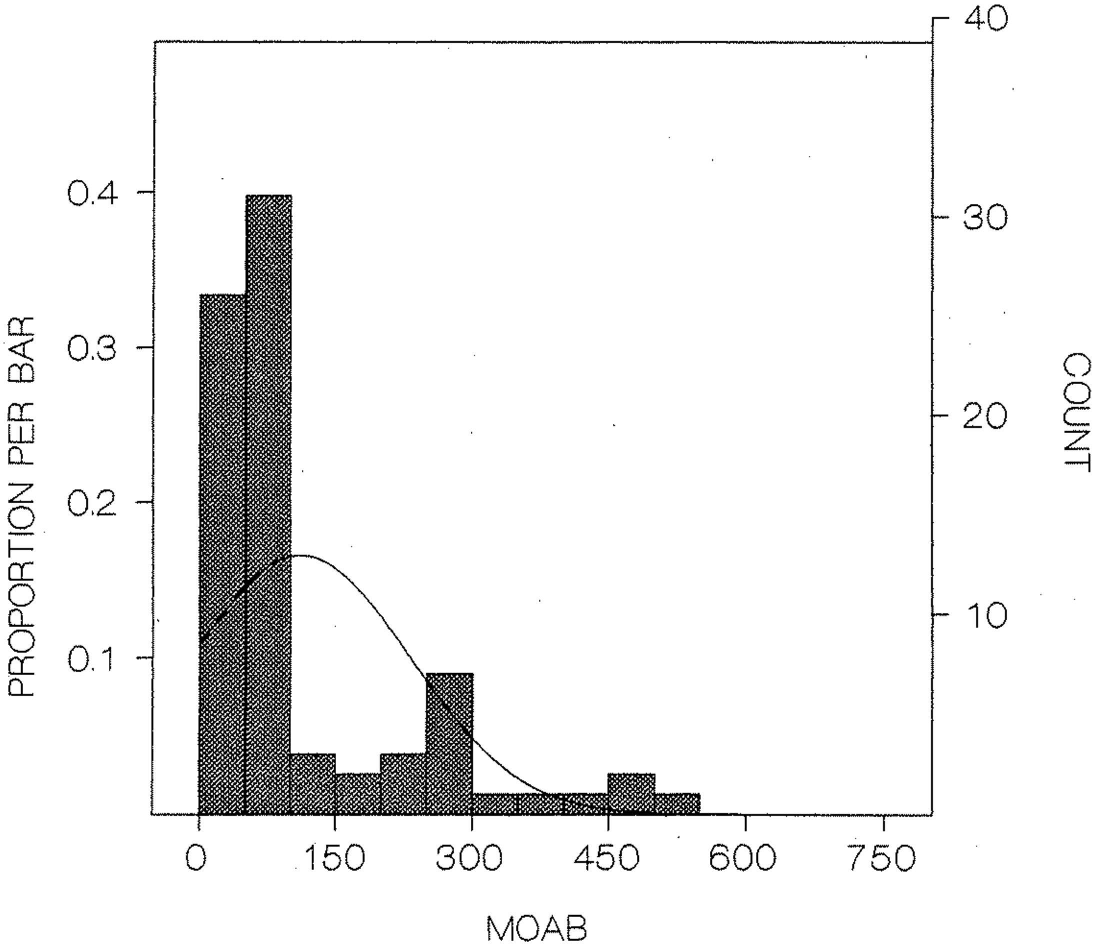
Frequency Distribution POAB-80: Fines 50-80%



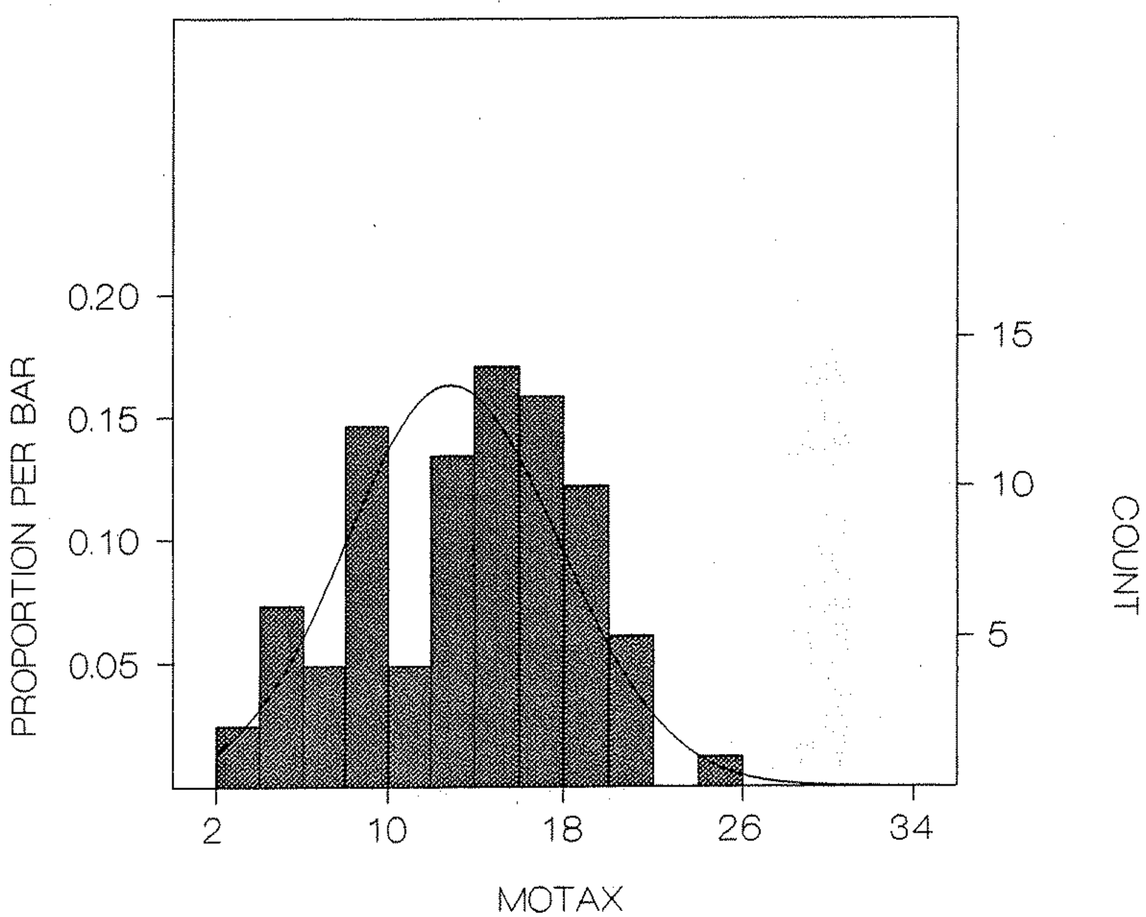
Frequency Distribution POTAX-80: Fines 50-80%



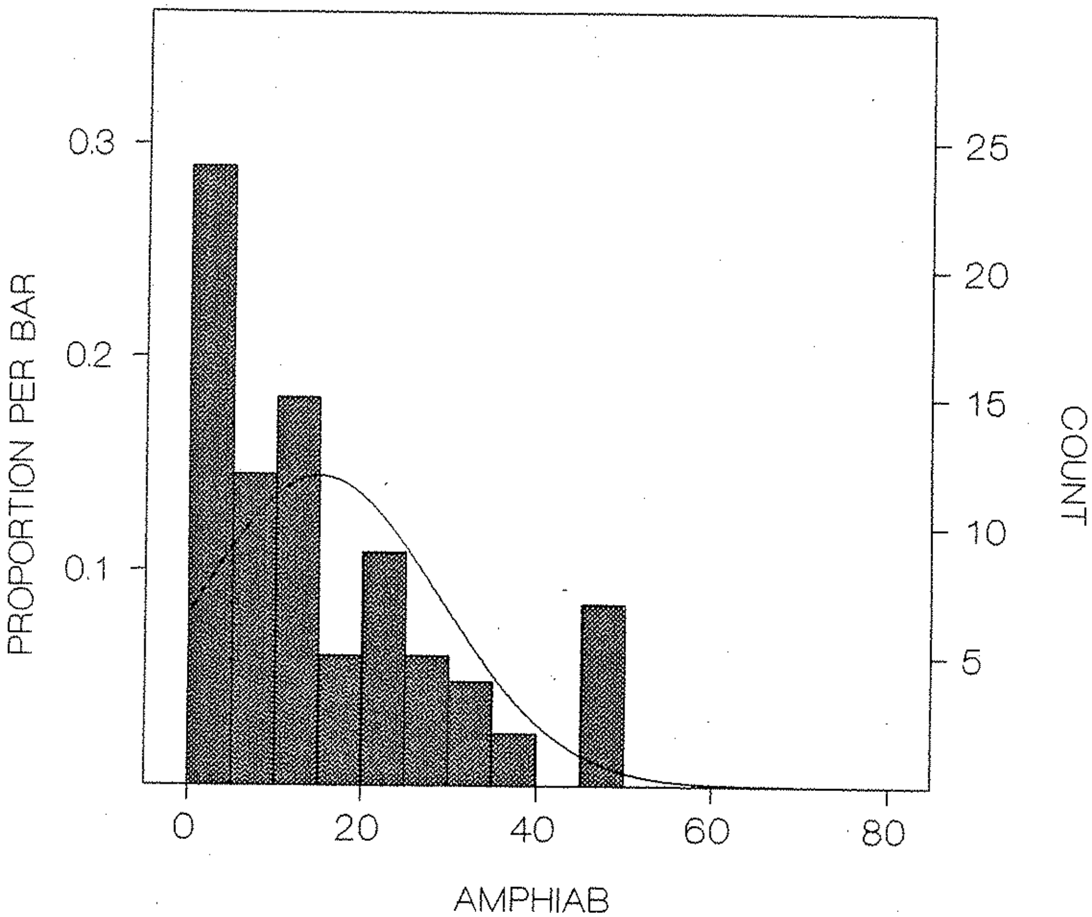
Frequency Distribution MOAB-80: Fines 50-80%



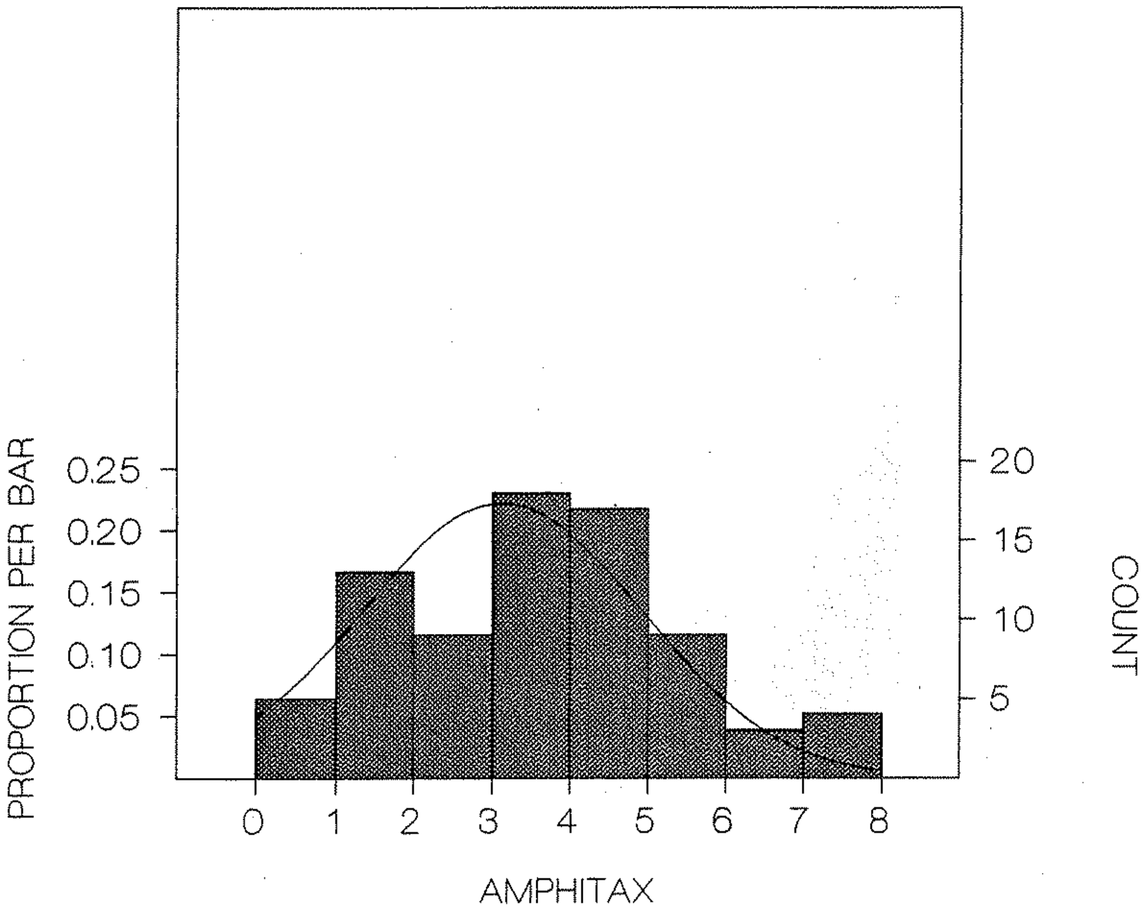
Frequency Distribution MOTAX-80: Fines 50-80%



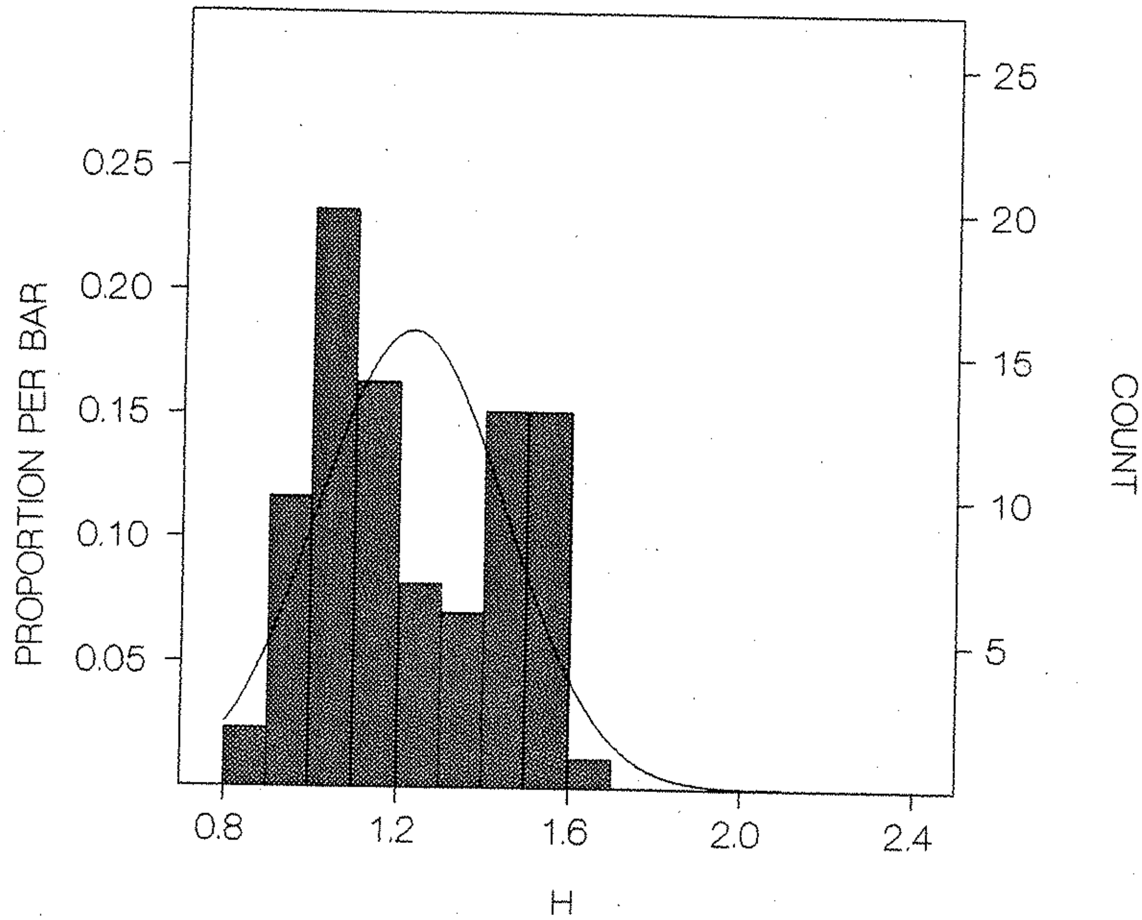
Frequency Distribution AMPAB-80: Fines 50-80%



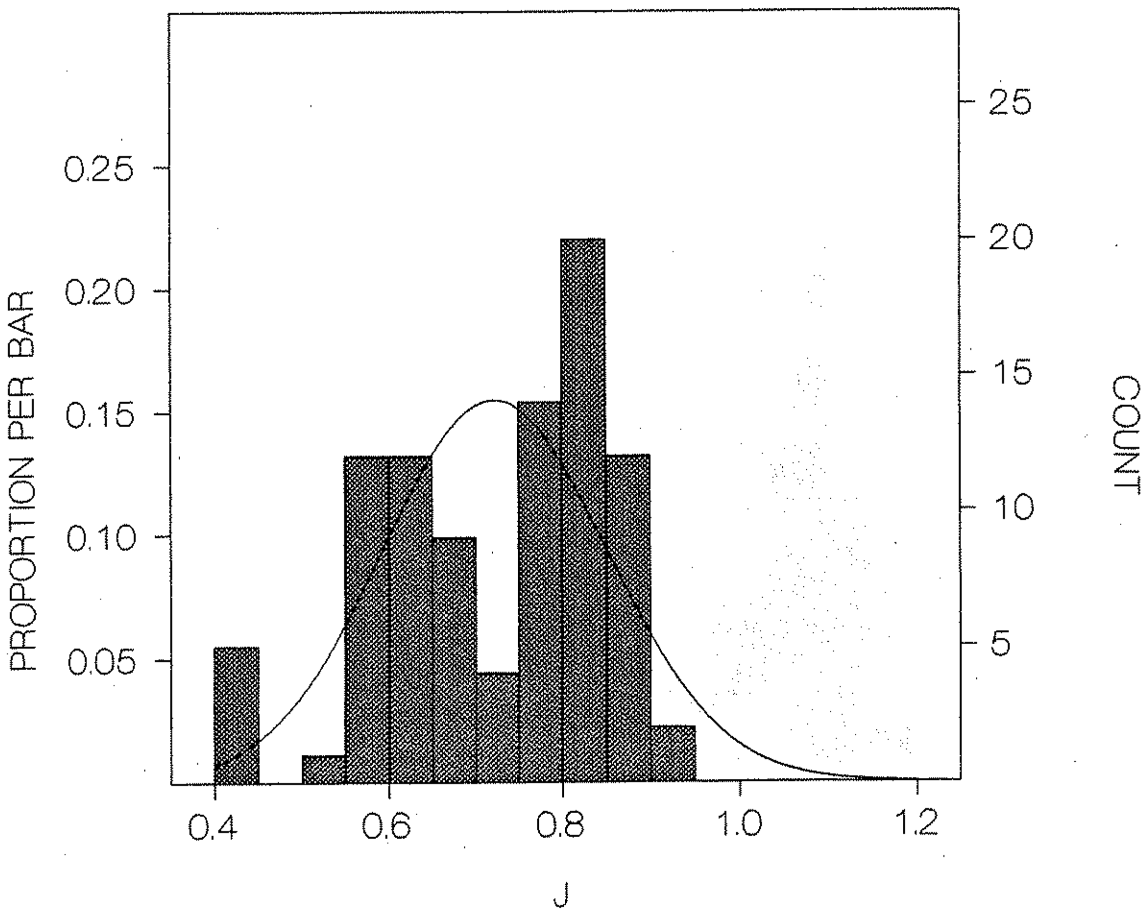
Frequency Distribution AMPHITAX-80: Fines 50-80%



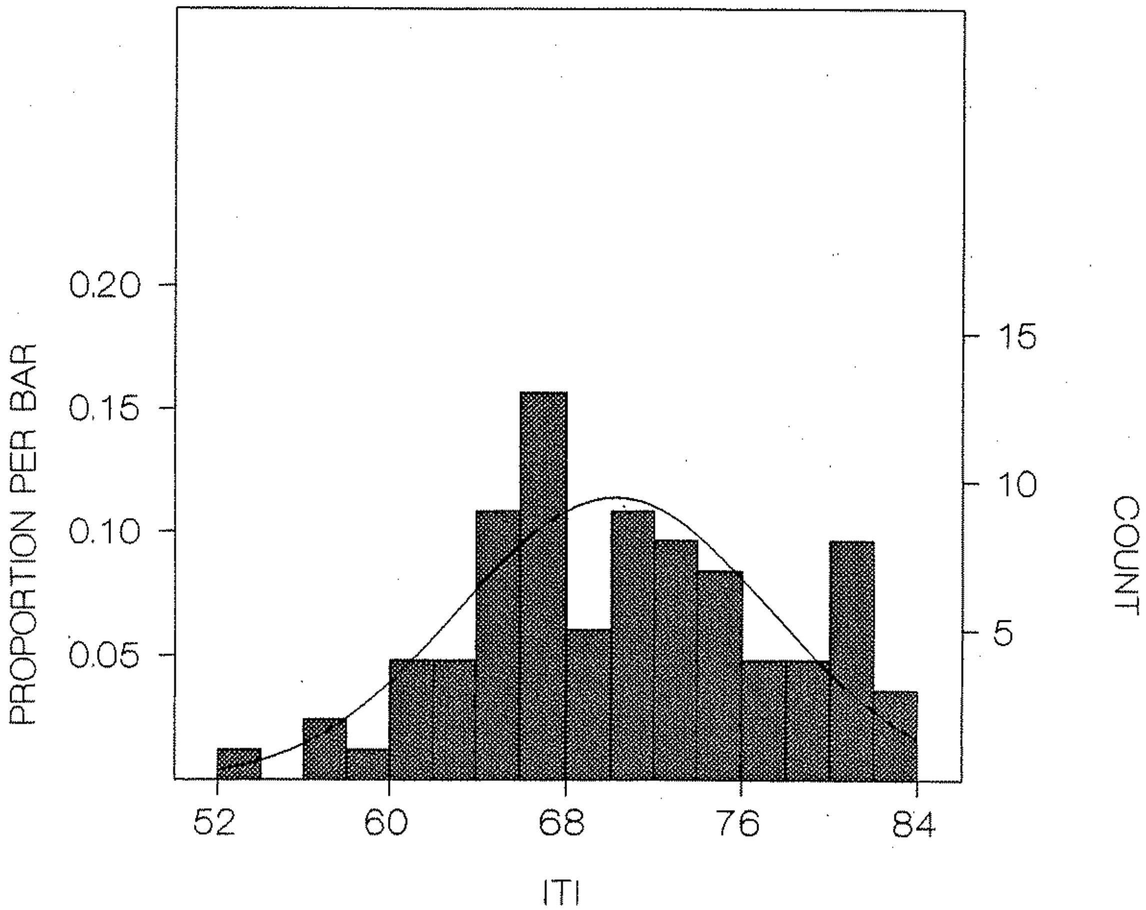
Frequency Distribution H'-80: Fines 50-80%



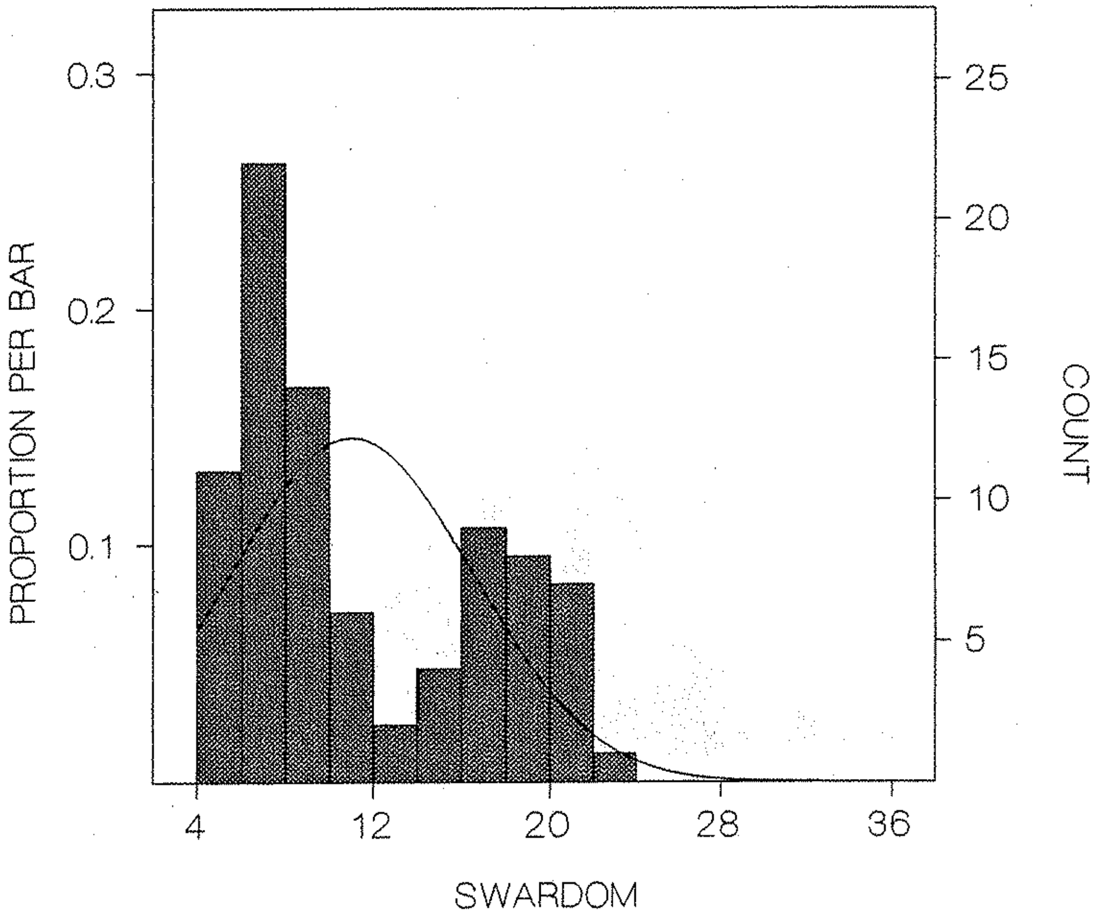
Frequency Distribution J'-80: Fines 50-80%



Frequency Distribution iti-80: Fines 50-80%

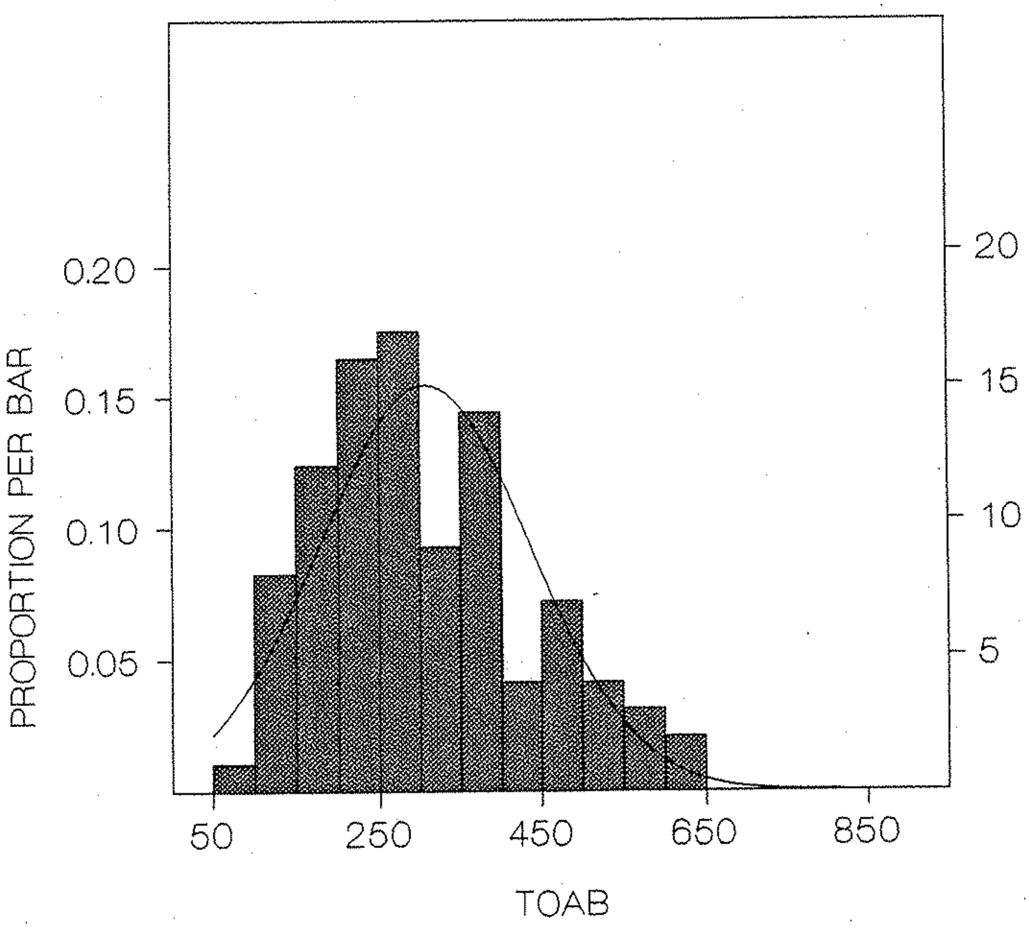


Frequency Distribution SDI-80: Fines 50-80%

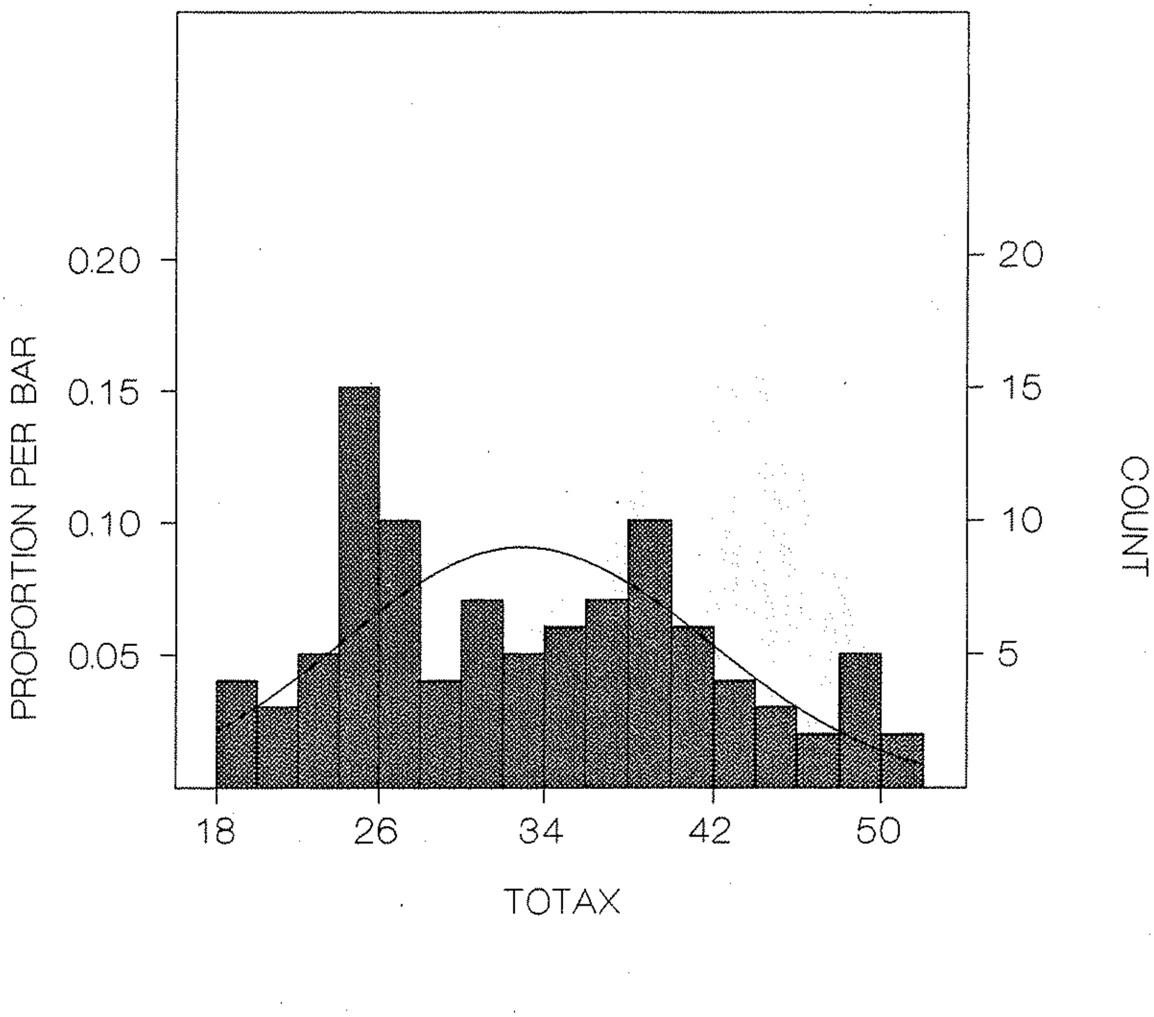


Appendix F4
80-100% Fines Habitat Category

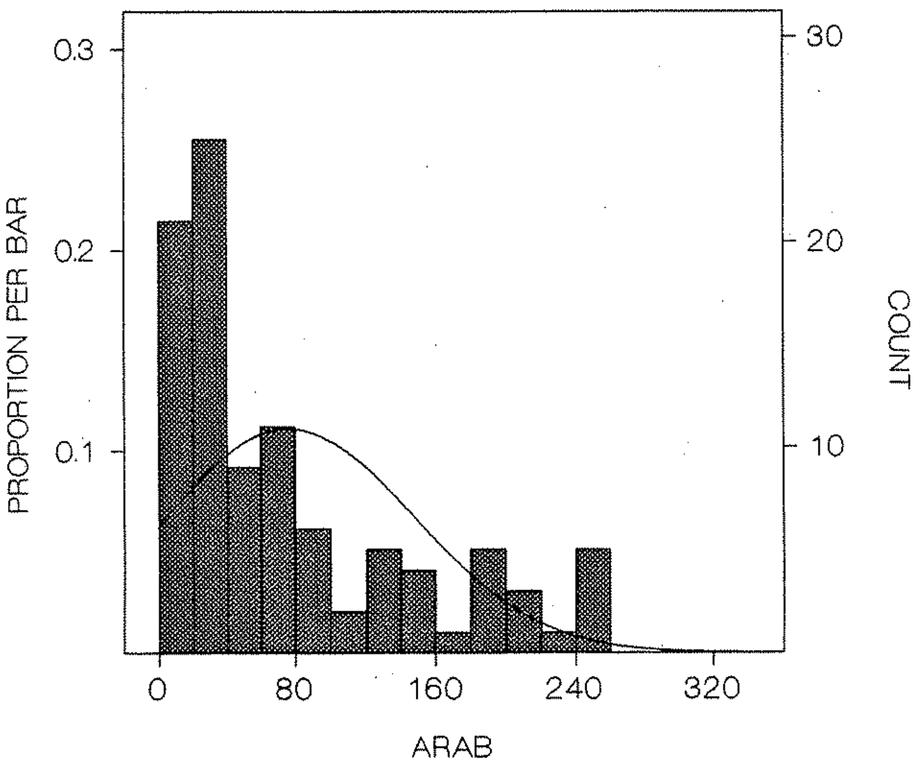
Frequency Distribution TOAB-100: Fines 80-100%



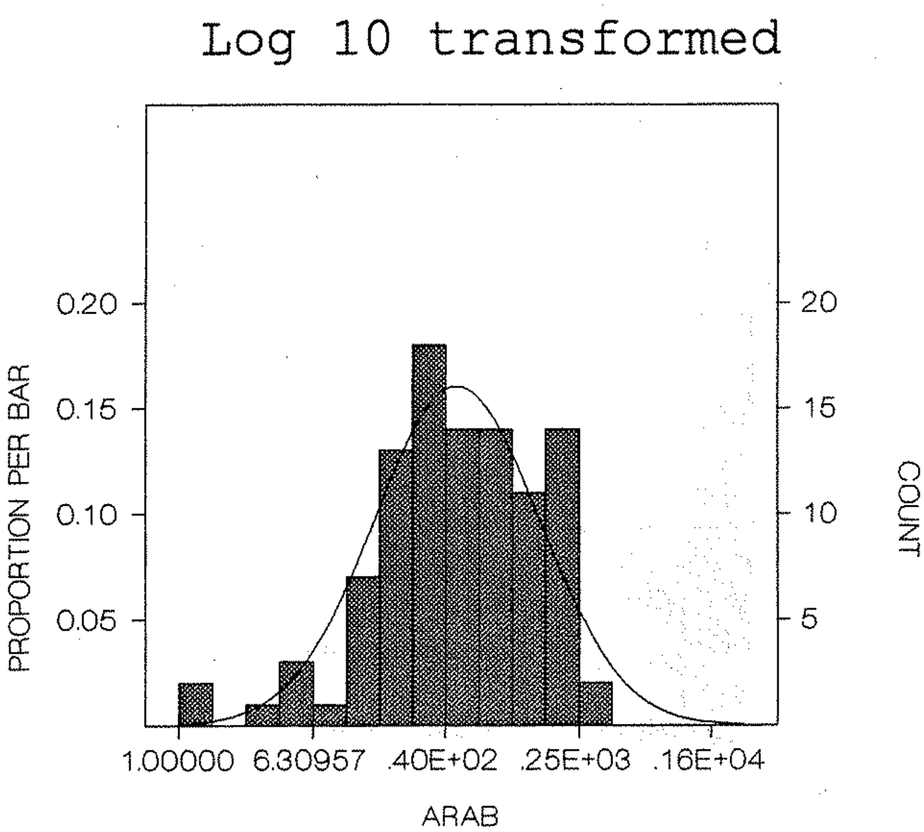
Frequency Distribution TOTAX-100: Fines 80-100%



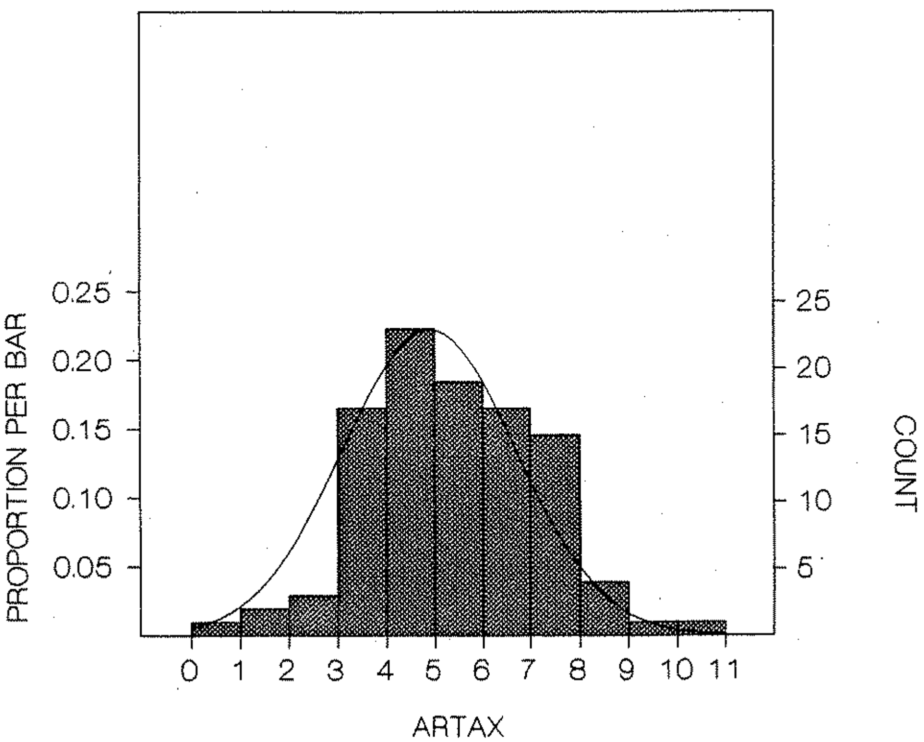
Frequency Distribution ARAB-100: Fines 80-100%



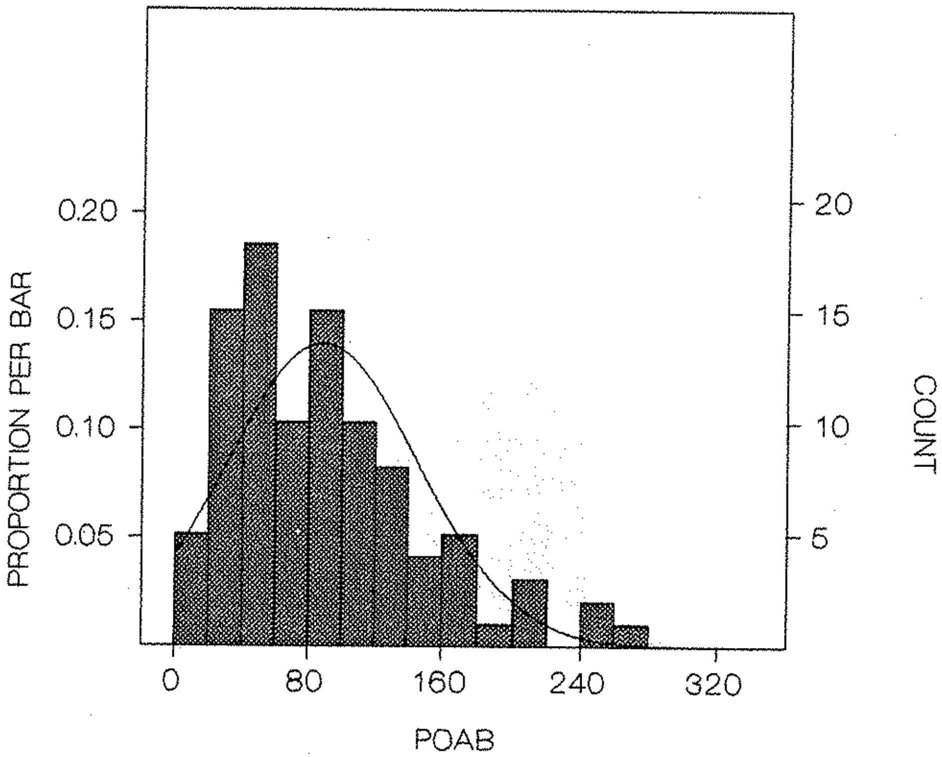
Frequency Distribution ARAB-100: Fines 80-100%



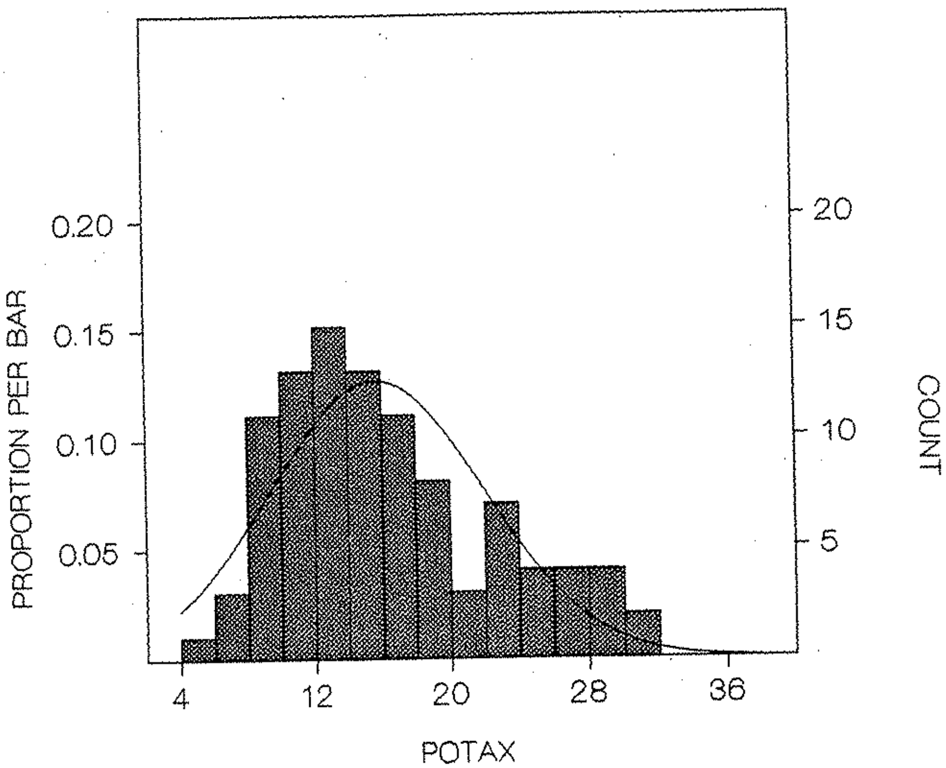
Frequency Distribution ARTAX-100: Fines 80-100%



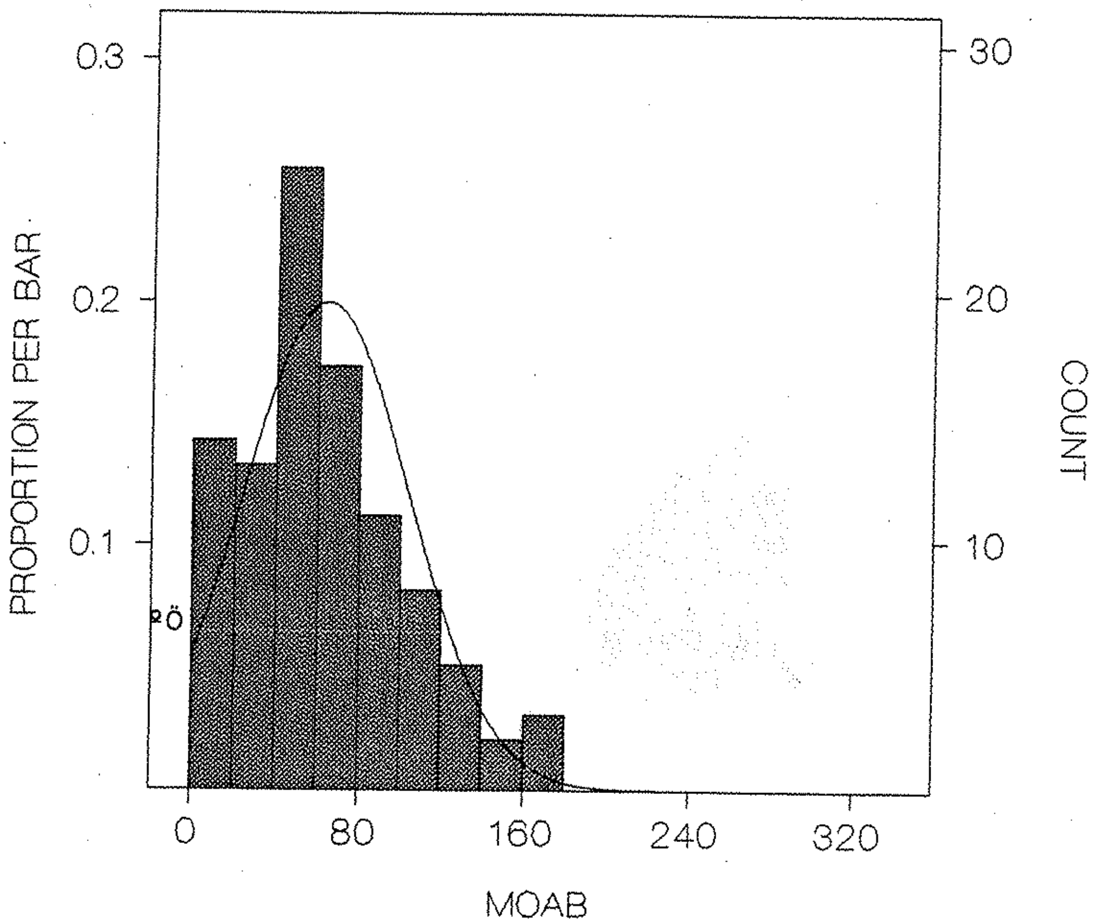
Frequency Distribution POAB-100: Fines 80-100%



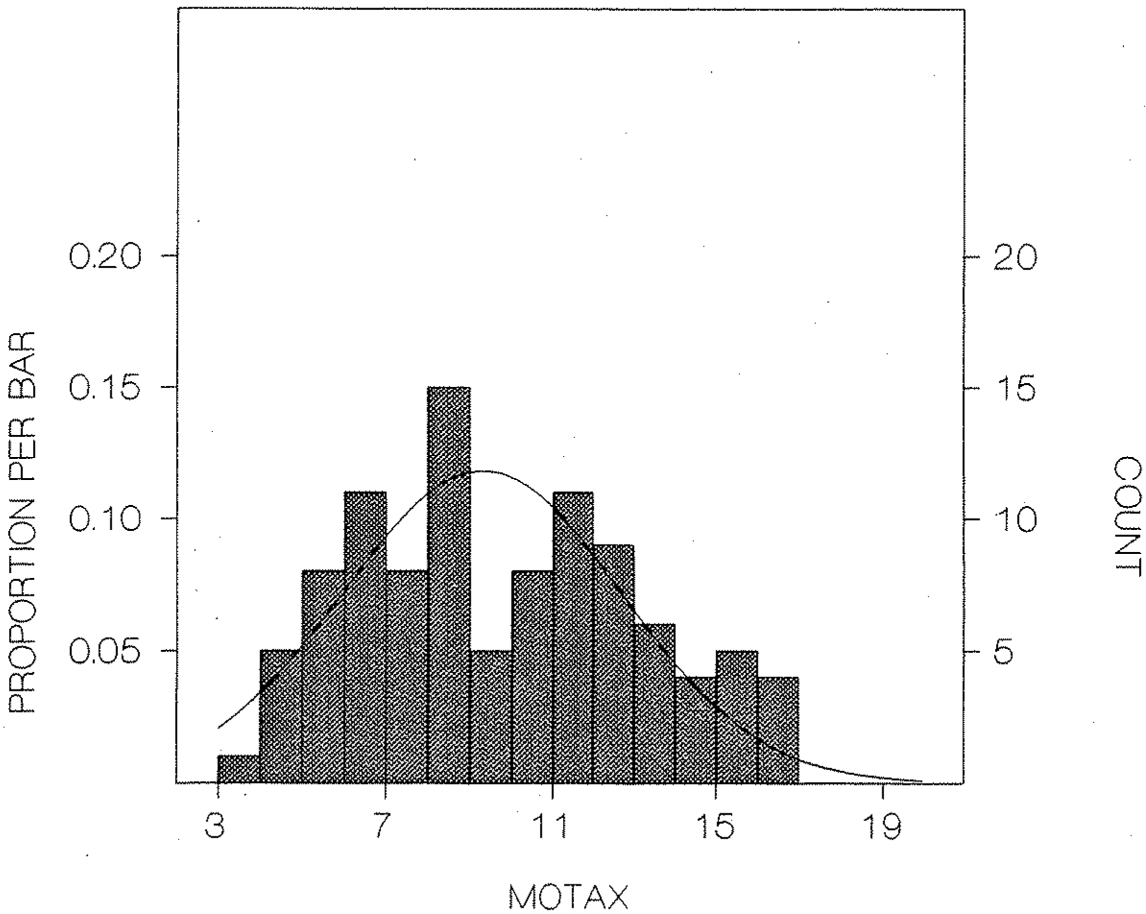
Frequency Distribution POTAX-100: Fines 80-100%



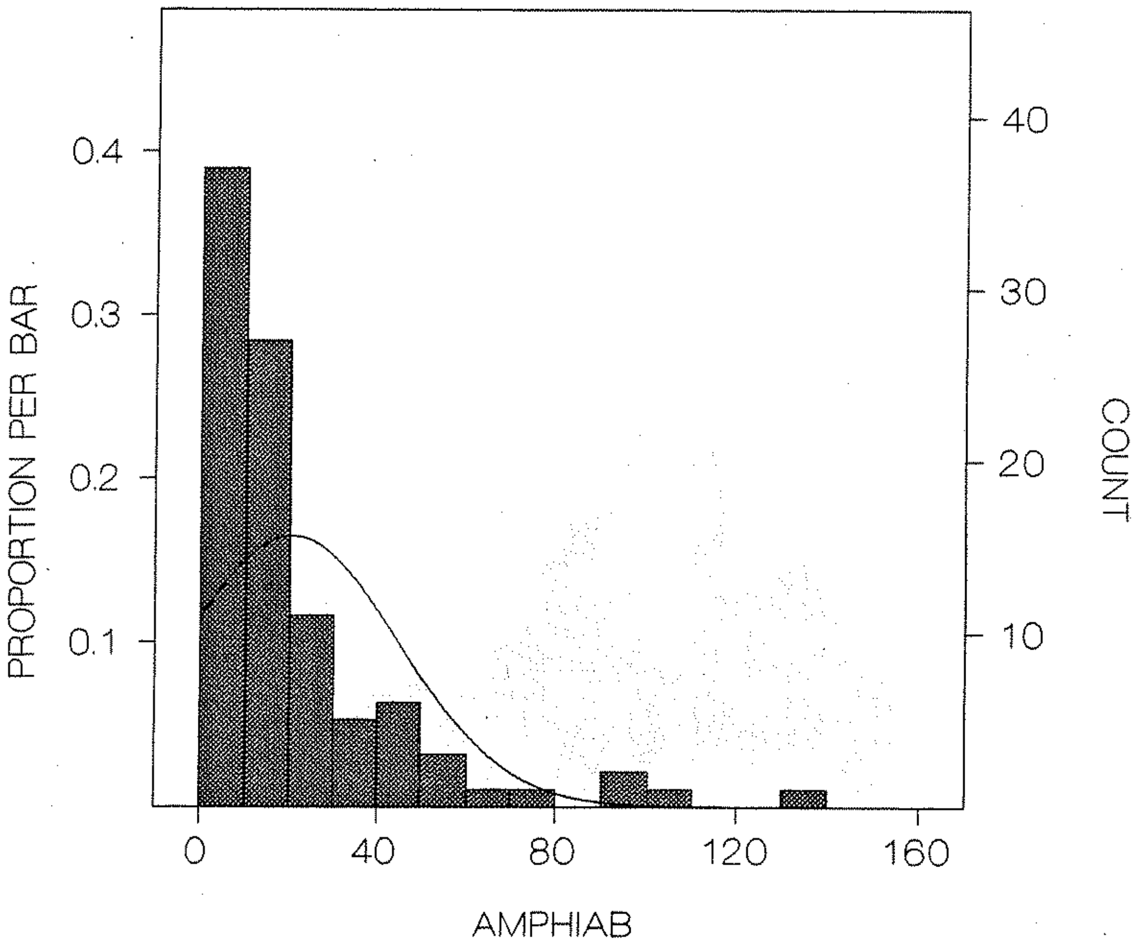
Frequency Distribution MOAB-100: Fines 80-100%



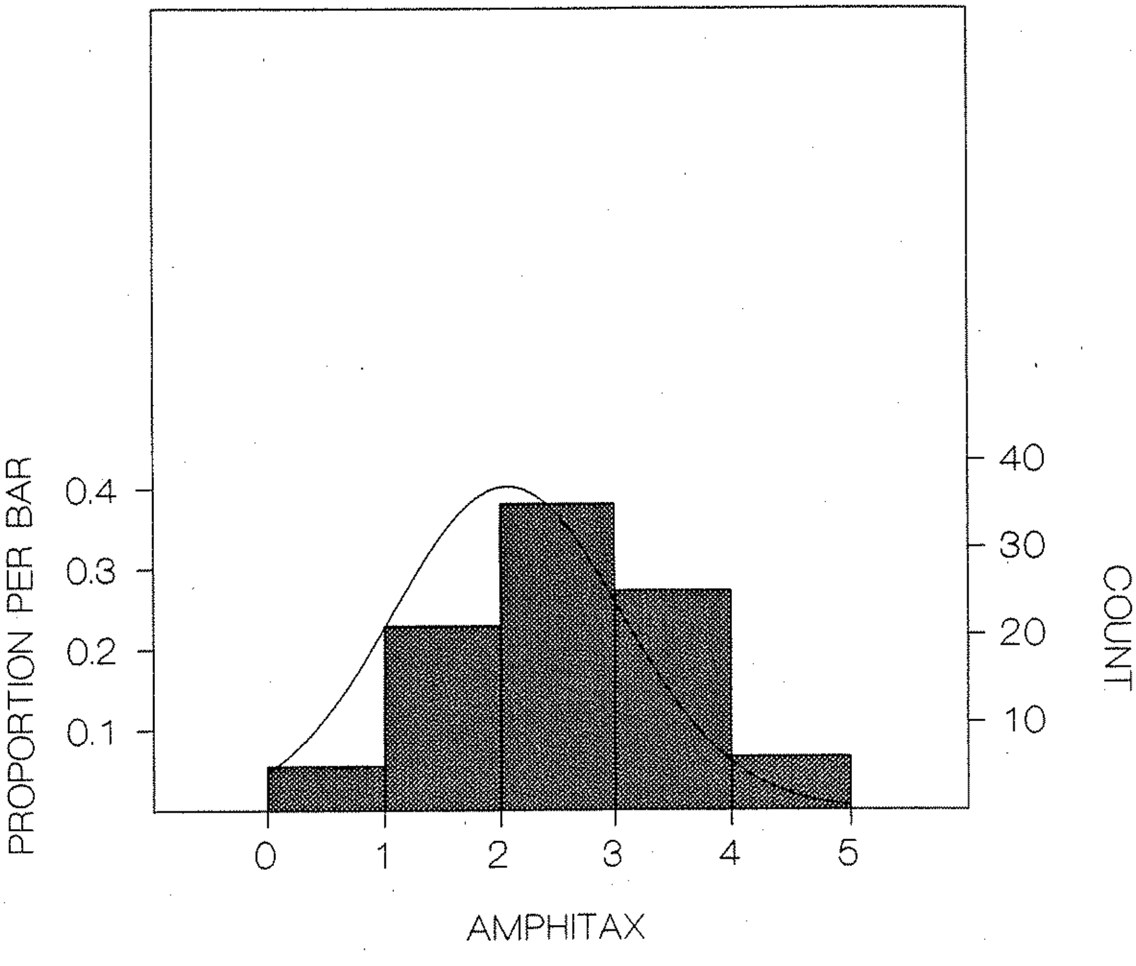
Frequency Distribution MOTAX-100: Fines 80-100%



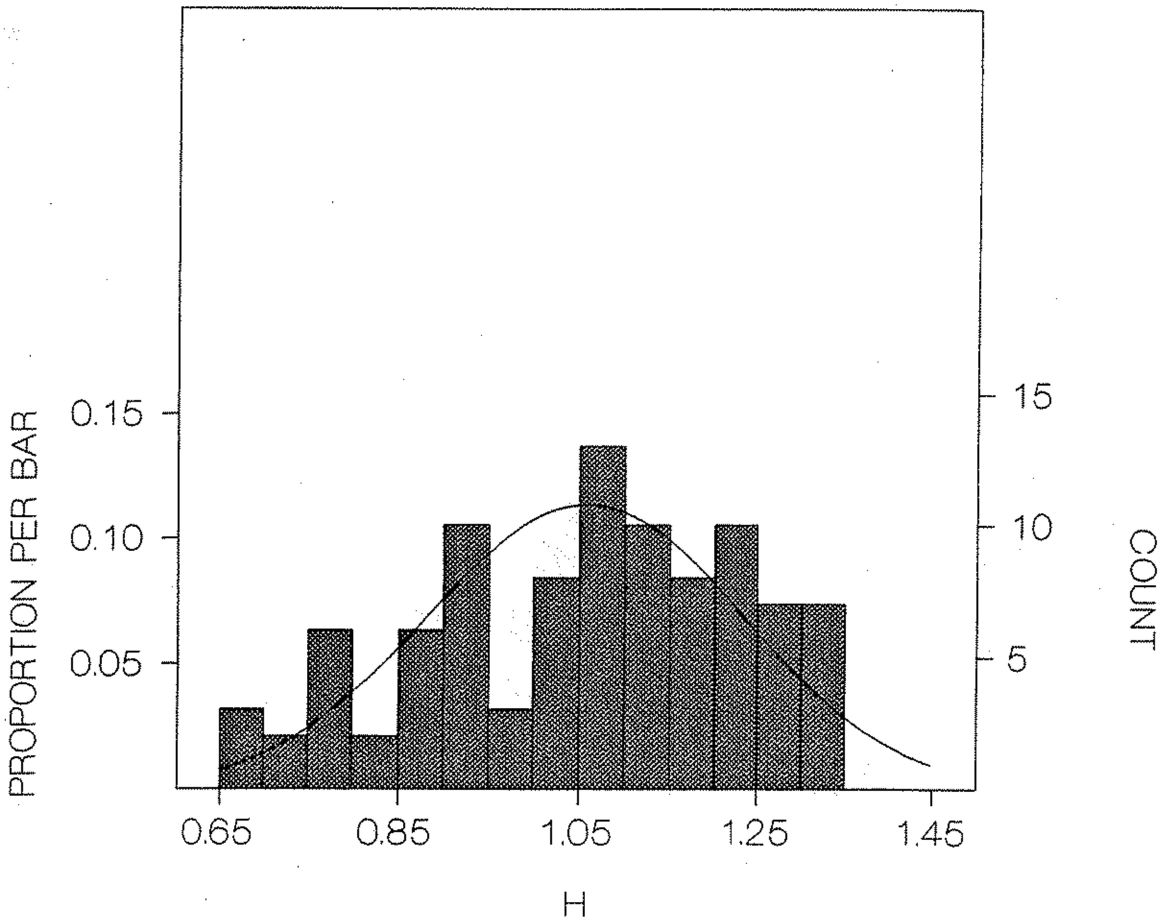
Frequency Distribution AMPHIAB-100: Fines 80-100%



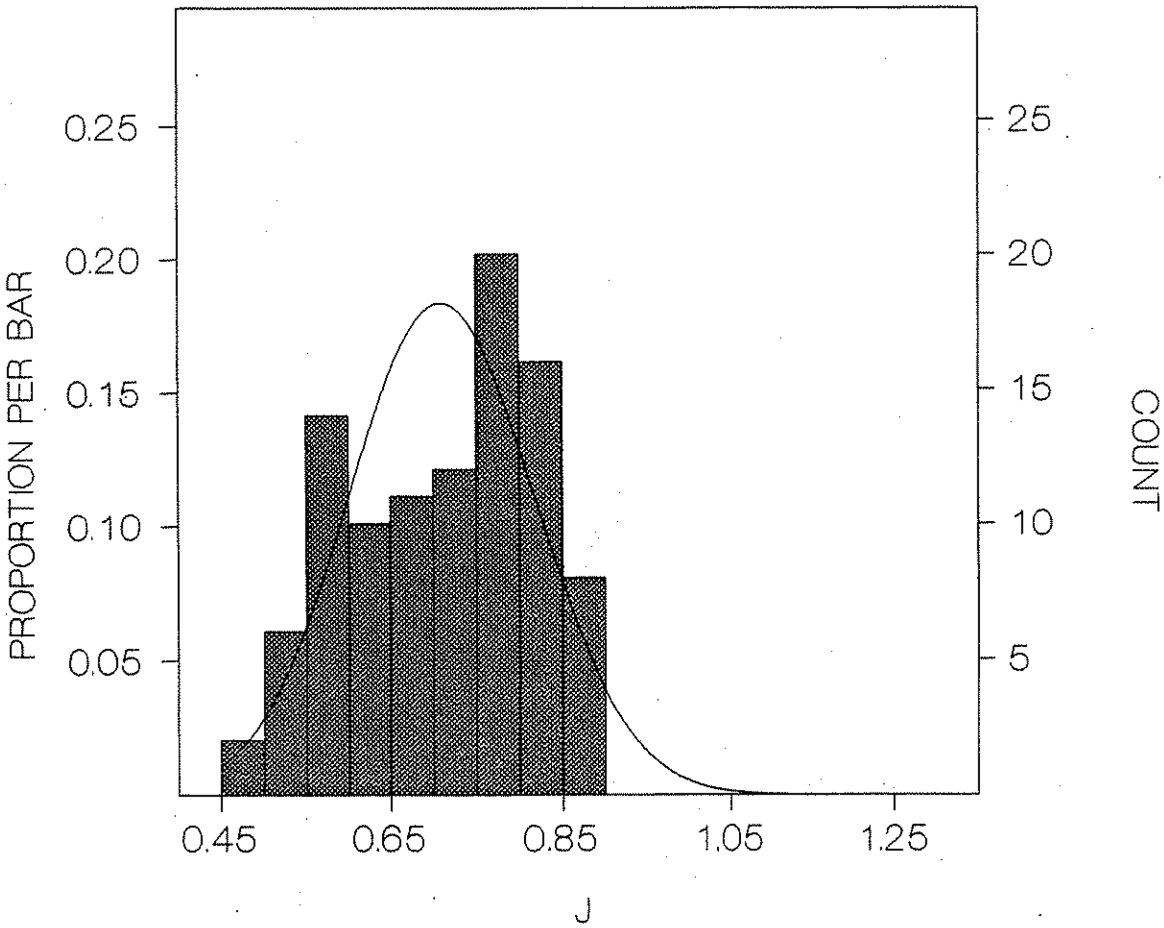
Frequency Distribution AMPHITAX-100: Fines 80-100%



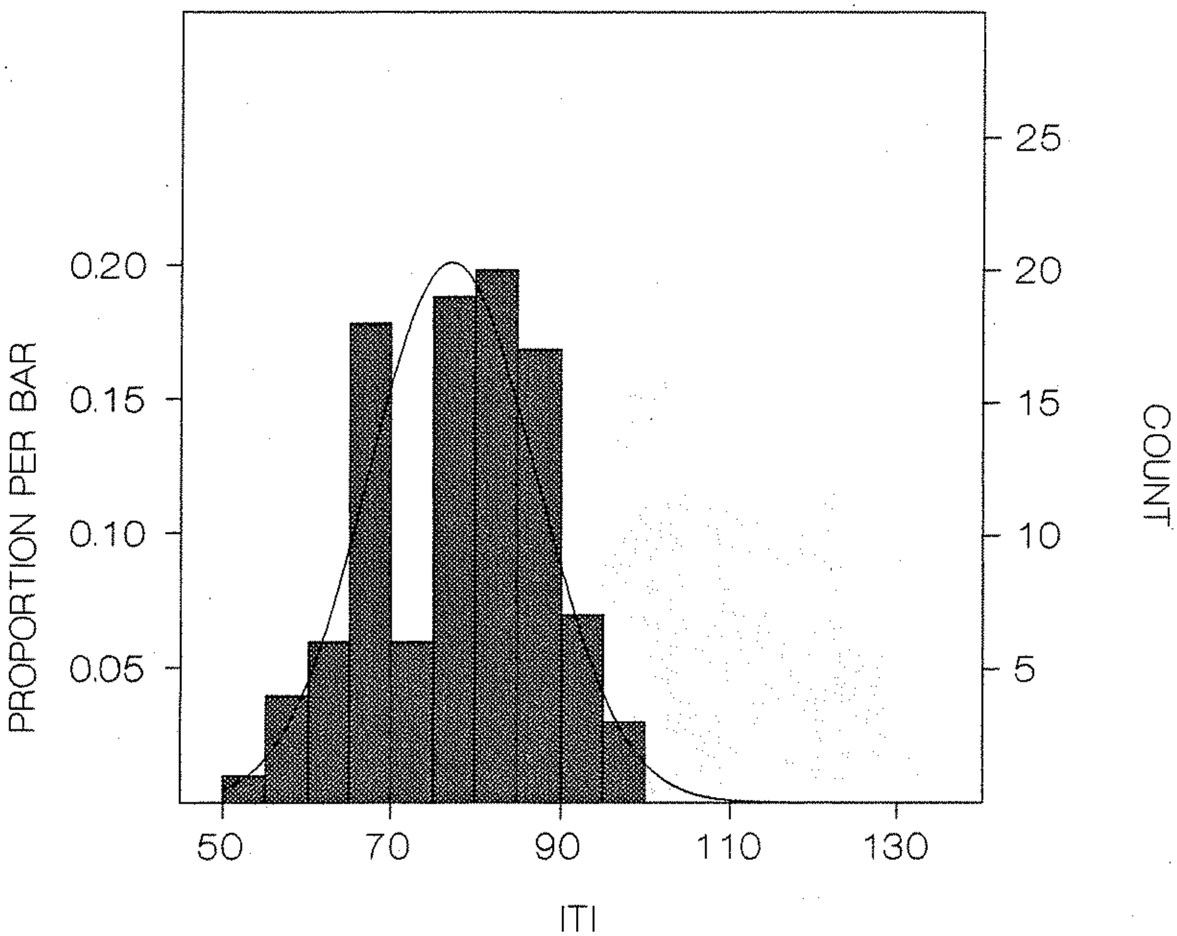
Frequency Distribution H: Fines 80-100%



Frequency Distribution J-100: Fines 80-100%



Frequency Distribution ITI-100: Fines 80-100%



Frequency Distribution SDI-100: Fines 80-100%